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# Exploration of a Theory of Internal Audit

A study on the theoretical foundations  
of internal audit in relation to the nature  
and the control systems  
of Dutch public listed firms

Walter Swinkels

**Exploration of  
a theory  
of internal audit**

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# EXPLORATION OF A THEORY OF INTERNAL AUDIT

A study on the theoretical foundations of internal audit in relation to  
the nature and the control systems of Dutch public listed firms

## ACADEMISCH PROEFSCHRIFT

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aan de Universiteit van Amsterdam  
op gezag van de Rector Magnificus  
prof. dr. D.C. van den Boom

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## Preface

I started this thesis out of interest, to balance a professional practice with underlying theoretical fundamentals and to enrich my life.

Having started the work quite some time ago, at a certain moment I realized that it should not become a lifetime project. The process of initiating, drafting and finalizing this PhD thesis has been a very valuable journey and has enriched my knowledge and way of thinking. In the meantime, my life continued and my three beautiful children were born.

I want to thank all those who were interested in this project and inquired after the progress and content. My special thanks to Mieke, the girls and the family, who have given me their unfailing support and enabled me to work on *the book*.

This thesis would not have been complete without my promoter Hans Strikwerda, who has been a great inspiration and who enriched my thoughts during the process. I want to thank the committee members Leen Paape, Eddy Vaassen, Philip Wallage for their support, and Marcel Pheijffer for his encouragement and support during the initiation phase of this thesis. I want to thank Deloitte for the opportunity to combine work and research, and in particular Paul van Batenburg, who convinced me that quantitative research really is fun.

The content of this thesis would not be complete without the support of the Chief Internal Auditors of the AEX companies who gave insight into the scope of the internal audit functions within their firms.

Walter H.A. Swinkels  
Heerhugowaard, July 2012



# 1. Introduction

## 1.1 Setting the scene

Recent high profile (fraud) scandals and financial crises have undermined investor confidence in the management of firms and drawn global attention to how Management Boards of public firms are in-control of their operations (Corporate Governance Committee, 2003). These scandals cleared the way for corporate governance committees in various countries to provide recommendations and define new requirements on the control systems of public firms<sup>1</sup>. The background of corporate governance committees, as noted by Cadbury, seems to be a profound approach (Cadbury Committee, 1992). His committee mentions that the U.K. corporate governance code would strengthen listed companies in both their control over their businesses and their public accountability. Furthermore, companies would have the right balance between meeting the standards of corporate governance expected of them and retaining the essential spirit of enterprise.

However, the new requirements of corporate governance committees (also outside the U.K.), which were made apparent in a firm's annual report, have not prevented new scandals. At HBOS there was "inadequate *separation and balance of powers* between the executive and internal and external oversight bodies, i.e. finance, risk, compliance and internal audit, non-executive Chairmen and Directors, external auditors, the FSA, shareholders and politicians" (BBCNews, 2009). In his statement on BBC News, Paul Moore said that the "real problem and cause of this crisis was that people were just too afraid to speak up and the balance and separation of powers was just far too weighted in favour of the CEO and their executive". The new U.K. Corporate Governance code added principles with respect to Board composition to prevent *groupthink*; principles to promote a proper debate in the Boardroom and principles regarding the clarity of the business model and the risk tolerance as part of better risk management (FRC, 2010).

Corporate governance committees and related requirements in the U.S. did not prevent scandals at firms such as AIG and Lehman Brothers. The Committee on Oversight and Government Reform held a hearing to examine the regulatory

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<sup>1</sup> This, for example, has led to the Sarbanes-Oxley Act in the U.S.A., which requires multinationals listed on the US stock exchange to report on the effectiveness of their internal control system.

mistakes and financial excesses that led to government bailout of AIG; through reports and Audit Committee meeting reports, they demonstrated a lack of governance and transparency at AIG, for example by excluding risk management and internal audit from some of their critical control issues (COGR, 2008). Another U.S. example is Lehman Brothers, which is the largest bankruptcy in history to date. Although management in its annual statement confirmed to comply with the Sarbanes Oxley Act, the bank could not prevent bankruptcy. One of the books on Lehman Brothers (*A Colossal Failure of Common Sense*) describes an arrogant, greedy and reckless Board that was not in tune with the people within the firm and not sensible about its risk behaviour (McDonald & Robinson, 2009).

Although the Netherlands already has a history of corporate governance committees and codes, Dutch society has had its fair share of governance incidents as well, such as Ahold, VNU, ABN AMRO and Van der Moolen. These firms reported that they were in-control, but from a strategic point of view these firms turned to be out-of-control (Smit, 2008; Strikwerda, 2006)<sup>2</sup>.

Numerous stakeholders have interests in the level of control implemented within a public firm. Key stakeholders include investors, policy makers, regulators, credit rating agencies, banks and financiers, legal, audit and consulting firms. Increased (regulatory) demands for accountability have made firms' internal control systems part of the public policy debates on auditing and corporate governance (Maijor, 2000). There is not one universally accepted concept regarding the control system of a firm; different concepts for internal control are assumed in various researches, depending on the academic field involved. Furthermore, control is seen from different perspectives. For example, the corporate governance codes describe control from the perspective of shareholders and stakeholder on a firm (Corporate Governance Code Monitoring Committee, 2008; FRC, 2010). COSO describes control from the perspective of management and how they can control the process in relation to operations, reporting, its assets and compliance (COSO, 1994). Others view control from a management perspective with focus on the external environment as part of the survival of the firm (Pfeffer & Salancik, 1978) or a combination of internal and external control (Fligstein, 1990).

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<sup>2</sup> Strikwerda (2012) provides a critical view on the contributions and limits of the Dutch Corporate Governance Code to the welfare of the Dutch society.

## 1.2 The position and role of Internal Audit

The Dutch Corporate Governance Code (DCGC) (2008) refers to internal audit as a function for assessing the internal risk management and control systems.

Furthermore, this code indicates that the work plan of internal audit, activities and results should be discussed with the external auditor and the Audit Committee.

Up to now, the internal audit profession has been involved only indirectly in the discussion on corporate governance in the Netherlands. No internal audit representative was included in the Monitoring Commission and there was no clear understanding of the role of internal audit. This understanding is growing, thanks to a more active approach and through seminars (Gras, 2006). Also, academic research should do its part in clarifying the basis of internal audit and its added value. Therefore, this study will follow the recommendation made by Rittenberg (1999) and repeated by Sarens & de Beelde (2006), that the area of internal audit is ripe for a wide variety of research and should encompass its broad nature as described in the internal audit definition of the IIA<sup>3</sup>. Although Paape (2007) already noted that theoretical research on the *existence* of internal audit is limited, it is interesting to investigate which studies already covered the existence and scope of internal audit, and their results. In the Netherlands, there is a PhD-thesis by Paape (2007) with respect to the impact of corporate governance on the role, position and scope of services of internal audit, and a PhD-thesis from De Bruijn (2010) on the role of internal audit in relation to the laws and regulations of professional bodies. This PhD-thesis will build on those researches. The thesis of Paape (2007) in particular provides a good starting point for this thesis, due to its economic perspective. However, Paape's thesis mainly concludes on the *make-or-buy decision*, seemingly neglecting a broader view on the existence of internal audit and its scope. The same applies to the thesis of De Bruijn (2010), whose area of study relates to a thorough description of the legal position of internal auditors in the Netherlands; this research could be extended by an analysis of required legislative changes from an institutional perspective and in relation to the contribution to the control system of a firm.

There are some articles, already highlighted in this introduction, that touch a relevant part of this study: Van Peursem stated that internal audit is a discipline that creates a premium on the share price, but also asked the question whether there would be more losses than benefits if there were no internal audit (van Peursem,

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<sup>3</sup> The definition of the IIA will be discussed later in this chapter.

2004). Handy complains about *audit mania* that leads to layers of agents checking other agents on the assumption that nobody can be trusted, and that managers and employees are selfish (Handy, 1998). Handy is afraid that this checking will lead to a self-fulfilling prophecy: that an employee's taking responsibility is not necessary. Power (2007) is also cautious about auditing (in general) because of the fear that everything is made auditable without wondering whether there is some fit between solution and problem. Cunningham (2004: p. 7) adds to this discussion that *the structure of the control-and-audit regime hides the fact that it revives an old problem of agents watching agents. That is, control seeks to govern behavior and is deemed necessary due to lack of trust. Audits of control seek to test those controls to assure behavior is being controlled. Auditors monitoring controls can only test certain kinds of controls. There is a difference between control effectiveness and control audit-ability. A corporation can have controls that are more effective but less audit-able and controls that are less effective but more audit-able.* These examples make it necessary to investigate the history and origins of internal audit and its scope to analyze and understand the phenomenon internal audit.

An important step in history for the development of internal audit, as well as a large body of applied knowledge regarding internal audit can be found at the Institute of Internal Auditors (IIA). Global professionalization of internal audit began with the establishment of the Institute of Internal Auditors in the United States in 1941 (Brink, 1991; Courtemanche, 1991; Sawyer, 1996). This institute has published Standards for Professional Practice of Internal Audit, which describes the objective of internal audit. The IIA defines the field of internal audit to be:

*An independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes (IIA, 2004).*

This most recent definition of internal audit indicates a broad role and required field of knowledge for internal audit. According to the definition stated above, internal audit should be involved at all levels of an organization. This means the internal auditor to work on control at the process level, the management level and the strategic level.



Traditionally, the internal auditor has not worked at all levels of the organization. Most authors in the field of internal audit focus on the control measures within operational and financial processes (Sawyer, 1996; Spira & Page, 2002). This focus is largely determined by their audit approach. Internal auditors traditionally use the cycle approach to evaluate control procedures and techniques. This approach gives consideration to objectives (such as authorization, compliance, accounting and safeguarding assets) and is linked to the cycles of business transactions, following transactions throughout the firms' systems of control. Some authors recommend to keep focus and maintain the expertise in traditional accounting type of control and not turn internal audit into a *jack of all trades – master of none trap* (Burns, Greenspan, & Hartwell, 1994).

The latter approach seems to miss out critical elements with respect to the context of internal audit, the firm (business) and the institutional environment. Business complexity and a changing environment lead to a need for innovation, growth and adaptation of firm's organizational structures and processes (de Geus, 1997; Prahalad & Bettis, 1986; Simons, 1995). Corporate management's primary role relates to the coordination and realization of changes in strategy, structure and the (re-)allocation of resources. The tasks and changes at the corporate level affect the design of the control system of the firm. These developments in control could be viewed to be part of internal audit's domain. The question to be asked and answered is whether internal audit is part of the control system or whether the control system is an audit object of internal audit. Some authors state that internal audit should take the control system as a whole as its scope (Geeve & Molenkamp, 1998; Paape & Korte, 2000). These authors seem to define management control, besides process control, as the complete scope of a control system. However, this is incorrect, as it should also include strategic control. This is acknowledged implicitly by the original author with respect to management control – Robert Anthony. Anthony (1995) describes strategic control as the process of deciding on the goals of the organization and the strategies for attaining these goals versus the management control process of deciding how to implement strategies.

One possible issue for internal auditors is that there may be a gap between the IIA's vision, its practical application, and management and external stakeholder needs (Spira et al., 2002). Profound academic research of the function of internal audit within the context of the governance and management of a firm and its institutional environment is needed. It is, therefore, relevant to conduct research on the reason of existence of internal audit, its scope and the subject of the audits themselves. From an academic perspective, it is interesting to sort out the

background and theories surrounding internal audit functions. Paape et al (Paape, 2007; Paape, Commandeur, & van der Pijl, 2005) indicated that there are no major established theories regarding internal audit, which raises a question regarding the status and fundamentals of statements and judgments made by internal auditors.

### **1.3 A Framework for control**

The COSO<sup>4</sup> framework has become the most quoted framework in discussions on control systems within corporate governance committees (Corporate Governance Committee, 2008) and by regulators (PCAOB, 2004). The COSO control framework appears to be an institutional rule and seems to function as a myth, which is embraced and legitimized by auditors, firms, regulators, and others, but does not enhance survival prospects of the firm (Meyer, 1977). The concept of control implied by the COSO-framework can even decrease the real control (system) of a firm, focusing attention on a narrow definition of control restricted to maintain legitimacy in a regulatory environment instead of survival. Recent problems with a number of firms, some of which published an in-control statement based on the COSO framework, raise questions with respect to the effectiveness of the control system of these firms. Furthermore, it raises questions regarding whether the COSO framework is a complete framework to achieve a sufficient system of control, or that quintessential elements or aspects might be missing? Below, the COSO framework itself will be scrutinized for theoretical groundedness.

The COSO framework was developed in the 1990's by the Committee of Sponsoring Organizations of the Treadway Commission, in response to discussions about an integral internal control framework (COSO, 1992). The purpose of the Committee was to formulate an unequivocal definition of internal control, because at the time, internal control meant different things to different people. The Treadway Commission wanted to create one common definition so that managers, legislators, auditors and others could understand one another. In the COSO report (1992, 1994: p. 13) internal control is defined as:

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<sup>4</sup> The COSO committee has submitted a public exposure draft of the updated internal control – integrated framework in December 2011. The final version will be published in 2013.

*A process effected by an entity's Board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:*

- *effectiveness and efficiency of operations;*
- *reliability of financial reporting;*
- *compliance with applicable laws and regulations;*

The COSO definition seems to combine internal control and management control (Vaassen, 2003), thereby enlarging the scope of internal control to encompass different levels of an organization. While internal control's unit of analysis was traditionally on transactions and the reliability of management accounting information, its point of view has now been extended to include the managerial focus on operational efficiency (which includes also effectiveness).

Furthermore, the COSO definition of internal control of 1992 is less technocratic (i.e. procedure-minded) than previous definitions. Its description includes more attention to people. Control is viewed as a process that requires actions from people within the organization and also pays attention to items such as integrity, management style, information sharing and communication (COSO, 1992).

A further discussion on the combination of internal and management control is included below in the comparison of the COSO definition with the management control definition of Anthony. Anthony describes management control as *the process by which managers influence other members of the organization to implement the organization's strategies* (Anthony, 1995; p. 8). There is consistency between the definition of Anthony and COSO with respect to the element *process*, e.g. control is not a static element but a process which requires attention from various people within the firm. A difference between the definition of Anthony and COSO relates to its end result; COSO aims at the achievement of *objectives*, while Anthony aims for the implementation of *strategy*. These elements are related, but different. Furthermore, both definitions lack a description of what control actually is.

A more comprehensive definition of management control is provided by Merchant & Van der Stede: *Management control includes all the devices or systems managers use to ensure that the behaviors and decisions of their employees are consistent with the organization's objectives and strategies* (Merchant & Van der Stede, 2003: p. 5). This definition is more clear with respect to how control should

be achieved (devices or systems), its aim (both objectives and strategies) and its theoretical background, by linking it to the cybernetic and systems approach as a theoretical basis.

A missing element in both the COSO definition and the management control definitions is a focus on the external environment of a firm. Control is also needed because firms are part of a competitive environment in which there is an imperfect market with unexpected changes, there are competitors influencing each other and there is a need for access to the resources as necessary for its continuity in the long term (Fligstein, 1990; Pfeffer et al., 1978). Control on strategic level is not included in the scope neither in the management control theory nor in COSO. Especially COSO limits the scope of control on financial reporting and audit. This is particularly apparent in the attention given to audit terms such as ‘reliability of the financial reporting’ and ‘compliance with applicable laws and regulation’. This focus relates to the background of many COSO member organizations that have a strong audit or compliance objective, such as the American Institute of Certified Public Accountants (AICPA) and the Institute of Internal Auditor (IIA). Furthermore, the motivation for the COSO framework originates in the incidences of financial reporting fraud in the US. Therefore, it is not surprising that the framework reflects a strong tendency towards audit and compliance and is regarded as the standard of control by auditors (Renes, 2002)<sup>5</sup>. COSO seems to have a broader definition of control, but has not yet managed to implement this definition in all its breadth within its own framework.

In 2004, the Treadway Commission’s Committee of Sponsoring Organizations (COSO) published a new framework, Enterprise Risk Management - Integrated Framework and Related Application Techniques (COSO, 2004). This framework is not intended to replace the internal control framework from 1992; rather, it incorporates the internal control framework. It is expanded to include attention to a firm’s strategic level, risk appetite and risk management.

Both COSO frameworks claim to have included principles or criteria which can lead to a statement regarding operational effectiveness and efficiency.

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<sup>5</sup> Which is curious because chartered auditors are not trained in management control, but only in the control of systems and procedures with respect to management accounting information as needed for the Annual Report. In the Netherlands, a separate academic study and a degree exists for this discipline (Executive Master of Finance and Control). Those with this degree can register as chartered controller.

Nevertheless, the question remains whether COSO and its criteria are specific and complete enough. First of all, insufficient theoretical basis has been provided for the COSO framework to offer an appropriate answer to the previous question. Secondly, in reviewing older literature on audit, it is peculiar that the specification of the COSO framework focuses primarily on internal accounting control and the organization's accounting discipline. Around 1961, Mautz and Sharaf (1961/1985) already identified that audit is an applied discipline, which means that it takes its principles and theories from other fields. They noted that the academic fields that influence audit include accounting, law, ethics, management, communications and others (Mautz & Winjum, 1981).

Another question is whether COSO is being used properly, because there is a difference between emphases on form and stress on content. Focus on form rather than content can explain why many control systems, such as COSO, do not provide real control but only pseudo control (Hofstede, 1978b). Hofstede describes pseudo control as the state of affairs in which a system is under control on paper, but not in reality. This is made apparent by all the new control requirements as part of corporate governance committees and national laws, which were made apparent in a firm's annual report, but which have not prevented new scandals.

In addition, the use of language with respect to *control* is hazy, as there are different interpretations. As a consequence, people do not understand each other's vocabularies and follow-up action. COSO aimed to formulate an unequivocal definition of internal control as it was aware of the different meanings of internal control to different people, however, it has not succeeded as yet. This, too, will be discussed in the next chapters of this study.

## 1.4 Object of research

The purpose of this research is to *explore* the academic and professional literature and current practice to develop clarity regarding the theoretical and practical contributions to and limits of the *existence* and *the scope of work* of internal audit in relation to the control system of the firm. To date, debate on the reason d'être of internal audit, its theoretical background and its contributions to and limits for the control system of the firm is continuing still. No adequate theory<sup>6</sup> exists regarding the role and contribution of internal audit to control and its operationalization in a

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<sup>6</sup> There has been discussion about what constitutes an adequate theory. This will be discussed in 1.6 Research Setting.

control system of the firm, which hampers adequate development of this profession in relation to developments in the economy, in particular developments in the micro-economics of the firm.

In addition, COSO's approach is too limited and does not cover all dimensions of a control system in terms of scope and mechanisms. Contemporary language and meanings do not seem to be congruent with actual (management) practice and the scope used in COSO is not in line with the broad meaning of control. Cases of collapsing firms still arise despite the fact that several institutional measures have been taken to prevent this. This research presents a more multidisciplinary angle to strengthen the awareness and clarity of the relevant variables regarding the control system of a firm. According to Drucker (1980), the greatest danger in times of turbulence is to act with yesterday's logic and without a clear theoretical framework. We need to search for a profound theory to enlighten the role of internal audit in relation to the control system of a firm. This theory is to be found in the theory of the firm and the economic organization theory respectively, including its institutional context and the theory of control.

## **1.5 Research questions and aim**

The central research question relates to the following:

*What are internal audit's reason of existence and scope of work in the control system of the firm?<sup>7</sup>*

This central research question will be explored further by the following sub-questions:

### *1. What are the origins, purpose and scope of internal audit?*

From an academic perspective, it is interesting to sort out the background and theories surrounding internal audit functions. Paape et al (2005) indicated that there are no major established theories regarding internal audit. This raises the question regarding the origins, purpose and scope of internal audit. This research complements previous research on the role of internal audit in the control system of the firm.

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<sup>7</sup> The set-up of this central research is in analogy with the key attention areas of a theory of the firm: (a) why does a firm exist (its purpose), and (b) what determines its scale and scope (see also Connor, 1991: p 123).

It also describes how the role of internal audit has evolved over time and illustrates how certain external, institutional developments have influenced their role within firms. This will also show the impact of globalization, enforcement of corporate governance and efforts of the Institute of Internal Auditors.

2. *How do internal audit and the control system of the firm fit into a wider theory of the firm?*

The exploration of a theoretical foundation is performed first of all by looking at the theory of the firm as a meta-theory for analyzing the assumptions underlying a control system of a firm from an economic point of view. Internal audit, both as a function in the internal governance of the firm and as a profession is expected to be based on assumptions regarding the nature of the firm, or a theory of the firm. In addition, the fit of internal audit and the theory of the firm will be discussed. The theory of the firm in its present state of development is far from homogenous and involves different views. However, these different views (agency, transaction costs, and resource-based view) provide different dimensions/issues that can be complementary to each other and to internal audit in analyzing control issues within a firm.

3. *How does the control system of the firm fit into the theory of control and what are the critical elements of the control system?*

Various views on control will be investigated to explore broader theories and criteria in relation to the assumptions and scope of control. The formal study of control is cybernetics. On the whole, biological cybernetics and information theories are useful in investigating the control system of a firm. Control is the acquisition and processing of (external) information in order to steer flows of energy and matter in such a way, that the living system remains viable in a changing environment (Beniger, 1986). This is in line with firms who are information-driven constructions, compete with their rivals and align with their environment to adapt and remain alive. In addition, an integrative view will be summarized, which includes relevant elements of control.

4. *What explains at an institutional level the existence and deployment of internal audit in the Netherlands?*

This research will include empirical investigations by analyzing the existence of internal audit functions within listed firms in the Netherlands. This analysis will aim at the AEX, AMX and AScX firms at the NYSE Euronext in Amsterdam. Together, these firms represent all industries of the Dutch economy. The analysis of criteria can provide more insight into the fundamental premises of internal audit. Furthermore, the non-existence of internal audit functions at some listed firms in

the Netherlands could provide new perspectives and arguments why internal audit is not relevant for them to remain viable firms.

5. *How does the actual scope of work of internal audit functions of AEX listed firms in the Netherlands match with a broader, multidisciplinary view on the control system of a firm?*

Another part of the empirical investigations will analyze the actual practice of internal audit functions of AEX listed firms in the Netherlands. The aim of this empirical research is to explore the match with the theoretical explorations and actual practice.

6. *What explains possible differences between the internal audit functions' scope of work and the theoretical model for control and what are or should be the consequences of these differences?*

An essential element of the empirical research is to discuss possible differences between theoretical explorations of internal audit as set out in this thesis and the control system of the firm. The empirical explorations and discussions of Dutch AEX listed firms should lead to more clarity on the contributions to and limits of internal audit with respect to the control system of the firm.

## 1.6 Research setting

The setting of this research is exploratory. As mentioned above, there are no major established theories regarding internal audit and only developing comprehensive theories relating to the control system of the firm. The aim of this research is to structure existing theories and relations in such a way, that it generates insight into and meaning regarding the phenomena *internal audit* and a *control system of the firm*. This is in line with Stebbins (2001: p. 3) who describes exploratory research in social sciences as the broad-ranging, purposive, systematic, prearranged undertaking designed to maximize the discovery of generalizations leading to description and understanding of an area of social or psychological life.

Explorative research is mostly seen as a first step in developing a theory<sup>8</sup>. The question is: What is a theory? In general, it is defined as a statement of relations among concepts within a set of boundary assumptions and constraints (Bacharach,

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<sup>8</sup> Böhme distinguish three phases in the development of theory: exploratory or pre-paradigm phase, paradigm phase and post-paradigm phase which is called the *Finalisierung* of science (Boehme, G., van den Daele, W., & Krohn, W. 1979. *Die gesellschaftliche Orientierung des wissenschaftlichen Fortschritts*. Frankfurt: Suhrkamp.).



1989: p. 496). However, there is also much discussion on what a good theory is. Some are of the opinion that a good theory is a limited and a fairly precise picture, not covering everything as it will not meet the parsimony criterion (Poole & Van de Ven, 1989). Others claim that the use of the word theory is not always clear because its references are diverse and the word often obscures rather than creates understanding (Sutton & Staw, 1995).

This research does not start from scratch, because large volumes of theories and research already exist. One way to demonstrate value, is to highlight relations and how additions significantly alter the understanding of phenomena which are researched (Whetten, 1989). In addition, Whetten (1989: p. 493) mentions that *science is facts, just as houses are made of stone. But a pile of stones is not a house, and a collection of facts is not necessarily science*. Therefore, in line with the elements of Whetten (1989), this research will contribute to the theory of internal audit and the control system of the firm by explaining *what* these phenomena are and *how* they relate to each other and the underlying assumptions (*why*). In addition, they will be set in the current context and be related to Dutch listed firms.

## **1.7 Research method**

The methodological approach of this research covers multiple data sources, multiple theories and multiple methods, which is also called triangulation (Patton, 2002). The purpose of triangulation is to gain an overall picture from different perspectives which should also lead to a consistent view and answer to the specific research questions.

An important method for this exploratory research concerns analysis of academic journals and papers concerning the phenomena internal audit and control systems of the firm. The purpose of this analysis is to identify and understand the content of available research with respect to the phenomena of my research. Articles and papers were searched for and collected via university databases Academic and Business Source Premier and journal collections from JSTOR, Sage, Science Direct, SpringerLink and google scholar. Articles and papers were searched on the terms internal audit, internal control and internal control system of the firm, theory of control, control. Also references in collected articles linked to other related articles were taken into account.

Complementary to existing IIA research, which is based primarily upon quantitative data (Sarens et al., 2006), more qualitative data for research has been

collected by using semi-structured interviews with representatives of the internal audit function of Dutch AEX firms. This qualitative data should lead to more in-depth insights into the scope of work of internal audit within the Netherlands and possible reasons why their scope deviates from the theoretical insights. The understanding of the interview data will be supported by content analysis on relevant documents, such as the internal audit charter, internal audit plan and other reports.

## 2. Origins of and developments in internal audit

### 2.1 Introduction

To understand the existence and the scope of the internal audit function we need to understand its origins, the influence and contexts under which it developed, especially in the Netherlands.

Internal audit has been a *rising star* in the world of controlling a firm's business, reaching its peak around 2004, when the chief financial officer for Pitney Bowes Inc., told CFO Magazine that internal auditors were like rock stars (Leibs, 2004). He was referring to the post-Enron reforms when internal audit was given greater responsibilities and power.

Around the same time, some voices were suggesting that 21<sup>st</sup> century internal auditors must be prepared to *audit* virtually everything — operations (including control systems), performance, information and information systems, legal compliance, financial statements, fraud, environmental reporting and performance, and quality (Ratliff & Reding, 2002: p xi). The question is which assumptions and paradigms might qualify internal audit to *audit* everything. What are the postulates of the existence and scope of internal audit?

A few years later, discussions started about whether internal audit had become irrelevant, as internal auditors had not been mentioned and/or blamed for any aspect of the financial crisis — nobody asked the question: *where were the internal auditors?* (Marks, 2010; Molenkamp, 2009; Paape, 2009). This is indeed noteworthy, as the financial crisis of 2007-2010 was also about risk management and effective control. Either internal audit did a proper job, which then raises the question of relevance, or internal audit is part of the problem. Obviously, the control problem of the firm, as the events of the financial crisis suggest, reside at a higher level beyond the level of accounting information systems.

At the same time, the Institute of Internal Auditors (IIA) made positive observations about the role of internal audit. A recent study by the IIA on the characteristics of internal audit suggested unprecedented growth opportunities due to advances in technology, the expansion of communication capabilities and the increasing complexity and sophistication of global business operations (Alkafaji, Hussain, Khallaf, & Majdalawieh, 2010). Again, the question arises what the

postulates of the existence and scope of internal audit are. It seems as if different people or groups have different interpretations or views.

To date, there is little theoretical basis with respect to the question of why internal audit exists as a separate function within a public firm. Some events in recent history (such as the establishment of the IIA, accounting scandals, regulations, etc) have changed the role, position and perception of internal audit functions profoundly. This role has also been influenced by external changes: Spraakman performed an historical analysis and indicated in 2001 that internal audit, as a profession, was being forced to find a new mandate because its root activity (support management to ensure the completeness of financial (accounting) information) was taken over by low cost and company-wide (IT) systems. (Spraakman, 2001). However, the old mandate returned due to the post-Enron reforms as a result of which the reliability of financial statements became emphasized, which appeared not to be integrated in those systems. The need for a new mandate exists, however the post-Enron reforms made the regulatory environment regress to the old mandate.

The historical development of internal audit is the focus of this chapter. Yet, in light of the lack of clarity with respect to different points of view on academics, practitioners and institutes (such as the IIA) it is considered relevant to assess the existing literature from different angles, in order to identify a common view and to prevent mixing up the *theory in use* and the *espoused theory* by practitioners (Argyris, 1999).

Therefore, this chapter will clarify the existence of internal audit and its scope of work based on the following four elements:

*Firstly*, history clarifies its origin, going back to 3500 B.C. This review on literature on the history of internal audit should clarify some main reasons and assumptions, not just in the Netherlands, but also on a global scale. The history of internal audit in the Netherlands is rooted in the beginning of the 19<sup>th</sup> Century. Large Dutch firms, such as Philips and Dutch Railways, had already established internal audit functions in the late 1930s.

*Secondly*, there exists a global Institute of Internal Auditors (IIA) that performed groundbreaking work for the professionalization of internal audit since its establishment in the United States in 1941. The IIA developed a definition of internal audit that is used and recognized by internal audit functions and regulators

the world over. Furthermore, its research can provide insight into assumptions and developments.

*Thirdly*, from a regulation point of view, insight can be provided into the reason of existence of internal audit. More specifically, the existence of internal audit is related to the developments in corporate governance. Some initiatives are the corporate governance codes and the internal audit requirements under the New York Stock Exchange corporate governance standards.

*Fourthly*, this chapter complements previous literature reviews covering this area. Paape performed research on publications between January 1994 and April 2005, revealing that academic literature on internal audit is limited (Paape, 2007). This chapter will build on Paape's prior study to the present (see appendix II).

## **2.2 Historical roots of Internal Audit (until 1930's)**

Audit dates back to the Mesopotamian civilization around 4000-3500 B.C. (Ramamoorti, 2003; Sawyer, 1996). Formal record-keeping systems were introduced by organized businesses and governments, to allay their concerns about incorrect accounting of receipts and disbursements and collecting taxes (Ramamoorti, 2003). The need for and indications of audits can be traced back to, among others, public finance systems in Babylonia, Greece, the Roman Empire and the City States of Italy, all of which developed a detailed system of checks and counterchecks to prevent bookkeeping errors and inaccuracies, as well as fraud and corruption (Ramamoorti, 2003).

In Europe the first indications of an audit practice are found in ancient Rome. Through hearings, verifications were made of record keepers and their financial accounts, designed to prevent fraudulent acts (Sawyer, 1996). The task of hearing the accounts gave rise to the term *audit*, originating from the Latin *auditus* or *audire*, which means *a hearing* or *to hear/listen*. These hearings played an important role at that time, since not many people could read and write. The auditors were selected by the community and were expected to be competent and professional in recognizing fraud and errors (Dittenhofer, 1984).

At the beginning of the 13<sup>th</sup> Century, the first two official state auditors were appointed in the city of Pisa: an internal and an external auditor (Filius, 1984). This led to the practice of keeping two parallel sets of books for audit purposes.

Towards 1900, the audit profession developed a more systematic approach and became more extensive. The association of professional auditors was established in

the 16<sup>th</sup> century in Venice, Bologna and Milan. Prior to this, internal auditors were mostly state auditors who acted on behalf of the king and/or state. During the 16<sup>th</sup> to 18<sup>th</sup> centuries, the work area of audit expanded to include the transactions of a business-oriented society. The focus remained on fraud detection and prevention by verifying each transaction with the supporting source documentation (Gupta & Ray, 1992).

The origins of the more recent internal audit functions can be traced to the 19<sup>th</sup> century U.S. and U.K. railways (Sprakman, 2001) and the related development of accounting systems (Johnson & Kaplan, 1987). To oversee these diverse and dispersed operations, new procedures were invented, accompanied by effective management accountancy systems to coordinate the logistic, conversion and distribution activities (Johnson et al., 1987). When in the 1840s the railway firms began to conduct large-scale financial transactions at widely dispersed geographical locations, they appointed internal auditors to monitor the processing of financial transactions (e.g. payment vouchers, cash balances, station revenues). The focus of internal audit was on the financial processes and was very similar to what now is called financial audit. In addition, internal auditors also investigated non-financial data such as quantities of parts in short supply, adherence to schedules, and the quality of products (Ramamoorti, 2003).

From the 1930s onwards, the Securities and Exchange Commission (SEC) required firms to provide audited financial statements if they wanted to be registered at the Stock Exchange (Gupta and Ray, 1992: 3). This increased the work for external audit firms and had consequences for their approach of work. Increasingly, the external firms worked with sample sizes and limited their detailed verification work to transactions. This change of approach by the external auditor strengthened the establishment of internal audit functions within firms, in order to complete the detailed verification activities of transactions, which were previously performed by the external audit firm. In that sense, the internal audit function could be seen as an extension to the work of the external auditor.

As firms became larger and more complicated, and, therefore, management's ability to monitor its operations became more limited, the role of internal audit functions increased (Sawyer, 1996). In most cases, the internal audit function was a sub function of the accounting function and performed accounting related audits (Brink, 1991). The internal auditor usually had some kind of quality control function, e.g. to verify that the accounting operations of the organization were performed correctly to instructions and standards (Courtemanche, 1991). The

external auditors continued to have a strong influence on the work and the approach of internal audit, from the perspective of the task of the external auditors, being the assurance of a reliable financial statement.

## **2.3 Roots and Developments of Internal Audit in the Netherlands**

The history of internal audit in the Netherlands dates back to 1477, when the Dukes of Burgundy installed a General Audit Office (*Algemene Rekenkamer*) in the Netherlands to verify transactions related to the expenditures and receivables of their widely dispersed properties (NRC, 1999). In 1814, the General Audit Office of the Netherlands was set up in its present form, to audit the reliability of the financial statement, but also to audit the effectiveness of government laws and policies.

Internal audit within Dutch public firms emerged during the late 1930s, e.g. at Philips' Gloeilampenfabrieken N.V. (now Royal Dutch Philips Electronics) and the Dutch Railways (*Nederlandse Spoorwegen*), as a result of internationalization and decentralization (Smith Committee, 2003). The primary task of the Dutch internal audit function was to audit and certify financial statements (Goudekot, 1956). Internal and external auditors were seen as servants of the same purpose (a reliable financial statement) and differed in position only; internal audit was accountable to management, while the external auditor had a public role and was accountable to the shareholders (Breedveld-Krans, 1991; Goudekot, 1956). Furthermore, in the Netherlands the internal and external auditors received the same (technical and skills) education and training (Hope & Fraser, 2003).

The Royal Dutch Institute of Chartered Accountants (NIVRA) pursued to give the internal *attestation* function a legal basis, but this never became part of Dutch law (Hope et al., 2003). Nevertheless, management of Dutch firms judged that having its own internal audit function was important, to acquire internal knowledge on audit, experience within the firm, and to save on the costs of an external auditor (Breedveld-Krans, 1991). In addition, due to the growth and internationalization of Dutch firms, internal audit was able to support management in monitoring the existence and operating effectiveness of control and securing its (financial) control in foreign countries (Hope et al., 2003).

From the 1980s and 1990s onwards, the awareness of management on a broader role of internal audit increased. Wildschut started the discussion about the internal audit's supporting role to management in relation to the effectiveness of processes

(Wildschut, 1976). After the 1980s, the operational scope of many internal audit functions evolved from financial audit only to include operational audit as well (Breedveld-Krans, 1991; Den Butter & Verkaik, 1993).

Due to economic circumstances across the globe, firms were restructuring, including the position of internal audit (McNamee & Selim, 1998). The management of some firms considered that from a cost-benefit perspective, the financial audit work could be completely outsourced to the external auditor. Other firms kept the internal audit function and made the change towards a mix of financial and operational audit (Breedveld-Krans, 1991).

In addition, discussions started about more distinct audits, such as ISO (International Organization for Standardization), TQM (Total Quality Management), legal, environmental and health and safety audits besides financial and operational audits (Paape, 1995). Discussions also showed a further shift from financial audit and auditing the reliability of historical information towards the examination and evaluation of the quality of a control system designed to assure the accomplishment of a firm's goals and objectives (Paape, 1995). This change in scope was not supported by all audit directors; some audit directors took the position that financial audit was the basis and the main focus of the audit function (Ekelschot, 1993).

The professionalization of the internal audit practice grew in the 1990's with the development of an internal / operational audit education at the University in Rotterdam (in 1993) and later also in Amsterdam. This education was specifically oriented on internal auditors, not the external auditors. In addition, the Dutch Association of Internal Auditors (VRO) was initiated to promote operational audit in the Netherlands in 1994 and, consequently, the interests of its members registered as operational auditor. These initiatives separated the internal audit practice from the dominance by the Royal Dutch Institute of Chartered Accountants (NIVRA), which is the professional body for the external auditors, but also the chartered accountants (RA's) who were acting as internal auditor.

In 1997, the Dutch chapter of the Institute of Internal Auditors (IIA) was established as promoter of the interests of all internal auditors in the Netherlands (Smith Committee, 2003).<sup>9</sup> The Dutch institute contributed to the

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<sup>9</sup> The first professional body for internal auditors originates in the mid-1980s, when the Internal Accountants' chapter (INTAC) was established as part of the Royal Dutch Institute of Chartered



professionalization of its field, among others by some publications relevant to this study. Especially the empirical, current state reports, such as *The Role of the Internal Auditor regarding Internal Control and Accountability* (IIA, 1999a), the three reports on the *Competency Framework for Internal Auditing in the Netherlands* (van Kuijck & van Zandvoort, 2002; van Kuijck & Vincenten, 2003; Vlak, 2001), the two *Position Papers* on the role of internal audit in the Netherlands (IIA, 2008; IIA & Intac, 2005), *Allies in Governance* concerning the relationship with the Audit Committee (IIA, 2008), the *Relationship of the Internal and External Auditor* (IIA & Nivra, 2009), the *Role of Internal Audit as Spider in the Governance, Risk and Compliance (GRC) Web* (IIA & Nivra, 2010) and *Study report: Common Body of Knowledge (CBOK)* (IIA, 2010b). Overall, the publications provide insight into the current state of affairs. However, these reports should not be seen as mandatory guidance documents, to be used as professional standards by Dutch internal audit functions. Furthermore, the principles of the reports generally are linked to standards set by the global IIA. However, there are no publications with respect to required professional standards covering future outlooks<sup>10</sup> or research from an institutional perspective; on the contrary, they are descriptions of internal audit functions' going concern and described from a closed system environment setting.

To clarify the development in the scope of internal audit, the relevant elements from the reports will be described below.

### **2.3.1 Role of internal audit**

The first report of the Dutch IIA concerned the role of internal audit in relation to control and accountability (IIA, 1999a). The report acknowledges the shift from financial and compliance audit to operational audit, but also notes the *hype* surrounding the word *operational audit*. Various internal auditors each have a different explanation of the term, varying from *accounting control* to *overall*

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Accountants (NIVRA). This body promoted the interest of the *accountants* who were working as internal auditor. By the end of 1997 there were three different organizations for Internal Auditors – INTAC, VRO and IIA-NL, as well as an organization for EDP auditors (NOREA) to promote the interest of the Electronic Data Processing (EDP) auditors. The various organizations are linked to each other to coordinate activities. As of 2006 the VRO and IIA Netherlands integrated both organizations.

<sup>10</sup> Except for the U.S. based study on the Common Body of Knowledge. The data from this report are based on 2006-figures, which makes looking towards the future in 2010 more difficult.

*quality of a company's internal control*<sup>11</sup>. A logical interpretation of the scope of operational audit would be 'operational activities' or 'the operations'. This is different from an audit on the controls for financial reporting, although there can be some overlap. In general, the members of the IIA concluded that internal audit should have a wider scope than just reliability of financial reporting information<sup>12</sup>. Efficiency of the primary process should also be in the scope. As a consequence, a more multidisciplinary audit function was suggested to manage this broader scope with sufficient quality.

The 1999 IIA report acknowledged that internal audit should take a more proactive role, for example help management proactively in projects, instead of only being a *reactive reporter*. It is interesting to note that the report considers specific types of audit, such as health and safety, environmental, legal and ISO, as something outside the internal audit function. In 1999, no need was expressed to link these types of audit to internal audit, or to integrate them within the internal audit function. This point of view changed in the years that followed.

A last point to note is the position of internal audit in relation to the Management Board and the Audit Committee. In approximately 50% of the firms in the scope of

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<sup>11</sup> Different descriptions continue to be published. For example: in the IIA/NIVRA publication on the relationship between the internal and external audit of 2009, operational audit is described as *investigations into the quality of information, such as in control statements, risk management, integrity, compliance with laws and regulations, operational process control, project and program management and sustainability*. This description assumes the old dichotomy of financial versus operational audit, while the current practice assumes the existence of more kinds of audit than only these two.

<sup>12</sup> As the report does not cover any definitions of financial, compliance and operational audit, Paape's definition will be used. Paape (2007) is the first academic who wrote a dissertation on the role of internal audit. He provides clear definitions of the different kinds of audit:

Financial audit: an audit of financial statements enables the auditor to express an opinion whether the financial statements are prepared, in all material respects, in accordance with an identified financial reporting framework.

Compliance audit: an audit to assess whether the organization adheres to certain specific requirements of policy, procedures, standards, laws and governmental regulations.

Operational audit: an audit of (parts of) a firm's management control (or internal control) system to provide additional assurance that this system will enable the firm to reach its objectives and, if needed, provide advice for improvement. A comment on the latter definition is that it seems like a management audit, while operational audit is more expected to be focused on operational activities as opposed to management activities.

the report<sup>13</sup>, an Audit Committee was established. In those firms with an Audit Committee, the internal audit function discussed the audit planning and reports in the Audit Committee. The report notes that the primary focus of the Audit Committee was on the reliability of the financial statement, and that the attention for a broader system of control was considered only limited.

### 2.3.2 Professional Practices and Competency Framework

Between 2001 and 2003, the Dutch IIA published three reports on the Professional Practices and Competency Framework of internal audit in the Netherlands. These studies were a result of the global IIA Competency Framework report. The Dutch IIA wanted to investigate the way the global IIA Competency Framework could be applied in the Dutch environment.

The *first* report describes the summary of the global IIA research reports regarding the Competency Framework (Vlak, 2001). This report first focuses on risk and change — internal audit should be seen as a change agent — and then on who should cover all significant risk areas. Therefore, the scope here is much broader than the scope of financial audit. Implicitly, a limit is set to that scope, as the audit areas relate to operational, financial, compliance and IT audits. There is no specific reference to, for example, management or strategic audit, governance or risk management. Another issue relates to independence of the internal audit function, which is thought to be less relevant and more a state of mind and appearance<sup>14</sup>.

The *second* report describes the growing importance of IT in relation to the control system of a firm (van Kuijck et al., 2002). This is also visible in the priority rating given to internal audit tasks: (1) reliability of information; (2) reliability of automated systems; (3) efficiency of business processes; (4) compliance; and (5) control of business risks. As also to be noted from the report, elements such as business risks and the quality of processes are not among the top-three focus areas. Risk and quality of processes are thought to be covered by other *assurance*-related

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<sup>13</sup> The report covered 30 firms varying from public, private and not-for-profit sector firms.

<sup>14</sup> *De Accountant* of February 2005 discusses the combination of the role of internal auditing and control within the Dutch firm Hagemeyer. The discussion concerned perceived independence issues of checking one's own work. Hagemeyer argued that the group acted as an independent party in relation to the operating firms, which made it possible to combine the role at group level. The group consolidation process was audited by the external auditor to prevent self control. It might be interesting to verify how, currently, the roles are combined within the AEX firms. This will be investigated as part of the empirical analysis of the internal audit functions within the AEX firms.

functions within the firm, such as compliance, risk management, revenue assurance and quality functions<sup>15</sup>. The overview identifies a continuous focus on the reliability of (financial) information, supported by reliable automated systems. It is interesting to observe that the *partner of management* paradigm is leading, and the Audit Committee is not really considered a key stakeholder in 2001/2002. That was to change in subsequent years.

The *third* and final report describes the overall conclusions of a workshop with the main Dutch internal audit leaders at that time and it includes the opinion of five executives and two Supervisory Board members with respect to the role of internal audit (van Kuijck et al., 2003). The participants in the workshops conclude that the value proposition of internal audit relates to relevance, coverage, topicality and changeability with regard to business risk and processes. The key terms mentioned are multidisciplinary teams (to cover diversity of risk areas), independence, objectivity, professionalism, proactivity, innovation in audit approach, knowledge of management's needs and a good relationship with management. These terms are in line with the IIA report in 1998, so nothing new there. *On the other hand*, little attention is paid to the questions of management's risk appetite and understanding of the business, although these seem to be relevant in providing an appropriate level of assurance, help management in risk and control areas and in its ability to innovate its approach. This match is not made and is also not highlighted in the report.

The interesting points that arose from the interviews with the executives and Supervisory Board members are the following: (1) the key role of internal audit is to provide assurance. Consulting is not seen as a key task for internal audit, although there is room for this if internal audit has the capability or as part of their natural advice role as the result of identified control deficiencies; (2) independence is not a precondition to perform the work; (3) internal audit is an *assessor of* or *verifies* control systems and should not take any initiative regarding, for example, restructuring activities. On the other hand, it is appreciated when internal audit identifies so-called weak signals of possible risks and/or control issues; (4) a proactive approach is appreciated but internal audit should not take over the management responsibility in solving issues; (5) the interviewees do not relate

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<sup>15</sup> Although these are marked as assurance functions, the risk management and compliance functions would probably be marked as management support functions in the current timeframe, and not immediately as assurance functions!

internal audit to being responsible for the audit of the reliability of the financial statement.

Overall conclusion of the three reports on the Professional Practices and Competency Framework of internal audit in the Netherlands is, that the developments from the IIA in the U.S. seem to be leading in the approach of the IIA in the Netherlands. These developments seem not solely based on requests from within a firm (Audit Committee, Management Board), or based on institutional or theoretical changes, but are also opportunity-driven. In the Netherlands, the implementation of the American IIA insights is limited mainly by the discussion on the dichotomy between financial and operational audit. This may well be due to the background of many internal audit functions, such as the background of the chief internal audit, the background team, its activities, and the view of Management Board's and Audit Committee's on their internal audit function.

### **2.3.3 Position papers**

In April 2005, the Dutch chapter of the Institute of Internal Auditors (IIA) and the Internal Accountants' chapter of the Royal Dutch Institute of Chartered Accountants (called INTAC) published a position paper on the role of internal auditors in the Netherlands. This position paper was in accordance with the standards of the international IIA and the International Federation of Accountants (IFAC).

This position paper<sup>16</sup> contains sixteen points of view on correct conduct and the position of internal audit in the Netherlands (IIA et al., 2005: p 4-12).

1. It is the duty of the internal audit function to provide additional assurance on the effectiveness and the control of the business operations to the managing director and the management of an organization.
2. The task of the internal audit function is to evaluate and control the business proceedings by performing audits, reporting and advising on these

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<sup>16</sup> This position paper was released after the Dutch corporate governance code (DCGC) was published (2003) and includes more elements than the DCCG. However, a strong link with the 'accountants' within the IIA is also visible, specifically in relation to item 13 and 16. This goes beyond the requirements in the DCCG, even the 2008 version. This shows the strong influence of 'accountants' in the set-up of this position paper.

to responsible management and to the Audit Committee, answerable to the managing director.

3. The internal audit function is guided by the norms and standards of one or more recognized and authoritative professional associations in The Netherlands.
4. Sufficient expertise is available within the internal audit function.
5. The internal audit function develops and maintains a quality control system that continuously ensures that norms and standards of the professional associations are complied with.
6. The managing director of the organization appoints the head of the internal audit function.
7. After conferring with the Audit Committee the managing director will allocate the internal audit function's tasks. These tasks are based on the risk profile of the organization and are determined in combination with the tasks of the external accountant.
8. The managing director<sup>17</sup> shall lay down the responsibilities and duties of the internal audit function in an audit charter. After the Audit Committee has been informed by the managing director, he will also make these tasks known to the organization's management. Arrangements of importance to the execution of the tasks are also laid down in this charter.
9. Internal audit will attend the meetings of the Audit Committee, as well as those of the Supervisory Board, at its invitation, along with the mandate, as necessary, to confer with the Chairman of the Audit Committee and/or the Supervisory Board.
10. Internal audit will promote the implementation of audit recommendations made, without affecting the impartiality of the internal audit advisory role.
11. Internal audit will periodically propose audit planning for consideration and approval by the managing director.
12. The Audit Committee will discuss the planning, realization and reporting of the internal audit function in the presence of the managing director and the internal auditor.
13. The officer commissioning the external audit will request the external accountant to pay special attention in his management letter to the performance of the tasks of the internal audit function.
14. One of the duties of the internal audit function is to judge the set-up and operation of specialized assurance functions.

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<sup>17</sup> The position paper includes an explanation (2005: p. 3) for the description of this function: The neutral term '*managing director*' is used for the Chief Executive Officer as well as the Minister and/or Secretary General (SG), being the highest political or official head of a Ministry.

15. Taking into account their own specific assignments, the external accountant and the internal auditor will co-operate optimally.
16. The managing director of an organization decides to what extent the internal auditor will be involved in the financial audit. This involvement may imply that the internal auditor issues an internal auditors' certificate.

This paper discusses familiar items such as function, expertise, positioning, overview, relationships with other assurance providers, the relationship with the external auditor and its certification role. Some new insights are included: *Firstly*, the position paper includes different kinds of audit (e.g. operational, financial, compliance and Health, Safety and Environment (HSE) audits) under the umbrella of internal audit, while in 1998 these audits were performed by different functions. *Secondly*, there is a statement on multidisciplinary audit teams. The new element relates to the inclusion of specialists *from the business*. This points to a new direction with a mix of expertise, outside the regular RA, RO, RE and RC areas. *Thirdly*, the position paper states the requirements of working in accordance with the norms and standards of one or more of the recognized and authoritative professional associations in the Netherlands, such as the Dutch Institute of Internal Auditors (IIA), the Royal Dutch Institute of Chartered Accountants (NIVRA) and the Association of Chartered Operational Auditors (VRO), the Dutch Order of Chartered EDP Auditors (NOREA) and the Dutch Order of Accountants-Administration-Consultants (NOvAA) (IIA-NL, 2005: 6-7). This could be a challenge, as they all have their own view and each covers a part of the overall internal audit activities<sup>18</sup>. In addition, this limits the scope of available knowledge and experience, required for a multidisciplinary function – the required inclusion of specialists *from the business* and their knowledge, norms and standards may be inconsistent with using the norms and standards of the predefined associations. *Fourthly*, the roots of the internal financial auditor are still visible in the position paper and the issuing of an internal audit certificate. This is only possible for internal auditors who carry the post-nominal's RA or AA with certifying qualification.

The Dutch IIA updated its position paper in 2008 with a further extension of the position and claimed added value and scope of internal audit activities in relation to the more formal position paper of 2005 (IIA, 2008). In this position paper, internal audit is linked to the so called three *lines of defence* model, i.e. management as the

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<sup>18</sup> The difference between the associations has decreased in 2011 as IIA and VRO, as well as NIVRA and NOvAA, have merged.

first line of defence; control/compliance/risk management etc. as a second line of defence and internal audit as the third line of defence<sup>19</sup>. The scope of work of internal audit should be seen in comparison with the activities performed by management and supporting functions, together with the level of automation of basic control elements. This provides the opportunity for internal audit to build on these activities and to perform activities in other areas. The main changes described in the position paper relate to the extension of activities, including auditing project and program management, assessing integrity and fraud prevention and related social or soft control, assessing supporting functions such as HR and Marketing, and finally, auditing the information with regard to the corporate sustainability report. The first activities relate to risk areas, to weak spots in a control system, where things could go wrong. The role of the internal audit in the corporate sustainability reporting is not based on a risk perspective, but is of a more facilitating nature and limits the cost of external audit.

### **2.3.4 Relationship with stakeholders**

More recent publications cover the relation of internal audit and the Audit Committee (IIA, 2008), the external auditor (IIA et al., 2009) and other governance, risk and compliance (GRC) functions (IIA et al., 2010).

The publication regarding the existing relationship with Audit Committees in the Netherlands covers interviews with Audit Committee chairmen and describes some best practices (IIA, 2008). The report concludes that Audit Committee members have a *more intensive* relationship with the chief internal auditor, also due to a more direct reporting line, more frequent meetings and more involvement of the (chairman of the) Audit Committee in the appointment, evaluation and dismissal of the chief internal auditor. According to the Audit Committee chairmen there is room for improvement in the area of reporting, contact outside formal meetings and the use of internal audit as a front office to attract talent (talent pool function). In addition, the report includes statements from Audit Committee members such as *... assign grades ranging from 4 through 9 to the internal audit functions ... and Generally speaking, the results of the internal audit functions ... are acceptable* (IIA, 2008: p. 22), without clarification of the underlying meaning and elements of

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<sup>19</sup> Although not marked as a line of defence, the Audit Committee and External auditor could also be described as lines of defence. The origins of this three-lines-of-defence model are obscure; it didn't work during the recent financial crisis for the financial sector for which it was developed. So it should be questioned if this model is fit-for-purpose or just another management fad.



improvement. This is a missed opportunity to detail what should be improved besides the general points mentioned earlier, because this may bring the function of internal audit to a next level instead of muddling through. The report also includes an interesting statement with regard to outsourcing, this not being an option for the Audit Committee members, and capacity that should be more flexible (i.e. during major change processes the audit capacity should increase).

The report on the relationship between internal and external audit reflects the status quo of relying on each other's work to cover all relevant audit areas (IIA et al., 2009). The report mentions that the external auditor relies on the internal auditor's work; however the external auditor would like to see more reciprocal reliance. The report intends to highlight the possibilities and best practices to align the work of external and internal audit. However, the report is written more from the perspective of the external auditor rather than that of the internal audit perspective or from a governance perspective. The report covers only a part of the perspective of internal audit, namely the part that covers the common scope of internal and external audit.

A last report regarding governance covers the results of the role of internal audit in the area of governance, risk and compliance (GRC) (IIA et al., 2010). The conclusion of the report is, among others, that internal audit is the spider in the web and has access to all parts of the firm. The main conclusions of the report are (IIA et al., 2010: p.4):

- The approach of the Internal Audit function to produce an assessment of the governance in an organization can certainly be professionalized more.
- Distributing GRC responsibilities among several functions results in better control of the organization.
- Risk management is still being developed and the internal audit function does not have a clear approach of how to evaluate it yet.
- The Internal Audit function still focuses too much on risk management processes and too little on the outcome of these processes<sup>20</sup>.
- The activities arising from legislation and regulation, also referred to as 'regulatory compliance', are increasing perceptibly and reinforce a rule-oriented culture to the detriment of a principle-based culture.

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<sup>20</sup> This is an interesting suggestion and shows the further evolvement of the IIA/Nivra knowledge and understanding as in their 2008 report *Allies in Governance* they suggested focusing only on the *design* and *functioning* of risk management, seen also on the previous page of this study.

Overall, this report is a reactive response to a temporary phenomenon called governance, risk and compliance, without using a clear theoretical basis, without including a clear position and without including outlooks. Furthermore, the interpretation of the role of internal audit in it is very narrowly focused, and does not include a multidisciplinary view on the phenomena control in relation to a firm and its institutional context.

### 2.3.5 Study report Common Body of Knowledge (CBOK)

In 2010, the Dutch IIA published a report on the IIA Common Body of Knowledge (CBOK). It describes the main changes in scope with survey results from the IIA's global internal audit survey. The table below is a consolidated overview on earlier research by Paape (2007) and the new figures of the 2006 IIA CBOK data published by IIA Netherlands (IIA, 2010b), to provide a longer period of comparison.

	<b>Govern- ance*</b>	<b>Financial audit</b>	<b>Operational audit</b>	<b>Compliance audit</b>	<b>IT audit</b>	<b>Other</b>
1991	--	46%	32%	--**	12%	10%
1998	--	30%	51%	9%	--***	10%
2000	--	22%	45%	9%	16%	8%
2003	3%	30%	26%	13%	11%	17%
2006	6%	21%	27%	17%	12%	17%
2009 ****	8%	18%	27%	16%	13%	18%

**Table 2.1: Division of activities and time spend**

\* = was not measured in 1991, 1998, 2000

\*\* = not specified in 1991

\*\*\* = No IT included in 1998

\*\*\*\* = 2006 prediction for 2009

Paape already identified certain difficulties in comparing the figures between 1991-1998-2000. His problem with the figures was that no reference was made to IT

audit in 1998. Although the percentage for operational audits went up significantly (from 32% to 51%, falling slightly back to 45%) and the percentage for financial audits decreased from 46% to 30% and then to 22%, this might be because EDP audit was categorized under operational audit in the second study.

Furthermore, the study results of 2006 (covering 2003 figures and an estimate of 2009) show a huge decrease of attention for operational audits and even a decrease in IT audits, which is peculiar. It may be explained by the decrease in the hype surrounding operational audits, as discussed before. The decrease of IT audits can be explained by a more integrated operational audit approach, which also covers IT (application) control.

There is also a remarkable increase for the element financial audits in 2003. This may be explained by the Sarbanes Oxley regulation, which required more attention for financial audits. Paape (2007) mentioned this as well — it is here to stay and will not be completely absent from the activities of internal audit.

In addition, there is a new subject in the reports called *governance*, which is considered to be part of the internal audit activities. Section 2100 of the *International Standards for the Professional Practice of Internal Auditing (Standards)* describes governance in more detail (IIA, 2010a): *The governance process relates to the following objectives:*

- *Promoting appropriate ethics and values within the organization;*
- *Ensuring effective organizational performance management and accountability;*
- *Communicating risk and control information to appropriate areas of the organization; and*
- *Coordinating the activities of and communicating information among the Board, external and internal auditors, and management.*

The report does not clarify which specific activities internal audit needs to carry out to achieve good governance. A recent publication of the IIA Netherlands also mentions the governance element and it indicates increased attention to the provision of training for the Audit Committee, regulatory compliance assessment monitoring and corporate governance (IIA, 2010b). The concept of governance used in the report is a specific interpretation of the term *governance*, which is not based on the international literature on (corporate and internal) governance (e.g. Tricker, 1984 and Williamson, 1996).

A different description of *governance*, defined in a recent IIA Inc report, is: *providing administrative support for the Audit Committee* (Anderson, 2003: p. 33). If this refers to the final objective, it only covers the regular internal audit reporting, but under a new heading. The question is, whether this is confirmed by the directors of internal audit within AEX-listed firms who were interviewed in the empirical part of this research.

## **2.4 Research by the Institute of Internal Audit (1941-2010)**

The global professionalization of internal audit started with the establishment of the Institute of Internal Auditors in the United States in 1941 (Brink, 1991; Courtemanche, 1991; Sawyer, 1996)<sup>21</sup>. In 1941, two internal auditors, Robert B. Milne and John B. Thurston, concluded that a new professional body focusing on internal audit was needed for further professionalization (Brink, 1991). The purpose of the Institute of Internal Auditors is described by one of its founders, Robert B. Milne in 1945 (Flesher, 1996: p. 1):

*The Institute is the outgrowth of the belief on the part of internal auditors that an organization was needed in the structure of American business to develop the true professional status of internal auditing... Although its roots are in accountancy, its key purpose lies in the area of management control. It comprises a complete intrafirm financial and operational review.*

This initial purpose of the Institute of Internal Auditors was more vision than reality. In practice, internal audit was still an accounting-related function with a strong link to the external financial auditors. The interpretation of the word *management control* could also cause some confusion as it is not consistent with main stream definitions of management control as defined by Anthony and/or Merchant (see chapter 4 for details on their definitions).

A next step in the professionalization of internal audit were the so-called Statements of Responsibilities of the Internal Auditor (Gupta et al., 1992; Sawyer, 1996). The purpose of this statement was to provide a general understanding of the

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<sup>21</sup> The need for a global professional institute became evident after chapters of the IIA spread from the United States to other countries. Currently, the Institute has around 96 institutes over the world. The institute of Internal Auditors is a recognized professional association with a bi-monthly internal auditing magazine, a certification program to Certified Internal Auditor (CIA) and many seminars and training opportunities, as well as its own research foundation with research on the history, developments and future of internal auditing.

objective, scope and responsibilities of internal audit. In the first statement in 1947 the emphasis was on accounting and financial matters. The early Statement of Responsibilities of Internal Audit (1947) described internal audit as *an independent appraisal activity within an organization for the review on the accounting, financial and other operations as a basis for protective and constructive service to management. It is a type of control that functions by measuring and evaluating the effectiveness of other types of control. It deals primarily with accounting and financial matters, but it may also properly deal with matters of an operating nature.* (IIA, 1999b: p. 53)

Over the years the Statement of Responsibilities of Internal Audit (1957, 1971, 1976, 1981, 1990) was adapted and was finally integrated into the International Professional Practices Framework in 2002. Between 1947 and 1971 the focus was more on operational control than on financial and accounting matters. From the 1971 statement onwards, the scope of internal audit was focussed entirely on operations and the words 'accounting' and 'financial' were eliminated. The financial and accounting matters were seen as a part of the operations, and therefore did not need to be made explicit, according to the IIA.

Another, more fundamental, change was the proposal for a new definition of internal auditing (IIA, 1999b; Krogstad, Ridley, & Rittenberg, 1999): *Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.*

The premises of the new definition, explained in publications covering the main changes (Chapman & Anderson, 2002; Krogstad et al., 1999), are:

1. Internal audit is not only characterized as an independent, but also as an objective activity. This should enable an internal audit function to perform engagements on behalf of management or a business unit which may not be possible from the standpoint of independence but are possible in the sense of taking an objective (verifiable) approach. However, independence is also related to the organizational position of Internal Audit. The IIA standards prescribe that internal audit must report to a level within the organization that allows them to fulfil its responsibilities. Ideally, internal audit should report functionally to the Audit Committee, the Board of Directors, or any other appropriate

governing authority, and administratively to the Chief Executive Officer (CEO).

2. Internal audit does not necessarily need to be established within the firm, but may be outsourced to an external party. While the internal audit function has traditionally been seen as an internal activity, many firms have outsourced some or all of their internal audit activities. When internal audit is outsourced, it is mainly outsourced to its external auditor or another audit firm. (Carey, Subramaniam, & Chua Wee Ching, 2006). Since 1999 there has been discussion on outsourcing of internal audit, especially in relation to external audit. Most recently, a discussion focussed on the company Rentokil, that outsourced the internal audit function to their external auditor (see also paragraph 2.6.4).
3. The new definition emphasizes that the scope of internal audit encompasses assurance *and* consulting activities. This is explained as internal audit being a proactive, customer-focused function, concerned with key issues in control, risk management and governance — including monitoring new projects — without losing sight of its independent, objective role. This shift in focus is also highlighted in the starting statement from Wayne Gretzky in the article from Krogstad, Ridley, & Rittenberg (1999): *I skate to where the puck is going to be, not where it has been.*
4. To remain viable, the new definition explicitly states that internal audit is *designed to add value and improve an organization's operations*. Internal audit needs to be perceived as a contribution to an organization. This is an essential point and it is also interesting to see how this added value can be measured. The IIA does not expand on questions such as *How much value do internal audit services add? What costs are involved?* and *How to improve the effectiveness and efficiency of services rendered* (Paape, 2007). Most frequently used performance methods for the internal audit activity include 1) assessment by percentage of the audit plan completed; 2) acceptance and implementation of recommendations; 3) surveys/feedback from the Board/Audit Committee/senior management; 4) customer/auditee surveys from audited departments; 5) assurance of sound risk management; and 6) reliance by external auditors on the internal audit activity (Chenhall, 2003: p. 49).
5. Internal audit does not only focus on control or financial control, but its *scope* has expanded to risk management and governance processes, in order to help organizations *accomplish overall objectives*. It must reflect the organizational service drivers and the entire chain of value. This statement shows the shift from control to risk and governance. Attention to risk-based internal audit was initiated in the late 1990's and described the link to business objectives instead of only financial statement related objectives (McNamee et al., 1998).

6. The last premise and, according to the IIA, the most valuable asset consists of being a standards-based profession, as the basis for crafting a documented, disciplined and systematic process that assures quality performance on internal audit engagements.

Again, as in 1945, this definition reflects changes that already occurred. However, it should be seen as guidance to a more influential role in the future as well. It is also a kind of mission statement for future direction, without clarification of the current status versus future prospects. However, to date the 1999 IIA definition and scope are still in use, the only change relates to the attention for the areas *control, risk management and governance*. In the global IIA studies of 2006 and 2010 the following key activities regarding internal audit are taken as starting point (Allegrini, D'Onza, Melville, Sarens, & Selim, 2011):

- Governance
- Operational Audit
- Regulatory compliance
- Financial Audit
- Risk Management

Control seems to be included in operational audit, regulatory compliance and financial audit. Interestingly, there seems to be no explicit attention for IT!? In the glossary of the 2010 CBOK studies the following definitions are provided (Allegrini et al., 2011: p. 73-76):

*Governance: The combination of processes and structures implemented by the Board to inform, direct, manage and monitor the activities of the organization toward the achievement of its objectives.*

*Risk management: A process to identify, assess, manage and control potential events or situations to provide reasonable assurance regarding the achievement of the organization's objectives.*

*Control: Any action taken by management, the Board and other parties to manage risk and increase the likelihood that established objectives and goals will be achieved. Management plans, organizes and directs the performance of sufficient actions to provide reasonable assurance that objectives and goals will be achieved.*

*Compliance: Adherence to policies, plans, procedures, laws, regulations, contracts, or other requirements.*

How these definitions, formulated by the IIA, match with equivalent definitions in other academic fields remains to be seen. The definitions cover parts of definitions in academic literature, but do not use them accurately. The definition of *governance* and *control*, for instance, seem to be a mixture of the definition of corporate governance by Tricker (1984) and management control by Merchant (1998), but in the end the definition lacks accuracy. In the following chapters more accurate definitions will be presented and will provide more clarity.

The 2010 CBOK studies do not provide separate definitions of operational, compliance and financial audit, but only a general statement about assurance services: *An objective examination of evidence for the purpose of providing an independent assessment on governance, risk management and control processes for the organization. Examples may include financial, performance, compliance, system security and due diligence engagements.*

An extensive global IIA study in 2006 and 2010 revealed the following key results and focus areas with regard to internal audit (Allegrini et al., 2011; Burnaby & Hass, 2009): A first conclusion was that there is limited theory to the reason why an internal audit function exists. The only explanation is the requirement by law (such as government decrees or parliamentary acts) or regulation (such as stock listing rules, central banking regulations) (Allegrini et al., 2011: p. 2). In the 2006 survey, 62% of the respondents indicated that the internal audit activity existed because of the requirement by law or regulation. The survey of 2010 shows an increase to 70% and an expected increase to 75% in the next five years.



In 2006, the respondents indicated the following audit activities as most important and less developed roles (Burnaby et al., 2009: p. 828)<sup>22</sup>:

No	TOP 4 in 2006	Top 4 least performed activities in 2006
1	Fraud prevention	Executive compensation
2	Risk Management	Globalization
3	Regulatory Compliance	Environmental sustainability
4	Corporate Governance	Emerging markets

**Table 2.2: Most and least developed internal audit activities 2006 (Burnaby et al, 2009)**

In 2010, the respondents indicated the following audit activities as most important and less developed roles (Allegrini et al, 2011):

No	TOP 5 in 2010	Top 5 least performed activities in 2010
1	Operational audit	Implementation of Extensible Business Reporting Language (XBRL)
2	Compliance with regulatory code (including privacy) requirements	Executive compensation assessments
3	Auditing of financial risks	Migration to International Financial Reporting Standards (IFRS)
4	Investigations of fraud and irregularities	Social and sustainability (corporate social responsibility, environmental)
5	Evaluating the effectiveness of control frameworks	Quality/ISO audits

**Table 2.3: Most and least developed internal audit activities 2010 (Allegrini et al., 2011)**

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<sup>22</sup> It should be noted that the IIA survey results do not provide any indication of the proportion of working time spent on the key internal audit areas. Therefore, a comparison in division of time is not possible.

As there were differences in the questionnaires used in 2006 and 2010, a direct comparison of results is not possible (Allegrini et al., 2011). Nonetheless, the authors of the 2010 survey indicate that both operational audit and compliance audits continue to be important activities. Furthermore, the areas governance and risk management continue to be more important, besides the financial and operational audits that are expected to remain stable during the next five years.

Furthermore, the global IIA study from 2010 reports the following trend in the future of important attention areas (Allegrini et al., 2011):

- Corporate governance reviews
- Audits of the enterprise risk management process
- Reviews addressing linkage of strategy and firm performance (e.g., balanced scorecard)
- Ethics audits
- Social and sustainability audits

These activities are linked to a perceived increase of importance of compliance with corporate governance codes and related implementation of control frameworks. The IIA study also reveals that there is gap between the expectations of management and those of employees of internal audit functions, and the authors suggest that there is a lack of shared vision or consensus on where the profession is going (Allegrini et al., 2011).

The IIA research and their suggestions for expansion of internal audit's scope of work do not always seem to be theory-driven or demand-driven, but opportunity-driven. However, this approach also leads to semantics (new words for activities but no new content) and *muddling through* on old research questions which do not cover all relevant changes in the institutional context of firms and its environment.

## **2.5 Regulations Influencing Internal Audit**

The question to be asked is whether the existence of internal audit and its scope of work are determined by exogenous forces, in particular the institutional or regulatory context of the firm. Therefore, to understand this question, some relevant changes in the institutional or regulatory environment of the firm will be discussed, applicable to multinational firms that form the scope of this thesis.

In 1997, the Dutch Committee on Corporate Governance (*Peters Committee*) issued the first corporate governance report. This report did not pay attention to the role of internal audit. In 2003, the Corporate Governance Committee (*Tabaksblat*

*Committee*) updated the recommendations made by the Peters Committee. The Tabaksblat Committee was initiated after the accounting scandals in the United States, Europe and the Netherlands. The Committee and its code were to provide a more detailed guide for listed firms to improve their governance (Corporate Governance Committee, 2003: p. 67). The Committee also provided principles regarding internal audit as a relevant function in the evaluation of the internal risk and control systems. The updated code of 2008 included additional principles regarding internal audit in relation to the Audit Committee. In the absence of an internal audit function, the Audit Committee has to assess and the Supervisory Board has to explain its recommendation in the Supervisory Board's report (Corporate Governance Code Monitoring Committee, 2008).

The Dutch financial industry was one of the first to have regulations regarding the role of internal audit. Before the implementation of the *Wet Financieel Toezicht* (Wft) in 2007, the Dutch financial sector already had mandatory rules laid down in the *Regeling Organisatie Beheersing* (ROB). The rules stipulate the requirement of a permanent internal audit function to systematically test and evaluate the effectiveness of the organizational structure and control mechanisms (Paape, 2007). Besides the regular Dutch Corporate Governance Code, the Dutch Banking code of 2009 includes the requirement of an independent internal audit function who has a reporting line to the chairman of the Audit Committee (NVB, 2009). The banking code, like the IIA definition, addresses the scope of internal audit with a focus on the quality and effectiveness of the bank's system of governance, risk management and control procedures.

The approach of contemporary internal audit, risk and control in the Dutch environment can be traced back mainly to the U.S. and U.K. and in case of the financial sector to the Basel and Solvency Committees. The description will start with the highlights of the most influential regulations and committees in the U.S. in relation to the role of internal audit:

### **2.5.1 Foreign Corrupt Practices Act**

As a result of the Watergate investigation (1973-1976), legislative and regulatory bodies started to pay attention to control of public listed firms (COSO, 1992). Separate investigations by the Office of the Watergate Special Prosecutor and the SEC revealed that a number of large U.S. firms had been making illegal political contributions and questionable or illegal payments to foreign government officials. The response to these investigations was the introduction of a bill that was enacted as the Foreign Corrupt Practices Act (1977). Although the main purpose of this act

was to eliminate payments by U.S. firms to foreign officials to assist a firm in obtaining business, its secondary purpose was to enhance control within U.S. firms (Flesher, 1996). The act required that public firms maintain a system of internal control (see 15 U.S.C. § 78m). These control systems should be sufficient to provide reasonable assurances that transactions are authorized and recorded to permit the preparation of financial statements that conformed to the generally accepted accounting principles (Brink, 1991). This created an opportunity for internal audit to broaden their scope of work to include the whole system of control besides the familiar accounting control (Courtemanche, 1991). The Act also led to an increase in the establishment of internal audit functions in the U.S. and to the growth of the size of existing internal audit functions. The Foreign Corrupt Practices Act has, therefore, also been nicknamed the internal audit full-employment act (Flesher, 1991).

### **2.5.2 Treadway Commission**

By 1985, there was renewed attention for control after a number of business failures at savings & loans banks and alleged audit failures (COSO, 1992). The National Commission on Fraudulent Financial Reporting was created in 1985 by the joint sponsorship of the AICPA, American Accounting Association, FEI, IIA and Institute of Management Accountants (IMA), under leadership of Mr. Treadway. The main objective of the commission was to identify the causal factors leading to fraudulent financial reporting and to define recommendations for the future reduction of incidences (Treadway, 1987). The work of this commission resulted in the issuance of the Report of the National Commission on Fraudulent Financial Reporting which emphasized the significance of competencies and behaviour of management and employees, competent and involved Audit Committees and an active and objective internal audit function (Treadway, 1987: p. 11-12). The Commission emphasized the importance of the internal audit function in the entire financial reporting process and its coordination with the independent external auditor.

Based on the recommendations of the Treadway commission, a task force under the auspices of the Committee of Sponsoring Organizations (COSO) of the Treadway Commission was set up to provide practical and broadly accepted criteria for establishing internal control and evaluation of its effectiveness. The purpose of the COSO committee was to provide a common understanding of internal control among all parties (corporate management, internal and external

auditors, legislators, regulators, academics and the general public) and to assist management to exercise better control over a firm (COSO, 1992: p. 98).

In 2001, the COSO Committee published the Enterprise Risk Management - Integrated Framework, which expands on internal control with an extensive focus on the subject of enterprise risk management (COSO, 2004). This framework is not intended to replace the internal control framework from 1992, but rather incorporates the internal control framework.

### **2.5.3 Sarbanes-Oxley Act**

The Sarbanes-Oxley act was signed into law in July 2002 as a direct result of U.S. corporate failures, in which significant control failures were associated with fraudulent financial statements. This act defines a comprehensive set of requirements, intended to lead to improvements in the governance and control of public registrants in the U.S. Most familiar is the required executive responsibility for effectiveness of control infrastructures, the procedures for financial reporting and the quarterly certification of, and annual attestation to, the effectiveness of control infrastructures and accurate, complete and timely financial statements (Sarbanes-Oxley Act (SOX), 2002).

Although internal audit is not included in the Sarbanes-Oxley act, the law turned out to have great consequences for internal audit functions. The U.S. legislator took the setting of audit standards for the audits of public firms away from the AICPA, a private standard setter, and created a new body, the Public Company Accounting Oversight Board (PCAOB), to set the audit standards for public firms (Rittenberg & Miller, 2005: p. 3). The directions in the Audit Standard are based on the internal control framework established by COSO and caused this to be more widely known and applied.

The Sarbanes-Oxley act also has some limitations. The approach stresses on financial reporting. In theory, the COSO framework also identifies efficiency and effectiveness of operations and compliance with laws as objectives of control. These two objectives are less directly related to the presentation of and required disclosures in financial statements and, therefore, receive less attention.

Internal audit has played a significant role in most organizations' compliance efforts during the first years of the Sarbanes-Oxley act, by supporting management with the relevant risk & control documentation and testing, including updates to management and Audit Committees (Rittenberg et al., 2005). After the

implementation of the Act, internal audit's attention for the requirements of the Act returned to their assurance role only. However, it shows the strong linkage between internal audit and control for financial reporting as a basic building block of internal audit functions.

#### **2.5.4 Listing standards of the NYSE**

As a result of the corporate failures (like Enron, WorldCom) in the U.S., the New York Stock Exchange (NYSE) responded with new corporate governance and disclosure standards to enhance investor protection (NYSE, 2004). One of the standards' rules was the requirement for all publicly listed firms to have an internal audit function (section 303A). The requirements state that the internal audit function should have a clear reporting line with the Audit Committee to ensure that the oversight function is operating effectively. This standard reinforces the legitimacy of internal audit for large firms.

Besides the developments in the U.S., there have been developments in the U.K. that influenced the Dutch environment and the Dutch code of corporate governance (such as the *comply or explain* focus and attention for principles besides rules), although less direct than the U.S. points.

#### **2.5.5 U.K. Combined Code**

In 1992, the Committee on the Financial Aspects of Corporate Governance (under responsibility of Sir Adrian Cadbury) issued a report on corporate governance specifically relating to financial reporting and accountability. The committee wanted to achieve a balance between the essential powers of the Board of Directors and their accountability. The reason for the initiative to set up this committee was the concern about a perceived low level of confidence both in financial reporting and the related ability of auditors to provide assurance on the reliability of these reports and the safeguarding of assets (Cadbury Committee, 1992). These concerns were heightened by some unexpected corporate failures of major U.K. firm's (e.g. Maxwell and Polly Peck).

The internal audit function is described as complementary to, but different from, that of outside auditors (paragraph 4.39 of the Cadbury Code). The committee recommends that firms establish an internal audit function to monitor the control system including procedures. Internal audit is seen as an integral part of a firm's system of control, together with supervision by the Audit Committee.

The discussion on the scope of the description of control was clarified in the Rutteman Working Group in 1994. This working group decided that the scope of the published statement of a firm's control could be restricted to financial control only (Rutteman Working Group, 1994)<sup>23</sup>. The scope for reporting on control effectiveness in the U.K. changed from internal financial control in the Cadbury and Rutteman reports to internal control (financial, operational, compliance control) and risk management in the Turnbull report (principle D.2.1.) (ICEAW, 1999). This development is also visible in the scope of internal audit in the U.K. (Spira et al., 2002). Furthermore, the relationship between the Audit Committee and internal audit has been strengthened as well since the Smith report (Smith Committee, 2003).

### **2.5.6 Basel Committee and Solvency**

The Basel Committee has a strong influence on the European banking sector. Although it does not possess any formal supranational supervisory authority, it does provide standards, guidelines and best practices which are adopted by the European Commission and/or by local countries. In 2001, the Basel Committee issued its best practices paper *Internal audit in banks and the supervisor's relationship with auditors* (the Internal Audit Paper). This paper highlighted the importance of internal auditors in banking organizations and the need for cooperation between banking supervisors and banks' internal and external auditors (Basel-Committee-on-Banking-Supervision, 2001). These guidelines are translated in the Dutch Financial Supervision Act (Wet op het Financieel Toezicht (Wft)) as referred to earlier in this paragraph. The same applies to the insurance firms that are overseen by Solvency (II), a set of rules and regulations of the European Union, among others to set a proper risk management and control system<sup>24</sup>.

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<sup>23</sup> Over the years, the U.K. code of corporate governance is monitored and updated with new views (Hampel in 1998, Turnbull in 1999, Smith in 2003, Flint in 2005, etc).

<sup>24</sup> For reference see [http://ec.europa.eu/internal\\_market/insurance/solvency/index\\_en.htm](http://ec.europa.eu/internal_market/insurance/solvency/index_en.htm)

## 2.6 Academic Research on Existence and Scope of Internal Audit

The understanding of the existence and scope of internal audit can also be increased by investigating academic research on this topic. Paape performed research on academic and professional publications between January 1994 and April 2005, concluding that academic literature on internal audit is limited (Paape, 2007). This chapter will build on Paape's prior study. Articles and papers were collected via university databases, Academic and Business Source Premier and journal collections from JSTOR, Sage, Science Direct, SpringerLink and Google scholar.

Paape (2007) surveyed 30 journals over the period January 1994 to April 2005 and 204 articles (see Appendix II). He mentioned that most articles were part of only a few journals, such as *Managerial Auditing Journal*, *Journal of Auditing* and the Dutch *Maandblad voor Accountancy en Bedrijfseconomie*. This research will review the period of May 2005 to January 2011 and investigate themes covered by the articles.

From the new research can be concluded that internal audit is still not a subject in management-related academic journals, such as the *Administrative science quarterly* and *Academic management review*. The articles found are included in accounting and audit-related journals, such as *Accounting Horizons*, *International Journal of Auditing* and *Managerial Auditing Journal* (for details see appendix II). Furthermore, 62 articles that include internal audit as a topic were identified in the selected period<sup>25</sup>. On average, approximately 10 articles on the subject were found each year (2005 – 11, 2006 – 11, 2007 – 8, 2008 -5, 2009 – 14, 2010 – 10, 2011 – 3 up to January). Most articles on internal audit have been published in the *Managerial Auditing Journal* (27 articles) and *International Journal of Auditing* (14 articles). In some cases, additional journals have been taken into account as they they cover articles of internal audit in the selected period (for details see appendix II).

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<sup>25</sup> The difference in total in comparison to the earlier selection of Paape is related to his selection of articles in the *Managerial Auditing Journal*. Paape's selection included all publications containing some reference to internal auditing. This thesis only includes articles which highlights internal audit in the title of the article. This limited the number of relevant articles substantially.



The following main themes resulted from the review on various articles<sup>26</sup>:

<b>Topic</b>	<b>Description</b>	<b>Use of theories</b>	<b>Research setting</b>
Internal audit existence	Articles describing factors driving the adoption and characteristics of internal audit functions and the identification of organizational drivers of internal audit effectiveness.	Agency theory, Institutional theory	U.S., Australia, Italy, Belgium, Ethiopia
Scope of internal audit activities	Internal audit practices and developments in scope of work (risk based, value added, compliance, etc.) and in relation to external influences.	Limited to audit references, no explicit theories	U.S., Middle East, Africa, Asia, Europe
Relationship internal audit and external audit	Most articles refer to reliance of external audit on internal audit from an external audit perspective. Furthermore, there is a link with fees and outsourcing.	Limited to audit references, no explicit theories	U.S., Australia, Jordan
Outsourcing of internal audit	Sourcing decisions on internal audit activities and the impact of insourcing and outsourcing.	Transaction Cost Economics, Resource-based view on the firm	U.S., Australia, Netherlands
Relation to and with Audit Committee and Management	Articles relates to the independence and objectivity of internal audit. Furthermore, the articles describes the association of Audit Committee oversight and the nature of internal audit activities	Limited to audit references, comfort theory (relates to agency theory)	U.S., Australia, Malaysia, Belgium

**Table 2.4: Internal audit themes from academic magazines**

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<sup>26</sup> There were a few general articles on the compliance with the IIA standards across Europe, U.S. and Asia as well. These are not relevant for this PhD and will, therefore, not be discussed.

### 2.6.1 Internal audit existence

The first identified and key theme for this study concerns the purpose of existence and the effectiveness of internal audit. There are only a few studies that researched the existence of internal audit in the period May 2005 – 2011.

The first three articles explain the existence of internal audit as a monitoring mechanism to reduce agency costs (Carcello, Hermanson, & Raghunandan, 2005b; Goodwin-Stewart & Kent, 2006b; Sarens et al., 2006). The agency costs are caused by information asymmetry between executive and independent directors, but also between senior managers and division/business unit managers. Internal audit is seen as a complementary mechanism besides control by management to create a proper governance structure that limits agency costs.

Carcello et al. (2005) first established that since 2001, the number of firms with an internal audit function increased due to regulations in the U.S. (such as the requirements of the NYSE). Furthermore, they investigated the size of internal audit functions, associated with the following variables (Carcello et al., 2005b: p. 70):

- Size of firm;
- Leverage;
- Type of industry, e.g. firms operating in the financial, service and utility industries;
- Relative level of inventory;
- Size of operating cash flows and
- Role of the Audit Committee, e.g. in the review on the internal audit budget.

Overall, they conclude that the establishment of an internal audit function, their size and scope of work is explained by a firm's risks, their ability to pay for monitoring, and their audit characteristics.

Sarens and Abdolmohammadi (2010) performed a similar study with a focus on the European (Belgian) setting. They found some conflicting results in comparison with Carcello et al, such as a positive relation between management ownership and the relative size of internal audit and a negative relation between the proportion of independent Board members and internal audit size.

Goodwin & Kent (2006) identified variables for the existence of an internal audit function, such as size, asset composition, industry (financial sector), strong risk

management, corporate governance (= existence Audit Committee and an independent (non-CEO) Board Chair). They also summarized earlier articles on the existence of internal audit, which support the use of the agency theory as framework for explaining the existence and scope of internal audit functions. A first reference is made to Wallace and Kreutzfeldt (1991) who laid the foundation with their research into the characteristics of firms with or without an internal audit function and who identified size (measured by revenue, assets and net income), profitability and cash flow, industrial competition, regulation, decentralization, competent accounting personnel and conservative accounting policies, strong management control and low error propensity as indicators for the existence, scope and size of internal audit functions. Carey et al. (2000) did not find the presence of internal audit to be associated with size, debt, or agency variables (the proportion of non-family management in the firm, and the proportion of non-family representation on the Board of Directors) at Australian family-owned firms. He concluded that the existence of internal audit as monitoring tool is viewed as substitute for, rather than as complementary to external audit. This conclusion should be seen in relation to the scope of the research — small family-owned firms, totally different from large, multinational firms.

Arena, Arnaboldi, & Azzone (2006) and Arena & Azzone (2007) use the new institutional theory as described by Meyer & Rowan in 1977 and DiMaggio & Powell in 1983 for the analysis of the existence and scope of internal audit functions in Italy. There are external forces that may lead to the choice to set up an internal audit function, e.g. laws and/or regulations, the choice of other organizations, consulting or professional bodies (Arena, Arnaboldi, & Azzone, 2006). The studies show a strong influence of regulations when they impose sanctions, which is the case with a listing on the New York Stock Exchange. Another finding was that successful firms with an internal audit function mimicked other firms, which were influenced by professional organizations (such as Big4 firms) or bodies (such as IIA).

Arena & Azzone identified the following additional reasons for management to establish an internal audit function: efficiency and effectiveness of business processes, identification and evaluation of enterprises' risks, additional attention for reliability of financial information and safeguarding of firm assets (Arena & Azzone, 2007). Furthermore, their study suggests significant correlations between the adoption of internal audit and the size (large versus small), industry (bank and insurance) and affiliation to the IIA. Their study also identified certain reasons like

fear of increasing bureaucratic complexity, cost-benefit analysis or the size of the firm (being too small) to not set up an internal audit function.

Christopher et al. adds to the Italian studies that the existence of internal audit, in conformance with the institutional theory, is a social expectation and pressure since corporate scandals at stakeholders (Christopher, Sarens, & Leung, 2009). An internal audit function is seen as a control in the governance framework of a firm and should, therefore, be in place.

Sarens et al provided questions for future research which will be kept in mind (Sarens et al., 2006): Does listing encourage firms to set up an IAF, or can the establishment of an IAF be considered as a part of the preparation for an IPO? Does the dispersion of operations have an impact on establishing an IAF; the more (less) dispersed the operations of an organization are, the more (less) the need to set up an IAF as monitoring mechanism? Do we wait for a critical evaluation of whether traditional IA activities are still able to meet the current needs of organizations? These questions, and especially the last question, will be explored further in the next chapters. A study of Van Peurseem indicated that line managers in Australia often do not believe that internal audit has sufficient knowledge to be able to meet the needs of management and they do not take their advice into account (van Peurseem, 2004). This leads to a negative reputation of the effectiveness of internal audit.

### **2.6.2 Scope of Services**

The articles related to the scope of services can be further categorized in the area of general developments in scope (Allegrini, D'Onza, Paape, Melville, & Sarens, 2006; Cooper, Leung, & Wong, 2006; Hass, Abdolmohammadi, & Burnaby, 2006), the role in Sarbanes-Oxley assessments (Carcello, Hermanson, & Raghunandan, 2005a; Nagy & Cenker, 2007), consulting activities (McNamee et al., 1998; Mihret & Woldeyohannis, 2008), fraud (Coram, Ferguson, & Moroney, 2008). It is interesting to note that there is only one article on information systems in relation to internal audit, while an efficient IT-function is thought to be essential for the success of a firm.

In 2006, the *Managerial Journal of Auditing* published a series of articles on the development of internal audit in Asia, U.S. and Europe, which all capture the same high level observations with respect to arguments to establish an internal audit function; *increasing complexity of business transactions, a more dynamic regulatory environment and significant advances in information technology have*

*resulted in opportunities and challenges for internal audit* (Allegrini et al., 2006; Cooper et al., 2006; Hass et al., 2006 ). In addition, the articles show differences per region. For example, they show that in Asia (covering, among other, Malaysia and Australia), the perceived status and professional leadership of internal audit was quite limited around 2006 (Cooper et al., 2006). This is also due to a lack of a professional program, such as used by the IIA. The article on the development in Europe describes the changes in Belgium, France, Italy and the U.K. (Allegrini et al., 2006)<sup>27</sup>. The article does not provide a single overview on developments, as it mentions the different maturity in every country. However, in a more recent article, Arena and Azzone describe the development from traditional accounting and financial control, into operational control, risk management and corporate governance (Arena & Azzone, 2009). They describe the activities ranging from regular assessments of the design and operating effectiveness of a risk and control system and training management to facilitating the implementation of enterprise risk management. Furthermore, the element 'corporate governance' can be interpreted as supporting the Audit Committee and external auditors in their duties with regard to monitoring the internal risk and control system.

The article on the developments in the U.S. was influenced mainly by the shift towards a focus on compliance as a result of the regulations of the Sarbanes Oxley act (Hass et al., 2006 ). This shift is seen as a potential reputation risk, as internal audit can be stereotyped as a compliance police agent, which most firms had left behind in the 1980s. Other articles on the Sarbanes Oxley act (SOx) were published by Carcello et al. (Carcello et al., 2005a) and Nagy & Cenker (Nagy et al., 2007). Carcello et al. investigated changes in internal audit after the U.S. accounting scandals and concluded that they had led to increased internal audit budgets and more frequent contact with the Audit Committee. Nagy & Cenker support the finding of more budget and work for internal audit on one side, and the risk of damage to its professional status on the other, due to the focus on compliance-related activities. The literature from the IIA in one of the previous chapters shows that this concern was unfounded, as SOx has not taken over all time and resources of internal audit functions.

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<sup>27</sup> There is a reference to the Netherlands in the title of the article, but in the description there is no explicit attention for the state of affairs in the Netherlands.

### *Risk based internal audit & consulting*

Another development relates to risk-based internal audit, focusing on risks related to the objectives of a firm (Hass et al., 2006). This risk focus highlights areas like the IT environment, that is marked as increasingly important, but also the area of strategic alignment as part of adding value to management. In an article from 2010, the risk-based internal audit is described as a topic in development (Castanheira, Lima Rodrigues, & Craig, 2010). First of all, it describes the association between risk-based annual audit planning and private, large firms (especially in the finance sector). It concludes that internal audit has a more proactive role in the implementation of ERM in smaller firms. The latter underscores the development towards prevention-focused service, away from a sole control approach to a risk-based approach, that also leaves room for consulting services (Hass et al., 2006). This development is consistent with the IIA definition of 1999 that emphasizes value-added activities. Consulting services is a way to create added value, according to the IIA. There are some articles related to added value consulting activities. The articles describe the positive benefits in the sense of staff morale and the general standing of internal audit. In addition, the risk profile of a firm, the quality of strategic planning and marketing of internal audit influence the extent to which a consulting profile is attained (Mihret et al., 2008). Most common consulting activities concern risk management facilitation, project management, legislative compliance evaluations and contingency planning and disaster recovery evaluations and involvement in mergers, acquisitions and divestitures (McNamee et al., 1998).

These risk related activities increase the workload of internal audit and there is concern from chief internal auditors for higher risks of failure and risks with respect to independence for internal audit itself (McNamee et al., 1998). At an earlier stage, the debate on independence issues due to consulting activities was investigated by Meredith and Akers (Meredith & Akers, 2003). They concluded that the perceptions between CEOs and CAEs differed on this topic; CEOs prefer focus on assurance while CAEs preferred also involvement in consulting activities. This shows the gap between the demands from management versus the opportunity approach from internal audit functions.

### *Fraud*

Prevention and detection of fraud as a task of internal audit is a returning topic. Coram, Ferguson & Moroney identified that firms with an internal audit are more likely to detect and report fraud (Coram et al., 2008).

## *IT audit*

There is only one article to explicitly link internal audit with IT activities, while in other articles IT is mentioned as being a fundamental part of modern firms (Allegrini et al., 2006; Cooper et al., 2006; Hass et al., 2006). The study verifies the scope of activities regarding IT and concludes that the internal audit focus is primarily on traditional IT risks and control, such as IT data integrity, privacy and security, asset safeguarding and application processing (Abu-Musa, 2008). Other elements, such as competitive disadvantages, wrong IT selection, privacy violations and business interruption, are given little or no attention, according to the study.

### **2.6.3 Relation internal and external audit**

All articles that link internal audit to external audit are written from the point of view on external audit, discussing the question whether and how external audit can rely on internal audit. The background of the discussion relates to leveraging experience and reducing duplication of work, in effect the cost of external audit (Glover, Prawitt, & Wood, 2008; Munro & Stewart, 2010; Suwaidan & Qasim, 2010).

The reliance on an internal audit function from the point of view of external audit is determined by the following factors: objectivity of the internal auditor, competence and work performance in relation to financial audit related activities (Desai, Roberts, & Srivastava, 2010)<sup>28</sup>. Objectivity seems to be the most essential factor, followed by competence and work performance (Desai et al., 2010; Suwaidan et al., 2010). In addition, the actual reliance is also based on the expectations of litigation and regulatory costs. In case these are high, there is a higher probability of no reliance. In addition, Glover et al. (2008) found that external auditors are more willing to rely on the work of internal auditors when they perform objective tasks, as opposed to subjective tasks. This is also supported

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<sup>28</sup> Desai, Roberts & Srivastava (2010: p. 538) included the definitions (cited below) of objectivity, competence and work performance in their article: competence was defined as the educational level and professional experience of the internal auditor and other such factors. Objectivity was defined as the organizational status of the internal auditor and organizational policies affecting the independence of the internal auditor. Work performance was defined as the assessment of internal control, risk assessment and substantive procedure performed by the internal auditor. They have taken the definitions from SAS No. 65 (AICPA 1991).

by Munro (2010), who investigated the impact of consulting services by internal audit and the negative influence of this on the willingness of external auditors to rely on the work of internal audit. Another study reveals that client pressure can significantly increase the willingness of external auditors to rely on internal audit, especially in case significant non-audit services are provided (Felix, Gramling, & Maletta, 2005).

In addition, there are some articles investigating whether internal audit involvement in external audits increases the effectiveness of external audits (Lin, Pizzini, Vargus, & Bardhan, 2011; Prawitt, Smith, & Wood, 2009). They prove that external auditors are more likely to detect material weaknesses in the financial statement when they coordinate their efforts with the IAF. Furthermore, internal audit plays a relevant role in the prevention and detection of material weaknesses in the financial statement of a firm.

Another related topic is the relationship between the reliance of external on internal audit and the level of external audit fees. The economic benefits of coordination of and reliance on work of internal audit (e.g. lower fees) are recognized in several studies (Glover et al., 2008; Munro et al., 2010). Some others investigated the fees in relationship with the existence of internal audit and the attention for higher quality external audit. In this relationship, the external audit fees were higher when firms had an internal audit function and were committed to strong corporate governance, preferring good quality external audit (Goodwin-Stewart & Kent, 2006a; Singh & Newby, 2010).

Finally, one article took a broader perspective and investigated the process of professionalization of internal audit versus external audit in Denmark. The study indicates that external audit maintained an intellectual jurisdiction over internal audit by controlling its knowledge base through monopolizing the educational system, thus preventing Danish internal audit from obtaining a distinct jurisdiction of its own (Arena & Jeppesen, 2010). The same issue applied to the Netherlands, although that situation has been resolved by setting up a separate course system for the education of internal auditors at a number of universities that is independent from the educational system for external auditors, and by separating the IIA from the NIVRA.

#### **2.6.4 Outsourcing internal audit**

Academic and professional internal audit literature with respect to outsourcing of internal audit activities has two sides. On one side it is argued that in-house internal



auditors have more commitment and in-depth firm-specific knowledge (Carey et al., 2006). On the other side, the proponents of outsourcing emphasize the external providers' (usually a public accounting firm) specialist expertise, flexibility, and cost-effectiveness (Speklé, van Elten, & Kruis, 2007). Research shows that the *group affiliation bias* needs to be taken into account; Gramling and Vandervelde's study of internal audit objectivity with a group of internal and external auditors showed that both groups were in favour of their own *flavour* (Gramling & Vandervelde, 2006). The same conclusion is reached by Glover et al. who concluded, based on an experimental case, that external auditors will sooner rely on the work of outsourced rather than in-house internal auditors when the inherent risk is high (Glover et al., 2008).

When a firm outsources its internal audit, it is mostly outsourced to the firm's external auditor (Carey et al., 2006). Worldwide, this rate/percentage may have changed due to the Sarbanes-Oxley Act (Sec. 201g), which prohibited the outsourcing of internal audit services to firms' external auditors (Sarbanes-Oxley Act (SOX), 2002). This change in regulation was motivated by the belief that this outsourcing creates an economic bond between external audit firms and their clients, thus compromising the ability of the external auditor to take strong stands against misleading or fraudulent financial reporting (Prawitt, Sharp, & Wood, 2010: p. 1). However, the SOx rules do not prohibit outsourcing internal audit activities to parties not being the external auditor of the firm.

The transaction cost economics (TCE) view on Williamson is commonly used to explain the outsourcing decision of internal audit (Carey et al., 2006; Speklé et al., 2007). They explain the background of TCE as being the transaction costs related to factors such as uncertainty, frequency of activities and asset specificity (Carey et al., 2006; Speklé et al., 2007). Carey also links outsourcing of internal audit to the more strategic resource-based view on the firm, which focuses on core business activities and exploitation of competencies based on knowledge and expertise, rather than on channeling resources to non-core activities (Carey et al., 2006). Carey also makes a reference to Rittenberg and Covaleski: They concluded that external audit firms promote assurance services relating to internal audit activities as their core competence, while this is just a supporting mechanism within a firm (Rittenberg & Covaleski, 2001).

Speklé and Carey's empirical studies found that asset specificity (in the sense of specific knowledge) is significantly associated with the sourcing decision on internal audit activities (Carey et al., 2006; Speklé et al., 2007). They also found the variable *frequency* to be significantly associated with insourcing an internal

audit function, especially in case of large firms and firms that use internal audit on a frequent basis. Furthermore, they noted that traditional services of financial statement audit and compliance audit were outsourced, while other areas were kept in-house. However, the research of Paape did not support these outcomes, as it did not find significant relationships regarding asset specificity or information asymmetry (Paape, 2007). Paape suggests that these factors are more predictive for internal audit's size.

In 2009, the outsourcing by Rentokil of the internal and external audit work to KPMG initiated a discussion, starting with an article in the Financial Times (Hughes, August 3 2009). In the Netherlands, discussions started as well and were published in the *Maandblad voor Accountancy en Bedrijfseconomie*, led by Marcel Pheijffer (Pheijffer, 2009). The discussion is primarily related to the perception of independence. This is in line with additional studies by, for instance, Hill, who shows that Board members do not perceive the outsourcing of internal audit to the external auditor as problematic, as long as separate members of the staff of audit supplier work on the two engagements (Hill & Hoskisson, 1987). Pheiffer also highlighted the recent study by Prawitt, who showed that outsourcing internal audit work leads to an even lower accounting risk compared to any other outsourcing arrangement, or compared to the in-house internal audit (Prawitt et al., 2010). The overall conclusion is that more research is needed to get a clear discussion and picture. This may also be accomplished by making the necessary differentiations in the outsourcing activities. Abbott et al. distinguish different outsourcing activities, more specifically routine versus non-routine internal audit activities (Abbott, Parker, Peters, & Rama, 2007). The first may lead to economic bonding, while this may not be the case for non-routine tasks that are nonrecurring, specialized activities. Their main conclusion is that Audit Committees have the ability to monitor the sourcing of the firm's total internal and external audit coverage, while simultaneously exhibiting concern for external auditor independence.

### **2.6.5 Relation with Audit Committee and Management**

The IIA describes internal audit as one of the organizational cornerstones of corporate governance (Holt & DeZoort, 2009; Stewart & Subramaniam, 2010; Strand Norman, Rose, & Rose, 2010). The other organizational cornerstones are management, the Audit Committee and the external auditor. The articles in the selected timeframe concerning the governance of internal audit mostly deal with the question of independence, meaning that internal audit must be free to report findings, the reporting activities are not subject to any influences and internal audit

is to be professional to be able to form unbiased opinions (Ahmad & Taylor, 2009; Christopher et al., 2009; Holt et al., 2009; Strand Norman et al., 2010). Specific elements such as the relationship with management, the relationship between internal audit and the Audit Committee, fraud, and reporting outside the firm are covered.

Holt et al describe that internal audit functions are seen as a crucial function to stem fraud and abuse and to prepare accurate financial statements by focusing on the control of the financial reporting process (Holt et al., 2009). The importance of internal audit for outside stakeholders is mostly related to the prevention of fraud and/or the detection of fraudulent activity (Marden, Holstrum, & Schneider, 1997; Strand Norman et al., 2010), based on internal audits' perceived intimate knowledge of the organization and processes. Also, the existence of an internal audit function is perceived as an advantage, to prevent losses associated with fraud. Holt et al. even suggest firms to consider providing an internal audit report to external stakeholders, to provide additional transparency (Holt et al., 2009). Their survey revealed that this report increases investors' perceived oversight effectiveness and confidence in financial reporting reliability.

Independence in the sense of objective and professional functioning has been studied from different angles. One angle is the influence of incentive compensation or stock ownership on planning decisions, which resulted in the conclusion that internal audit in the study was not impaired by that (Marden et al., 1997). O'Leary and Stewart's study shows that the existence of an effective Audit Committee had limited impact on internal audits' ethical, objective decision making (O'Leary & Stewart, 2007). Ahmed et al clarified that independence is sometimes inflicted by ambiguity in the exercise of authority, time pressure, conflict between management and professional requirements and internal audit's personal values (Ahmad et al., 2009). Furthermore, Sarens and De Beelde found that senior management's expectations significantly influence internal audit planning and that their support is critical to the success of internal audit within a firm (Sarens et al., 2006). Van Peurseem found that a close relationship with management can put their independence at risk, however, the interviewed respondents noted that they were conscious that they had to report to higher authorities, if necessary (van Peurseem, 2004).

Other articles described the independence in the sense of accessibility of the Audit Committee. A general assertion and investor concern is the importance of a primary reporting line away from management and to the Audit Committee to prevent possible problems associated with internal auditors' conflicts of interest

(Christopher et al., 2009; Holt et al., 2009; Stewart et al., 2010; Strand Norman et al., 2010). Christopher et al. (2009) found some independence threats in their Australian study, that varied from a CEO/CFO being responsible for appointing, dismissing and evaluating the head of internal audit without any role in this process for the Audit Committee (i.e. one-quarter of the firms), to a more general one of internal audit being a training ground and stepping stone for future managers. There is a risk that internal audit may not operate objectively when they depend upon their auditees for future career moves.

Strand Norman et al. found that internal auditors perceive more personal threats reporting high (fraud) risks directly to the Audit Committee, as against to management (Strand Norman et al., 2010). This finding runs counter to the anticipated benefits of direct reporting to the Audit Committee. The background of this fear is the investigated internal auditors' perception of overreaction by the Audit Committee, and subsequent management reprisals to internal audit. Their study shows that internal auditors believe that information is filtered through management, regardless the reporting line and the participating internal auditors do not prefer cutting off that line of communication with management.

Sarens et al. focused on the reason why internal audit adds value to the Audit Committee (Sarens et al., 2006). Their literature review and case studies illustrate that internal audit is a source of *comfort* to Audit Committees, especially in the domain of risk management and internal control. Comfort and discomfort are related to the level of information asymmetry between the Management Board and the Audit Committee. They illustrate that internal audit can provide comfort by involving the Audit Committee in the audit plan, providing reports and presentations, together with interpersonal and behavioural skills of internal audit as part of the informal contacts with Audit Committee members.

There is also attention for the discussion in relation to internal audit and serving two masters (Abbott, Parker, & Peters, 2010) with on one side the Audit Committee wanting to cover its litigation and reputation concerns, resulting in a focus on financial statement-related control since those are likely to reduce the incidence of financial misstatement; and on the other side management, who may prefer a broader perspective with more focus on operational audits. The study shows that Audit Committee oversight is positively associated with larger percentages of internal audit hours being allocated to control activities. However, the study also shows that many Audit Committees have little oversight of internal audit. Furthermore, there seems to be a balance of allocation of resources to

evaluation of control in relation to the financial reporting process and to other kinds of operational audits and consulting activities. Note that these results should be seen in the context of firms who have to comply with SOx, and as such may have a more distinct focus on the internal control in relation to the financial reporting process.

## **2.7 Concluding remarks**

This review on literature on the origin and development of internal audit from different angles resulted in some interesting observations and conclusions.

The first conclusion is that internal audit function has its roots in accounting and financial audit. It was initiated to verify and to prevent bookkeeping errors and inaccuracies, as well as fraud and corruption. Internal audit activities were positioned within the accounting function and there was a strong relation with the external auditor. The main focus of internal audit functions was to audit the control with respect to financial reporting. Furthermore, the need for an internal audit function is related to the size of a firm. Since the 19<sup>th</sup> century firms became larger, with widely dispersed geographical locations and limited managerial ability to monitor all operations. Internal audit was initiated as a monitoring function, in addition to management supervision and controlling functions.

The second conclusion is that internal audit functions in the Netherlands were initiated to perform financial auditing activities as in the US. Both internal and external auditors had the same education and the same technical skills. Compared to other countries, internal audit in the Netherlands had a more specific role in the financial statement process, because of the possibility to issue an internal statement on the financial statement. Over the years this has changed, and in particular in the 1980s, many internal audit functions changed their role to a mix of financial and operational audit.

The third conclusion is that developments from the IIA in the U.S. seem to be leading in the IIA approach in the Netherlands. The implementation of the IIA insights in the U.S.A. is mainly limited by the discussion in the Netherlands on the dichotomy between financial and operational audit. This may well be due to the background of many internal audit functions, such as that of chief internal audit, the educational background of the team, its activities, and the views of the Management Board and the Audit Committee on their internal audit function.

A fourth conclusion is that the U.S. IIA research and its suggestions for expansion of internal audit's scope of work do not always seem to be theory-driven or

demand-driven, but opportunity-driven. However, this approach also leads to semantics (new words for activities but no new content) and *muddling through* on old research questions (e.g. CBOK) which do not cover changes in the nature of the firm, its business models and the institutional context of a firm.

A fifth conclusion is that regulatory and legislative changes are an important reason why internal audit functions exist within some firms. Some regulations, such as the New York Stock Exchange corporate governance standards, but also regulation in the financial industry, require the existence of an internal audit function. This regulation institutionalizes the existence of internal audit functions within firms. However, the regulatory context, in response to a number of affairs, has regressed to a narrow view of control, mostly to the reliability of the annual report.

A sixth conclusion relates to the limited and narrowly focused academic research on internal audit. The subject of internal audit is mostly published in accounting and audit-related journals, and not in management-related academic journals. A limited number of articles use theories as background for their study. Three different theories are applied most often: the agency theory, the institutional theory and the transaction cost economics. They relate to the question why an internal audit functions exists and to the choice of in- or outsourcing the activities. Other articles cover the relationship with external audit. All these articles have been written from the external audit point of view, covering the question how external audit can rely on the work of internal auditors. There is also attention for the growing strength in the relationship of the Audit Committee and internal audit, which is also supported by external investors. The articles show discussion with respect to the allocation of resources as well, resulting from serving two 'masters'. While management seems to require assurance and consulting services from internal audit in the broad field of risk management and control, the Audit Committee mainly wants assurance on financial reporting risks and control, a proper tone at the top and possible investigations on fraud. A final observation is that although IT is mentioned as being an essential part of modern firms, especially for management accounting information systems (E.g. SAP, Oracle and other ERP-systems) and, therefore, expected to get attention in articles, this is not reflected in the articles published in the reviewed journals.

The overall final note of this chapter concerns the limited number of changes in the field of internal audit since the new IIA definition in 1999, neither initiated from its professional organization (IIA), nor from academic research. The only change is in the regulatory environment that positioned internal audit functions in the area of

corporate governance requirements after several corporate failures in the period from 2004-2006, but silence reigned during the financial crisis of 2008-2010. Furthermore, internal audit functions are closely related to external auditors in the governance requirements. The question is how much the internal audit profession has evolved or that they adhere to the frequently quoted epigram *plus ça change, plus c'est la même chose...*





## 3. A closer look at the theory of the firm

### 3.1 Introduction

Internal audit, both as a function in the internal governance of the firm and as a profession is expected to be based on assumptions regarding the nature of the firm, or a theory of the firm. The objective of this chapter is to discuss the content of the theory of the firm and the nature of the firm respectively, its issues and how internal audit and its scope fit normatively and in practice into the theory of the firm.

Although there is a large volume of literature covering the theory of the firm, the majority of this economic literature views and explains the firm from a theory of markets (Jensen, 1998). This theory of markets views a firm as a black-box input-output system, without people or information problems. The (traditional) theory of the firm explains the boundaries of the organization of the firm, but provides little or no insight into the inner working of the organization of the firm. This study is interested in opening that black-box and uncovering the key assumptions behind a firm from an economic perspective. Fortunately, there is also a wealth of literature covering the perspective of the economic organization. These theories can provide a theoretical basis for the field of internal audit in relation to the control system of the firm.

The use of specific language is to be noted. Commonly, the concepts *risk management* and *internal control* are used in current corporate governance codes and by internal auditors. Knight is one of the first economic authors to write about risk and to relate this concept to conditions of uncertainty. He makes a distinction between risk, uncertainty, and the laws of probability that are used in the neo-classical economic theory (Bernstein, 1996)<sup>29</sup>. Nevertheless, Knight did not focus on a theory of the firm, but on a theory of profits (Foss, 1999). In the course of this chapter, it will become clear that the theory of the firm is more concerned with uncertainty than with risk.

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<sup>29</sup> Bernstein highlights an interesting description of Knight in his book on risk and uncertainty (1996: p. 219): ...It will appear that a measurable uncertainty, or “risk” proper ... is so far different from an immeasurable one that it is not in effect an uncertainty at all. Risk is in common literature mostly related to potential loss (Furubotn & Richter, 2000)

In addition, this chapter will identify a limited attention for the concept of (internal) control in the existing economic theories. Jensen refers to the internal control system in the sense of the failure of these systems to restructure or redirect themselves in the absence of crisis (Jensen, 1993). He refers to ineffective governance (decision rights split between the Board of Directors and CEO, the size of the Board, the compensation and equity holding) as being a major part of the problem. This is a limited view on internal control as it mainly relates to the Board level (and thus the relation between executive and non-executive management) and not the whole organization and its management control. Jensen also emphasizes the link with external control mechanisms, such as external regulatory oversight, capital markets and take-over possibilities, market competition and the managerial labour market.<sup>30</sup> The agency theory and the transaction cost economics view refer to internal governance mechanisms, instead of to control system (although this might be considered semantics). Control is reflected in the property rights view in the sense of ownership and access and as an isolating mechanism in the resource-based view on the firm.

### **3.2 Theory of the firm**

The most influential article regarding the nature of the firm is by Coase (Coase, 1937). His article reflects a change in economic thinking from being concerned with price theory and the effect of markets on firm behaviour, to being concerned with the firm itself. He describes the major elements of the modern theory of the firm (Coase, 1937; Foss, 1999). Firstly, he describes why a firm exists: because transactions are assumed to be less costly than continuous exchange on the market. Secondly, he addresses the transaction costs of using the price mechanism; thirdly, he mentions the importance of studying the forces that determine a firm's size (respectively the boundaries of the firm). Finally, he highlights the role and importance of a firm's internal organization. This study is based on the Coasian view on the firm, rather than on the neoclassical theory of the firm, in which the firm is considered to be a black-box production function.<sup>31</sup>

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<sup>30</sup> This external focus will not be part of this study, except that it plays a role in the definition of in-control.

<sup>31</sup> Coase himself did not elaborate on the internal organization of a firm, so he did not actually open the black box. However, he initiated the discussion for the importance of a firm's internal organization. It should be noted that the neo-classical authors Marshall and Schumpeter, too, considered the organization as an important factor of production next to labour and capital

The theory of the firm as an academic field is far from homogenous and involves different views. The existence, the boundaries and the internal organization of the firm are the key elements of the Coasian theory of the firm (Foss, 1999). These elements are extended in the agency theory, transaction cost economics, property rights view and resource and knowledge-based view (Barney, 1991; Cyert & March, 1992; Demsetz, 1988; Fama, 1980; Foss, 1999; Furubotn & Richter, 2000; Grant, 1996; Holmström & Roberts, 1998; Jensen, 2000; Kogut, 1992; Penrose, 1959/1995; Peteraf, 1993; Poppo & Zenger, 2002; Rajan & Zingales, 1998; Williamson, 1975; Williamson, 1996).

Although the neoclassical theory is not the focus area of this study, it does provide some basic assumptions regarding the theory of the firm in general. In their article on the existence of an equilibrium for a competitive economy, Arrow and Debreu (Arrow & Debreu, 1954) refer to underlying economic assumptions of perfect competition, complete contracting possibilities, perfect information and absence of externalities. In line with Foss (1999), this thesis will use two basic Arrow-Debreu assumptions to structure the different related Coasian theories of the firm. First of all, this model assumes the possibility of *complete contracts*, which can be written without costs. The second assumption relates to *symmetry of information*, which leads to a complete view on all relevant information. The theory of the firm can be divided in complete and incomplete contract theories of the firm and has three important streams<sup>32</sup>; transaction cost economics, agency theory and property right theory (Foss, 1999; Furubotn et al., 2000; Williamson, 1996). The *incomplete* contract theories break with the first assumption and comply with the second. Their assumption is, that it is costly and complex to draft contracts as not all future contingencies are known and it is costly to write contracts that cover all contingencies. Therefore *ex post* governance is required to maintain an efficient process and prevent inefficient outcomes. The *complete* contracting theories comply with the first assumption and break with the second of the Arrow-Debreu model regarding information symmetry. They assume complete contracts

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(Hendrikse, 2003). This so-called *organizational capital-view* on the internal organization currently receives new attention as part of the knowledge-based view of the firm, which will be discussed later in this chapter.

<sup>32</sup> In addition to the agency, property rights and transaction cost economics, Foss (1999) also highlights some new, uncommon perspectives on the theory of the firm, like the coordination perspective. This coordination perspective focuses primarily on the employment relationship and has a close link to agency theory and property rights theory. For this reason, this will not be discussed separately in this thesis. The same applies to the information processing view, which concentrates on team theory work. The latter can be viewed as part of the resource/knowledge-based view.

characterized by *ex ante* incentive alignment, but they also assume the presence of asymmetric information and risk preferences of agents, which requires *ex post* monitoring<sup>33</sup>. The following table offers an overview, including concepts and assumptions with respect to the Coasian theories of the firm, and the resource and knowledge-based view (Foss, 1999: p xxx; Jensen, 2000; Williamson, 1996).

	<b>Agency theory</b>	<b>Transaction Cost Economics</b>	<b>Property Rights theory</b>	<b>Resource - based view</b>	<b>Knowledge-based view</b>
<b>Concept of the firm</b>	A legal fiction	A collection of residual decision rights to physical assets	A collection of residual decision rights to physical assets	A bundle of resources	A bundle of knowledge assets
<b>Rationality</b>	Maximizing	Bounded	Maximizing	Bounded	Bounded
<b>Contracting</b>	Complete	Incomplete	Incomplete	Incomplete	Incomplete
<b>Transaction costs</b>	Monitoring and bonding costs	Costs of drafting complex contracts	Costs of drafting complex contracts	Costs of integrating and exploitation of resources	Costs of integrating in and transmitting knowledge
<b>Unit of analysis</b>	Contracts/ individuals	Transactions	Transactions/ ownership	Resources or combination of resources	Knowledge and information

**Table 3.1: Overview Coasian theories of the firm (Foss, 1999: p. xxx; Jensen, 2000; Williamson, 1996)**

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<sup>33</sup> The contracting theory does not include a direct link to the purpose of a firm. Baumol (in Landes, Mokyr and Baumol, 2010) distinguishes between redistributive firms and productive firms. The latter adds value to economic growth and the general welfare of society, while the former is described as aggressive, warfare, rent-seeking litigation firms not adding value to the general welfare of a society. Furthermore, a firm is driven by the motive to increase the wealth of its owners or shareholders, which excludes government agencies from this definition.

It should be noted that the resource based view has been extended with the dynamic capabilities view, in which a firm's resources are considered not to be static, but need to be developed, transformed, and new resources need to be acquired to allow a firm to survive in a changing environment (Eisenhardt, 1989; Teece, 2007; Teece, Pisano, & Shuen, 1997).

To make sense out of the different theories of the firm, the divergence between the different levels of attention of a firm must be clear, as in the case of the above theories:

- The firm in relation to other firms (transaction cost economics, property rights, resource and knowledge-based view)
- The firm in relation to external resources (transaction cost economics, property rights, resource and knowledge-based view)
- Relation between shareholder and management (agency, property rights)
- Relationship between Supervisory Board and management Board (agency)
- Relation between management and employees (agency, property rights)

In addition, there is the institutional environment of firms which can be described as the formal rules of the game as included in constitutions, laws and regulations and the informal customs, traditions, norms and religion (Williamson, 1996).

The concept, rationale, assumptions and unit of analysis of the different theories of the firm will be explained further in the paragraphs below.

### **3.2.1 Agency theory**

In most of the literature, the agency theory deals with the relationship between the owner/shareholder of a firm and the chief executive officer (Jensen & Meckling, 1976). In this view, ownership is widely held by shareholders — at least, in US jurisdiction, but not in German, French and Dutch jurisdiction — and managerial actions deviate from the required maximization of shareholder returns (Pratt & Zeckhauser, 1985). On the other hand, Fama (1980) and Pratt & Zeckhauser (1985) utilized the principal-agent theory to examine the hierarchical inter-manager relationships that exist within large firms. In this context, the firm's chief executive officer is viewed as the principal who attributes decision rights to the lower level management (agents), and thus inducing agency costs due to information asymmetry.

Jensen and Meckling (1976: p. 311) define the corporation, in which the firm has been incorporated, as a legal fiction that serves as a nexus for contracting relationships among individuals, which is also characterized by the existence of divisible residual claims on the organization's assets and cash flows, generally to be sold without the permission of the other contracting individuals. It should be noted that Jensen's concept of the firm as a nexus of contracts, and also the agency theory in general, does not provide an answer to the question of why a firm exists; it focuses on (the lack of) the boundaries of a firm and on its internal organization.<sup>34</sup> They mention that there are a multitude of complex relationships, i.e. contracts, between the legal fiction (i.e. the corporation / firm), executives, employees, customers, and suppliers of goods and capital.

The assumptions behind the agency theory primarily relate to the separation of ownership and management, and motives and preferences behind human behaviour (Eisenhardt, 1989; Jensen et al., 1976). Principals and agents each may be seen as *utility maximizers*, chasing self-interest and maximizing their own personal economic gain, which will not be necessarily be aligned. Different people can strive for different goals (Pratt et al.), which may lead to possible goal conflicts between a principle and an agent. Information asymmetry between a principal and an agent arises when the principal is uncertain of the alignment of the agent's behaviour with the firm's goals, and because it may be prohibitive expensive either to measure effort, performance, the relation between effort and performance or all of these three. This is the so-called issue of *hidden information* and *hidden action* (Pratt et al., 1985). Within a large organization, the principal wants to ensure that agents use their attributed decision rights in a way that contributes to the organizational objectives in a most efficient way and does not impair the integrity of the firm. A principal may have several agents, whose efforts cannot all be observed, only the output (Arrow, 1991). This uncertainty can be caused by lack of familiarity with the agent's specific knowledge and his activities or results, or by a difference in objectives (Jensen, 1998). This can lead to so-called *moral hazard problems* (O'Connor Jr, Priem, Coombs, & Gilley, 2006; Zimmerman, 2000). Some examples of moral hazard are misstatements and nondisclosure, consumption

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<sup>34</sup> The definition of Jensen en Meckling is based on the premises of the concept of the Modern Business Enterprise (MBE) with a focus on tangible assets and complete ownership of the residual claim. Rajan and Zingales (1998) highlight that this view is becoming out of date as a result of new business models, the changing nature of assets and knowledge, organizational forms and environment — also see the paragraph on property rights view.

of costly perquisites and pursuit of increased compensation through diversification and growth ventures that misuse free cash flow (O'Connor Jr et al., 2006). As a result of *asymmetry of information, hidden information, hidden action* and possible goal conflicts, the Management Board may lack the instruments to have the firm perform in a most efficient way, especially from a shareholders' perspective.

Goal conflict does not have to occur, because self-interest may lead to cooperation as well, when agents recognize the ability to satisfy personal objectives in relation to the objectives of the firm (Gomez-Mejia, Wiseman, & Johnson Dykes, 2005). Furthermore, the goal conflict assumption can be limited through a proper selection and deselection of new managers and employees and some kind of organizational identification which is, among other, linked to the length of tenure of managers and employees within a firm (March & Simon, 1958) and congruence between individual and organizational values (O'Reilly & Chatman, 1986).

Furthermore, there can be a difference between the attitude of principals and agents toward risk. Agents who are risk-averse create opportunity costs for risk-neutral principals who prefer agents to maximize firm returns (Wiseman & Gomez-Mejia, 1998). The risk-averse agent assumption may not be appropriate in general, as they may prefer to adopt the prospect strategy for the firm (Kahneman & Tversky, 1979; Wright, Mukherji, & Kroll, 2001). This strategy means that individuals are psychologically risk-averse in satisfactory situations, but risk-prone in unsatisfactory situations, resulting in a shift from risk-averse to risk-taking (Kahneman et al., 1979; Wright et al., 2001).

#### *Linkage between the Agency theory and the control system of a firm*

Researchers have identified governance mechanisms<sup>35</sup> that limit agents' self-serving behaviour and improve goal congruence (Eisenhardt, 1989; Jensen et al., 1976; Kosnik, 1987). These governance mechanisms are related to monitoring and bonding costs of agents within the firm. These mechanisms vary at different levels; the level between shareholder and corporate management, the level between

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<sup>35</sup> Although external forces have an indirect impact on the internal governance mechanisms, the focus is on internal control and, therefore, other mechanisms of governance are not discussed. This means that external control mechanisms, such as external regulatory oversight, capital markets and take-over possibilities, market competition and the managerial labour market are not discussed (Jensen, 1993).

Supervisory Board and corporate management and also the level between corporate management and its divisional, business unit management and its employees.

A governance mechanism from the agency theory, which is also reflected in the institutionally recognized corporate governance codes and the COSO-framework, is the monitoring by the Supervisory Board, Supervisory Board committees, and the remuneration-incentive process<sup>36</sup>.

The Supervisory Board monitors managerial actions on behalf of the corporation. In the last few decades, the governing role of Boards has evolved to include new Board conditions and procedures that should promote the Board's effectiveness in monitoring management on behalf of stockholders in the U.S. (Jensen & Murphy, 2004; Kosnik, 1987)<sup>37</sup>, and on behalf of the corporation in the Netherlands (Strikwerda, 2012).

A Supervisory Board's compensation/remuneration committee can be an effective deterrent for focusing on short-term rather than long-term value, especially when this committee can influence the remuneration process, policies, and practices (Jensen et al., 2004). In current high equity-based compensation schemes, Boards must monitor the remuneration process to prevent managers from benefiting from short-term increases in stock prices that are achieved at the expense of long-term value. Jensen and Murphy emphasize the 'importance of being involved in the process and not only 'bless' plans that have been approved by top management. This can create an environment that invites abuse and bias' (Jensen et al., 2004: p. 51).

Proper oversight on the incentive programs is one of the Supervisory Board's important roles, along with the use of objective standards for target setting, linking performance to set targets and use of a mixed cash-stock-stock options structure

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<sup>36</sup> There are also other mechanisms to reduce information asymmetry, such as the bottom-up resource allocation process from Bower, informal communication, double loop control by supporting functions, internal audit and external advisors. This is not discussed in the economic literature in relation to the agency theory, but is part of the management (control) literature. This literature will be further expanded upon in chapter 4.

<sup>37</sup> For example, the New York Stock Exchange has required all registered firms to have at least three outside directors on their Boards and exclude executive directors from a Board's Audit Committee. Another proposal has emphasized independence between the chairperson of the Board and executive management within a one-tier Board, but this has not been translated in requirements from a regulator up to now (Jensen & Murphy, 2004). Similar requirements are codified in the DCGC (2008), see for example section III.2 Independence and III.3 Expertise and composition.



(Knight, 2002). Incentive programs typically include plans whereby senior executives obtain shares and stock options to align the financial interests of executives with those of the firm and shareholders (Eisenhardt, 1989; Jensen et al., 1976). Jensen et al (2004) revised this opinion on compensation and concluded that compensation can also be a substantial source of agency costs if it not managed properly (more details in chapter 4). According to the agency view, both management and shareholders benefit from rising long-run stock prices, thereby reducing the likelihood of moral hazard (O'Connor Jr et al., 2006). A note must be made on the relationship between management's influence on stock price versus its operating performance. This influence is only one factor among other (such as investor expectations and discount rate) in a firm's overall stock price (Knight, 2002). Furthermore, when opportunity presents itself, options will increase the likelihood of self-interested behaviour by managers. The corporate finance literature provides empirical evidence that CEOs have financial incentives to continually maintain or increase firm performance and to avoid lower-than-expected performance (O'Connor Jr et al., 2006). Based on the formal contract between principal and agent, an agent can have a right to make decisions. The power of the principal lies in the possibility to create and enforce efficient contracts to limit the presumed self-serving behaviour of managers. Emphasis remains on the ability of principals to reduce information asymmetry by installing appropriate information channels and systems within the firm to be informed about the behaviour of the agent and outcomes of his work (Eisenhardt, 1989).

Ultimately, the agency theory provides insights into how to deal with relationships (in the sense of Supervisory Board and management Board and within the organization) and underlying assumptions of self-interest, bounded rationality, risk adversity and mechanisms, so as to control these assumptions and risks. The agency theory does not provide explanations or essential clues about the existence and the boundaries of the firm. Furthermore, the agency theory does not contribute to an explanation in relation to the general welfare of society or economic growth as is done by Baumol (Landes, Mokyr, & Baumol, 2010). The agency theory overlooks the fundamental mechanisms of internal organization, such as the labour contract as an incomplete contract defining a "zone of acceptance" within which an employee can be expected to obey orders, allowing the firm to absorb uncertainty (Simon, 1991). Furthermore, it overlooks, the role of commitment and the related forms of non-financial rewards (recognition, status, belongingness) and especially identification with organizational goals which explains why despite explicit or clear orders employees often taken initiatives which are not self-serving but contribute to the achievements of the firm (Simon 1991). The agency theory also

overlooks the role of a firm in relation to their changing environment, competitive realities and the necessity to refocus resources within a firm in order to survive and grow (Foss, 1999). This is acknowledged, too, and authors therefore recommend to use the agency theory in combination with other theories, because the agency theory offers only a partial view on organizations (Eisenhardt, 1989).

### *Linkage between the Agency theory and internal audit*

The traditional nature of internal audit relates to the verification of the accuracy, timeliness and completeness of the accounting information (Courtemanche, 1991) or in a broader sense, to evaluating evidence on accounting information in order to determine and report on how well this accounting information complies with established criteria (Arens & Loebbecke, 2000). Traditionally, the annual statement is based on historical information and is conceptually based on accounting profit. As economic profit is increasingly used to determine the value of a firm, management and external stakeholders are more interested in a firm's future cash flows, and assurance that these future cash flows will materialize (Strikwerda, 2012).<sup>38</sup> As a result of asymmetry of information and possible goal conflict, the Management Board may lose control of the firm. As a consequence, it is to be expected that the economic *raison d'être* of an internal audit function is to reduce information asymmetry, complementary to other measures the Management Board takes. The Audit Committee is also expected to require an internal audit function for this reason, as is researched by Goodwin-Stewart et al (2006) and Sarens & De Beelde (2006).

### **3.2.2 Transaction cost economics**

The most well-known translation of the Coasian theory of the firm is that by Olivier Williamson and his transaction cost economics (TCE). The objective of TCE is to explain different forms of organization based on the differences in transaction costs. Williamson describes the firm as a governance structure, rather than as a production function (Williamson, 1996). The firm is not seen as a black box as in neoclassical economics. It is described as an organizational construct in different modes — hierarchies, market, hybrids (Williamson, 1981).

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<sup>38</sup> This also explains the movement to managing non-financial, leading parameters besides the financial, lagging parameters as explained by Johnson & Kaplan (1987) and Kaplan & Norton (2004). This will also be discussed in more detail in chapter 4.

In addition, TCE tries to identify, explicate and mitigate contractual hazards (Williamson, 1996: p. 12) and links the possible hazards to behavioural assumptions. The first assumption relates to bounded rationality (Simon, 1976), the notion that decision makers' capabilities are bounded in terms of formulating and solving problems and processing all information during the decision-making process. The second assumption deals with opportunism, e.g. possible conflicts because individuals are promoting their own self-interest, and is explained by Williamson (Williamson, 1979: p. 234):

*Opportunism is a variety of self-interest seeking, but extends simple self-interest seeking to include self-interest seeking with guile. It is not necessary that all agents be regarded as opportunistic in identical degree. It suffices that those who are less opportunistic than others are difficult to ascertain ex ante and that, even among the less opportunistic, most have their price.*

These behavioural assumptions lead to incomplete ex ante contracting and as a consequence ex post monitoring of the contract is required to prevent or to handle conflicts. Williamson describes governance as the economizing response to infuse order and to realize mutual gains (Williamson, 1999). Transaction cost economics provides a basis for describing a contractual or transactional relationship between parties, in which each party expects something from the other (Speklé, 2001a). This can be a relationship within the organization, but also between organizations. The choice of mechanism depends on a comparative analysis of the transaction costs characteristics (i.e. asset specificity, uncertainty and frequency) (Williamson, 1996). The key characteristic asset specificity relates to opportunity losses due to investments in alternative sources. Asset specificity may take the form of physical, human, site-specific, dedicated assets or investments and brand name capital. Uncertainty indicates the predictability of the environment and sight on possible disturbances to which transactions are subject. Uncertainty also has a behavioural component, in the sense of potential non-disclosure, manipulation of information, which is called *information asymmetry* in the agency theory; Williamson refers to information impactedness (Williamson, 1975). Frequency denotes the recurrence of transactions. Depending on these characteristics, TCE analyses the most economic, value preserving governance structure to infuse order, thereby to mitigate conflict and realize mutual gain (Williamson, 2002).

Williamson further explained some key propositions of TCE (Williamson, 2002). TCE assumes that firms are better in managing *intentional, cooperative adaptation* in the contract implementation than are markets where spontaneous adaptation is assumed. Furthermore, TCE acknowledges that *incentive intensity* is compromised

within a firm in relation to markets. Within a firm there is more *administrative control* to govern transactions than within a market. Finally, within a firm the disputes about incomplete contracts will first be solved within a firm, while in the market any disputes need to be taken to court.

#### *Transaction cost economics and the control system of a firm*

Current corporate governance codes and the COSO-framework as well provide relatively little attention for different modes of governance as elements in the control of economic organization. In contrast to transaction costs economics, it does not cover the make-or-buy decision. The boundaries of the firm are, however, increasingly a point of attention, especially because of the concentration on core capabilities and restructuring of non-core capabilities, joint ventures, outsourcing, buyer-supplier arrangements, etc. (Dekker, 2004; Speklé, 2001a; Van der Meer-Kooistra & Vosselman, 2000) and the flow of information (Arrow, 1996). Transaction cost economics assumes that higher asset specificity leads to hierarchy as a governance mechanism to protect the transaction against opportunistic behaviour. Alternatively, activities of low asset specificity are expected to be governed by the market mechanism (Williamson, 1996).

Speklé translated TCE into a TCE of management control and identified different forms of control systems (Speklé, 2001b). In her PhD thesis, Kruis studied the empirical evidence for the effectiveness of different management control archetypes of Speklé (Kruis, 2008). This study showed some, but limited, support for Speklé's TCE of management control.

#### *Linkage between TCE and internal audit*

Williamson argues that an internal monitor (a manager, an internal auditor is) has an advantage over external monitors, as he has greater freedom of action, a wider scope, understands the language of the firm and can rely on less formal evidence (Williamson, 1975). With that TCE seems to imply an advantage of the internal auditor over the external auditor. TCE is commonly used to explain the outsourcing decision of internal audit (Carey et al., 2006; Speklé et al., 2007). Speklé and Carey's empirical studies found that asset specificity is significantly associated with the sourcing decision on internal audit activities (Carey et al., 2006; Speklé et al., 2007). They also found the variable *frequency* to be significantly associated with insourcing an internal audit function, especially in case of large firms and firms that use internal audit on a frequent basis. Furthermore, they noted that traditional services concerning financial statement audit and compliance audit were

outsourced, while other areas were kept in-house. However, the research of Paape did not support these outcomes, as it did not find significant relationships regarding asset specificity or information asymmetry (Paape, 2007). The make or buy decision of internal audit and its size are not explicitly part of this study and will, therefore, not be researched.

### **3.2.3 Property rights theory**

Like the transaction cost theory, property rights theory assumes the view that contracts are incomplete as they contain gaps or missing provisions, which are accepted by both contract parties (Hart, 1989). As a consequence, the ex post allocation of control is a point of focus. A difference between property right view and the transaction cost economics view relates to the assumption of rational, maximizing behaviour instead of bounded rationality. This rational approach implicates a maximization of its own utility in contrast with the bounded rationality approach. The agency theory shares the assumption of maximizing behaviour. In addition, it departs from the transaction cost theory in being more explicit about decision rights and asset ownership.

A key element of this theory relates to assets, i.e. ownership as the *unit of analysis*. Ownership is further operationalized as a bundle of decision rights and is linked to residual rights of control (Grossman & Hart, 1986). An owner of an asset has not only the ability to use an asset, but also to exclude others from the use of or selling an asset. The latter is mostly related to assets such as machines, inventories, buildings or locations, cash, client lists, patents, copyrights, and the rights and obligations embodied in outstanding contracts (Hart, 1989). Human capital and the inherent intellectual capital cannot be owned as such. Human capital as uncodified personal knowledge is difficult to transfer, and it is difficult to write property rights for such assets; therefore, human capital has no transferable ownership title. Human capital is one of the carriers of and determinants for the value of a firm and its value creation (Arrow, 1996). However, management has no control over the alienation rights of the part of the capital of the firm as uncodified personal knowledge is the property of the individual (Furubotn et al., 2000). The increasing role of human capital in driving value creation and economic growth undermines the control model as this is assumed in corporate law, corporate finance and corporate governance, and erodes the legal basis of issuing instructions by the management. This shift towards human capital thus also creates a new issue with respect to safeguarding the assets of the firm.

A second element of the property rights theory covers the boundaries of a firm. These boundaries are defined by the boundaries of the firm's physical assets. The property rights theory describes both the costs and the benefits of the integration of assets within a firm. This theory deals with relation-specific know-how and investments and the level of bargaining to reach efficiency and prevent hold-up problems (Hart, 1989). It is expected that a firm is more likely to integrate specific know-how when it requires a critical investment decision. Furthermore, a way to mitigate bargaining difficulties is to replace the transaction costs in the marketplace with internal organization. Integration is only optimal when there is clear sight on generating surplus; else the market competition is the better alternative (Hart & Moore, 1990). The governance structure of a firm is a mechanism for dealing with hold-up problems (Holmström et al., 1998). This governance model can have different variations, but the overall idea links to the influence on bargaining outcomes and incentives.

#### *Property rights theory and the control system of a firm*

The basic concept of the property rights theory in relation to the control of the firm by management relates to the delegation of the right to use tangible assets and intangible assets such as patents, copyrights and trademarks; management has the right on its residual income and the right of alienation (Furubotn et al., 2000). As discussed above, this view does not adequately cover human capital. Especially when their knowledge is valuable in the decision making and the performance of a firm, the rights assignment and control problem should be solved by alternative mechanisms (Jensen, 1998). Jensen (1998) refers to alternative contractual arrangements with employees, a system for partitioning decision rights within the organization and a proper system of performance management, reward and punishment. Jensen basically concludes that in the case of uncodified personal knowledge, the traditional incomplete labour contract should be substituted for supply contracts in order that the management of a firm is in-control. This however may have adversarial consequences both on society and the development of human and social capital (Sennett, 1988). Strikwerda (2008) describes IBM as an example which includes a combination of elimination of information asymmetry, multidimensionality in reporting lines (in which the customer is the primary profit center), clear values (the IBM Values) and a global performance measurement infrastructure. This case describes an approach which manages the issue of control in an environment of uncodified personal knowledge, where agency costs are acceptable, the performance of the firm is above industry average, knowledge

workers feel safe to share personal knowledge, and is attractive to knowledge workers compared to other firms and to the market of self-employment.

In addition, the traditional view on the modern business firm is based on vertically integrated firms with clear boundaries defined by the firm's physical assets. The boundaries of the firm did not change unless ownership of assets changed (Rajan & Zingales, 1998 ). Currently some industries are still partly vertically integrated, such as the steel and oil industry. More recent literature describes the change in the nature of the firm when vertically integrated firms as preached by the property right theorists, moved towards looser forms of collaboration (Rajan et al., 1998). This change depends on the industry and the way a firm has *control* over and *access* to the required assets (internally and externally). Rajan and Zingales introduced an extension of the property rights view by adding the concept of *access* to critical resources (including human assets) as an alternative to ownership. In addition, Arrow conjectures increasing tensions between legal relations and the fundamental determination of productivity by knowledge as is already the case with intellectual property, especially because a material part of the knowledge that is critical for the success of the firm is owned by employees, not by the corporation as is the case with tangible assets (Arrow, 1996; Sutcliffe & Weber, 2003).

Overall, firms are increasingly dominated by firm-specific human and organizational capital (Asher, Mahoney, & Mahoney, 2005). Or, as Drucker wrote; *knowledge is the primary resource for individuals and for the economy overall. Land, labour and capital — the economist's traditional factors of production — do not disappear, but they become secondary* (Drucker, 2006: p. 139). Human capital is needed to create innovative products, services and processes. However, human capital is inalienable and requires another contractual relationship as control mechanism (Jensen, 2000). A good example of working with this traditional paradigm on today's reality is the Saatchi case (Zingales, 2000: p. 27):

*In 1994, Maurice Saatchi, chairman of Saatchi and Saatchi, proposed a generous option package for himself. The U.S. fund managers, who controlled 30 percent of the shares, became furious. The stock had underperformed for several years, and the last thing they wanted was to reward the chairman. This act of managerial self-interest needed to be punished with a serious shareholders' initiative, and so the shareholders voted down the proposal at the general shareholders' meeting. This opposition led to the departure of Maurice Saatchi, quickly followed by the resignation of several key senior executives. These executives, together with the Saatchi brothers, started a rival agency (M and C Saatchi), that in a short period of time captured some of the most important accounts of the original Saatchi and*

*Saatchi. The original firm, which later changed its name to Cordiant, was severely damaged. In hindsight, the mistake the U.S. fund managers made was to treat Saatchi and Saatchi as a traditional firm with clear boundaries defined by its assets. Because they had ownership (thanks to their 30 percent holding of the votes) they may have thought they controlled the firm. Instead, much of the firm broke off as they attempted to exercise their traditional ownership rights.*

Zingales' answer to this changed reality is, that a firm should create an environment where employees know that their rewards will be greater if they make firm specific investments than working in the open market (Zingales, 2000). This is in line with the view on Jensen (1998) and Strikwerda (2008) on the previous page.

Aral *et al.* even take a broader view by describing the complementarities between (investments in) human capital, organization capital and information capital (Aral, Brynjolfsson, & Van Alstyne, 2007). These three elements together in their co-specialization and complementarity are seen as the intangible assets being the basis of the value of the firm (Strikwerda, 2011a). This view is strongly linked to the resource/knowledge-based view on the firm which is discussed in the next chapter.

The traditional property right school implies that joint ownership is never optimal (Holmström *et al.*, 1998). Holmström and Roberts plead for the use of the property rights approach — with its emphasis on incentives driven by ownership — as a part of the investigation of these new hybrid structures, together with other theories and related incentive instruments. They recognize that the trend of disintegration, outsourcing, subcontracting, and dealing through the market rather than bringing everything under the umbrella of the organization seems to prevent or manage hold-up problems. As discussed under the TCE, the boundaries of the firm increasingly are a point of attention, especially due to the focus on core capabilities and restructuring of non-core capabilities, joint ventures, outsourcing, buyer-supplier arrangements, etc. Property rights theory can be part of this TCE analysis with respect to the mechanisms of ownership and access.

#### *Linkage between the Property rights theory and internal audit*

In the traditional firm, based on tangible assets and thus the management of the firm having full control over the alienation rights, the property rights theory provided an implicit basis for management control and for the right of management to issue instruction to employees. The issue of the control of alienation rights implied that internal audit should assess e.g. by detecting fraud or embezzlement, that the alienation rights would not be violated. The emergence of the importance



of uncodified personal knowledge within firms is expected to influence the scope of internal functions. It necessarily will broaden the internal audit's scope with respect to control mechanism beyond the traditional fraud detection only.

In addition, the property rights theory can be of help for internal audit functions in relation to the trend of de-verticalization, outsourcing, subcontracting and alliances. Given the assumption of incomplete contracting and, as a consequence, gaps, missing provisions or ambiguities in contracts, it remains to be seen how this will be controlled by firms. Internal audit can highlight these gaps and ensure that appropriate measures are taken. This is already happening in practice, with so-called contract governance, contract management, supplier audits, compliance audits at clients, etc.

### **3.2.4 Resource and knowledge-based view**

Penrose developed the resource-based view of the firm by defining a firm as a collection of productive resources managed by administrative decision (Penrose, 1959/1995). The principle of the resource-based view on the firm is that competitive advantage lies primarily in the application of bundling valuable resources at the firm's disposal (Wernerfelt, 1984: p. 172). The fundamental elements of the resource-based view are *competitive advantage* and *resources*. *Competitive advantage* relates to the activities which *generate above-normal rents* in comparison with competing firms (Mahoney, 1992); these rents can exist due to owning scarce resources such as land or patents, or due to monopoly rents as result of government protection or collusive arrangements, or due to entrepreneurial or Schumpeterian rent by risk taking and innovation in an uncertain environment. *Resources* are described as valuable (i.e. contributing to efficiency and effectiveness), rare (i.e. not widely held), inimitable (i.e. not easily replicated) and non-substitutable (i.e. no replaceable resources for the same function) (Barney, 1991; Priem, 2001). In a more formal way, resources are described as the tangible and intangible assets bound semi-permanently to the firm (Priem, 2001). Priem describes the difference between tangible and intangible resources as their imitability or observability<sup>39</sup>. The latter is relevant for the control system of a firm

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<sup>39</sup> There are more distinctive descriptions of intangible assets than described in the resource-based view. Strikwerda (2012) described the views from an accounting and organizational strategy perspective: The International Accounting Standards Board defined standards for intangible assets (IAS 38) to provide clarity on the accounting treatment. IAS 38 defines an intangible asset as an identifiable non-monetary asset without physical substance, but with future economic benefits and

and is theoretically interesting, but the characteristics defined by Barney and Priem have not been operationalized within the academic field of the resource-based view of the firm.<sup>40</sup> The same applies to the statements of Rumelt, that when a resource is impossible or costly to imitate or substitute, the rent for the resource may be long-lived, provided there is demand for it (Rumelt, 1997), and Connor's statement that inimitable resources and resource combinations lead to a sustained competitive advantage that cannot be duplicated easily or substituted by competitors (Conner, 1991).

According to the resource-based view, resources can be divided into physical assets (e.g., specialized facilities, geographic location), competencies (e.g. patents, brand names, trade contracts, efficient procedures) and human capital (e.g., industry experience and expertise, management skills, superior sales force) (Barney, 1991; Penrose, 1959/1995; Wernerfelt, 1984). The resources with superior profits are called strategic assets (Amit & Schoemaker, 1993; Michalisin, Smith, & Kline, 1997). This distinction between different kinds of asset is also used by TCE and property right view and, therefore, is not distinctive. A distinction with the other described theories of the firm relates to their assumptions. The assumptions behind the resource-based view are related to heterogeneity of resources and capabilities, imperfect mobility, ex ante and ex post limits to competition (Barney, 1991; Peteraf, 1993). The heterogeneity of resources and capabilities across firms in an industry should ensure rents, and the relative immobility of resources should ensure that valuable resources remain within the firm. Productive factors may have different levels of efficiency, leading to superiority to others and/or higher satisfaction of customer needs (Peteraf, 1993). It is possible that rents are earned by a number of equally efficient producers, as long as there is a limited supply, e.g. resources not expanded freely or imitated by other firms (Peteraf, 1993: p. 181). Furthermore, the ex ante and ex post limits should ensure a proper rent versus efficient costs.

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reliable measurement of costs. However, human capital is not recognized as a relevant intangible asset, as the IASB is more focused on elements such as patents. This approach deviates from the organizational strategy view as defined by Jensen, which is more concerned with human capital and the nature of the firm.

<sup>40</sup> It is possible to operationalize intangible assets. In 2004, Kaplan and Norton introduced an approach to quantify intangible assets into tangible outcomes in their publication strategy maps: converting intangible assets into tangible outcomes.

An extension of the resource-based view is the knowledge-based view on the firm (Grant, 1996). The existence of a firm is in their view related to the exploitation of knowledge within a firm, instead of via the market and via transactions. Arrow describes the advantage of superior productivity of joint actions and the possibility to develop organization-specific, specialized language (Arrow, 1974, , 1996) Via the hierarchy, knowledge can be transferred and capital accumulation can take place, leading to a firm with a distinct identity, which is not replicable in the market. The knowledge-based view differentiates between tacit knowledge (knowing how) and explicit knowledge (knowing facts) (Grant, 1996). According to Grant (1996: p. 111), the distinction lies in the transferability and the mechanisms for transfer across individuals, space, and time; tacit knowledge is revealed through its application and its transfer can be costly and uncertain when it cannot be codified. Explicit knowledge is revealed by its communication and can easily be consumed by additional users at close to zero marginal cost. Jensen and Meckling refer to the difference of specific and general knowledge and relate this to the decision-making process and required level of decentralization (Jensen, 1998)<sup>41</sup>. The level of decentralization is explained<sup>42</sup> as the requirement of loosely coupled entities within a firm to allow adaptive behaviour in response to changes in the firm's environment (Simon, 1962). However, this element of loosely coupled entities is elaborated as part of a theory of organization (especially with respect to the type of control within an organization), not as part of the theory of the firm.

Another school within the resource-based view is the dynamic capabilities approach<sup>42</sup>. The essence of this approach is that competitive success arises from the continuous development, alignment, and reconfiguration of firm specific assets (Teece, 2007); for sustainable success, a firm requires the capabilities to *sense* new

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41 Jensen describes the relation between decentralization and the assignment of property rights and the control or agency problem in the sense that agents exercise their rights in a way that contributes to the organizational objectives (Jensen, 1998: p. 103). He further describes that the optimal degree of decentralization depends on the size of an organization, the ability of information technology to transfer specific knowledge, the rate of change in the environment, government regulation (increased regulation tends to increase centralization) and the level of control technology (communication and measurement techniques).

42 Strikwerda (2011: p. 37) foresees a change from the resource-based view, via a knowledge-based view, to the dynamic capabilities view, especially the capability to reinvent the business model of the firm in order to be in-control.

opportunities, *seize* them and *transform* themselves when the environment changes. Control in this sense is approached from a dynamic and adaptive point of view in relation to its environment. This approach builds upon the resource-based view and among other the entrepreneurial view on Schumpeter<sup>43</sup>, the behavioural theory of the firm of Cyert and March and the evolutionary economics of Nelson and Winter<sup>44</sup> (Augier & Teece, 2009; Teece, 2007). Contrary to the old economic theories, the dynamic capabilities approach includes management in its scope. Furthermore, this approach acknowledges the changing environment of firms which shift from large, hierarchical organizations to more flexible and interdependent organizations. This view complements the resource-based view and the other theories of the firm by recognizing the need for unique and difficult-to-replicate dynamic capabilities (such as leadership, administration, innovation, etc) in a fast-moving business environment open to global competition (Teece, 2007).

#### *Resource and knowledge-based view and the control system of a firm*

The resource and knowledge-based view describes the domain of strategy and the focus on resources and, increasingly, on knowledge. Usually, this element is discussed in corporate governance documents in a limited way<sup>45</sup>. The resource and knowledge-based view perceives different *isolating mechanisms*, meaning the phenomena which create and help (the management of) a firm with their sustainable competitive advantage and potential sources of rent (Mahoney, 1992; Rumelt, 1997).

A key element of sustainable advantage is *causal ambiguity*. It is related to a complex web of social interaction and superior combinations, which cannot be simply imitated or completely understood. Causal ambiguity is often chosen as an important factor affecting knowledge transfer (Grant, 1996). An example is Southwest Airlines, which has a successful low cost strategy that cannot be

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<sup>43</sup> Schumpeter is well known for his idea with respect to creative destruction leading to innovation from, among other, technological, product and services, and organizational change.

<sup>44</sup> The evolutionary economics of Nelson and Winter are used in relation to the routines that are thought to be the skills of the organization and they reinforce the idea of path dependency. Path dependency refers to a firm's capabilities based on its historic decisions and developments and which may impact its future. This can be a limitation of control when it hinders its development or position in the market.

<sup>45</sup> See also the discussion of the Dutch Corporate Governance code by Strikwerda (2012)

equalized by Continental and United Airlines (Collis & Montgomery, 1995). Most of the Southwest Airlines strategic elements can be observed and duplicated easily, e.g. prices, kind of plane, routes, etc. Somehow it is difficult to reproduce and specify what their superior capabilities are and how they have arisen<sup>46</sup>.

Furthermore, *specialized assets* and *special information* can be linked to organizing capital (Foss, 1996) and superior information service (Alchian & Demsetz, 1972; Arrow, 1974, , 1996). These principles and the information service establish how knowledge is transferred to groups and how it is monitored. They facilitate the integration of the entire organization and are supported by information regarding profits, costs, responsibilities, etc. Strikwerda highlights that information superiority must be coded in multiple aspects of the organization, together with the capability to process or to interpret data, via information, into new or increased revenue streams (Strikwerda, 2011a). This is in line with Dierickx and Cool (1989), who state that non-purchasable or non-substitutable assets are likely to be more specific to a firm and can create a sustainable competitive advantage.

Another relevant isolating mechanism to secure a sustainable advantage is intellectual property protection like *patents, trademarks and other legal restrictions* (Lieberman & Montgomery, 1988). The objective of intellectual property protection is to stimulate the investment in innovation with the ability to capture an appropriate return (Besen & Raskind, 1991). The protection can be seen as a reward for the innovative activities of a firm, that enables the investor to capture the returns from his investments, which could otherwise be subject to appropriation by others (Kitch, 1977). There are also other government restrictions like copyright protection, licences, regulation of trade secrets, etc. The restrictions can be different by country depending on their laws and regulations and differs in the extent and period of protection.

There are also isolating mechanism which are marked as *unique resources*<sup>47</sup> or *unique managerial talent* and *team embodied skills* (Michalisin et al., 1997). They are the management skills and capabilities that should ensure maintenance and renewal of the right resources and knowledge within the firm. At the end, management should ensure an optimal growth through a balance between

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<sup>46</sup> This is also related to the so-called theory of commitment of path dependence.

<sup>47</sup> An example of a *unique resource* is the organizational culture of a firm (Barney, 1986). Barney notes that the content of the actual culture may be influenced by the founding fathers in the firm (Barney, 1991). Rumult (1997) notes that culture is a result of human action, not human design.

exploitation of existing resources and exploration of new ones (March, 1991; Penrose, 1959/1995; Teece et al., 1997). Management has a critical task to make the right decisions on the strategy and allocation of resources beyond traditional measures like reliability of accounting information, preventing fraud, or even achieving set objectives, to prevent the firm to become out-of-control<sup>48</sup>.

Another intangible but important isolating mechanism relates to a firm's *reputation*<sup>49</sup> and *consumer trust*. A strong reputation along with strong consumer trust results in a strong competitive advantage, especially for firms in which trust is critical (Collis et al., 1995). An example is Gerber Baby food in the U.S. or Nutricia baby food in the Netherlands. In addition, the unique quality of experience becomes important for consumer trust and loyalty (Pralhad & Krishnan, 2008). Brand loyalty through trust is not easy to imitate in a short period. This relationship has also been analysed and confirmed by management scholars (Michalisin et al., 1997). In other words: reputation is valuable because it helps the firm win customers, charge premium prices, attract investors, improve access to capital markets and attract superior human resources (Michalisin et al., 1997: p. 370).

*Organizational learning* is also seen as a relevant isolating mechanism (Danneels, 2002; Lieberman et al., 1988; March, 1991). Firms with faster learning curves make higher profits in case of intense competition. Danneels refers to customer learning in the sense of the knowledge of needs, preferences, effective distribution and sales access and communication channels (Danneels, 2002). An example of a firm that stepped into a competency trap is Chrysler. A competency trap is the adherence to routines and a denial of the need for change which lead to inappropriate learning (March, 1991). Chrysler invented the minivan during the 1980s and made a fortune from it. Although America's car-buying tastes changed, Chrysler's factories kept on producing a particular style of car, and innovation had

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<sup>48</sup> Various lines of research provide guidance of possible dysfunctional effects in the strategy setting process, such as the already mentioned bounded rationality (Simon, 1976), bounded awareness (Chugh et al., 2007), bounded knowledgeability (Giddens, 1984), dominant logic (Pralhad & Bettis, 1986), belief conservatism (March, 1994), and groupthink (Janis, 1972) leading to incomplete or unrealistic strategies that may even miss important waves of disruptive technologies or changes (Christensen, 1997).

<sup>49</sup> Fortune magazine annually measures a firm's reputation. The criteria are: quality of management, quality of products and services, innovativeness, long-term investment value, financial soundness, people management, community and environmental responsibility and use of corporate assets. In addition, the most admired firms are also compared in terms of firm financial performance. It indicates that a firm with a high reputation outperforms firms with a low reputation score.

been narrowly focused on improvements in minivans (Pfeffer, 2007). In the meantime, the competition developed innovative cars and even minivans, which resulted in a diminishing market share and profit for Chrysler. This inability is also described by Prahalad as dominant logic, meaning the inability both at the individual level of managers and at the level of the organization itself, to see changes in the environment of the firm relevant for the continuity of the firm and act on these (Prahalad et al., 2008).

*Innovation* is also described as an essential mechanism to continue having a sustainable advantage. In 1934, Schumpeter recognized the importance of an entrepreneurial vision for the competitive advantage of a firm (Conner, 1991). Entrepreneurship also requires the power of revolutionary innovations to shift market positions. Schumpeter defines innovation as *creating new combinations* – combining existing resources, materials or means of production in some novel way (Swedberg, 2007). This shows the importance of monitoring and reacting to the changes in potential sources of rent and the applicable isolating mechanisms, such as managing the internal know-how, promoting creativity and innovation and learning as engine for competitive vitality. This approach is more focused on dynamics and adaptability of the firm (Michalisin et al., 1997; Teece et al., 1997). The dynamic capabilities view extends the resources/competences-view on the firm, and describes the need for a firm to be innovative and adaptive in order to be in-control (Teece et al., 1997).

The preceding list is not mutually exclusive, because resource and knowledge-based view theorists have argued persuasively that competitive advantage results from superior knowledge, or luck, or a combination of the two (Barney, 1986; Diericks et al., 1989). Overall, the resource/knowledge-based view provides direction regarding the overall control of a firm. Implementation of the identified mechanism differs per firm. This is in line with its view's assumption regarding heterogeneity. However, the resource/knowledge-based view does not include clear criteria for a good control system of a firm. The mechanisms remain on an abstract level, as a result of which they are difficult to apply.

#### *Linkage between Resource and knowledge-based view and internal audit*

The resource -based view implicitly implies a role and function for internal audit as possibly being part of the bundle of valuable resources. A proper system of control itself will be one of these valuable resources to maintain a sustainable advantage towards competitors. Subsequently, internal audit can be viewed as *valuable* (i.e. contributory to efficiency and effectiveness) as part of the overall control system of

a firm. The question is whether the competences of internal audit are rare (i.e. not widely held), inimitable (i.e. not easily replicated) and non-substitutable (i.e. no replaceable resources for same function). This raises the question whether the existing scope (mainly operational and financial audit) answers these criteria, or whether the field of internal audit should apply the concept of dynamic capabilities to its own field and develop new competences in order to remain viable.

The concept of the resource-based view should be considered as a theoretical basis for internal audits. This view can be used in the selection of possible strategic elements of the firm to be audited, such as focus on the use of intellectual protection and innovation. The emergence of the knowledge-based view, with its focus on the exploitation of knowledge and information instead of transactions, implies new objects to be audited for internal audit. Internal audit areas may be the assessment of the design and effectiveness of a control system in relation to general and specific knowledge, the organization-specific, specialized language and, in line with the dynamic capabilities view, the way how organizations *sense* new opportunities, *seize* this information within the firm and *transform* themselves when the environment changes.

### **3.3 Concluding remarks**

This chapter explored the theory of the firm as a meta-theory to analyze the control system of a firm and to identify linkages with internal audit functions. The following concluding remarks can be made based on the exploration:

First of all, it can be concluded that the theory of the firm, also the Coasian view on the firm rather than on the neoclassical theory of the firm, seems to keep an *outside-in* perspective or, in other words, a *markets* perspective instead of an internal organization perspective. The black box of the firm is opened in the Coasian view on the firm, but not sufficiently. Therefore, other streams of research should be included to be able to provide a comprehensive normative model.

Secondly, the theory of the firm is far from homogenous and involves different views. These different views (agency, transaction costs, property rights and the resource/knowledge-based view) provide different dimensions/issues that can be complementary to each other and to internal audit, by analyzing control issues within a firm. The different theories highlight the fundamental questions from the Coasian theory of the firm related to why a firm exists (TCE, property right view, RBV/KBV), what the boundaries of a firm (TCE, property right view) are and the internal organization of a firm (Agency theory, property right view, RBV/KBV).



Thirdly, the discussed theories of the firm provide insight into the assumptions behind the existence, boundaries and mechanism of internal organization. Fundamental assumptions are bounded rationality (agency theory, TCE), information asymmetry (agency theory) or information impactedness (TCE), the importance of boundaries of a firm by ownership or access to assets (property rights view, RBV/KBV) or asset specificity (TCE) and maximizing behaviour and related incentive issues (agency theory, property rights view).

Fourthly, more recent economic literature shows awareness of the shift from physical assets to human, information and organizational assets. It shows insights that the nature of firms, as expressed in the concept of the New Business Enterprise — implicitly assumed in corporate governance thinking — is changing. This explicitly changes the required focus within the different theories of the firm (agency, transaction costs, property rights and resource/knowledge-based view). This exploration of literature should also alert internal audit functions to the shift from physical assets towards human, information and organizational assets, and to their own adaptation in these areas.

Fifthly, this exploration of literature also showed the limited attention for risk & control systems. This vocabulary is not familiar within the Coasian theory of the firm. The theory of the firm is more concerned with uncertainty than with risk and furthermore, with information, governance mechanism and adaptation instead of financial audit related control. In addition, the output of the financial controls, i.e. the financial statement, is based on historical information, while lacking thorough information on the future profitability and cash flow. The latter element is not extended in the Coasian theory of the firm, but can implicitly be concluded.

Sixthly, the different views of the firm indicate that internal audit could be seen as a double loop control mechanism at corporate level of a firm (agency, TCE), in addition to its control system. The boundaries or scope of internal audit are not described, but seem to be very broad as it covers information asymmetry and incentive issues, but also possible issues in relation to bounded rationality and other behavioural elements. The resource and knowledge-based view challenges internal audit to indicate their distinctive competencies and explain why it is part of the bundle of valuable resources, this in relation to the creation of above-normal rents.



## 4. The theory of control revisited

### 4.1 Introduction<sup>50</sup>

When is a firm in-control? Many business people, regulators, investors, practitioners in the field of law, audit and consulting, as well as many others, are concerned with this question. Increased (regulatory) demands for accountability have made firm's control system part of the public policy debates regarding auditing and corporate governance (Majoor, 2000). The use of the word 'control' requires a study of what control is, especially within the context of the internal organization of the firm. A common concept regarding the control system of a firm is still lacking at this moment; different concepts for control are assumed in various researches, depending on the choice of academic field. This chapter will discuss different views of (in-)control as well as an underlying theory of control as this seems to be relevant for a theory with respect to internal audit. The theory of control will play a role in the determination of the scope of work of internal audit.

### 4.2 Internal audits' view on control

The Institute of Internal Auditors (IIA) defined the scope of a control system in their *International Standards for the Professional Practice of Internal Auditing (Standards)*. They relate an effective system of control to risk management, control, and governance processes (IIA, 2010a). Furthermore, according to the *Standards*, adequate control is assumed to be present if management has planned and organized (designed) in a manner that provides reasonable assurance in relation to the effective management of the organization's risks and if the organization's goals and objectives are achieved efficiently and economically.

Section 2100 of the *International Standards for the Professional Practice of Internal Auditing (Standards)* explains the nature of work of internal audit and describes the elements of governance, risk management and control in more detail (IIA, 2010a: p. 9-11):

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<sup>50</sup> Control of the firm can be seen as a firm being *in control*. The unit of analysis considers the internal control system of the firm from an organizational perspective and on how it is established by its management. The question of *who* controls the firm, as part of corporate governance, is not the primary focus.

### ***Governance:***

The internal audit activity must assess and make appropriate recommendations for improving the (IT) governance process in its accomplishment of the following objectives:

- Promoting appropriate ethics and values within the organization;
- Ensuring effective organizational performance management and accountability;
- Communicating risk and control information to appropriate areas of the organization; and
- Coordinating the activities of and communicating information among the Board, external and internal auditors, and management.

### ***Risk management:***

The internal audit activity must evaluate risk exposures (including fraud) relating to the organization's governance, operations, and information systems regarding the:

- Reliability and integrity of financial and operational information;
- Effectiveness and efficiency of operations and programs;
- Safeguarding of assets; and
- Compliance with laws, regulations, policies, procedures and contracts.

### ***Control:***

The internal audit activity must evaluate the adequacy and effectiveness of a control system in responding to risks within the organization's governance, operations and information systems regarding the:

- Reliability and integrity of financial and operational information;
- Effectiveness and efficiency of operations and programmes;
- Safeguarding of assets; and
- Compliance with laws, regulations, policies, procedures and contracts

The definitions strongly relate to each other, especially risk management and control. Both definitions are broader than transactions (e.g. policies, systems, procedures, checklists, standards and chart of accounts). However, the above descriptions fail to include the firm's scope of control. For example, does it include the external environment (corporate governance, industrial organization, regulatory

environment) or only the internal organization (internal governance)? Furthermore, the description does not include specifics on assumptions and criteria with respect to control.

Sawyer states that internal audit's scope covers all control activities, as long as internal audit can relate them to the objective of the firm (Sawyer, 1996). Section 2120.A4 of the *Standards* (IIA, 2004) mentions that adequate criteria are needed to evaluate control activities. Internal auditors should ascertain the extent to which management has established adequate criteria to determine whether objectives and goals have been accomplished. If they are adequate, internal auditors should use such criteria in their evaluation. If they are inadequate, internal auditors should work with management to develop appropriate evaluation criteria (IIA, 2006). However, the standards do not include specific criteria for evaluating control activities. A position paper of the IIA (IIA, 2006) identifies organizational governance principles which could be seen as high-level criteria for evaluating organizational governance. These principles are also covered in the COSO framework and are accounting-related.

From an (internal) audit perspective another classification is important; the division between *accounting* control and *administrative* control (Heier, Dugan, & Sayers, 2005; Mautz et al., 1981). The safeguarding of assets and the accuracy and reliability of accounting data is described as part of accounting control, while the promotion of operational efficiency and the encouragement of adherence to prescribed managerial policies is seen as part of administrative control. This differentiation ensured that the scope of the auditor remained focused on accounting data and excluded the need to be primarily concerned with administrative control as well. The difficulty is to link administrative control directly to line items in the financial statement and to financial statement risks because it is related to the general management of a firm. The administrative control is partly, but not completely or accurately, covered in for example COSO.

### **4.3 Other views of control**

There are various connotations of control (Flamholtz, 1985: p. 37), ranging from "choosing operating rules and enforcement of rules to maximize the organization's objective function" (Arrow, 1964), "devices or systems managers use to guide the behaviours and decisions of employees" (Merchant, 1998), and "verifying the conformity of actions to plans and directions" (Fayol, 1916) to "power" (Hofstede, 1968) and interpersonal influence activities" (Tannenbaum, 1962) and as the "verification of judgements and activities to a standard" (Starreveld, 1994). The

connotations include elements of the subject control, but there is no integrative view. In other words, control seems to denote just about anything an author wants it to be.

In general, the classification of the meaning of control falls into two categories: a broad and a narrow view on control (Luneski, 1964). In a broad function of control, Luneski (1964) states it as being the function of constraining and regulating action in accordance with plans and set objectives. Furthermore, control is seen as a means to instruct, direct, motivate, inspect and correct subordinates. This approach can be labelled as meta control (Simons, 2005), because it covers the whole management process from mission, vision, planning and organization design to monitoring and correcting, including the behavioural component regarding motivating and leading.

The narrow approach on control limits itself to the monitoring, analyzing and correcting of actual performance versus plans. This approach is only one aspect of the broad view on control. Luneski (1964) differentiates the two approaches as the view that *makes sure that* operations conform to plans (broad) versus the determination *if* operations are conforming to plans (narrow). Control is seen by a wide range of management writers as one of the principles of management. These writers include Emerson around 1912, Fayol around 1914 and later writers such as Koontz and O'Donnell around 1972 (Fayol, 1916; Giglioni & Bedeian, 1974; Wehrich & Koontz, 1993).

Understanding the scope of control is a challenge, because of all the different connotations as indicated by a short summary below (not limitative):

- Accounting versus administrative control (Heier et al., 2005; Mautz et al., 1981).
- Internal and external control (Fligstein, 1990; Pfeffer et al., 1978)
- Strategic control, management control and operational control (Anthony, 1995)
- Formal en informal control (Anthony, 1995; Barnard, 1938)
- Output and behavioural control (Ouchi, 1977)
- Market, bureaucracy and clan control (Ouchi, 1979)
- Administrative and social control (Hopwood, 1976)
- Results, action and personnel control (Merchant, 1998)
- Levers of control (Simons, 1995)
- Internal governance and internal control (Strikwerda, 1997)

Another point of attention concerns the difference in meaning of control in different languages. In French, control refers to inspection; this same meaning is used in the Netherlands. However, in the U.S., control refers to the broader concept as indicated in the discussion in the above paragraphs. It may cause misunderstanding when the same kinds of words are used with different meanings.

The range of views and interpretations on control will be discussed in the following paragraphs and will be linked to each other as far as possible. This should create a clear view on the difference between the institutionalized definition of control embedded in governance committees, laws, audit study books and in business reality versus an integrative view on knowledge basis regarding the subject of control — varying from management, legal, governance, behavioural organization, psychology and organization learning to audit literature, etc.

#### **4.4 Assumptions underlying control**

From an organizational level there is a need for control to deal with uncertainty and differential amounts of information in different parts of a firm (Arrow, 1964). Control helps management to create order, direction and conformity of distinctive, idiosyncratic behaviours.

Control problems occur due to lack of information and/or understanding of the goals to be reached. Merchant refers to a number of control problems; lack of direction, lack of motivation and lack of capabilities (Merchant, 1998). These three elements create a need for management to set up control structures and the right contextual arrangements, to ensure that the firm's objectives are met. Control, as opposed to *contrôle*, requires *ex ante* and *ex post* control mechanisms, such as goal setting, organization and (explicit en implicit) coordination mechanisms. Combined, these *ex ante* and *ex post* control mechanisms are the basic elements of general management, as indicated by Fayol in the 19<sup>th</sup> century. This indicates that control is based on the whole firm and its organization, and is not just one of the elements of management.

Furthermore, the need for different types of control is also influenced by the view on people or the so-called organizational man (McGregor & Cutcher-Gershenfeld, 2006). In the 1960s, McGregor started the discussion by asking whether people create value or are merely a cost to be cut whenever possible (McGregor et al., 2006). On the other hand, he counter posed the previous idea with the statement that people are an asset that should be valued and developed. The reality consists of a variety of choices between these extremes. The importance of social systems had

been investigated and evidenced earlier, as part of the Hawthorne studies in the 1930s.

The economic point of view also indicated certain assumptions of human behaviour and its imperfections. The assumptions bounded rationality (Simon, 1976) and opportunism (Williamson, 1996) have been described already in the previous chapter. Jensen notes that individuals are willing to substitute or, in other words, are willing to make trade-offs, as long as this is in line with their demands (Jensen, 1998). Working in a firm and being controlled can be seen as a trade-off that is accepted by members of a firm. It provides comfort and social cohesion (Sennett, 1988). Control problems can occur when the responsibility for creating and sustaining order tends to be distributed unevenly within organizations (Tannenbaum, 1962). There are only a few in the organization (management) who decide about the kind of order and the organizational norms.

A firm is not a closed system, but is part of an operational context (market) and an institutional context, together with other firms and organizations which will influence its existence. To ensure its continuity in the long term, access to the right resources is needed (Fligstein, 1990; Pfeffer et al., 1978), or its existing resources need to be developed or transformed (Teece, 2007). The previous discussion in this chapter on the views and assumptions in relation to the subject of control lacks a coherent, coordinating theoretical framework. As it turns out, the field of cybernetics provides a theory of control. This theory of control will be expanded in the following paragraph.

## **4.5 Cybernetics is the formal study of control**

Some claim that cybernetics is a theory of ‘everything’ (Skyttner, 2005). Cybernetics covers the control of living systems, varying from biological cells, biological systems to socio-economic systems like firms. Cybernetics explains how living systems, biological, the individual, social systems, different from inorganic physical systems, are *organized*. The function of this organization is to generate, acquire, store, process and to communicate information: to control the flows of matter (input-output economics) and energy (ecology) in order that the living system remains alive and whenever necessary adapts itself to changes in its environment to survive (Beniger, 1986). Today it is understood that control is not only related to matter and energy, but applies also to data and information itself. Cybernetics is not restricted to economics, a theory of the firm or accounting, and is neutral with respect to the role of institutions; cybernetics can therefore be used as a theory of control for the practitioners in internal audit.



Cybernetics is defined as the science of communication and control in both machines and living beings (Ashby, 1956; Wiener, 1950). Wiener's objects of interest were teleological mechanisms (meaning mechanisms with a purpose or goal), that were self-regulated through circular feedback mechanisms. The word cybernetics is Greek for *steersman*. The equivalent Latin word is *governor*, meaning *a person in control*. These meanings may be closely related to the function of management. Similar to a biological system, a firm is goal-oriented. Firms exist or are set up with a specific purpose and to obtain a stage of equilibrium. A firm that demonstrates evolution in order to survive in a changing environment appears to have a complex organization (Simon, 1962). As implied by Ashby's Law of Requisite Variety (1956), the organization of a firm needs a minimum level of complexity in order to survive and thus to be in-control. Simon (1962) defines complexity of a system (an organization) to consist of three characteristics: First of all, the system (organization) is composed of interrelated subsystems, each being subordinated by an authority relation to a larger system it is part of (e.g. a firm consisting of a number of divisions, a division consisting of a number of business units, etc.), thus forming a hierarchy. Secondly, between a system and its sub-systems there are information processes in the sense of programming. This concept of programming is the same as programming in the definition of organization culture: the collective programming of the mind. This programming consists of communicating the mission of the firm (identification with), its values (internalization of), the understanding of the business, work methods, targets, budgets, corporate policies, etc. Thirdly, this programming is not total or absolute, but has the nature of *loosely* coupled, thus allowing localized instances to be adaptive in response to new situations.

Important elements of cybernetics are steering or governing, using programming, standards and feedback loops to ensure that specific goals are met. Wiener used the example of a steersman who wants to cross a river during strong winds and a strong tide. The steersman can remain in control by following a given course and take action in case the boat goes off course. The steersman will monitor the flow of information, detect possible differences from expected values and adjust the differences to ensure a stage of equilibrium. Yet, a goal must be programmed prior to the behaviour that influences the action (crossing a river during strong winds and a strong tide). Control, therefore, is also linked to programming. This programming should be interlinked with the context of an organization to create an effective control system (also see Bower, 2005). Employees and managers are less task-driven, as described by management control authors such as Anthony (1995), but more objective or even value-driven (Strikwerda, 2012).

Another element of cybernetics is that systems interact with their environment. A firm is an open system that can never be in a true steady state, because it is continually adapting to its environment, if it wants to survive. It is always a challenge to cope with sufficient variety of sophistication within the firm in relation to the environment and thus be able to remain in equilibrium, regardless of a changing environment (Ashby, 1956). This is also called homeostasis. It always deals with a variety of possibilities within an organization. Others call this the adaptability of the organization, or the flexibility of the organization to cope with changes in the environment (Barnard, 1938; Volberda, 1998). The awareness of complexity and the importance of considering the whole picture instead of the parts of a system is the added value of this view.

According to Beniger (1986), there are three dimensions of control: A first dimension is the maintenance of an organization, even when there are no external changes (*existence or being*). The second dimension is the adaptation of goal-oriented organizations to variation and change in external conditions (*experience or behaving*), to prevent increase of entropy of the system. The third dimension relates to reprogramming less successful goals and processes while preserving successful ones (*evolution or becoming*). These dimensions need to be applied to survive in the environment.

Furthermore, there are four levels at which control is being programmed (Beniger, 1986). The first level of programming is at the level of genetics (molecular programming) – it is programming codified in the DNA and the nervous system of living systems. Some speak of the DNA of a firm and therefore it can be compared to an entrepreneur who is setting up a firm, defining its culture. The second level of programming is cultural programming (in society) as this takes place through learning by imitation, by teaching, and institutional programming on culture-based social structures. The third level of programming is labeled bureaucracy and includes programming in the form of trade rules, commercial techniques, professional standards and routines. The fourth level of programming is about technology. This relates to specifically designed functions and programs, such as information systems and processors.

Cybernetics and system approaches are well-known in the day-to-day way of thinking in business and professions with concepts such as purpose, relationship, boundary, input, transformation, output, environment, feedback, open system, homeostasis, communication, control, identity, hierarchy and adaptation (Jackson,

2000). We can, therefore, conclude that cybernetics provide a meta level from which the subject of control can be studied.

#### **4.6 Information theory as part of cybernetics**

As mentioned in the cybernetic view, a fundamental aspect to maintain control is the processing of information. Information is a means to create social order and mutually making sense of information (Garfinkel, 2008). Therefore, it is understandable that Simon indicated as early as 1973 that a major problem for a firm relates to organizing information, storage and information processing to enable effective decision making (Simon, 1973). In addition, Simons defines control systems as the formal, *information*-based routines and procedures managers use to maintain or alter patterns in organizational activities (Simons, 1995: p. 5).

The assumptions behind this definition can be linked to cybernetics and the information theory; elements as objective setting, value hierarchy of different patterns and preferences, measuring facts, interpreting and making sense of information, the cause-effect analysis and creating information out of data. Therefore, a description of the different levels of information (Garfinkel, 2008; Strikwerda, 2010; van Peursen, Bertels, & Nauta, 1968) will be discussed and linked to the current management literature.

<b>Element</b>	<b>Description</b>	<b>Link to management</b>
Goal information	Setting the objective or a final state to be reached as the basis of the system and/or firm.	Mission statement, objective function
Axiological information	Management decides to a value hierarchy, which determines the patterns and preferences of selection towards information (taken into mind history, context, culture)	Values of a firm
Environmental information	Material information = objective, factual data about changes in the external environment  Eidetic information =the interpretation and making sense of external information leading to new insights or confirmation of existing view.	Strategy (Market research, strategic surveys), Fayol's prévoyance  Leadership, Learning
Effect information	Information on cause-and-effect relations (the If>Then>Else relationship).	Process management, business models, Learning
Pragmatic information	Transaction and performance data that is transferred into relevant information for making decisions.	Management information, Performance and other operational management

**Table 4.1: Different types of information (Garfinkel, 2008; Strikwerda, 2010; Peursen, Bertels and Nauta, 1968)**

This cybernetic type of information provides insight into the special properties of information as an economic good and its implications for the role, meaning and effectiveness of the firm (Arrow, 1996; Strikwerda, 2011a). This type of information and translation into management controls is a way to codify and/or program the different types of information within the firm.

The above overview demonstrates that pragmatic information is only one of the relevant information types as part of a cybernetic system. Transaction and performance data should therefore not be the sole area of attention as part of the question if a firm has an appropriate control system. An assumption behind the growing need for these different types of information is the changing social structure and conventions in society, together with a growing importance of the creative knowledge workers within firms (Strikwerda, 2011a, 2011b).

The above table presents a rational, systematic view on information. However, human beings are not always rational and use fragmented data, a selection of facts, and adapt reality to its own liking. There are cognitive and psychological causes for this creation of *noise* and *filtering* of information, such as budget gaming (Hofstede, 1968), anchoring (Tversky & Kahneman, 1974), belief conservatism (March, 1994) and dominant logic (Prahalad et al., 1986). This psychological noise and filtering may cause a firm to become out-of-control and will, therefore, be taken into account in this thesis.

#### **4.7 Organizational studies' view on control**

The preceding discussion on the assumptions set in cybernetic and information theory provides a frame of reference for a solid control system of a firm. The next step is the translation of these views in the current organization and management literature (economic literature is already discussed in chapter 3), broader than the internal audit related literature such as the implicit 'theory' in COSO, which lacks essential elements.

A question to be discussed in the chapter is the extent to which the broader organization and management literature provides sufficient clarity and answers the requirements of a solid control system of a firm. The broader views organization and management are part of the umbrella term *social science* (Ghoshal, 2005). A selection is made of the social sciences that are applicable to the study of the control system of a firm (Kuper, 2003; Rollinson, 2005)<sup>51</sup>. As will be demonstrated, no single organization theory exists that encompasses all the relevant elements concerning the control of a firm. However, the field of organizations is covered as part of organizational studies. Pfeffer (1997: p. 4) describes the field of organizational studies as an interdisciplinary focus on (a) the

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<sup>51</sup> This study will exclude demography, education, geography, gender studies, etc, which are not directly linked to the control system of a firm.

effect of social organizations on the behaviour and attitudes of individuals within them, (b) the effects of individual characteristics and actions on organizations with a particular emphasis on the efficacy and (...) individual influence (e.g. through leadership) in organizational systems, (c) the performance, success, and survival of organizations, (d) the mutual effects of environments, including resource and task, political and cultural environments on organizations and vice versa, and(e) concerns with both the epistemology and methodology that undergird research on each of these topics. Organization studies include interdisciplinary views such as industrial relations, organizational psychology, organizational sociology, management, administrative theory, and organizational behaviour” (Heugens, 2008: p. 14)<sup>52</sup>. As also mentioned by Heugens (2008), it remains a challenge to make a selection of many different theories<sup>53</sup> and underlying principles, even with the limitation of applied social sciences and organizational studies. In addition, there is a mass-production of theories that have no link to reality and/or fail to provide tangible and suitable solutions to management and control problems.

The following table incorporates an initial exploration of views of organizational studies that provide input for integrative comprehensive control system of the firm.

<b>View</b>	<b>Major elements</b>	<b>Key authors</b>
Management control view	<p>Management control is viewed as top management’s task; management must establish a link between strategy, strategic planning and operational control. Management control should increase the probability that the objectives can be achieved.</p> <p>In addition to formal arrangements regarding budgeting and reporting, its scope has evolved and now includes behavioural control as well.</p>	(Anthony, 1995); (Merchant, 1998; Simons, 1995; Strikwerda, 2008)

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<sup>52</sup> The organization studies do not seem to include explicitly economic organization in their area of attention, while it is one of the points of view that is expected to be taken into account.

<sup>53</sup> The *Academy of Management Journal’s* Subject Index offers authors a choice of 63 different theories to choose from, see: <http://www.aom.pace.edu/amj/forms.htm>.

Management view	Management deals with planning, organizing, leadership, coordination and controlling. It deals with principles such as managing objectives, delegation of authorities and structure, which can lead to an efficient and effective organization.	(Drucker, 1974; Fayol, 1916; Mintzberg, 1973)
Psychological view	Appropriate psychological checks and balances and attention to psychological factors such as cognitive biases (e.g. anchoring, competitor neglect), reinforcement of unrealistic views, belief conservatism, dominant logic and narcissism, which leads to a Board being in or out of control	(Kets de Vries, 2001; Lovallo & Kahneman, 2005; March, 1994; Prahalad et al., 1986)
Organizational Culture view	Culture consists of basic assumptions, values and beliefs, and artefacts that provide direction for people. It is important that management influence and control people in both thinking and acting. Leading by example and vision are tools that management uses to create the appropriate culture	(Hofstede, 1980; Hofstede, 1968; O'Toole, 1995; Schein, 1992)
Organizational learning & adaptation	For effective control there should be awareness and consistency of the espoused theory and theory-in-use. The espoused theory is what we say we do or would like to do, while the theory-in-use shows the real behaviour. Furthermore, learning should also be translated (if required) in adaptation of the firm	(Argyris, 1999; Levitt & March, 1988)
Organizational Politics view	Within organizations, power is used to acquire, develop and use influence and resources to obtain preferred results in situations involving uncertainty. To be in control means being aware of the level of politics, its rightful application and preventing conflicts among individuals or groups that can hinder the achievement of the firm's goals.	(Mintzberg, 1983; Pfeffer, 1992)
Resource dependence view	A firm is in control when it succeeds to acquire those resources needed for its continuity in the long term.	(Pfeffer et al., 1978)

**Table 4.2: Different points of view regarding control**

As demonstrated above, on the one hand control relates to the most efficient organization of resources within and outside a firm. On the other hand, control relates to controlling the hearts and minds of the organization's people (Rollinson, 2005). These alternative views, have some commonalities, but also differ considerably from the view, models and theories assumed in the current corporate governance codes (see also Strikwerda, 2012) and COSO.

Let us start with the theory that has evolved since the beginning of the 19<sup>th</sup> century. The general view regarding control of the firm starts with the management and the management control perspective. Recent studies (Ferreira, 2005; Merchant, 1998; Simons, 1995) show the symbiosis of these two views. The management view deals with *the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims* (Wehrich et al., 1993). This definition is strongly linked to the definition of management control, which is defined as *the process by which managers influence other members of the organization to implement the organization's strategies* (Anthony, 1995'; p. 8).

However, Anthony originally applied this broad definition of management control narrowly. His view on management control is closely related to management accounting (Simons, 1994). The field of management control further evolved and extended its scope by including behavioural control, such as culture, management style and communication (see Merchant, 1998 en Simons, 1994). Control provides the context for accomplishing the goals of a firm (Ouchi, 1984). A broader scope has evolved due to the growing awareness of the importance of 'people' within a firm. This broader view on control can be closely linked to the management perspective. Based on many years of experience and testing, Wehrich and Koontz (1993) break management down into five functions (planning, organizing, staffing, leading and controlling). These principles go back to the times of Alfred Sloan and Henri Fayol. Sloan (1990) identified management principles (such as decentralization, organizing, command and control structures) to solve management problems already around 1916.



During the same time Fayol defined his functions of general management (Fayol, 1916):

- *Prevoir: c'est-à-dire scruter l'avenir et dresser le programme d'action*
- *Organization: c'est-à-dire constituer le double organisme, materiel et social, de l'entreprise*
- *Commander: c'est-à-dire faire fonctionner le personnel*
- *Coordiner: c'est-à-dire relier, unir, harmoniser tous les actes et tous les efforts*
- *Côntrole: c'est-à-dire veiller à ce que tout se passe conformément aux établies et aux ordres donnés.*

Furthermore, Fayol divided the functions of management into 14 principles – division of work, authority, discipline, unity of command, unity of direction, subordination of individual interest to the common interest, remuneration, centralization, chain of authority, order, equity, stability of tenure of employees, initiative and esprit de corps. He noted that his identified principles were flexible and capable of adaptation if required. Furthermore, intelligence and experience is required to use the principles in a proper manner.

The above management principles involve a balance between formal and informal control. The importance of this balance is also emphasized by Barnard (1938), Tönnies's (1957) and Simons (Simons, 1995). Extended research in management and management control shows that an integrative view on control is a mix of more traditional accounting control (such as budgets and financial measures), administrative control (such as organization structure and governance systems) and socially based control (such as values and culture) (Malmi, 2008). The integrative view can be summarized in the following relevant elements of control, based on research in the area of comprehensive control systems of a firm (Ferreira, 2005; Flamholtz, 1985; Malmi, 2008; Merchant, 1998; Paape, 2008; Simons, 1995):

- Mission
- Values
- Vision
- Strategy
- Organizational Structure
- Leadership
- Learning & Adaptation
- Performance Management & Monitoring
- Information & Communication

The challenge is, to investigate assumptions per element, as currently, there are no empirical studies focusing on the whole. The available studies relate to a part of the control system's design and use (Chenhall, 2003; Ferreira, 2005). Although some academics are of the opinion that different theories should be kept apart as they offer different insights (Chenhall, 2003), I am of the opinion that searching for underlying assumptions should never be hindered, but encouraged.

## **4.8 Assumptions behind the elements of control**

In the previous paragraph, the elements of control were introduced. However, the assumptions behind these high-level elements were not discussed. This will be done in the following paragraphs, to provide guidance on the content of the different elements.

### **4.8.1 Mission**

The purpose of a mission is to capture the fundamental reason why a firm exists (Pearce II & David, 1987). The result of a mission is first of all to inspire and motivate members of the firm to exceptional performance and secondly to guide the resource allocation and objective setting process (Bart, 1997).

The mission is a means to (de)select employees to ensure their identification with the mission. In addition, the mission provides focus and a purpose which limits the risk of information (data) overload for the members of a firm (Lash, 2002). It should *not* describe how the firm expects to compete and deliver value to customers and society, when and with which assumptions (Drucker, 1946; Kaplan & Norton, 2004) as this is part of the strategy process<sup>54</sup>.

### **4.8.2 Values**

Based on recurred literature, Schwartz and Bilsky define values as the concepts or beliefs that relate to desirable end states or behaviours, independent of specific situations, which serve as guiding principles for behaviour and are organized in a hierarchy of importance (Schwartz & Bilsky, 1987). Values are considered to be essential to the experience of meaning (Cha & Edmondson, 2006). Within a firm, it is the internal compass that drives the behaviour of the people within the firm

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<sup>54</sup> A mission may relate to the identity of the firm, and changes therein are in the Dutch jurisdiction BW2 107a first paragraph, subject to approval of the general meeting.

(Kaplan & Norton, 2008)<sup>55</sup>. Successful firms show that the values are chosen by management itself, largely independent from the environment, competitive requirements and management fads (Collins & Porras, 2002)<sup>56</sup>.

The origins behind the values of a firm can be found in business and moral principles as described by the founding fathers or inspiring leaders of firms. Collins and Porras highlight some lines on the role of core values by some leaders of successful firms (Collins et al., 2002). Thomas J. Watson Jr. of IBM confirms the importance of a set of beliefs on which it premises all its policies, actions and faithful adherence to those beliefs. He wrote the credo to preserve the beliefs as being kept as the rules of life. The same is applicable for other long lasting firms like Johnson & Johnson, Merck, HP, etc. They, according to Collins and Porras, are strongly cultivating their values within the firm, to the extent that might seem like brainwashing at times (Collins et al., 2002). Values seem to be misused to manipulate members of the firm, instead of used to govern a firm with the support of information, the values of the firm form a type of information (axiological information). There are examples where it went wrong – for example at Toyota. Toyota was always strongly focused on quality, reliability, and continuous improvement in manufacturing methods. The big business disease syndrome lead to focus on growth as main priority above quality. The consequence of this focus was to open new factories in new countries, stronger focus on cutting costs, etc. (Stalpers, 2010) which strongly diminished the core values of quality and reliability in the routines and minds of people.

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<sup>55</sup> Auditors generally focus on integrity rather than values. Integrity is important for the control environment of a firm and is indirectly linked to a reliable financial statement and safeguarding of assets. This focus is due to the attention auditors pay to the prevention of fraud. Integrity is mostly seen as a virtue and is linked to being consistent in applying values (such as being honest, incorruptible, complete and sincere) despite the presence of circumstances which might threaten those principles (Kaptein & Wempe, 2002). Integrity can be related to the levels of moral development from Kohlberg (1st level - self-interest, 2nd level -conformity to society, 3rd level - using universal ethical principles). In the end, integrity is not a value in itself, but can be interpreted as a capability to be mindful and consistent about its own moral development (in word and deed). For this reason, no explicit attention will be paid to integrity as an item as such; it will be part of the broader view on values and leadership.

<sup>56</sup> There are also different cultural models, such as the double S Cube from Goffe and Jones, the competing values framework from Quinn and the Organizational Culture Assessment Instrument of Cameron and Quinn. These models provide insight and awareness in different kind of cultures, but they do not resolve the answer of how these models enhance control of the firm. For this reason there will be no explicit attention for these kinds of models.

Values can also be seen as moral principles as described in the Ten Commandments, or moral principles that have been extensively studied by philosophers, besides the business principles. Moral principles are the guidelines people use to make moral judgments, and are made explicit in the values of a firm (Kaptein & Wempe, 2002). Attention given to these values can be explained by the following developments (Strikwerda, 2011a; Wempe, 1998). Until the 20<sup>th</sup> century, the institutional authorities and environment, such as the state, politics, churches and labour relations, ensured strong and clear cultural programming. Changes in society (such as globalization, changes from an industrial society to an information society and individualization) force firms to take over the role of socialization and cultural programming. Another development is the increased attention of public opinion through organized action groups and media paying attention to the behaviour of (the people within) a firm. Also, liability claims on firms led to more attention for prevention of legal issues caused by dysfunctional behaviour within and outside a firm. Organization values are a subset of social values and differences in value sets need to be taken into account (Hofstede, 1980). This cultural variety requires clear positions on what is acceptable and what is not, taking into account the specific customs and habits in different countries. For example, what is called bribery in a Western country is accepted in other countries<sup>57</sup>. Multinational firms work in an open system/different countries with different institutional habits and customs. However, global regulation requires a firm to develop specific values, independent of institutional habits and customs. Specific values provide guidance for the boundaries within which firm members should operate, and provide focus, as mentioned in the section regarding the mission of a firm.

### **4.8.3 Vision**

A vision highlights the future aim (3-10 years) and direction and helps individuals to understand why and how they can support obtaining that vision (Kaplan et al., 2004). A vision is not to be seen as ambition, but is the result of the interpretation and making sense of external information and developments (eidetic information).

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<sup>57</sup> The US Foreign Corrupt Practices Act (FCPA) is an example of a law against bribery. That law prohibits United States persons and corporations from making corrupt payments to foreign government and political party officials. Also, other countries and firms outside the US are prosecuted for corrupt payments under the flag of FCPA, with Siemens as an example. In this environment, firms have a strong interest in establishing business practices that detect and prevent corrupt payments and enforcement actions.

This is a process that takes substantial and sustained intellectual energy as it deals with a firm's future and focusing on short-term restructuring and reengineering is a trap (Hamel & Prahalad, 1994). The vision is the step towards, setting the strategy. The vision is not a static statement, but needs to be monitored in relation to internal and external developments, to ensure that the assumptions behind the vision still apply.

#### **4.8.4 Strategy**

The above-mentioned mission, values and vision provide the foundation for the strategy of a firm. As they are too high level and generic, there is a need to define a clear strategy to translate them into operational, tactical and strategic objectives and to make resource allocation choices (Kaplan et al., 2004).

According to Porter, the essence of strategy is coping with competition, meaning current competitors, new entrants, substitute products or services and bargaining power of suppliers and buyers (Porter, 1998). A strategy is about creating a defensible position in the market (Porter, 1998). This also means to make trade-offs in what not to do, to maintain a competitive advantage. In the end, strategy is a means to create a clear scope and choice of the business, product, services, customers and markets that a firm wants to work in (Strikwerda, 2005a). Strategy is also an important element of the corporate governance system, as investors invest on basis of future cash flows.

There are different kinds of strategy. First of all, there is the grand strategy, that covers the ability to control the environment and the resources outside a firm (Pfeffer et al., 1978). The grand strategy has a strong power and (geo) political focus, which can be linked to diplomacy and military literature and goes beyond the core competence and operating excellence of a firm (Strikwerda, 2002). It focuses on the power of a firm towards competitors, suppliers and customers which is required for the continuity and profitability of a firm (Strikwerda, 2005a). There are different types of power to be distinguished (Strikwerda, 2005a: p. 61-62); the capability power (e.g. technology), specific market power (e.g. patents, licenses, etc), persuasive market power (e.g. brands, reputation), competitive pressure (e.g. attacking cash flow of rival firm), non-competitive power (e.g. deep pockets and entry barriers through court cases), positional market power (position, negotiating power), control over infrastructure (e.g. networks), ownership of standards (e.g. Windows) and the power towards governments. This grand strategy is mostly not made explicit, but is kept implicit.

Secondly, there is the corporate strategy. The corporate strategy should provide clarity on the markets, products and customers it should focus on, its financing and how the business units are managed and synergies are identified and organized (Porter, 1998; Strikwerda, 2008). This strategy should ensure added value above the strategy and value of separate divisions and business units. This is also called ‘parenting value’ (Goold & Campbell, 1987) and ‘enterprise value proposition’ (Kaplan & Norton, 2006).

The third level of strategy relates to business unit strategy. The difference between the business unit strategy and corporate strategy (Porter, 1998) concerns the focus to create a competitive advantage in the business unit operations instead of across business. Corporate and business unit strategies converge more and more due to synergies between the economic models of firms.

The fourth level of strategy relates to functional strategies which has a close link to the business strategy. This concerns the different value chain activities determining in which markets, with which products, which customers are supported together with support of marketing, distribution, financing strategies and possible sourcing and outsourcing strategies (Slywotzky, 1996).

Strategy is operationalized in plans with respect to resource allocation and actions to achieve objectives. The translation from strategic ideas into a strategic plan is a dynamic process covering a mix of top-down and bottom-up initiatives (Bower & Gilbert, 2005). However, it is argued that bottom-up allocation fails due to (among other) information asymmetry, dominant logic, belief conservatism and budget gaming (Bower et al., 2005; Hofstede, 1968; March, 1994; Prahalad et al., 1986). A more top-down, rational planning tool such as the Balanced Score card could support the strategy process. An attention area is that strategic issues emerge within the firm without a conscious process behind it (Bower et al., 2005; Mintzberg, 1978). This latter view shows the importance of the interactive communication within the organization to capture this kind of emergent strategies. The allocation process should bring the rational and emergent strategies together.

The challenge is to keep a competitive advantage by identifying new trends, products etc., which leads to innovation. There are two important elements from a strategy perspective; a firm needs to adapt to environmental changes, but more importantly, a real competitive advantage is realized when a firm is capable to shape the environment by building new markets that meet ‘untapped’ customer demand (Teece, 2007).

Flaws in the strategy process directly have an impact on the meta control of a firm. From a control perspective there is a challenge of underperformance due to poor strategic thinking, poor strategic planning and/or poor strategic execution leading to an endangered continuity of the firm or pursuing a strategy in favor of personal interest instead of a firm's interest.

#### **4.8.5 Organization structure**

Unlike many tangible, physical forms, an organization is a sociological, economic and legal abstraction whose boundaries represent an intangible construct (Bhidé, 2000). A firm has first of all an economic, institutional meaning which determines specific structural choices (Strikwerda, 2000). A firm's organization structure is not only an internal arrangement of resources but also has an external orientation by looking at their role in a network of players (Miles & Snow, 1994). A firm's structure depends on choices in relation to coordination via the market mechanism, coordination through hierarchy, authority or coordination by using a hybrid form which relies on networking and trust (Adler, 2001; Williamson, 1975). This institutional view on structure is a first level of analysis based on the assumption that *structure follows strategy, but the market is the common denominator* (Chandler, 1990: p. 383-4; Strikwerda, 2000).

The internal organization structure can be divided into (mainly) two views, the formal and the sociological view. According to the formal, economic definition, an organization structure is an instrument of a firm to accomplish cooperation and coordination that is conscious, deliberate and purposeful (Barnard, 1938; Strikwerda, 1994). A key element is conscious coordination, because this is different from the market that is disorganized and not conscious. Furthermore, it provides management with a framework for operating activities and channelling information. In the economic view there are some key elements of an organization structure (Strikwerda, 2008). The first element concerns the task structure and the attribution of decision rights. The second element is delegation of physical and financial resources (budget). The third element relates to the system of rewarding individuals (material and immaterial). The fourth element is the system for measuring and evaluation of performance (individuals as entities). The economic view highlights the responsibility for profit & loss and related decision rights, resources, reporting and remuneration. It brings the market mechanism within the domain of internal organization.

The sociological definition of organization structure relates to the internal patterns of organization relationships (Thompson, 1967). It reflects the governance, roles,

authorities for making decisions and the formal lines of reporting (Chenhall, 2003; Greenberg, 2002; Thompson, 1967). The sociological view emphasizes the composition, the positions, levels of influence, cooperation, identification and relations of persons within that structure (Greenberg, 2002). In practice, a multinational firm exists of a number of substructures. The different substructures are included in the table below (Strikwerda, 2005b; , 2008: p.123):

<b>Different substructures</b>		
Legal Structure (e.g. ownership of shares and assets)	Governance structure (e.g. tasks, attributed decision rights, use of resources and assets, reporting and selection of people, assessment and monitoring of remuneration)	Informal, social structures, ethnical structures (which may influence routines, decision making and innovation)
Financial structure (e.g. central concern funding)	Structure of strategic theme's and Accounts (e.g. theme and Account management)	Functional structures (accounting, HR, etc)
Treasury structure (e.g. international cash management)	Project structures (e.g. for innovation and strategy development)	Knowledge structures (the pattern of distribution of (related) knowledge across the organization)
Fiscal structure (e.g. fiscal transfer prices)	Geographic structures (e.g. country organizations, land fixed assets like telephone networks)	Information or data structures (data bases, intranet)
Transaction structure (e.g. ownership flow, information, goods, value flow)	Product / Services structures (may be generated across business units)	Market segment-structures (based on consumer attributes, preferences)
Process / delivery-structures, (production, logistics, distribution)	Technology infrastructure (e.g. generic technologies used by all divisions, software libraries, operating platforms)	Timing structure (patterns of purchasing, services, real option method film industry, etc)

**Table 4.3: Different substructures of a firm (Strikwerda, 2005b; 2008: p.123)**



The table shows the difference of an organizational and a legal entity which are not always the same (Hodgson, 2002; Strikwerda, 2009). Differences occur due to local tax- and/or other legislation. Noteworthy is the discussion about fading boundaries of the firm. This is valid from an economic perspective, but not always from a legal perspective as these so called hybrid firms' are networks of multiple and distinct legal firms connected by contracts, rather than a single firm (Hodgson, 2002). This shows the importance of attention for different perspectives, such as between legal and organizational structures.

Organization structure's role as part of an control system of a firm changed in the 21st century in relation to the 20<sup>th</sup> century and some new attention areas emerged (Bower et al., 2005; Strikwerda, 2008). The characteristics of task structure, attribution of decision rights, allocation of physical and financial resources (budget) and reporting is extended with strategic themes and key accounts as accountable entities. Furthermore, the coordination, concentration, organization and thinking of activities shifts towards a combination of purpose, economic model, cause-effect relations, systematic context and information which is loosely coupled from the formal structure. In addition, where a formal structure provided an identity and security in social-psychological sense in the 20<sup>th</sup> century, people in the 21<sup>st</sup> century tend to have more identities, separate from the identity at work.

Another central element of organization structure relates to its logic. The logic behind different kind of forms of internal organization of a firm can be divided in three categories (Chandler, 1990; Donaldson, 2001; Miles et al., 1994; Strikwerda, 2000, , 2008): The first category relates to strategy. In accordance with Chandler (1990), the design of the operating model should follow the strategy of the firm. More specific, the strategy and related strategic themes should be reflected in the primary accountable entities for target setting, resource allocation, etc. Secondly, the operating model should have a fit with the market. This is also known as the fit-to-the market criterion (Chandler, 1990; Miles et al., 1994), such as customer preferences, availability and use of distribution channels, accounts, regions. The third category questions the character of the operational processes of a firm. Attention points for this category are economies of scale/scope/speed, availability of resources, purchasing power, modularity, cost of communication, market efficiency (Slywotzky, 1996; Strikwerda, 2008). Also the opportunities concerning inter-organizational relationships such as joint-ventures, outsourcing and integrative buyer-supplier relationships should be taken into account as they have implications for the control of the firm (Dekker, 2004). The previous points lead to questions with respect to the exploitation of synergies and the boundaries of a firm

(the activities to be performed in-house (R&D, Manufacturing, etc) versus the use of subcontracts versus outsourcing).

Pugh et al (1968) investigated dimensions which explain the variations between organization structures. These dimensions have been supported but also criticized on its selection process which lacks a solid basis. Overall, there appears to be consensus that complexity (amount of specialization and degree of expertise), formalization (standard, documented procedures), and centralization (hierarchy of authority, span of control) are the major dimensions of structure (Blackburn, 1982; Van de Ven, 1976). Furthermore, empirical research shows that a positive relationship exists between complexity and formalization, but a negative one between complexity and centralization (Child, 1972; Van de Ven, 1976). The standard at multinational firms is to decentralize authority down into the organization (Arrow, 1964; Hayek, 1945). This enables a firm to anticipate on and process information concerning local changes and opportunities in the market in a controlled and efficient manner. However, Slywotzky (1996) provides a good statement regarding designing a proper structure: every dimension of a design involves choices, not givens!

Another dimension of an organization structure relates to management accounting streams within a firm, defining the internal organization in terms of profit centers, cost centers, etc (Anthony, 1995). Drucker identified basic building blocks of a structure that can be marked as revenue activities (sales, marketing), result contributing activities (purchasing, production, etc), support activities (staff functions), top management and household/hygiene activities (Drucker, 1974). However the difference between cost centers and profit centers diminishes due to lowering costs of information and disembedded organization of information<sup>58</sup> (Kaplan, 2007). Strikwerda describes new building blocks of the organization based on more modular set up of organizations which is in line with contemporary situation (Strikwerda, 2005a: p 78-79). The logic of the modular set up is to enhance the capability to deal with uncertainty by more focused information process capability. The difference mainly relates to a change from profit versus cost centers to value creating units (activities increasing value, mix-match

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<sup>58</sup> The difference between profit and cost centres is important as it covers the reporting for management and the external parties according local (tax) authorities and local shareholders. In case the assumptions of profit center and cost center are left behind, this will have possible fiscal implications as fiscal authorities would like to tax possible added value (Strikwerda, 2008).

flexibility, co-creation, infrastructure) and value defending units (public affairs, alliances, etc) and profit appropriation units (e.g. exploitation of property rights, patents, licences, etc). The assumption behind this extension is to highlight which activities create value, which activities ensure the capturing of value and which activities defend the core of the firm. This new set up shows attention for co-creation and support units which are seen as value creating units based on their infrastructure/ economies of scale activities (e.g. SSC).

Overall, the importance of the internal structure of the firm changes as the coordination and programming mechanism is diminished. The different, formal structures still are important, but their coordination role is overshadowed by other control mechanisms as described in this chapter.

#### **4.8.6 Leadership**

There is a long history of research concerning the importance and effect of leadership on the firm's performance and control. Ethological research suggests that people have a need for leadership (Kets de Vries, 2001). Leadership within a firm is generally defined as the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization of which they are member (Den Hartog & Dickson, 2004: p. 250). People within a firm who identify themselves in and are committed with the objectives of the firm perform beyond expectation (de Hoogh et al., 2004).

Different kinds of leadership concepts have come and gone over time, from transforming leadership (Burns, 1978), transformational leadership (Bass, 1985), charismatic leadership (Conger & Kanungo, 1987), visionary leadership (Collins et al., 2002), to authentic leadership (Avolio & Gardner, 2005). All concepts relate to formulating and communicating attractive visions and strategy, making decisions, selecting the right people, motivating people, consistency between words and deeds, focusing on results, and effecting change. This also means that the behavior may be unconventional and/or counter normative (Conger et al., 1987). A leader is able to make sense of its environment and changes within the environment by properly analyzing material information and translating this into eidetic information preserving its identity and values.. Furthermore, they are willing to confront and lead the people within the firm to new areas which can be fundamental different (Conger et al., 1987). In addition, these kinds of leaders are

believed to have the ability to shift people their focus from self interest to collective interest (Bass, 1985; Burns, 1978)<sup>59</sup>.

Leadership should always be seen within the context of the firm, its environment and even society. Charismatic and authentic leaders leave a sufficient number of options open to create different styles with these concepts; is a leader autocratic - making decisions on his/her own or is a leader participative – involving managers and employees in the decision making process (Tannenbaum & Schmidt, 1973). A leader can take on different roles depending on the situation in the firm, environment and society. This contingency approach was used by Jack Welch during his time at GE where he varied his leadership style from autocratic to participative due to changes in the context of the firm (O'Toole, 1995). However, the underlying assumptions and consistency in behavior were always the same.

Besides leadership competencies, it is important to consider the dynamics between management and employees as well as the firm's national and international domain (Kets de Vries, Vrignaud, Agrawal, & Florent-Treacy, 2009). Leadership is not only realized by the CEO but is joint effort between the management Board and middle management etc. Mintzberg investigated the role of management and identified a variety of roles an executive performs. Leadership is only one of the elements (Mintzberg, 1973): other elements of the interpersonal role are being a figurehead (ceremonial duties) and liaison to/with members of his organization and outside the organization. The second role relates to the informational role, which covers monitoring of different persons and parties, disseminating information to different stakeholders and being the spokesman to the outside world (investors, large clients, etc). The third role deals with making decisions as part of being the entrepreneur, the disturbance handler or negotiator in case of problems and the decision maker regarding resource allocation. The different roles of management, as described by Mintzberg, highlight the diversity in activities that determine the

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<sup>59</sup> There is a noteworthy website with leadership quotes which supports this research (<http://www.leadershipnow.com/leadershipquotes.html>) such as:

*To be able to lead others, a man must be willing to go forward alone – Harry Truman*

*All of the great leaders have had one characteristic in common: it was the willingness to confront unequivocally the major anxiety of their people in their time. This, and not much else, is the essence of leadership - John Kenneth Galbraith*

*Superstars seek success in a technique for eliciting support; heroes pursue success as the outgrowth of inner values - Henry Kissinger*

effectiveness of leadership, not only from the CEO, but also from his/her fellow executives and of middle management who should set the same tone.

However, the dark side of human behaviour could be detrimental for a firm. There are several neurotic leadership styles, such as suspicion, depression, dramatic/narcissism, compulsive and detached/schizoid behaviour, all of which determine the hygiene within a firm (Kets de Vries & Miller, 1986). These styles could lead to mistrust, internal fight culture, inactiveness, inertia, lack of confidence (suspicion, depression) or to a compulsive need for control and centralization (compulsive) or to a pattern of non-involvement, non-coordination, non-cooperation and internal rivalry (detached/schizoid). The most common neurotic style relates to charismatic and visionary leadership which in turn may lead to narcissism. This kind of leadership is determined by demonstrating excessive emotions, exhibitionism, and exaggeration of achievements, image management, misuse of information, risk-taking and creating his own environment instead of acting in favor of the interests of the firm<sup>60</sup>. A meaningful turnaround of this neurotic behavior is in worst case performed after dramatic failure.

Some risks in the behavior of leaders are due to cognitive biases, for example the process of anchoring which relates to focusing on initial data, impressions or estimates instead of the whole picture (Tversky et al., 1974). Another example concerns competitor neglect, when a firm only focuses on a fraction of the actual competition and thus concentrate on the variables under their own control, ignoring competition (Simonsohn, 2010). Other cognitive biases are bounded rationality and bounded awareness resulting in failure to see and use relevant information (Chugh & Bazerman, 2007; Williamson, 1996), bounded knowledgeability by unacknowledged conditions of action and unintended consequences of action (Giddens, 1984), dominant logic in the way of thinking due to experience, mental maps and orientation (Prahalad et al., 1986) and belief conservatism as rigidity to change of mind and old experiences (March, 1994).

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<sup>60</sup> Leadership should in this sense also be related to the moral development as described by Kohlberg (1969). Looking at the scandals and examples described it could be concluded that many leaders have not reached the 2<sup>nd</sup> and 3<sup>rd</sup> level of moral development (1st level - self-interest, 2nd level - conformity to society, 3rd level - using universal ethical principles).

Another risk area is groupthink with the following symptoms (Janis, 1972):

- Illusions of invulnerability;
- Unquestioned belief in the morality of the group;
- Collective rationalization of assumptions;
- Stereotyping / disqualifying of out-group;
- Direct pressure to conformance / loyalty;
- Self-censorship of (deviating) ideas;
- Illusions of unanimity;
- Self-appointed mind guards.

The above symptoms lead to decision-making based on incomplete information, missing assessment of risks of leading alternative and missing critical assessment of alternatives. This strong cohesion of opinions, fear of discussion and strive for unanimity diminishes the connection with the developments within and outside a firm and as a consequence relevant information is not correctly interpreted and/or used.

An important factor for sound leadership and to prevent groupthink as well as to eliminate cognitive biases is to mix personality types within a Board (Kets de Vries et al., 1986). The Board room and management dynamics are an important denominator of leadership success within a firm. Awareness of Board room dynamics enables management to adapt any dysfunctional behaviour. If the dysfunctional dynamics remain (sub)unconscious, it will eventually control the firm instead of resolving it (Cairnes, 2003).

Many internal auditors believe that leadership is a difficult element of control and hard to include in internal audit activities. This paragraph shows extensive research and attention areas which should be taken into account as an internal audit function.

#### **4.8.7 Learning & adaptation**

An element of cybernetics is that systems interact with their environment. A firm is an open system that can never be in a true steady state because it is continually learning and adapting to its surrounding environment. There is always a challenge to cope with sufficient variety of sophistication within the firm in relation to the environment and is thus able to remain in equilibrium regardless of a changing environment (Ashby, 1956). This is also called homeostasis. It always deals with a variety of possibilities within an organization. Others call this the adaptability of

the organization or the flexibility of the organization to cope with changes in the environment (Barnard, 1938; Volberda, 1998). The awareness of complexity and the importance of considering the whole picture instead of the parts of a system is the added value of this view.

Learning and adaptation are closely connected to cybernetics. This describes self-regulated mechanisms with feedback and feed forward mechanisms. Learning is the adaptation or encoding of internal or external information, interferences and errors into the organizational routines to guide the behaviour of the firm (Levitt et al., 1988).

There are several levels of learning and adaptation relating to control (Argyris, 1999; Beniger, 1986). A first dimension is the maintenance of an organization, even when there are no external changes (*existence or being*). In this situation single-loop learning takes place by identifying and correcting errors in a process and organization. The underlying assumptions are not changed. The second dimension is the adaptation of goal-oriented organizations to variation and change in external conditions (*experience or behaving*). This is also known as double-loop learning in which the system is changed to prevent errors in the future. The third dimension relates to reprogramming less successful goals and processes while preserving successful ones (*evolution or becoming*). This dimension needs to be applied to counteract entropy, but requires a huge change in the foundation of the firm. There are two well-known examples, such as Nokia<sup>61</sup> and Dupont who reprogrammed themselves into a new firm with new activities, selling the old activities. Another example relates to arriving at the inflection point; this means shifting from an old structure of doing business to a new way of doing business, as happened to Intel and the whole computing industry in the 1990's (Grove, 1996).

A central item in the literature concerning adaptation of the firm is the relation between the exploitation of current certainties versus the exploration of new possibilities (March, 1991). The latter is concerned with risk taking, experimentation and looking for innovation, while exploitation concerns efficiency, effectiveness and refinement. The choice for the balance between exploitation and exploration is made concrete in the allocation of resources.

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<sup>61</sup> In 2007, Nokia failed to catch the last wave of innovation and is now losing its position to other competitors such as Apple and Samsung. It remains to be seen whether Nokia is able to adapt and reprogram itself again.

In current environments it seems almost impossible to focus only on exploitation without being faced by losing market share and/or dominance. Christensen investigated well-managed firms that failed to stay atop of their industry when they were confronted with market and technological changes (Christensen, 1997). This happened to firms in both fast moving and slow moving industries (e.g. chemical and mechanical related firms). The problem lies in sensing disruptive technologies, having the allocated resources and capabilities to bring innovations into the market. It requires management to sense the changes needed and to seize how to allocate resources and reconfigure the organization, even if this means cannibalizing existing businesses (Teece, 2007).

There are also challenges in learning and adaptation. Ashby already indicated during the 1950s that from a biological standpoint it is more important to focus on the reason for errors instead of just fixing errors (Ashby, 1956; Otley, 1999), otherwise there is also the risk of falling into a competence trap (Levitt et al., 1988). A competence trap is the adherence to routines and the denial of the need for change which leads to inappropriate learning (March, 1991). An example of a firm which stepped into a competence trap is Chrysler. Chrysler invented the minivan during the 1980s and made a fortune. Although America's car-buying tastes changed, Chrysler's factories continued to produce this particular car, and failed to focus on innovation other styles of vehicles (Pfeffer, 2007). In the meantime the rivals developed other kind of cars and even minivans resulting in diminishing market share and thus profit for Chrysler. The term dynamic conservatism, may apply here. Dynamic conservatism refers to persistence to adhering to past patterns of practice in the face of information that should initiate change, but the gaming and self-interest of parties who do not want to change (middle management) (Argyris, 1999).

Simons indicated that interactive control within the firm and its outside parties is critical to anticipate and manage future uncertainties (Simons, 1995). In other words, sensing and scanning disruptions and reflection points. Within the firm these changes are mostly already identified but not yet anticipated upon. As described by Simons, there may be a link between interactive control systems it within the capabilities of a firm, the allocation of resources and from exploration to exploitation. All should be taken into account as part of a firm's comprehensive control system, to prevent getting out-of-control. History and research show that focus on exploitation only will lead to losing market share and/or dominance and, in the end, might put an end to the firm's continuation.



#### **4.8.8 Performance Management & Monitoring**

The measurement and monitoring of performance within a firm has a long tradition of research and is mostly known from the management control research (Anthony, 1995; Simons, 1995). The intention of performance management is to coordinate and influence behaviour, so that organizational members have the knowledge and motivation to act in the organization's best interests (Jensen, 2003; Otley, 1999). A critical process in the performance of a firm is its resource allocation process (Bower et al., 2005). This is the process by which, in addition to corresponding changes in the systemic context, the strategy is implemented in operational budgets and operations.

The assumptions used behind performance management originates from the cybernetic and systems view (Anthony, 1995; Simons, 1995). This view also begins with setting standards and objectives, measuring achievements, comparing achievements to standards and objectives, feeding back information about unwanted variances and correcting processes. Typical elements related to the performance management process are developing goals and objectives, strategic and business plans and budgets, monitoring by strategic and business reviews, and necessary corrective actions in case of deviations or changes in the environment (Otley, 1999; Simons, 1995). As mentioned earlier, a missing element in the traditional management control approach is the element of programming; programming relates to clarity on the strategy, goals, values and value hierarchy of the firm. This is in line with the so called systemic context (Bower et al., 2005). This context should prevent any misaligned resource allocation and information asymmetry between corporate plans and business unit initiatives. Misalignment can lead to a performance gap. Mankins & Steele mention that many firms realize only 60% of their strategies' potential value because of misalignment between strategy, planning and execution (Mankins & Steele, 2005).

Today's firms have to balance between economic profit and observing environmental and other constraints as well as pursue non-financial objectives (diversity, social objectives and sustainability). Hence the need for multi-objective multi-criteria decision making increases and needs to be embedded in the objective function of a firm (Strikwerda, 2012).

Critical performance parameters help in order to realize the targets, objectives and strategy (Simons, 1995). This focus on parameters is not new, but was already set up at Dupont around 1915 (Simons, 1995). The latest method to develop and measure objectives is the Balanced Scorecard (BSC), developed by Kaplan and

Norton (2008). This method is further extended by the use of strategy maps to highlight strategic themes, causal relations that represent the major component of the strategy and their interrelationships. The basis of the BSC concerns the different points of view — financial, customer, internal process and learning. This spread of attention for financial and non-financial parameters originates in the 1920s when firms such as General Motors focused on these broad criteria (Johnson et al., 1987). In addition, Kaplan and Norton differentiate between leading (future oriented) and lagging (result-oriented) parameters to ensure a balance to short-term results and long-term success.

Budgeting has traditionally been the method for setting targets and is intended to motivate managers. Budgets are necessary to help managers make the tradeoffs in allocating resources between initiatives and going-concern activities, divisions, and projects (Jensen, 2003). The challenge is to execute these rational-based plans and budgets, because people within a firm have their own objectives and these can be in conflict with the firm's. Therefore, goal congruence should ensure consistency between the firm's objectives versus personal objectives (Anthony, 1995). A mechanical cybernetics view is not always realistic, because objectives are not always clear, and/or cannot be measured, and feedback information is not always well understood or reacted upon (Hofstede, 1978a). March and Simon indicated that objective setting is a political process in which differences in goals and in perceptions of reality may be a condition for intergroup conflict (Cyert et al., 1992). On the other hand, Locke has empirical evidence that suggests that goal setting increases performance and motivation (Locke, 2001). Attention is needed for the context (such as politics, power and psychological factors) in relation to the budget and the resource allocation process as part of the whole performance management system (Hofstede, 1981) and the systemic (structural, cultural and cognitive) context (Bower et al., 2005).

One of the elements of the systemic context is the reward system. The current idea is that the relation between compensation and budgeting is the source of the problem regarding a non-effective budget/resource allocation process (Jensen, 2003). Research shows that rewards temporarily change what we do and ensure compliance to the targets, but do not create an enduring commitment to any value or action (Hope et al., 2003). This can lead to actions that may be harmful to the firm, such as holding back profits when a target cannot be reached, pulling next years' profits forward to reach a target or moving profits to a next year when the targets have been met (Jensen, 2003). Therefore, some authors strive for the *beyond budget* phase in which budgets are no longer used (Hope et al., 2003). This

approach does not prohibit a reward system, because they acknowledge the importance of rewarding good performance. There are a number of principles that provide a framework for setting rewards in a right way (Hope et al., 2003: p. 110-112; Jensen et al., 2004):

- Do not base rewards on a fixed performance contract;
- Evaluate and reward performance relative to peers, benchmarks, and prior periods given the circumstances;
- Use a few simple, clear, and transparent measures;
- Align rewards with strategic goals;
- Reward team performance;
- Align rewards with interdependent groups;
- Do not use rewards to motivate people, but use them as a means of involvement and commitment;
- Make rewards fair and inclusive;
- Senior managers must communicate with capital markets. They must understand what drives value in their organization and align internal goals with those drivers, not with analysts' expectations;
- Remuneration committees must take full control of the remuneration process, policies, and practices.

#### **4.8.9 Information & Communication**

Information and communication are closely connected, at least in the classical, mathematical approach because information is in this approach only identifiable as part of a communication situation with transmission and receiving data (Skyttner, 2005). This communication can take place between people but also between machines or between machines and people. In the sociological theory of information it is seen as a matter of social order and a mutually making sense of information (Garfinkel, 2008).

The description of the control element *information & communication* in the management control or audit literature is usually limited to the information *technology* systems. It is true that the evolution of computer-based information systems enabled major development in processing large, complex amounts of data in a timely way (Beniger, 1986). It enlarged the scope of data processing to add systems to support management and administrative activities including planning, analysis, and decision making (Davis, 1999). Furthermore, information technology was extended to internal and external networks connecting a firm to outside parties. The basis of information systems consists of information technology infrastructure

(hardware), application systems (software), and personnel that apply information technology to deliver the information requirements and output (Davis, 1999).

However, as described in paragraphs 4.5 and 4.6, the cybernetic theory of control provided various types of information – from goal, axiological and environmental, to effect and pragmatic information. These different types of information relate to the earlier discussed management control elements, such as mission, values, strategy, performance management, learning and adaptation (as discussed in paragraph 4.8). As such, information within a firm is more than just an IT system and its related pragmatic — transaction related — information. As described by Strikwerda (2008, 2011), there is a growing number of firms, such as IBM and Nestlé, that have found their way in managing the new business administration by detaching information from its organizational structure. Furthermore, Strikwerda (2011) describes that information technology only serves the people within the firm to be able to interpret and exploit data. In other words, these firms invest in the information capital of the firm instead of in information technology.

This view is beyond the narrow focus of much used quality criteria of information such as completeness, timeliness, accuracy, accessibility information as defined by COSO (2004). COSO is very much limited to transaction data, while the cybernetic theory of control explained a broader perspective where also relevance and the relation to its competitive position is included (Alberts, Garstka, & Stein, 1999).

This broader cybernetic theory of control should prevent a firm to become out of control as it is not able to control data and information as a result of data overload. Individuals have cognitive limitations to processing large amounts of data and/or information (Simons, 1995). There is a clear dilemma between receiving too much pragmatic information and receiving all available, but not the right information (Edmunds & Morris, 2000). Research shows that decision making performance was unaffected when there was more information. In fact, when more information was available, it actually lead to less accurate decision making (O'Reilly III, 1980). A cause of this problem is insufficient attention for the interpretation of information in relation to a firms mission, values, goals, besides the collecting and organizing of material information, which may not all be relevant for the performance of a firm (Sutcliffe et al., 2003).

## 4.9 Concluding remarks

This chapter explored literature on control to analyze and to identify a theory of control that could provide clarity to the required scope of work for internal audit functions. The following concluding remarks can be made based on the exploration:

A comprehensive theory of control could be formulated by using the biological cybernetics and information theory supported by insights from organization theories. Its concept of analysis is a living system, that is explicitly organized for information processing to effect control and to remain alive in an open system. This is in line with firms who are information driven constructions, competing with their rivals and aligning with their environment to adapt and remain alive. However, it should be noted as well that the comprehensive theory as described in this chapter has not been adopted yet in current management, management control and management accounting studies.

Furthermore, based on this literature research, control elements and their assumptions have been clarified. Firstly, there is a growing importance of the mission and values of a firm as focal points for its managers and employees and to prevent any data overload. This is also related to the whole systemic context of a firm, which includes, among other, the values, structure and performance structure of a firm. The question is, whether missions and visions are correctly defined and really provide clear guidance. It is also the question whether management on values is applied correctly, instead of being treated as trivial, intangible and as an artefact.

Secondly, information is broader than the traditional scope on accounting type of information. There is a growing importance of relevant, accurate, timely and accessible information from a broad perspective (goal, axiological, environmental, effect and pragmatic) that also requires the attention of internal audit.

Thirdly, the logic of organization structure changes due to the changing information context. The importance of the internal structure of the firm changes as the coordination and programming mechanism is diminished. The different, formal structures remain important, but their coordinating role is overshadowed by other control mechanisms as described in this chapter.

Fourthly, the importance of psychological element expands. Internal audit should be able to identify lacking results and misalignment with dysfunctional behaviour and other causes.

Fifthly, changes in the resource allocation process and its detrimental effects on a firm's performance management are an essential part of an appropriate control system of a firm. However, this process only seems to receive marginal attention at this moment.

These insights can help internal audit to focus on essentials regarding the control system of a firm. However, these assumptions are not static and may alter due to modifications in the institutional environment. The logic of falsification cannot always be applied and principles therefore may be seen only as temporary *crutches* to aid sense-making as we go along and are accepted within its institutional boundaries.

## 5. Investigating the existence of internal audit in the Netherlands

### 5.1 Introduction

The previous chapters (chapters 2 and 3) provided a broad view on developments in internal audit, both in the Netherlands, worldwide and from a theoretical perspective. These chapters indicated a limited number of academic publications regarding the function of internal audit in the Netherlands, with the exception of Paape (2007) and De Bruijn (2010). A quintessential question to be studied in this chapter relates to the existence of internal audit in firms in the Netherlands. Some international studies described the existence and the characteristics of internal audit in their specific countries (Arena et al., 2007, , 2009; Carcello et al., 2005b; Goodwin-Stewart et al., 2006b; Wallace & Kreutzfeldt, 1991). Furthermore, they provide some theoretical angles from which to investigate the existence of internal audit. However, the results of these studies differ and not one of the studies includes the Netherlands in its scope.

Scheffe (2011) performed a high level empirical study of the existence of internal audit functions at Dutch listed firms in the Netherlands. The publication of the Dutch Corporate Governance Code (DCGC / Committee Streppel) on 15 December 2010<sup>62</sup> triggered the author to perform this study, as this publication ignored the best practice principles concerning internal audit. Somehow, the Dutch Monitoring Committee Corporate Governance Code overlooked the internal audit function, although it is part of the DCGC.

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<sup>62</sup> The complete title of this publication is: Monitoring Committee Corporate Governance Code, Second report on the observance of the Dutch Corporate Governance Code, December 2010 (*Monitoring Commissie Corporate Governance Code, Tweede rapport over de naleving van de Nederlandse Corporate Governance Code, december 2010*).

The code includes the following in relation to internal audit (Corporate Governance Code Monitoring Committee, 2008: p. 35-36):

### **V.3 Internal audit function**

#### **Principle**

*The internal auditor shall operate under the responsibility of the management board.*

#### **Best practice provision**

*V.3.1 The external auditor and the Audit Committee shall be involved in drawing up the work schedule of the internal auditor. They shall also take cognizance of the findings of the internal auditor.*

*V.3.2 The internal auditor shall have access to the external auditor and to the chairman of the Audit Committee.*

*V.3.3 If there is no internal audit function, the Audit Committee shall review annually the need for an internal auditor. Based on this review, the supervisory board shall make a recommendation on this to the management board in line with the proposal of the Audit Committee, and shall include this recommendation in the report of the supervisory board.*

Furthermore, the Dutch Monitoring Committee Corporate Governance mentions the following in its chapter *Account of the Committee's work* (Corporate Governance Code Monitoring Committee, 2008: p. 57):

*The reactions to the consultation round included suggestions for the internal audit function to be given a higher profile in the Code. In the Committee's view, every listed firm should, in principle, have an internal auditor under best practice provision V.3.1.*

On the other hand, the Dutch Monitoring Committee Corporate Governance provides listed firms with a possibility to deviate from the principle (Corporate Governance Code Monitoring Committee, 2008: p. 57):

*The Committee has noted in its compliance reports that local listed firms in particular are likely not to have an internal audit function. The Committee has therefore provided in V.3.3 that if there is no internal audit function, the Audit Committee should review annually whether there is a need for an internal auditor.*



*Based on this review, the Supervisory Board makes a recommendation to the management board and includes a note of this in its report.*

Thus, although the internal auditors, the Institute of Internal Audit (IIA) and some academics mention that internal audit is one of the cornerstones of corporate governance (Holt et al., 2009; Stewart et al., 2010; Strand Norman et al., 2010) and internal audit is mentioned in the DCGC, the possibility to deviate from the principle seems to exist. A first analysis of the existence of internal audit functions within the NYSE Euronext listed firms (AEX, AMX, AScX) shows that in practice, the principle of deviation is used substantially. The table below shows that most AEX firms do have an internal audit function, but it also shows that in the case of AMX and in particular AScX firms it is not very common:

IA Yes/No	Euronext March 2011			Total
	AEX	AMX	AScX	
No	2	11	15	28
Yes	22	14	10	46
<b>Total</b>	24	25	25	74

**Table 5.1: Existence of IA at NYSE Euronext firms**

Therefore, it is interesting to analyze possible *critical explanatory variables for the existence of internal audit in the Netherlands*, taking into account previous international research on this topic and contributing to the growing body of literature.

The analysis of these criteria can provide more insight into the fundamental premises of the existence of the function of internal audit in the firm. Furthermore, the non-existence of internal audit functions at some of the listed firms in the Netherlands could provide new understanding of or arguments why their management does not consider internal audit to be relevant for the firm to remain in control.

## 5.2 Theoretical background and hypothesis development

### 5.2.1 Agency theory

The previous chapter 2 and 3 already discussed literature that links the existence of internal audit to the agency theory (Adams, 1994; Carcello et al., 2005b; Goodwin-Stewart et al., 2006b; Wallace et al., 1991). Agency theory deals with the relationship between principals and agents. In relation to internal audit, the firm's chief executive officer is viewed as the principal who attributes decision rights to its lower level management (agents). Adams (1994) described internal audit (together with other mechanisms such as the Audit Committee) as a monitoring tool to overcome information asymmetry problems. The assumptions behind the agency theory are primarily related to human behaviour (Eisenhardt, 1989; Jensen et al., 1976). As a result of asymmetry of information and possible goal conflict, the Management Board may lose control of the firm. Therefore, internal audit can be the monitoring mechanism to make the possible asymmetry visible. This asymmetry is more likely to occur in large and/or more complex organizations (Adams, 1994; Carcello et al., 2005b; Goodwin-Stewart et al., 2006b; Wallace et al., 1991). These variables will be further operationalized in this study.

Large organizations are further operationalized in this study as the *size of the firm* (revenues, total workforce expressed in FTEs, total assets).

***Hypothesis 1: The existence of internal audit on the Dutch Stock Exchange (AEX, AMX, AScX) is positively influenced by the size of the firm***

*Organizational complexity* covers the second set of hypotheses. Previous internal audit research did not identify the literature behind complex organizations, although it already exists. As early as 1962, Simon highlighted his findings regarding complex systems.

He described a complex system as (Simon, 1962: p. 468):

*... one made up of a large number of parts that interact in a non simple way. In such systems, the whole is more than the sum of the parts, not in an ultimate, metaphysical sense, but in the important pragmatic sense that, given the properties of the parts and the laws of their interaction, it is not a trivial matter to infer the properties of the whole.*

*Complexity frequently takes the form of hierarchy. By a hierarchic system, or hierarchy, I mean a system that is composed of interrelated subsystems, each of the latter being, in turn, hierarchic in structure until we reach some lowest level of elementary subsystem. ...in human organizations, the formal hierarchy exists only on paper; the real flesh-and-blood organization has many inter-part relations other than the lines of formal authority.*

The above descriptions align with the cybernetic theory of organizations as described in chapter 4 and can be used as meta-theory.

*Organizational complexity* is operationalized into the number of subsidiaries and countries, which is associated with a higher degree of decentralization, which in turn leads to a greater demand for monitoring (Carcello et al., 2005b; Goodwin-Stewart et al., 2006b; Sarens et al., 2006).

***Hypothesis 2: The existence of internal audit on the Dutch Stock Exchange (AEX, AMX, AScX) is positively determined by organizational complexity***

Another hypothesis relates to Audit Committees. An Audit Committee is seen as a body that has a monitoring role of managerial actions (Kosnik, 1987). Research shows that frequent Audit Committee meetings are an effective deterrent to fraudulent financial reporting by managements in large firms (O'Connor Jr et al., 2006). Furthermore, it is assumed that effective monitoring by Audit Committees is difficult without the support of internal audit (Goodwin-Stewart et al., 2006b). Sarens & De Beelde (2006) illustrate that internal audit is a source of *comfort* to Audit Committees, especially in the domain of risk management and control. Comfort and discomfort are related to the level of information asymmetry between the management board and the Audit Committee. They illustrate that internal audit can provide comfort by involving the Audit Committee in the audit plan, providing reports and presentations, together with profound interpersonal and behavioural skills of internal audit as part of the informal contacts.

***Hypothesis 3: The existence of an internal audit function is positively influenced by the existence of an Audit Committee***<sup>63</sup>

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<sup>63</sup> U.S. and Australian literature indicate the existence of an independent (non-CEO) Board chair as a variable. In the Netherlands, most firms have a two-tier system that makes this variable not applicable and will, therefore, not be taken into account in this study. The same applies to the variable 'risk committee'; this is not common in the Netherlands (with exception of the financial industry) and will,

Furthermore, it is assumed that the existence of an internal audit function is positively influenced by the presence of a designated *risk management function* in the organization of the firm (Goodwin-Stewart et al., 2006b).

***Hypothesis 4: The existence of an internal audit function is positively influenced by the presence of a separate risk management function***

Goodwin-Stewart and Kent (2006b: p. 84) investigated the role of internal audit in the area of fraudulent or erroneous financial reporting. They conclude that material misstatements in financial reports are, among other, associated with high levels of accounts receivable and inventories. They researched and concluded a positive relationship between the use of internal audit and firms with a higher proportion of receivables and inventories, as well. Although this hypothesis may be interpreted as ‘old’ economy and industry elements, it may still cover much of the currently listed firms and is, therefore, included in this study.

***Hypothesis 5: The existence of an internal audit function is positively influenced by a higher proportion of receivables and inventories in relation to total assets***

***Hypothesis 5.1: The internal audit function is positively influenced by a higher proportion of receivables in relation to total assets***

***Hypothesis 5.2: The internal audit function is positively influenced by a higher proportion of inventories in relation to total assets***

## **5.2.2 Institutional theory**

Recent studies used the new institutional theory as a framework to identify factors driving the existence of internal audit (Al-Twaijry, Brierley, & Gwilliam, 2003; Arena et al., 2006). This theory assumes that organizations are driven to incorporate the structures, practices and procedures institutionalized in society to increase their legitimacy and their survival prospects, independent of the immediate efficacy (Meyer, 1977). In addition, DiMaggio and Powell (1983) conclude that the effect of institutional pressures is an increased *isomorphism* or homogeneity of organizations in a given institutional environment.

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therefore, also not be taken into scope. This study will also not take into account unproven variables such as segmentation, operational cash flow and debt leverage.

This *isomorphism* or homogeneity is a result of three types of environmental pressures (DiMaggio et al., 1983): *Coercive* pressures are the result of legal mandates or influence from organizations they are dependent upon. The existence of a legal environment strongly affects many aspects of an organization's behaviour, structure and functions. *Mimetic* pressures are related to uncertainty of firms which leads to copying or modeling to perceived successful structures, functions, etc. from other firms. *Normative* pressures cover the influence of professional firms, groups and associations brought into the firm through hiring practices or memberships.

These pressures may fit well the drivers for the existence of internal audit. The *coercive* pressure is visible in practices in relation to corporate governance guidelines all over the world. Internal audit is also linked to regulatory pressures with respect to the Dutch banking regulations regarding the role of internal audit. Another example is the New York Stock Exchange (NYSE) that requires all publicly listed firms to have an internal audit function (NYSE, 2004). These two examples are not suggestions for firms, but are requirements as a license to operate (banks) and to have access to the U.S. (NYSE) capital market.

*Industry characteristics* are also relevant, as some industries face more regulatory scrutiny that may increase their investment in internal audit, such as the highly-regulated financial and utilities sectors (Goodwin-Stewart et al., 2006b; Wallace et al., 1991). Furthermore, large firms might be more vulnerable to institutional pressures because of their prominent role in society and because they are expected to be front-runners in the development and implementation of best corporate governance practices. As mentioned in the introduction (paragraph 5.1), a first analysis of the existence of internal audit at NYSE Euronext indicates that not all listed firms have an internal audit function. This being the case, it can be concluded that a firm's listing on the NYSE Euronext does not uniquely influence the existence of an internal audit function, but that other variables influence this choice as well. Apparently, shareholders and stakeholders do not demand an internal audit function. For this reason, no hypothesis will be developed regarding *coercive* pressures.

*Mimetic* pressures cannot be linked directly to a clear hypothesis for investigating the existence of internal audit, except by the indirect link of the Audit Committee Chairman who models his experience in other firms on the firm he supervises.

***Hypothesis 6: The existence of an internal audit function is positively influenced by an Audit Committee Chairman who supervises firms with an internal audit function and/or worked at a firm with an internal audit function.***

Normative pressures to set up an internal audit function may be linked to the existence of a Big 4 Audit firm that influences a firm to set up an internal audit function (Goodwin-Stewart et al., 2006b). Although the IIA is an influential association for the internal audit community, it is not seen as an indicator for the existence or non-existence of internal audit. They are more involved in existing internal audit functions and influencing the scope of work with training, publications, etc.

***Hypothesis 7: The existence of an internal audit function is positively influenced by the presence of a Big 4 external auditor.***

### **5.3 Research method<sup>64</sup>**

The scope of research regarding the existence of internal audit in the Netherlands focuses on the NYSE Euronext in Amsterdam, covering all AEX, AMX and AScX firms. The NYSE Euronext consists of 75 firms divided over AEX, AMX and AScX. For this research, the composition of the indices as of 21 March 2011 is used as point of reference. These firms represent the different industries within the Netherlands (Consumer business, Manufacturing, Construction, Building, Engineering, Transport, Financial services, Real estate, Investment, Telecom, Media and Technology). Data have been obtained from the 2010 annual report of the firms, as well as information from [www.jaarverslag.info](http://www.jaarverslag.info), and have been complemented with data from the company website.

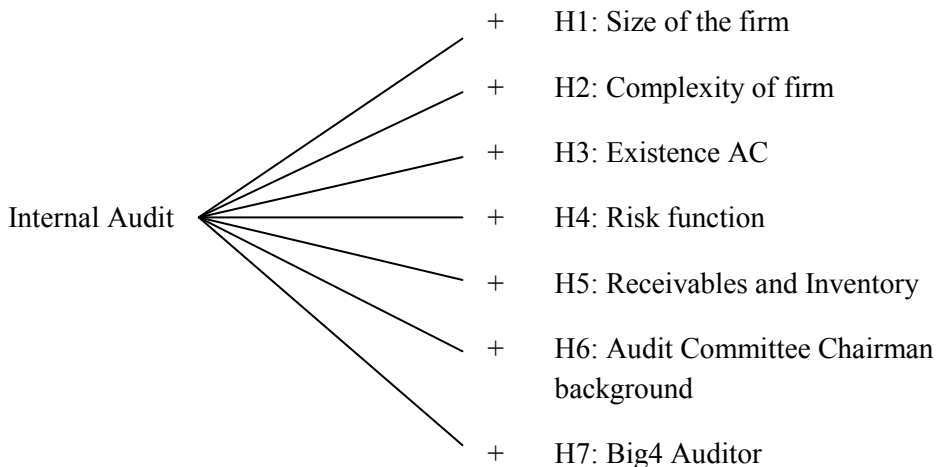
This research excludes some previously researched variables (Carcello et al., 2005b; Goodwin-Stewart et al., 2006b) which are axioms, i.e. true by definition (Bailey, 1994). The first variable which will not be taken into account is *U.S. regulation*, as firms listed on the U.S. NYSE are required to have an internal audit function. A second variable that will not be taken into account is *financial industry*,

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<sup>64</sup> The research method and results have been reviewed by drs. P.C. Van Batenburg. Mr. Van Batenburg works at Deloitte, teaches statistics at Nyenrode University and is a member of the Statistical Auditing committee at the Limperg Institute.

as an internal audit function is mandatory in the financial sector according to national regulations (Wft). The firms with the *U.S. regulation* and *financial industry* profile on the NYSE Euronext in Amsterdam will be excluded from the sample firms. This means that the following firms are excluded: Aegon, ING, BinckBank, Delta Lloyd, SNS Real, Kas bank, Arcelor Mittal, ASML, Philips, Reed Elsevier, Shell, Unilever, ASMI. In addition, for Aperam, no annual report was available during this study and as a result, this firm is also excluded from the sample firms. The final number of firms included in the sample is 61. The hypotheses are coded in relation to this total population.

The following research model will be used and tested for explaining the existence of internal audit:



Where:

- **IA** = internal audit / no internal audit
- **Size (1)** = Number of turnover
- **Size (2)** = Number of total assets
- **Size (3)** = Number of FTE
- **Complexity (1)** = Number of countries
- **Complexity (2)** = Number of entities
- **Existence of Audit Committee** = a dummy variable given the value 1 when AC exists, 0 otherwise
- **Separate RM function** = a dummy variable given the value 1 when RM function exists, 0 otherwise
- **Receivables** - accounts receivable divided by total assets;
- **Inventory** - inventory divided by total assets;

- **AC Chairman** = a dummy variable given the value 1 in case the Chairman supervises or worked at firms with an IA, 0 otherwise
- **Big4 Auditor** = a dummy variable given the value 1 if a Big4 auditor is used, 0 otherwise

**Table 5.2: Research model.**

The aim of this study is to measure the significance of the independent variable on the dependent variable, being the existence of internal audit. Therefore, the first step is to verify whether the independent variables are relevant to be associated to the dependent variable. This is measured by using cross-tabs for qualitative variables with a Yes/No answer (Bailey, 1994). A logistic regression will be run in which the existence of internal audit will be predicted by relevant, independent quantitative variables (Hosmer & Lemeshow, 1989).

The second step is to measure the predictability of the existence of internal audit per relevant variable via a logistic regression analysis. This analysis provides first insights into the match between the population with respect to the existence or non-existence of an internal audit function.

The third step is to verify the correlation between the different independent variables, to ensure that there is no impeding multicollinearity (Schroeder, Lander, & Levine-Silverman, 1990). Multicollinearity occurs when independent variables are strongly correlated and will result in a decreased predictive validity of the equation. Unacceptable multicollinearity is considered if a bivariate correlation coefficient is stronger than 0.80 (Schroeder et al., 1990). The latter approach will also be taken into account in this study.

The fourth step is to investigate the significance of the variables in the equation. This analysis will lead to a predictive model for the existence of internal audit based on the selected population of firms.



## 5.4 The results

### 5.4.1 Overview on descriptive statistics

An overview on the descriptive statistics concerning the 61 samples is included in table 5.3:

Variables	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Turnover (€) in MLN	61	0.3	29,530	192,092	3,149.04	5,592.48
Total Assets (€) in MLN	61	2	27,775	250,133	4,100.53	6,770.92
Employees (FTE)	61	0	122,027	775,497	12,713.10	23,020.27
Countries	61	2	105	1,282	21.02	20.95
Entities	61	1	3,400	11,085	181.72	517.03
Audit Committee	61	0	1	57	0.93	0.25
Risk Manager	61	0	1	13	0.21	0.41
Inventory / Total assets	61	0	0,52	5,81	0.095	0.13
Receivables / Total assets	61	0	0,76	11,15	0.18	0.15
AC Chairman	61	0	1	27	0.44	0.50
Big 4 auditor	61	0	1	58	0.95	0.22

**Table 5.3: Descriptive variables and statistics of N (61), Minimum, Maximum, Sum, Mean and Std Deviation.**

The overview indicates that the variance for *Hypothesis 3: Existence of Audit Committee* and *Hypothesis 7: Big 4 Auditor* does not meet the minimum expected count to explain the existence of internal audit. Hogg and Craig (1970) mention

that for chi-square tests a sufficient level of variance is required. They describe a minimum variance (or minimum expected count) of five. Hypothesis 3 and 7 do not meet the minimum expected count of five. For this reason, these variables will not be taken into account. As a consequence, *Hypothesis 3 and 7* cannot be tested. In addition, the variable Risk Management function will not be taken into account in the next steps of this study, as the reliability of the data included in the dataset is not ensured. The desktop study of annual reports and websites of firms does not provide sufficient information.

The next steps of the analysis of the hypotheses will cover (1) the significance of individual variables, (2) details of spread of internal audit in existence regarding independent variables, (4) multicollinearity, (5) the estimate of an overall model and (6) the identification of significant variables in the estimated equation.

#### **5.4.2 Significance of individual variables**

From an institutional and agency perspective (including previous research) it was expected that there would be a significant relation with the defined variables. Table 5.4 provides an overview of the significance of the relationship based on Pearson chi-square tests for the qualitative variable (Hypothesis 6) and by using logistic regression for quantitative variables. All relations with a 1-tailed  $p < 0.05$  can be selected for the next step in this study as listed in table 5.4.

The table shows that *Hypothesis 2 related to number of entities*, *Hypothesis 5.1 Receivables/Total Assets* and *Hypothesis 6: AC Background*, do not have a significant relation to the dependent variable at a 5% level. Therefore, these variables will not be taken into account during the next steps of this study.

<b>Independent Variables</b>	<b>Expected relation</b>	<b>P (2-tailed)</b>	<b>P (1-tailed)<sup>65</sup></b>	<b>Significant (P&lt;0.05)</b>
H1: Size of the firm				
Size is determined by Turnover	+	0.034	0.017	Yes
Size is determined by Total assets of a firm	+	0.030	0.015	Yes
Size is determined by FTE of a firm	+	0.023	0.012	Yes
H2: Complexity of firm				
Number of countries	+	0.006	0.003	Yes
Number of entities	+	0.184	0.092	No
H5: Receivables and Inventory				
H5.1: Receivables / Total	+	0.591	0.296	No
H5.2 Inventory / Total assets	+	0.066	0.033	Yes
H6: AC Chairman background	+	0.343	0.171	No

**Table 5.4: Significance test of independent variables**

### **5.4.3 Details on spread individual variables**

Via a logistic regression analysis of the variables *turnover*, *total assets*, *FTE*, *number of countries* and *inventory/total assets*, the predictability of the existence of

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<sup>65</sup> As this study focuses on a 1-tailed hypothesis, the results of SPSS should be divided by two to obtain the critical value for the 1-tailed hypothesis.

internal audit will be measured per relevant variable. This analysis provides some first insights into the match between the population and the predictability of an internal audit function.

A first result of the logistic regression is the turning point with respect to the expected existence or non-existence of internal audit. This turning point is where  $p > 0.5$ . The following table 5.5 shows the numbers of the turning point:

	<b>Turnover</b>	<b>Assets</b>	<b>FTE</b>	<b>Countries</b>	<b>Inv/TA</b>
<b>Turning point</b>	€ 1,600 mln	€ 2,100 mln	6,500	15 / 16	3% / 4%

**Table 5.5: Turning point for existence or non-existence of internal audit**

The logistic regression shows that the turning point with respect to the expected existence or non-existence of internal audit in relation to the variable *turnover* is above 1,600 million euro. The turning point in relation to *total assets* is somewhere around 2,100 million euro. The turning point regarding *FTE* is around 6,500 FTE. The turning point with respect to the variable *number of countries* is somewhere around 15/16 countries. The turning point for the variable *inventory/total assets* is between 3% and 4%. At this point, the predictability of the separate variables on the existence of internal audit is higher than 0.5. Note that the turning points of these variables should be interpreted independently and should be taken in relation to each other. The detailed scatter diagrams are included in appendix III.

A second result of the logistic regression is the deviation of firms that are (not) expected to have an internal audit function, see table 5.6:

	<b>Turnover</b>	<b>Assets</b>	<b>FTE</b>	<b>Countries</b>	<b>Inv/TA</b>
<b>Predictability is &lt; 0.5 (0.45)</b>	15%	18%	15%	15%	30%
<b>Predictability is &gt; 0.5</b>	8%	7%	8%	10%	23%

**Table 5.6: Percentage of firms deviating from the predictability**

The first row of the table indicates the percentage of firms that do have, but are not expected to have, an internal audit function based on the selected variables. At least

15% of the firms seem to have an internal audit function, while this is not supported by the variables in this study. The variable inventory/total assets shows an even higher deviation. But likewise, of those firms that have no internal audit function, according the variables at least 7% were expected to have one. Here, too, the deviation in relation to the variable inventory/total assets is high.

The following more explicit overview (table 5.7) shows the result of the logistic regression and the predictability of the existence or non-existence of an internal audit function.

<b>Firm</b>	<b>Turnover</b>	<b>Total Assets</b>	<b>FTE</b>	<b>Countries</b>	<b>Inv / TA</b>
Ahold	-	-	-	0.4236	-
Air France KLM	-	-	-	-	0.3678
AMG	0.4336	0.4068	0.4174	-	-
Arcadis	-	-	-	-	0.3019
Boskalis	-	-	-	0.3702	0.4390
Dockwise	0.4007	0.4438	0.4018	-	0.3678
Exact Holding	0.3927	0.3826	0.4142	-	0.3019
Grontmij		0.4221	-	-	0.4390
Kardan	0.4283	-	-	0.4236	-
KPN	-	-	-	-	0.3019
Logica	-	-	-	-	0.3019
Macintosh Retail Group	-	0.4054	-	0.3445	-
Mediq	-	0.4424	-	-	-
Ordina	0.4111	0.3892	0.4416	0.3320	0.3019
Prologis	0.3948	-	0.3799	0.4373	0.3019

Punch Graphix	0.3859	0.3845	0.3878	-	-
Randstad	-	-	-	-	0.3019
SBM offshore	-	-	-	-	0.3019
Telegraaf Media Group	0.4222	0.4172	0.4326	0.3445	0.3019
TKH Group	-	0.4096	-	-	-
TNT	-	-	-	-	0.3019
Unibail Rodamco	-	-	0.4092	-	0.3019
USG People	-	-	-	0.4236	0.3019
Vopak	-	-	-	-	0.3019
Wessanen	0.4320	0.3920	0.4208	0.3966	-
Wolters Kluwer	-	-	-	-	0.4390

**Table 5.7: Firms with IA while predictability of existence is < 0.5 (0.4500)**

Table 5.7 provides some initial insight into the firms that are not expected to have an internal audit function, based on one or more variables. The firms are a mix of AEX, AMX and AScX. The overview indicates that 12 firms have a link with only 1 variable and may not be a selected firm, in case the variables are combined in a joint equation. However, there are also 8 firms that have a significant predictability on all variables (Ordina and Telegraaf), or on 3 to 4 variables (AMG, Dockwise, Exact Holding, Prologis and Punch Graphix and Wessanen). These firms, by comparison, are also expected to be marked as firms, for which there is no predictability to have an internal audit function. These firms are all AMX or AScX firms.

<b>Firm</b>	<b>Turnover</b>	<b>Total Assets</b>	<b>FTE</b>	<b>Countries</b>	<b>Inv / TA</b>
Aalberts	0.5130	-	0.5975	0.6919	0.9955
Accell Group	-	-	-	-	1.0000
Amsterdam Commodities	-	-	-	-	1.0000
Arseus	-	-	-	-	0.9187
Ballast Nedam	-	-	-	-	0.9975
BAM	0.8851	0.7865	0.8193	-	0.9955
BE	-	-	-	-	0.9966
Beter Bed	-	-	-	-	1.0000
Brunel Int.	-	-	0.5243	0.7374	
Corio	-	0.8235	-	-	
Eurocom Prop	-	0.5265	-	-	
Heijmans	0.5955	-	0.5390	-	0.9534
Imtech	0.7293	0.5615	0.8075	-	
Kendrion	-	-	-	-	0.9737
LBI International	-	-	-	0.5068	
Pharming Group	-	-	-	-	0.9981
Spyker Cars	-	-	-	-	0.9990
Ten Cate	-	-	-	0.5068	0.9981
Unit 4 Agresso	-	-	-	0.6423	
Wavin	-	-	-	0.6676	0.9383

**Table 5.8: Firms without IA while predictability of existence is > 0.5**

Table 5.8 provides some first insight into the firms that are expected to have an internal audit function in relation to one or more variables. The firms are mainly AMX and AScX firms (only BAM and Corio are AEX firms). The overview indicates that the majority of firms (13) have a link with only 1 variable and may not be a selected firm in case the variables are seen in equation. However, there are also 3 firms (Aalberts, BAM, Imtech) that score higher than 0.5 on 3 to 4 variables regarding the predictability to have an internal audit function.

The next step is to verify possible multicollinearity and the variables in comparison to each other, before an analysis of the results above is performed.

#### 5.4.4 Multicollinearity

Although the identified variables above have a significant relation towards the dependent variable of this research, it is important to exclude possibilities of multicollinearity (Schroeder et al., 1990). The purpose of this study is to select the key variables that predict the existence of internal audit and to prevent inclusion of redundant variables. In this study a correlation of 0.80 and greater is used as an indication of impeding multicollinearity.

<b>Variables</b>	<b>Turnover (€ in MLN E)</b>	<b>Assets (MLN E)</b>	<b>Employees (FTE)</b>	<b>Countries</b>	<b>Inventory / Total Assets</b>
<b>Turnover (MLN E)</b>	1	0.754	0.943	0.466	-0.113
<b>Assets (MLN E)</b>	0.754	1	0.715	0.490	-0.219
<b>Employees (FTE)</b>	0.943	0.715	1	0.543	-0.126
<b>Countries</b>	0.466	0.490	0.543	1	-0.173
<b>Inventory / total assets</b>	-0.113	-0.219	-0.126	-0.173	1

**Table 5.9: Pearson Correlation overview in relation to multicollinearity**



Table 5.9 shows that there is only one example of unacceptable multicollinearity; a correlation of 0.943 exists between the variables *Turnover* and *FTEs*. This correlation exceeds the tolerance level of 0.80. Therefore, one of the variables needs to be excluded from the next steps of the study.

#### 5.4.5 Significant variables in the equation

The final step in the process is to verify the significance of the associated variables in relation to each other. There are only 4 dependent variables left (*Turnover*, *Total Assets*, *FTEs* and *Countries*), out of which the variable *Turnover* and the variable *FTEs* should be selected, since they cause multicollinearity. An optimal mix of significant variables will be selected using SPSS, which is also significant in equation. The analysis of *Turnover*, *Total Assets*, *Countries* and *Inventory/Total Assets* in the equation leads to the results listed in table 5.10:

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>Df</b>	<b>Sig. 2-tailed</b>	<b>Sig. 1-tailed</b>	<b>Exp(B)</b>
<b>Turnover</b>	0.147	0.191	0.595	1	0.441	0.221	1.159
<b>Total Assets</b>	0.124	0.130	0.907	1	0.341	0.171	1.132
<b>Countries</b>	0.045	0.024	3.445	1	0.063	0.032	1.046
<b>Inventory / total assets</b>	-2.356	2.637	0.799	1	0.371	0.186	0.095
<b>Constant</b>	-1.131	0.605	3.489	1	0.062	0.031	0.323

**Table 5.10: Variables in the Equation for Turnover, Total Assets, Countries and Inventory/Total Assets**

The results in table 5.10 do not lead to significant relations in the equation that could be used as a predictive model.

The next step is to verify whether the set with *FTE* instead of *Turnover* leads to a significant relation to each other and to the dependent variable. The analysis of *FTE*, *Total Assets*, *Countries* and *Inventory/Total Assets* in the equation leads to the results listed in table 5.11:

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>Df</b>	<b>Sig. 2-tailed</b>	<b>Sig. 1-tailed</b>	<b>Exp(B)</b>
<b>Total Assets</b>	0.168	0.139	1.455	1	0.228	0.114	1.183
<b>FTE</b>	0.000	0.000	0.155	1	0.693	0.347	1.000
<b>Countries</b>	0.047	0.025	3.542	1	0.060	0.030	1.048
<b>Inventory /</b>	-2.064	2.567	0.646	1	0.421	0.211	0.127
<b>Constant</b>	-1.146	0.609	3.544	1	0.060	0.030	0.318

**Table 5.11: Variables in the Equation for Total Assets, FTE, Countries and Inventory/Total Assets**

The results in table 5.11 do not lead to significant relations in the equation that could be used as a predictive model. The next step is to verify which set of variables leads to the most significant relation to each other and in relation to the dependent variable. The examination leads to the following two variables that have the most significance in relation to each other, see table 5.12:

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>Df</b>	<b>Sig. 2-tailed</b>	<b>Sig. 1-tailed</b>	<b>Exp(B)</b>
<b>Total Assets</b>	0.223	0.123	3.257	1	0.071	0.036	1.249
<b>Countries</b>	0.052	0.023	5.004	1	0.025	0.013	1.054
<b>Constant</b>	-1.444	0.521	7.694	1	0.060	0.030	0.236

**Table 5.12: Variables in the Equation for Total Assets and Countries**

The strongest relation in the equation are the variables *Total Assets* and *Number of Countries*, with a 1-tailed  $P < 0.05$ , and more specifically, 1-tailed  $P$  of 0.036 in relation to *Total Assets* and a 1-tailed  $P$  of 0.013 in relation to *number of Countries*.

Overall, the two variables are linked to the hypotheses regarding *size (Total Assets)* and *complexity (Countries)*. The following model can be drafted based on the variables *Countries* and *Total Assets* in the equation:

$$\hat{Y} = -1,444 + 0,052C + 0,223TA$$

$$\hat{Y} = \ln(p/(1-p))$$

$$(p/(1-p)) = \exp(-1,444 + 0,052C + 0,223TA)$$

$$P = \exp(-1,444 + 0,052C + 0,223TA) / (1 + \exp(-1,444 + 0,052C + 0,223TA))$$

This chapter results in a model that predicts the existence of internal audit based on the variables *Size of a Firm (=Total Assets)* and *Complexity of a Firm (=Number of Countries)*. In relation to the population of 61 firms of the AEX, AMX and AScX, this model predicts that the firms listed in table 5.13 are not expected to have an internal audit function:

<b>Firm</b>	<b>Predictability of IA</b>
Ordina	0.22
Macintosh Retail Group	0.24
Telegraaf Media Group	0.25
Wessanen	0.28
Punch Graphix	0.33
Dockwise	0.36
USG People	0.36
Mediq	0.40
AMG	0.43
TKH Group	0.43

**Table 5.13: Firms with IA while predictability of existence is < 0.5 (0.4500)**

Table 5.13 shows the predictability of the existence of an internal audit function, listed from low to higher probability. As expected, a low predictability resulted for Ordina, Macintosh, Telegraaf and Wessanen, since they had a low predictability on both variables (*Total Assets* and *Number of Countries*). The other firms scored a low predictability on only one of the two variables (*Total Assets* or *Number of Countries*). AMG, Punch Graphix, Dockwise, Mediq and TKH Group scored a low predictability on the variable *total assets*.

USG people scored a low predictability on the variable *Number of Countries*. For firms with only *Total Assets* as key variable, *Size* has been determined to be the dominant factor in explaining the existence of an internal audit function, while for the firm with only the *Number of Key Countries* as key variable, *Complexity* is the dominant factor.

Nevertheless, these firms have an internal audit function. Future research may analyse the reasons behind the existence of internal audit at the above firms and challenge the validity of the model.

The firms listed in table 5.14 are expected to have an internal audit function according to the model, but lack an internal audit function in practice:

Firm	Predictability of IA
Imtech	0.50
Unit 4 Agresso	0.50
Wavin	0.57
Brunel International	0.59
BAM	0.61
Aalberts	0.62
Corio	0.67

**Table 5.14: Firms without IA while predictability of existence is > 0.5**

In one of the previous paragraphs, the predictability of the existence of an internal audit function was already investigated and highlighted. This analysis showed that

none of the above firms scored a significant relation on both *Total Assets* and *Number of Countries*. There are three firms (Imtech, BAM, Corio) for which *Total Assets* is the significant variable (i.e. *Size*). The *Number of Countries* (i.e. *Complexity*) is the significant variable for the other four firms (Unit 4 Agresso, Wavin, Brunel and Aalberts).

The Dutch Corporate Governance Code requires the Supervisory Board to disclose the reason for not requiring an internal audit function in the annual report (best practice provision V3.3). As a consequence, the annual reports already include an explanation why these firms do not have an internal audit function. Table 5.15 provides a summary of the reasons disclosed by the above firms:

Firm	Reason concerning non- existence of internal audit function
Imtech	Imtech has no internal audit function. On the basis of the annual evaluation of its Audit Committee, the Supervisory Board concludes that there is no need for such a function, because adequate checks and balances and control systems are in place.
Unit 4 Agresso	The Corporate Finance Function conducts regular on-site control visits and desktop reviews to ensure that all reporting is being conducted accurately and on time, and that risk management and control measures are being adequately executed.
Wavin	It was concluded that, considering the nature of Wavin’s operations and the involvement of internal and external experts in addition to the use of tools like SAP GRC, an internal audit function is not necessary at this time. Improvements of Wavin’s control environment can be achieved by better documentation of the control activities, in combination with strong administration and management information systems, regular visits from regional and central management and intensive external audits using native speaking audit personnel at the operations.
BAM	The Supervisory Board took note of the annual assessment by the Audit Committee concerning the lack of an in-house audit position within the Group. Bearing in mind, for example, the project-oriented nature of a building firm’s activities, and the large number of projects being undertaken by divisions of the Group both at home and abroad, it was decided to have the audit process carried out by an external auditor, in

	conjunction with the employees from the central finance division and the controllers at the operating firms. This arrangement — which is governed by clear agreements — once again proved satisfactory in 2010.
Brunel	Considering the nature of Brunel’s worldwide operations, it was concluded that a better cost/benefit ratio could be achieved by (I) strong administration and management information systems, centrally specified and monitored by regional financial controllers, (II) continuing regular visits from regional and central management and (III) more intensive external audits using locally based native-speaking audit personnel.
Aalberts	In view on its size and the existing risk management and monitoring systems, for the time being Aalberts Industries has not hired an internal accountant yet.
Corio	The (audit) committee also reviewed the need for an internal auditor, but does not recommend one for the time being.

**Table 5.15: Firms without IA function**

The arguments listed in table 5.15 indicate that an independent monitoring activity does not necessarily need to be performed by an internal audit function. Instead, most firms use the corporate finance function and the external audit to fill this gap. An exception is Aalberts, who indicates the size of its firm as a reason why an internal audit function is not deemed necessary. This research shows that *Size* is not an adequate argument for Aalberts (see table 5.8). Furthermore, Corio does not provide a clear argument why it does not have an internal audit function. Due to its kind of business (real estate - asset intensive) it shows up in this overview, but it may have good arguments why an internal audit function is not relevant; the limited size of their firm being one of them.

The above firms do not let the external environment — such as the Dutch Corporate Governance Code — influence them to set up an internal audit function as described in the institutional theory. Furthermore, external stakeholders neither press, nor have an effect on these firms to set up an internal audit function either. The importance of internal audit for outside stakeholders is mostly related to the prevention of fraud and/or the detection of fraudulent activity (Marden et al., 1997; Strand Norman et al., 2010), based on the internal auditors' perceived intimate knowledge of the organization and processes. Internal audit is seen as a crucial

function to stem fraud and abuse and to prepare accurate financial statements by focusing on the control in relation to reliable financial reporting (Holt et al., 2009).

Firms such as Imtech, Unit 4 Agresso and Aalberts focus their control systems on management and the finance function, and are not disclosing any information on the way in which independent assurance on their level of control is received. Internal audit is not seen as a complementary mechanism to create a proper governance system that limits agency costs. Also, their Audit Committees seem to take sufficient comfort from these control mechanism (note: Aalberts does not have a separate Audit Committee).

Some firms (Bam, Brunel, Wavin) seem to reason in line with the research of Carey et al. (2000), who concluded that the existence of internal audit as monitoring tool is viewed as a substitute for, rather than complementary to external audit. These firms make explicit references to the use of external audit instead of using an internal audit function besides their control monitoring by management and the finance function.

A final interesting element relates to the expected scope of internal audit. Although the firms do not describe the scope of the activities of internal audit, this scope seems to be focused on the financial reporting risk, as the key functions involved are the finance function and the external auditor. These firms may have a dated or limited view on the role of internal audit — being an internal *accountant* — as Aalberts describes this function. This study provides insights that the role of internal audit is much more than just financial audit, as described in previous chapters. A first exploration of the scope of internal audit of AEX firms will be discussed in the next chapter.

## **5.5 Summary and concluding remarks**

This study explored the existence of internal audit in relation the listed NYSE Euronext firms (AEX, AMX, AScX). Some international studies already focused their study on the existence and the characteristics of internal audit in their specific countries (Arena et al., 2007, , 2009; Carcello et al., 2005b; Goodwin-Stewart et al., 2006b; Wallace et al., 1991). However, the results of their studies do not completely match the criteria used and none of these studies include the Netherlands.

This study indicated that the following significant variables could be linked to the existence of internal audit: *Turnover*, *Total Assets*, *FTE*, *Number of Countries*. These variables are indications of the *Size* and *Complexity* of a firm. The result of

this study shows that related hypotheses are supported, while others were not. This is consistent with the earlier research of Wallace & Kreutzfeldt (1991), Carcello et al (2005) and Goodwin-Stewart and Kent (2006). However, contrary to Goodwin-Stewart and Kent (2006), this research found a significant relation between complexity and the existence of internal audit. The reason may be the selection of another measure (number of countries instead of business segments).

This study did not identify any links to corporate governance in the sense that the existence of an Audit Committee and Audit Committee Chairman appears not to be a significant variable in the explanation of the existence of an internal audit function. Furthermore, the agency theory variables concerning receivables/ total assets and inventory/total assets were not significant variables based on the identified population of 61 NYSE Euronext listed firms either.

The variables that are significant show that the turning point for the existence of an internal audit function is around 1,600 million euro *Turnover*, 2,100 million euro *Total Assets*, 6,500 *FTE*, or doing business in more than 15/16 *Countries*. However, these variables are not significant in the equation. The most significant relation in the equation is that of the variables *Total Assets* and *Number of Countries*.

Some NYSE Euronext listed firms do not fit with the criteria above and unexpectedly either have or do not have an internal audit function. Future research may be performed to unravel the rationale behind these choices.

There are some limits to this study and possibilities for future research. The empirical findings should be interpreted in the right context, given the exploratory nature and relatively limited number of firms (61) taken into account. Future research on a larger scale is necessary to strengthen the results of this study. Cross country research could investigate the results in other countries as well.

In addition, the current study has been performed based on annual reports. There may be other relevant variables as well, such as the nature of work (manual labour, professional labour), the role of technology, the application of IT within the different functions, e.g. a full enterprise system and the kind of business and business model that have not been taken into scope this time, as such data is not publically available and is difficult to come by. Furthermore, there may be a risk of misinterpretation of information given the nature of the research by examination of annual reports and websites of the NYSE Euronext listed firms. Alternative



research methods, such as interviews, may help to build upon the results of this study.

Furthermore, the focus has been on identifying the existence of internal audit. The study does not identify the size, scope and effectiveness of an internal function and its activities. There may be large differences in the size and scope of current existing internal audit functions. It should be noted already that a comprehensive control system of a firm is beyond financial control, which is an important basic element but not a premise for the continuation and adaptability of a firm. The scope of internal audit functions will be part of the next chapter. Future studies could investigate whether the existence or non-existence can be explained sufficiently. A first exploration of the scope of internal audit of AEX firms will be discussed in the next chapter.



## 6. Assessing the scope of Dutch internal audit

### 6.1 Introduction

Internal audit has been a growing occurrence in business supported by the establishment of the global Institute of Internal Auditors (IIA) in 1941 and IIA's aim to make internal audit an embedded *profession* the world over. Internal audit within Dutch public firms emerged during the late 1930s, e.g. in Philips' Gloeilampenfabrieken N.V., now Royal Philips Electronics and the Dutch Railways (*Nederlandse Spoorwegen*), as a result of internationalization and decentralization (Smith Committee, 2003). Ratliff concluded that 21<sup>st</sup> century internal auditors must be prepared to audit virtually everything: operations (including control systems), performance, information and information systems, legal compliance, financial statements, fraud, environmental reporting and performance, and quality (Ratliff et al., 2002: p xi). A recent study by the Institute of Internal Auditors (IIA) on the characteristics of internal audit suggests unprecedented growth opportunities due to advances in technology, the expansion of communication capabilities and the increasing complexity and sophistication of global business operations (Alkafaji et al., 2010).

However, these discussions do not clarify internal audit's required scope of work. The Dutch Corporate Governance Code (DCGC) fails to provide sufficient criteria with respect to a firm's effective system of control (Strikwerda, 2012) and subsequently fails to provide a framework for control from which internal audit functions could conclude their role, activities and its contribution. The DCGC limits itself to (internal) risk management and to control systems as needed for the annual report only, suitable for the size of the corporation (Corporate Governance Code Monitoring Committee, 2008). The DCGC requires a firm to expand on the kind of framework or criteria used as internal risk management and control system, with a reference to the COSO framework of internal control. This does provide some direction in the element of control. Although COSO has defined internal control in a broad sense, it apparently seems to work with the old rational, closed system paradigm and still focuses strongly on financial reporting and audit (Renes, 2002; Williamson, 2007). There is no explicit reference to a theoretical foundation within the COSO report. Although the COSO report includes literature references to Porter, Beniger (COSO report 1992) and to Tversky & Kahneman (COSO report 2004), which suggests a broader focus than financial reporting, the theoretical concept of these authors does not materialize in the COSO concept. Also based on

the discussions in chapter 3 and 4 it can be concluded that the COSO report misses quintessential elements or aspects to be able to provide a judgement on the effectiveness and completeness of a comprehensive control system of a firm.

The DCGC also limits the internal risk management and control systems to the requirement of a reasonable assurance that the financial reporting does not contain any errors of material importance (Corporate Governance Code Monitoring Committee, 2008: p. 14). This suggests that where auditors base themselves on corporate governance codes, they limit themselves to a narrow view on control.

As discussed in chapter 2, the main areas of attention of internal audit in the Netherlands are financial, operational, compliance and IT audit (IIA, 2010b). A new area is governance<sup>66</sup>. An international IIA study in 2010 supported this Dutch scope with the following exceptions: they also included investigations into fraud and irregularities, and an evaluation of the effectiveness of control frameworks (Allegrini et al, 2011). The latter activity seems to specify the framework that could be used during audits, but does not provide new insights into the coverage of control elements. In addition, it does not match with the opening statement that *internal auditors must be prepared to audit virtually everything*. Paape already mentioned that IIA's broad definition and statement are a source of vagueness leading to an expectation gap in practice (Paape, 2007).

Reading through some of the 2010 annual reports of AEX firms, words such as *quicken the pace of transformation, transformation of portfolio, undergo significant transformation, changing global market environment, introduction of a new strategy, setting up a shared service centre, change the structure of the firm, align organization to better respond to the needs of customers* describe an interesting broad environment for internal audit to work in and to provide assurance for. Are these areas also part of internal audit's scope?

Therefore, this chapter will establish the following research question: *How does the actual scope of work of internal audit functions of AEX listed firms in the Netherlands match with a broader, multidisciplinary view on the control system of a firm?*

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<sup>66</sup> *Governance* as an object of internal audit is defined in a recent IIA Inc report as *providing administrative support for the Audit Committee* (Anderson, 2010: p. 33). This seems to cover the regular internal audit activities and the regular reporting line. Besides a new word it does not seem to cover the area of governance from a content perspective.

An important element of the empirical research is to discuss possible differences between the theoretical explorations of internal audit and the control system of the firm as set out in chapter 4. It is assumed that they all have the same view on the *elements* of control and the scope of internal audit. The empirical explorations and discussions of Dutch *AEX* listed firms lead to more clarity on the contributions to and limits of internal audit in the control of a firm. This should answer the following question: *What explains possible differences between the internal audit functions' scope of work and the theoretical model for control and what are or should be the consequences of these differences?*

This empirical part of the study will contribute to the theory of internal audit by comparing the developed multidisciplinary framework with the current Dutch internal audit practice at listed firms.

## **6.2 Theoretical framework**

As discussed in chapter 4, cybernetics is the formal study of control. Cybernetics is defined as the science of communication and control in both machines and living beings (Ashby, 1956; Wiener, 1950). Management control researchers use cybernetics mainly from a closed system perspective (Anthony, 1995; Flamholtz, 1996), contrary to the open nature of cybernetics itself. Their emphasis relates to processes and the monitoring of information to ensure that processes behave within acceptable parameters. This closed perspective leads to a focus on internal processes and maintenance of the status quo and, where required, improvement of the standards, but lacks attention for the external environment.

Cybernetics itself has an open character (Beniger, 1986). This also applies to firms that can be described as information-driven constructions and that compete with their rivals and need to remain aligned with their changing environment, to adapt in order to remain alive (Williamson, 2007). This broader perspective, beyond the boundaries of an organization, increases the scope of uncertainty (Williamson, 2007). This view on control implies a broader view on the function of (management) control in the firm view beyond the limited scope of control as implied by codes for corporate governance. It requires attention for new areas, such as *adaptation* of goal-oriented organizations to variation and change in external conditions and *reprogramming* less successful goals and processes while preserving successful ones.

Based on the above, this study identified three levels of possible problems for control in line with Beniger (1986):

<b>Levels</b>	<b>Descriptions</b>
Maintaining the status quo	Maintaining an organization, in absence of external changes
Adapting	Adapting goal-oriented organizations to variation and change in external conditions
Re-programming	Reprogramming less successful goals, programs and processes while preserving

**Table 6.1: Three levels of control according to Beniger (1986)**

The cybernetic control processes are programmed on different levels within this hierarchy. The most basic cybernetic control process relates to administrative organization on process level (also called AO/IC in Dutch or accounting information systems). Traditionally, the internal auditor has not worked at all levels of the organization. Most authors in the field of internal audit focus on the control measures within operational and financial processes (Sawyer, 1996; Spira et al., 2002). This approach gives consideration to standards (such as authorization, compliance, accounting and safeguarding assets), assesses business transactions by following transactions all the way through the firm's processes and provides assurance on the level of achievement of *control* objectives and operating effectiveness of standards. Internal audit is an additional monitoring activity besides the regular control performed by management.

At a higher level, cybernetic control is related to achieving several objectives for an entity of a firm up to the level of the firm. Cybernetic systems at still higher levels relate to control processes of a firm in relation to other organizations. These two higher levels are also being referred to as 'management control' (Anthony, 1995; Giglioni et al., 1974; Mautz et al., 1981; Merchant, 1982) and strategic control (Goold et al., 1987; Ittner & Larcker, 1997; Kaplan et al., 2008; Langfield-Smith, 1997; Simons, 1995).

Each higher level of system analysis shows management control concerned with a wider range of uncertainties (Williamson, 2007). As mentioned in the cybernetic view, a fundamental aspect of maintaining control is determined by information;

objective setting (*goal information*), value hierarchy of different patterns and preferences (*axiological information*), measuring facts (*material information*), interpreting and making sense of internal and external information (*eidetic information*), the cause-effect analysis (*effect information*) and creating information out of data (*pragmatic information*) (Garfinkel, 2008; Strikwerda, 2010; van Peursen et al., 1968)

Programming can be seen as encoded information, which must include both the goals toward which a process is to be influenced and the organization, procedures and systems for processing additional information toward that end (Beniger, 1986). Control, therefore, is closely related to programming of both individuals/groups as in computer programming.

Internal Audit requires practical principles of control of the firm in order to be of added value to them as well as to the firm. As discussed in chapter 4, extended research in management and management control shows that a comprehensive view on control is a mix of more traditional accounting control (such as budgets and financial measures), administrative control (such as organizational structure and governance systems) and socially based control (such as values and culture). The control elements of this comprehensive view are following:

- Mission
- Values
- Vision
- Strategy
- Organizational Structure
- Leadership
- Learning & Adaptation
- Performance Management & Monitoring
- Information & Communication

These elements of control will be taken into account during this empirical investigation in relation to Beniger's three levels of control. The COSO model and its attention areas (such as internal environment and control activities) will not be used as its wording is mainly used within the audit world, but not by management.

However, a link will be made to the COSO categories of entity objectives as these provide a good opportunity to maintain a link with the framework commonly used and referred to by internal auditors (COSO, 2004: p. 21):

- Strategic objectives relating to high-level goals, aligned with the entity's mission
- Operations objectives relating to effective and efficient allocation of the entity's resources<sup>67</sup>
- Reporting objectives relating to the reliability of information
- Compliance objectives relating to compliance with applicable laws and regulations

The effect of these objectives on this research is that separate attention will be paid to *processes, financial and non-financial reliability of reporting and compliance*. The objective strategy is already specified in the management control elements.

### **6.3 Methodology of research**

Complementary to existing IIA research, which is primarily based upon quantitative data (Sarens et al., 2006), more qualitative data research will be presented using semi-structured interviews with all Dutch AEX firms with an internal audit function. This qualitative data should lead to more in-depth insights into the scope of work of internal audit within the Netherlands and possible reasons why their scope deviates from the theoretical insights into control. Understanding the interview data will be supported by content analysis of relevant documents, such as the internal audit charter, internal audit plan and other reports.

The research sample is selected from the AEX firms of the NYSE Euronext. These firms have been selected on the premise that the AEX covers the Dutch leading multinational firms that are expected to be large, complex, multinational firms and operate in a competitive environment which creates a challenge for control of the firm.

A further premise is that AEX firms have an internal audit function, which is less often the case with AMX and AScX listed firms. The AEX firms without an internal audit function are not included in the scope of this research. The final

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<sup>67</sup> This definition uses an old resource configuration as it should cover the objective function of operational entities and the process of resource allocation.



premise is that the different AEX firms cover multiple industries and therefore allow a broad view to be generated.

The following firms have been selected and invited (see appendix IV and VI) for this research, based on the above criteria/premises:

Aegon	Fugro	Shell
Ahold	Heineken	SBM offshore
AkzoNobel	ING Group	TNT
ASML	KPN	Tom Tom
Boskalis	Philips	Unilever
DSM	Randstad	Wolters Kluwer

**Table 6.2: Overview on AEX firms in scope for semi-structured interviews**

Three AEX firms (BAM, Corio and Wereldhave) have not been selected because their 2010 and 2011 annual reports mention that they do not have an internal audit function.

Furthermore, four AEX firms (Arcelor Mittal, Air France KLM, Reed Elsevier and Unibail Rodamco) have not been selected because their head-office is not in the Netherlands and the head of internal audit was not in the Netherlands to be interviewed.

The interviews with the Chief/Director Internal Audit generally took 1-3 hours and have been conducted between September 2010 and March 2011. In principle, the interviewees are the Chief/Director Internal Audit. However, to ensure that the participants have sufficient experience in their role and in the organization, in certain cases the deputy or the methodology manager of a specific internal audit function was selected. In most cases, additional questions were handled by email after the official, face to face interview. The results were recorded on basis of the semi-structured interview protocol (see appendix V) and returned to the interviewee for comments and additions to ensure the validity of the data. In addition, content analysis has been performed on provided internal firm plans and reports.

Although the focus is on the selected internal audit functions' scope of work, the interview protocol includes a broader set of questions. The additional questions concern the structure of the function, the number of people, the internal auditors' background, the reporting lines and the use of a control framework, which are considered relevant factors influencing the actual scope of work.

## 6.4 Results

### 6.4.1 Focus on maintenance versus adaptation and reprogramming

A first area of observations relates to the level of attention of the internal audit function for the maintenance of the status quo of their firm, and/or attention for the adaptation of the firm and, where applicable, for reprogramming activities of their firms. The table 6.3 illustrates the allocation of attention of internal audit functions to activities related to maintenance of the status quo and activities related to adaptation or reprogramming of their firm. The most important conclusion to be drawn from the table below is that the interviewed internal audit functions not only focus on the existing organization and processes (also called maintenance of status quo), but on the monitoring of the adaptation and in some cases the reprogramming of their firm as well.

Levels of control	Scope of IA (n= 18)	Estimate of average attention
Maintenance of status quo	18	67%
Adapting	15	27%
Reprogramming	6	6%

**Table 6.3: Allocation of time over level of control areas by interviewed firms<sup>68</sup>**

The interviews highlight that the main focus of the internal audit functions is related to assurance engagements covering the maintenance of status quo level of control. One of the reasons of this focus is the rotation plan of most internal audit

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<sup>68</sup> During the interviews there have been discussions on the distinction between adapting and reprogramming. As the interviewees were not familiar with the terminology, there may be some bias in the division of attention between these levels of control.

functions to cover all entities within a certain number of years. This approach takes up most resources and time.

However, the interviews also highlighted more attention for pro-active monitoring activities in relation to changes and projects in the organizations. Internal audit seems to be aware that *locking the stable door after the horse has bolted* is useless. The interviews show that most of the time, internal audit is the initiator for more focus on monitoring projects, rather than the management board or Audit Committee (although it is supported as part of the approval of the internal audit plan). Internal audit adds value by providing early warning signals and comfort instead of hindsight advice and reports. This is made visible by the above table, that shows that 15 out of 18 firms devote time and resources to monitoring the implementation of changes within the organization, and 6 out of 18 are also involved in monitoring reprogramming activities. The attention for adapting and reprogramming seems to focus on project monitoring and assessment of appropriate project implementation; as a consequence, there does not seem to be attention for premise control. Premises are taken as a starting point, not as part of the assessment. Another way for internal audit to be involved in adapting and reprogramming activities is by facilitating risk assessments.

Some internal audit functions also seem to be more evolved in the awareness of its role and ability to create insight into root causes of control failures. This is in line with Ashby who during the 1950s already indicated that from a biological standpoint it is more important to address the reason for errors, instead of just highlighting and fixing them (Ashby, 1956; Otley, 1999). Emphasis on the root causes supports management with ways to make the appropriate changes within the organization, and to learn from the internal audit reports. In this sense, internal audit is an enabler to make the required change visible as well. This is also supported by research of the phenomenon of *bounded awareness*, meaning that humans regularly fail to see and use stimuli and information easily available to them (Chugh et al., 2007).

### 6.4.2 Breadth of focus on control elements

The interview framework also includes management control elements that had been discussed with the selected population. The results of their level of coverage of the different control elements are included in the table below.

	Yes	No	Partly
Strategy setting (including mission and vision)	0	18	0
Strategy Execution	9	9	0
Core values of a firm	13	5	0
Structure	13	5	0
Processes	18	0	0
Leadership and capabilities of people	3	6	9
Compliance internal/ external laws and regulations	18	0	0
Budgets and performance monitoring	18	0	0
Reliability of financial reporting	18	0	0
Information Technology	17	1	0

**Table 6.4: Allocation of time over control elements by interviewed firms (n=18)**

The above results indicate a link with earlier research by IIA (2010) and Paape (2007) and shows financial audit, operational audit, compliance audit and IT audit as main areas of attention. In the above table this is covered under processes, budgets and performance monitoring<sup>69</sup> (operational audit), financial reliability of information (financial audit), compliance internal/ external laws and regulations (compliance audits) and technology (IT audit).

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<sup>69</sup> This element is also partly covered under financial audit in case the focus is only on the reliability of the information in the monitoring reports.

### *Strategy setting*

A notable result is the complete absence of involvement of internal audit in the strategy setting process (including possible changes to mission and vision which are input for the strategy development). The interviewees are unanimous in their opinion that the strategy setting process is a management task, possibly supported by strategy or business development functions and challenged by the Supervisory Board.

Internal audit does not seem to consider itself a challenger of the firm's strategy, even though there is sufficient reason to take this into account (see also chapter 4). That is to say, from the field of administrative behaviour quite some audit attention areas and criteria, including underlying models and concepts from psychology, are available to be applied as audit tools. Various lines of research provide guidance for possible dysfunctional effects in the strategy setting process, such as the already mentioned bounded rationality (Simon, 1976), bounded awareness (Chugh et al., 2007), bounded knowledgeability (Giddens, 1984), dominant logic (Prahalad et al., 1986), belief conservatism (March, 1994) and groupthink (Janis, 1972), leading to incomplete or unrealistic strategies that may even miss waves of disruptive technologies or changes (Christensen, 1997). Internal audit may be the challenger of the logic and the consistency of the strategy and the underlying assumptions in areas such as market, competencies, financials, organization and execution of external developments. In this way, internal audit does not take over the role of the management or the Supervisory Board, but may strengthen the strategy process with its objective role and systematic and disciplined approach.

### *Strategy execution<sup>70</sup>*

50% of the interviewed internal audit functions (9 out of 18) allocate resources to the assessment of strategy execution. There is one internal audit function that recently transformed its purpose, role and scope of the function to include strategy execution in the scope of work and in the competency of the team. It explicitly assesses the strategy alignment between corporate and local strategy execution, and

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<sup>70</sup> The strategy setting and execution was not separated in the integrative view as discussed under the theoretical framework (paragraph 6.2). However, during the interviews it became clear that these topics should be separated to provide a more balanced view with respect to the attention of internal audit in the strategy process.

assesses the assumptions and benefits of and realism behind the local strategy. The other internal audit functions that include strategy execution in their scope of work seem to focus more on monitoring strategic change programs or projects and less explicitly and in-depth on the assessment of the corporate strategy alignment with local strategies. In addition, it was mentioned that on occasion, internal audit teams up with its internal strategy function to perform a joint audit on strategic topics. This is also a good example of ensuring that appropriate knowledge and skills on strategy are covered during an internal audit on this subject.

This growing attention for strategy execution and its alignment may be a new trend in internal audit and is not misplaced. As mentioned before, misalignment can lead to a performance gap. A research from Mankins et al shows that many firms realize only 60% of their strategies' potential value because of the misalignment of strategy, planning and execution (Mankins et al., 2005). Kaplan & Norton confirm this result with their studies (Kaplan et al., 2008). They provide an alternative method to Bower's bottom up resource allocation process, which reduces the issue of agency costs, and includes the issue of intangible assets for which Bower failed to produce a solution. In addition, they discuss the bottom-up processes concerning emergent strategic opportunities. These opportunities sometimes emerge within the firm without any conscious process behind it (Bower et al., 2005; Mintzberg, 1978). The latter view shows the importance of interactive communication within the organization to capture this kind of emergent strategy (Simons, 1995). However, the question whether emergent strategies are properly identified within a firm does not seem to be a part of any internal audit function. It could well be considered to be taken into account already, for example as part of the analysis of the allocation process and the bringing together of the rational and emergent strategies<sup>71</sup>.

### *Core values*

The majority of the internal audit functions (13 out of 18) include core values in the scope of their work. In general, the core values are included in the so-called entity level control of the COSO framework. The COSO framework includes elements as a code of conduct, training regarding the code of conduct and the transparency of confirmations (sign-off) that all people understand the content of the code of conduct (COSO, 1992). These observations confirm the expected

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<sup>71</sup> Also see the books from Christensen and studies on innovation and new business models.

limited attention for values in a broad perspective, meaning broader than the code of conduct. Auditors in general mainly address the element integrity instead of values. This is mainly due to the COSO framework which limits itself to the element integrity and ethical values as part of the control/internal environment (COSO, 1994, , 2004). COSO's bottom line emphasis is to prevent fraudulent and questionable financial reporting practices. In this sense, integrity seems to be confused with honesty, which does not capture the full picture of integrity (Carter, 1996). The same applies to living according to a consistent set of principles (Carter, 1996), because these principles could not be in line with societal, universal principles.

Internal audit is expected to focus on values instead of on integrity only<sup>72</sup>. A role of internal audit functions could be to verify how these values are codified in the objective function, decision making, discussions, artefacts, rituals and perceptions, and monitoring. Furthermore, they are expected to assess whether the right type and hierarchy of values are in place (Strikwerda, 2011b). This is not common yet, as identified during the interviews.

### *Structure*

Most internal audit functions (13 out of 18) include the structure of the internal organization of a firm in the scope of internal audit. All respondents are clear on the scope of this area; they do not assess the structure on a global level, since that is the responsibility of the Management Board.

Internal audit assesses the structure of the organization on lower levels (such as business unit levels) of the organization. In the interviews, it links to the *internal environment* of COSO which includes the element 'organizational structure'. The element 'structure' is mostly interpreted as the proper functioning of documented decision rights, authorization limits, reporting lines and, in a few cases, is linked to incentive management. Others make the link to audits of the governance structure of joint ventures and alliances. Changes in structure are taken into account during internal audits as well, for example to verify the effectiveness of a new way of working and handover between functions.

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<sup>72</sup> Discussion with management on the implementation and embedment of values is probably more a matchup with the vocabulary of management than with *soft controls*. The term *soft controls* has been well-known in auditing since the 1990's, but has not been adopted by management as yet. However, both deal with the question of influencing the behaviour of managers and employees as part of managing and controlling a firm.

Internal audit assesses the existence and operation of the defined structure, authorization limits etc. The respondents (with exception of those who also look at strategic alignment) do not seem to assess the logic and assumptions behind the various forms of a firm's internal organization (e.g. link between strategic themes, fit to the market and the operational processes) while there has been extensive literature on criteria to audit the design of the objective function, the organization of information and its related organizational structure (Chandler, 1990; Strikwerda, 2000, , 2005b, , 2008).

### *Process*

All 18 respondents include *operational* and *supporting* processes in their scope of work. It even seems to be the core area of attention of many internal audit functions. Processes are covered by so-called operational audits. All internal audit functions use a risk-based approach that covers entities, processes, joint ventures (and themes such as license agreements and export activities).

Some respondents mention that their scope still mainly relates to financial-based control with a mixture of business control, but not always covering *all* control elements related to the *core, primary* processes. This raises the question whether *procedural* knowledge (testing the procedures without necessarily being an expert on the content of control) is sufficient or that more *substantial* knowledge (tacit content knowledge and experience) is required to assess the effectiveness and efficiency of operations as well. The latter requires a multidisciplinary team of internal auditors, which is not yet in place at all internal audit functions (also see later paragraphs of this chapter).

### *Leadership and capabilities*

All respondents acknowledge the importance of the subject for the control of the firm, but also explain that it is not (7) or only partly (8) a subject for the activities of internal audit. There were 3 respondents who include these subjects in the scope of their audits as part of the HR related control. For example, they assess the effectiveness of the leadership program within entities of the firm. Leadership is mainly seen as less tangible, and is observed in an indirect way by linking it to incidents in relation to the code of conduct, values and other policies and procedures. As such, this subject is more exception-based and incident-driven. It is also part of informal discussions with top management, outside the formal reporting process. The capabilities of people seem to be more measurable and as



such are taken into account as part of the HR control system, e.g. job requirements, existence of functions, talent management and succession planning.

As reflected in the research by Paape (2007), the subject *tone at the top* does not seem to be in scope yet. This is also the overtone during this research; the Management Board does not seem to be part of the scope of internal audit functions. The Board is (within a two tier Board) the principal of the internal audit function and they see the domain of internal audit ending below the Board, not including the Board. Nevertheless, the question remains why internal audit should not be involved in this area, as leadership by top management is an essential element of a firms' control system. As mentioned earlier with the strategy setting process, history and research show that leadership may have a dysfunctional effect on the control of a firm. This has been highlighted yet again by a recent study on CEO narcissism overload (Rijsenbilt, 2011). Rijsenbilt indicates that moderate levels of CEO narcissism can be productive and can add value to the firm, but organizations need to be aware of the potential destructive behaviour of high levels of narcissism without sufficient countervailing power. In addition, the Management Board may be assessed on their required roles as described in chapter 4 under leadership, such as the requirements of Fayol and the roles with respect to entrepreneurship, communicator within and outside the firm, decision maker and transformer.

### *Compliance*

All respondents (18) include compliance in their scope of work as part of their standard work program for every entity audit or as a theme in a specific year as a returning topic, based on a risk assessment. Some respondents provide a subtle distinction by separating internal and external compliance. They mention that internal audit's scope is related to compliance with internal procedures. Other functions, such as legal or compliance are responsible for capturing the external laws and regulations in internal policies and procedures and for implementing these within the organization. Internal audit is the assessor of the operating effectiveness of these policies and procedures. During the interviews some discussion developed on the scope of compliance; for example the Sarbanes Oxley requirement for U.S. listed firms was sometimes considered an element of compliance. In this study, this element will be captured under reliability of financial reporting. Other examples of highlighted compliance elements are privacy, health and safety (including, for example, food and product safety), anti-competition, anti-bribery (such as U.S. FCPA and U.K. Bribery Act), export control and anti-money laundering (AML).

The inverse of compliance is also a relevant element of most interviewed internal audit functions. Investigations of non-compliant behaviour or fraud investigations are part of the scope of work at 16 of the 18 interviewed respondents. The other 2 firms have a separate security & investigations function which performs these kinds of investigations. The trigger for non-compliance investigations are requests from the Audit Committee or management based on accounting and/or compliance issues (e.g. whistleblower issues).

### *Budgets<sup>73</sup> and performance monitoring*

Budgets and performance monitoring is in scope of all the interviewed internal audit functions, especially in the area of auditing the existence and reliability of performance parameter reporting. The assessment of the *relevance* of parameters in relation to the strategy and objectives of a firm is a less convincing topic of internal audits, although some explicitly mention it is also part of their scope of work. However, the determination of critical parameters, besides its reliability, is equally important from a management control perspective.

The budget process is usually discussed at length by corporate and local management and controllers. The budget game is a well-known subject by now. March and Simon indicate that objective setting is a political process, in which differences in goals and in perceptions of reality may be a condition for intergroup conflict (Cyert et al., 1992). On the other hand, Locke has empirical evidence that suggests that goal setting increases performance and motivation (Locke, 2001). The extensive attention for the budget process is related to proper attention for politics, power and psychological factors and at the end a proper resource allocation process (Hofstede, 1981). For this reason, the fact that internal audit is not heavily involved in this process is not awkward, although some take a role in the assessment of the design of the process and the alignment of strategy and budget.

The performance reporting is more of a topic for internal audit. The background of this request may be aligned with the agency theory and the related information asymmetry. The interviews show that Management Boards wish no surprises and therefore require internal audit to perform independent checks on the information supplied by local management, to ensure that this information is reliable. This

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<sup>73</sup> The element 'budgets' is also part of strategy execution, as it relates to the resource allocation process. In this chapter it is combined with performance monitoring to remain consistent with the approach of chapter 4.

agency issue may be solved in the near future, as many firms make the transition to central access to information of all entities.

Remuneration is also part of the performance process and, although not always explicitly discussed during the interviews, an explicit part of certain internal audit functions, for instance as part of the HR risks or on the Audit Committee's request. Incentives and rewards are key elements of the agency theory, as it presumes alignment between the interests of both principal and agent. History shows that remuneration systems have led to *cooking the books* activities and manipulation of short-term earnings, therefore, this element should be a standard topic of all internal audit functions (Paape, 2007).

### *Reliability of financial reporting*

All 18 respondents include reliability of financial reporting in their scope of work. The attention for this topic varies between 2% and 75% of available time for an internal audit. The discussion reveals the following differences in approach. The internal audit functions with a low percentage of work in this area limits these activities to resources dedicated to external audit/statutory requirements with respect to the annual report and sustainability reporting. The work is mostly related to smaller entities within a firm that are not in scope for the external auditor, but about which the Management Board and Audit Committee want to be reassured that they are in control. Other internal functions, with a higher percentage of allocated resources to this area, include assurance activities centring on compliance with accounting principles and the control framework for this area (such as Sox testing).

### *Information Technology*

Most internal audit functions (17 out of 18) include information technology (interpreted as IT systems, but also extending to areas such as social media) in the scope of their function. One internal audit function does not include IT in its scope as this is performed by another function<sup>74</sup>. The kinds of audit vary from traditional IT audits for financial statement reliability, to integrated operational audits covering process, financial, compliance and IT knowledge, to pro-active project

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<sup>74</sup> IT auditors have in line with COSO their own control model called COBIT (Control Objectives for Information and Related Technologies framework). This framework has the similar gaps as COSO and will therefore not be explained further in this thesis.

audits of large IT implementations or migrations. Due to advances in technology more *manual control activities* are automated, which requires more internal audit attention in this area. There are also developments in continuous auditing based on technologic developments. These enable internal audit to limit assessment efforts and to focus on other areas.

### 6.4.3 Analysis of differences between firms

A next step in the analysis of the results of the empirical research at 18 Dutch AEX firms is to explore variables that may influence the scope of internal audit functions. The following variables will be explored:

- Purpose of internal audit function
- Size of internal audit function and related industry
- Existence of other assurance functions
- Background of Internal audit team
- Reporting line

#### **Purpose of internal audit function**

The majority of the interviewed internal audit functions (13 out of 18) adopt the IIA definition. The IIA defines the field of internal audit as follows:

*An independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes (IIA, 2004).*

However, five internal audit functions deviate from the others and have their own definitions. In general, common elements such as assurance, independence and quality of control also apply to the deviating definitions and overall there are two interesting points in these deviating approaches:

Two internal audit functions explicitly mention that they provide **reassurance**, thus meta-control, as management has the primary responsibility for providing assurance on the level of management control. This emphasis highlights the responsibility of management and positions internal audit more clearly as an assessment function. The IIA definition is more fuzzy, capturing everything, and creates confusion by including the consulting activity besides assurance. During the interviews it has become clear that all internal functions mainly focus on

providing *assurance*. Some even explicitly mention that consulting is a different profession and is not an element of internal audit; this should be done by other specific functions within a firm or specific consulting firms.

There is also one internal audit function with explicit attention for process harmonization, identification of process improvement opportunities and gathering and sharing of best practices. The basis of this activity relates to the end-to-end review on key business processes and providing reassurance that all risks pertaining to the processes are well understood and managed. This makes the natural advisory role very explicit and aligned with the continuous improvement of processes, rather than on only providing assurance.

The interviews also included a question regarding the trigger to set up an internal audit function. Half of the interviewed firms have had an internal audit function for over 20 years, others since the new century. In general, the reason why is linked to the growth of a firm and the continuing need for timely, reliable and accurate (financial) information from its decentralized units. As the control function could no longer be covered by management, additional control was needed by other monitoring functions, such as internal audit. Furthermore, it was a way to lower external audit costs and to improve the quality of process and learning. Other reasons are the requirements of the Sarbanes-Oxley law or the initial public offering (IPO) on a stock exchange. A close link to financial audit as a basis is present at all firms, and is maintained over the years.

The expectations of the Management Board and Audit Committee regarding the purpose of internal audit came across during interviews as well. In general, the feedback was quite consistent; internal audit is the eyes and ears within the firm and the Management Board and the Audit Committee see a monitoring role for internal audit to prevent any surprises, especially in the area of financial reporting and fraud. Some also mentioned that the Board sees internal audit as a function to signal to and share best practices with various parts of the organization.

### **Size and industry**

The interviewed population differed in number of employees within their internal audit functions.

Table 6.5 shows the differences in size:

Number of IA employees	Number of firms	Rounded percentage (n = 18)
<10	7	40%
10 to 50	5	30%
50 to 100	3	15%
>100	3	15%

**Table 6.5: Number of IA employees divided over interview firms (n=18)**

Although the researched population is small, the results appear to be in line with earlier research by Paape (2007: p. 55); at 40% of the firms the internal audit functions includes less than 10 employees, 30% have 11 to 50 employees and around 30% of the interviewed firms have more than 50 internal audit employees<sup>75</sup>.

A further analysis of the number of internal audit employees in relation to the total number of employees within a firm has been completed and places the number of internal audit employees in the context of the whole organization. The comparison is shown in table 6.6.

As expected from earlier research, the financial industry has the highest levels of internal audit employees in relation to the total number of employees with a percentage between 0.38% and 0.75%. The percentage of internal audit employees in relation to total number of employees of most firms is mainly between 0.02% and 0.09%. This small dataset does not show a consistent link between the size of the firm and the size of the internal audit functions.

Furthermore, a link is made with the scope of services of the interviewed internal audit functions and the size of their function. Mainly the larger internal audit functions (> 20 employees) cover elements such as strategy execution and leadership besides the other control elements.

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<sup>75</sup> There are slight differences in the percentages for organizations that have between 10–50 internal audit employees (5%–10% more in Paape’s study) and organizations that have more than 50 internal audit employees (5%-10% less in Paape’s study).

The internal audit functions with less than 5 employees focus only on control for financial reporting. However, more research is needed to provide significantly relevant results.

Percentage of total number of employees	Number of IA functions	Kind of Industry
0,01%	1	Oil & Gas instruments
0.02%	3	Consumer business, Building, Professional Services
0.04%	3	Consumer business, Transport, Media
0.07%	2	Consumer electronics, Telecom
0.09%	5	Consumer business, Chemicals, Technology, Construction
0.17%	1	Technology
0.22%	1	Oil & Gas
0.38%	1	Financial Services
0.75%	1	Financial Services

**Table 6.6: Percentages of internal audit employees in relation to total number of employees of researched firms and per industry (n=18)**

### **Existence of other assurance functions within a firm**

The scope of an internal audit function may depend on other functions within the firm that also provide support and assurance on specific areas. The interviews indicate that within all firms other functions exist that provide support or assurance in areas such as risk & control, quality, health & safety and environment, project value assurance (VAR), compliance, store audit, information security, asset protection and food-safety. In some cases, different committees combine different functions as well, such as the Business unit Audit Committee, Ethical committee, Compliance committee, Risk committee.

The most direct link is between internal audit and the risk & control functions. In 13 out of 18 interviewed firms, such a function exists for risk assessments and developing, adjusting and testing the control framework. These activities seem to overlap with the work of internal audit. In most cases, internal audit relies partly on the work of the risk & control functions and partly on additional checks to verify the completeness and accuracy of their work. This system of control enables an external auditor to rely on this system and limits the work in verifying the control framework. The existence of a separate risk & control function may indicate that internal audit can refocus its resources on other elements (broader view on internal audit) or it can be a trigger to limit the resources of an internal audit function (narrow view on internal audit).

An interesting theme is how the other functions relate to the work and scope of internal audit. As early as in the 1990's, discussions on integrating more distinct audits, such as ISO, legal, environmental and health and safety audits within the internal audit function took place (Paape, 1995). It showed a further shift from financial audit towards the examination and evaluation of the quality of control designed to assure the accomplishment of entity goals and objectives (Paape, 1995). In 1999, a Dutch IIA report considered different kinds of audit, such as health and safety, environmental, legal and ISO, as something outside the internal audit function. In 1999, there was neither need to link these functions to internal audit, nor to integrate them.

Currently, within some firms other assurance functions are integrated within the internal audit function (such as quality/ISO audits or HSE) or are reporting to internal audit (HSE). This is also in line with the IIA position paper which includes different kinds of audit under the umbrella of internal audit (IIA et al., 2005). In general, the internal audit function liaises regularly, co-ordinates with and takes account of the work of other assurance functions across the group. This can be done informally, and/or via committees and/or by agreeing each other's framework to avoid assurance gaps and to minimize areas of overlap. The interviews did not indicate that the latter is common at every firm. This may be an attention area for some internal audit functions. Firms may rethink the reporting structure of the assurance functions as many of the heads of internal audit have grown into a Chief Audit Executive (CAE) role. This role presumes that they act on C-level with related oversight. From that point of view it may seem logical to let the CAE coordinate the assurance functions. This will result in a better coverage of different potential risk areas and the ability to provide an overall assurance statement towards the Management Board and Audit Committee. It is, for example,



interesting to note that a *new* element such as sustainability audits is almost automatically parked under the responsibility of internal audit, while other elements such as health and safety & food safety audits are not transferred to the responsibility of internal audit.

This overall coordination should, in the end, lead to expertise to provide assurance to the overall in-control statement of a firm. In general, the internal audit function is one of the players in the control statement process or provides assurance on the management *in control* process. The interviews resulted in the observation that the question on *sufficient coverage to provide assurance or comfort* leads to the in-control statement, which is mainly related to a system leading to a reliable annual statement and sustainability statement. This seems to return the focus and scope of the *in-control statement* to financial reporting & financial control. Is this the essence of the scope of internal audit?

The interviews show that their expertise is broader, covering the areas of strategic, operational, financial and compliance control or subject matter expert areas in relation to potential risk areas. Others mention they are only expert in the area of *administrative organization*, excluding the control areas concerning the core, technical processes (this is seen as a task for consultancy firms). This seems to be in line with the *in-control* statement focus. In general, they agree they oversee all entities and processes, however limited by their risk-based approach. Another angle is that they have the authority to involve themselves in various control issues and subjects. Internal Audit is the function that can be *critical* and can start a discussion and promote continuous improvement.

## **Background team**

The background of the chief auditor and his team may be an influencing variable for the scope of the internal audit functions. A first influence may be indicated by the background of the chief auditor. More than 50% of the chief auditors at the interviewed firms have an educational background in audit (RA, CPA, etc.) and most of these auditors used to work at an audit firm. However, there is also a tendency of new chief auditors who do not match these criteria and have more of a business background (including finance functions). Larger firms in particular seem to hire this kind of chief auditor.

There is also a link between the background of the chief auditor and his team. At certain firms, where the chief auditor has a business related background, the team is hired from the business and/or are only temporarily part of the internal audit

function and will return to the business after a certain period. The team also reflects the different core functions of the firm; the team members with a financial background cover no more than 50% of the resources. This approach of a mix of career auditors and non-career auditors is common sense at the large non-financial, multinational firms that are interviewed. At other firms as well, the diversity between career auditors and non-career auditors and guest auditors from the business and/or a need for *specialist* knowledge are a growing trend. This is also in line with the position paper of the IIA of 2005, which emphasizes the well-known statement about multidisciplinary audit teams. The new element relates to the inclusion of specialists *from the business*. This points to a new direction with a mix of expertise, outside the regular RA, RO, RE areas. However, it is not yet common among the majority of the interviewed internal audit functions. The majority of the internal audit functions only cover the traditional *R-factor* (such as RA, RO, RE).

## **Reporting line**

The relevance of the reporting line for the scope of internal audit is twofold. Firstly, it relates to reporting as part of the corporate governance requirements. Secondly, it relates to the internal governance of the internal audit function as part of a global organization.

Internal audit needs to operate under the responsibility of the Management Board and have access to the chairman of the Audit Committee according to the DCGC (Corporate Governance Code Monitoring Committee, 2008)<sup>76</sup>. In practice, all internal audit functions report to the CEO of the Board (10 internal audit functions) or the CFO of the Board (8 internal audit functions) and to the Audit Committee (17 of the internal audit functions<sup>77</sup>). Two firms have a one-tier Board and report primarily to the Audit Committee. Administratively, they report to the CFO which is not in line with the position paper of the IIA (2005).

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<sup>76</sup> This approach is described for two-tier Boards and not for one-tier Boards such as Shell and Unilever.

<sup>77</sup> One internal audit function did not yet report to the Audit Committee although the company had an Audit Committee set up.

In the 2005 position paper of the Dutch IIA, the internal audit function still was positioned mainly under the Management Board as described below (IIA, 2005: p. 5, 10):

*The duty of the internal audit function consists of providing additional assurance to the managing director and the management of an organization on the effectiveness and the control of the business operations.*

*Communication with the Audit Committee will primarily go via the executive Board.*

Corporate governance and oversight by Audit Committees has made a next step. Especially in the Anglo-Saxon literature, some authors propose internal audit as one of the cornerstones of corporate governance (Holt et al., 2009; Stewart et al., 2010; Strand Norman et al., 2010). The other cornerstones are management, the Audit Committee and the external auditor. In this view, internal audit is much more an independent function of management rather than the tool of management approach as supported in the Netherlands. The question to be asked is whether this Anglo-Saxon approach will emerge in the future for listed firms with a strengthened monitoring role in relation to the Audit Committee. As a consequence, the scope of internal audit may then also include the Management Board and the strategy process, instead of only focusing on the business units as in the past.

The internal governance of internal audit has also changed over the past few decades due to further professionalization, scandals and external developments (such as the Sarbanes-Oxley law). Some functions mentioned the change from a regional to a global audit function, centrally led from the corporate office. The trigger to centralize internal audit coordination was to ensure overall insight and quality, so no risks would be missed or remain out of the Management Board's and the Audit Committee's sight. This centralization can further strengthen its role as cornerstone of corporate governance and its scope, broader than mainly financial and operational audit.

## **6.5 Summary and concluding remarks**

This chapter explored the actual scope of Dutch AEX listed firms' internal audit functions and explained possible differences between the internal audit functions' scope and the theoretical model for control. The following concluding remarks can be made based on the exploration:

First of all it can be concluded that the interviewed internal audit functions not only focus on the existing organization and processes (also called *maintenance of status quo*), but are involved in the monitoring of the adaptation and in some cases the reprogramming of their firm as well. Internal audit functions seem to be aware that *locking the stable door after the horse has bolted* is useless. However, the main focus is on assurance engagements covering the maintenance of a status quo level of control.

Secondly, the familiar control elements such as budgets and performance management, process control, reliability of financial reporting, compliance and information technology are part of the scope of the interviewed internal audit functions. Broader management control elements such as strategy setting, execution, core values, structure, leadership and capabilities are less standard elements of the scope of all internal audit functions due to the lack of knowledge, experience and confidence. However, the control problem of the firm, as the various scandals and crises suggest, rests within these elements as well. Furthermore, the interviews indicated limited connection with institutional developments, meaning the emergence of intangible assets and decreasing importance of tangible assets, requiring a different approach to control and to audit.

Thirdly, the majority of the internal audit functions use the IIA definition and deviating definitions include common elements such as assurance, independence and quality of control as well. The main difference is the focus on either consulting or assurance; the latter is already the main focus of the internal audit functions. The term *consulting* remains fuzzy. Most interviewed (not all) internal audit functions seem to be followers regarding what to audit or not, for example, based on their rotation scheme and on the approach and/or scope of external auditors. As a consequence, the broader comprehensive view of control is applied limitedly. A more focused definition or an operationalization of the IIA definition may provide more clarity for the internal audit function itself and its environment.

Fourthly, differences between the scope of work of internal audit functions may be explained in part by the *background* of the internal audit team. Currently more than 50% of the chief internal auditors have the *R-factor*. However, there is a tendency to hire new chief internal auditors with a business background (including finance). The same applies for the internal audit team and the multidisciplinary nature of the team to cover all main core processes and functions of a firm. This also affects the scope of work that is seen at some of the larger internal audit functions. Elements

such as strategy, strategy alignment, core knowledge of processes and regulatory compliance topics should be integrated in the multi-disciplinary team.

Fifthly, there is a growing importance for the role of the Audit Committees. The question to be asked is whether the Anglo-Saxon approach for listed firms with a strengthened monitoring role for the Audit Committee is the future in the Netherlands as well. As a consequence, the Management Board and the strategy process may become part of the internal audit's scope, which will no longer merely focus on the business units as was the case in the past.

Sixthly, the use and integration of assurance functions are widely dispersed areas within the interviewed firms. Firms may rethink the organization and the reporting structure of the assurance functions, since many of the heads of internal audit have grown into a Chief Audit Executive (CAE) role with related oversight. From that point of view it may be logical to let the CAE coordinate the assurance functions. This will result in a better coverage of different areas of the comprehensive control system and the ability to provide an overall internal assurance statement to the Management Board and the Audit Committee.

There are certain limits to this study and possibilities for future research. The empirical findings should be interpreted in the right context, given the exploratory nature and relatively limited number of firms (18) taken into account. Future research on a larger scale is necessary to strengthen the results of this study.

In addition, the current study has been performed on the basis of interviews and limited documentary research. There may be a risk of misinterpretation of information given the nature of the research. More in-depth research, perhaps supported by questionnaires, may help to build on the results of this study.

Future research on this topic, including the Management Board and Audit Committee members, may lead to new insights and rationale for choices made. This could further enhance embedding internal audit functions and their contribution to the control of the firm. At present, Management Board and Audit Committee members may have an outdated but dominant view on the role of internal audit, that does not match its current purpose and scope.



## 7. Summary and Conclusions

### 7.1 Introduction

This research started with the observation that increased (regulatory) demands for accountability have made a firm's control systems part of the public policy debate on audit and corporate governance (Maijoor, 2000). This attention related mainly to internal *accounting* control (or AO/IC as it is called in Dutch), to ensure a reliable financial statement. The attention to the meaning of control in the Netherlands increased as a result of the scandals and financial crises. Proper internal accounting control was an element to improve the control system of a firm, however, the control problem of the firm, as the events suggest, reside at a higher level.

Economic changes occurred while different international corporate governance committees drafted their codes. More recent economic literature shows awareness of the shift from physical assets to human, information and organizational assets. It shows insights that the nature of firms is changing. This change was not sensed and adopted by mainstream management control academics, nor in the practitioners' theories of governance, accounting or auditing. Corporate finance literature describes this translation as a change of focus from accounting profit to economic profit, requiring a different approach to control and to provide assurance. More recently, Kaplan and Norton operationalized this change in the nature of the firm in their books as well.

Another observation was that there is no common, comprehensive theory regarding the concept of control; different concepts for control are assumed in various researches, depending on the academic field involved. Subsequently, no adequate theory exists on internal audit's role in and contribution to the external or internal control system of a firm. This hampers adequate development of this profession in relation to developments in the economy in general and micro-economics in particular.

Up to now, the internal audit profession's involvement in the corporate governance discussions in the Netherlands has only been indirect. No internal audit representative was involved in the commission and there was no clear understanding concerning the role of internal audit. In the Netherlands, only two studies are known in this field: a dissertation by Paape (2007) on the impact of corporate governance on the role, position and scope of services of internal audit

and a dissertation by De Bruijn (2010) on the role of internal audit in relation to the laws and regulations of professional bodies. This study expands on those researches.

The purpose of this research was to *explore* literature and current practice to obtain a clear view of internal audit's theoretical and practical contributions to the reasons of *existence* and *scope of work* in the control system of a firm. The central research question of this study is: *What is internal audit's reason of existence and scope of work in the control system of a firm?*

## **7.2 Summary of findings and their implications**

This study investigates five different areas of attention to answer the different areas of the central research question.

*The first area of attention* relates to the literature on the origins, purpose and scope of internal audit. In general, internal audit has developed from traditional accountancy and financial control into operational control testing and training, consulting activities such as risk management facilitation and corporate governance support to the Audit Committee and external auditors as part of their duty to monitor the internal risk and control system. During the implementation of Sarbanes Oxley regulation (SOx) there was some fear of damaging its professional status, but this now seems to have been resolved. Although IT is mentioned as a fundamental part of modern firms and, therefore, expected to get attention in academic articles, this has not been the case in the selected internal audit related journals.

The main premises for the present internal audit functions were defined in 1999, covering elements such as *scope* (assurance *and* consulting activities to add value and remain viable; a broader scope than that of financial audit by covering governance, risk management and control), *organization* (internal and/or (partly) outsourced), *governance* (relation with management, the Audit Committee and the external auditor) and being a standard based *profession*. There have been a limited number of changes in the field of internal audit since the new IIA definition in 1999. Several corporate failures provided a boost for internal audit during the SOx period from 2004-2006, but silence reigned during the financial crisis of 2008-2010.

The IIA research and their suggestions for expansion of internal audit's scope of work do not always seem to be theory-driven or demand-driven, but opportunity-



driven. Furthermore, the perspective chosen seems to have a closed systems perspective that does not cover changes in the institutional context of firms and its environment. From an academic perspective, there are limited fundamental, integrative articles on internal audit, and no articles that suggest new theoretical insights, approaches and/or methods on additional value provided by an internal audit function. This study has closed this gap by exploring its origins, development and *raison d'être* and by structuring the different articles, theories used and latest theoretical insights.

*The second area of attention*, the exploration of a theoretical foundation, looks at the firm as a meta-theory on analyzing its control system from an economic point of view, as well as the role of internal audit. The theory of the firm is far from homogenous and involves different views. These different views (agency, transaction costs (TCE), property rights and the resource and knowledge-based view (RBV, KBV)) provide different dimensions/issues that can be complementary to each other and to the internal auditor, by analyzing control issues within a firm. The different theories highlight the fundamental questions of the Coasian theory of the firm related to why a firm exists (TCE, property right view, RBV, KBV), what the boundaries (TCE, property right view) of a firm are and the internal organization of a firm (Agency theory, property right view, RBV, KBV). In addition, the discussed theories of the firm provide insight into the assumptions behind the existence, boundaries and mechanism of internal organization. Fundamental assumptions are bounded rationality (agency theory, TCE), information asymmetry (agency theory) or information impactedness (TCE), the importance of boundaries of a firm by ownership or access to assets (property rights view, RBV, KBV) or asset specificity (TCE) and maximizing behaviour and related incentive issues (agency theory, property rights view).

The different theoretical views of the firm imply that internal audit functions as a double loop control mechanism at corporate level of a firm (agency, TCE). Internal audit's reason of existence is to support the firm and its management to highlight possible cases of information asymmetry and incentive issues between the Supervisory Board and Management Board and local management. Furthermore, the economic perspective also emphasizes the contribution to the performance and value(creation) of the firm (RBV, KBV). The advantage of internal audit over external monitors is their greater freedom of action, its wider scope, its understanding of the language of the firm and the possibility to rely on less formal evidence.

*The third area of attention* covers the exploration of a theoretical foundation from a *control* perspective. Various views on control are investigated to explore broader theories and elements of a control system of a firm. On the whole, biological cybernetics, information theory and management (control) theories are a useful and more practical addition to the economic point of view. A comprehensive theory of control is formulated by using the biological cybernetics and information theory supported by insights from organization theories. Its concept of analysis is a living system which is explicitly organized for information processing to effect control and to remain alive in an open system. This is in line with firms who are information driven constructions, competing with their rivals and aligning with their environment to adapt and remain alive. However, it should also be noted that the comprehensive theory as described in this chapter has not been adopted yet in current management, management control, management accounting studies. Based on the literature study some assumptions are made clear, to help focus on essential elements of a control system of a firm. These assumptions are not static and can change as a result of changes in the institutional environment. The logic of falsification cannot always be applied and principles, therefore, may be seen as temporary “crutches” to assist making sense of what we find as we go along, and to be used only until a better means can be found. Internal audit is also expected to adapt and reprogram its scope of work and audit programs to remain viable within a firm. The current internal audit standards are too generic and high level to provide sufficient guidance on the question whether a firm is really *in control* in the previously described areas. Internal audit as a profession should be keen on sensing fundamental changes, and should prevent adopting management hypes or fads. Therefore, the cybernetic theory of control, together with the insights from administrative behavior, organization theory and the theory of the firm (such as the resource and knowledge-based view and the dynamic capabilities view) provide a more comprehensive view on control for internal audit functions and the determination of their scope and required knowledge and skills.

*The fourth area of attention* is the exploration of possible *critical explanatory variables for the existence of internal audit in the Netherlands*, taking into account previous international research on this topic and contributing to the growing body of literature. This study indicates that the following significant variables could be linked to the existence of internal audit: *Turnover, Total Assets, FTE, Number of Countries*. These variables are indications of the *Size and Complexity* of a firm. This is consistent with the earlier research of Wallace & Kreutzfeldt (1991), Carcello et al (2005) and Goodwin-Stewart and Kent (2006). However, contrary to Goodwin-Stewart and Kent (2006), this research found a significant relation

between complexity and the existence of internal audit. The reason may be the selection of another measure (number of countries instead of business segments). The significant variables show that the turning point for the existence of an internal audit function is around EUR 1,600 million *Turnover*, EUR 2,100 million *Total Assets*, 6,500 *FTE*, or doing business in more than 15/16 *Countries*. However, these variables are not significant in the equation. The most significant relation in the equation is that of the variables *Total Assets* and *Number of Countries*. Some NYSE Euronext listed firms do not align with the above criteria and unexpectedly do or do not have an internal audit function. Future research may be performed to unravel the rationale behind these choices.

*The fifth area of attention* concerns the confrontation of the *actual scope of work of internal audit functions of AEX listed firms in the Netherlands with a broader, multidisciplinary view on a control system of a firm*. The confrontation shows that the interviewed internal audit functions not only focus on the existing organization and processes (also called ‘maintenance of status quo’) but that they are also involved in the monitoring of the adaptation and in some cases the reprogramming of their firm. Internal audit functions seem to be aware that *locking the stable door after the horse has bolted* is useless. However, the main focus is related to assurance engagement covering the maintenance of status quo level of control. Most interviewed (not all) internal audit functions seem to be followers regarding what to audit or not, for example, based on their rotation scheme and on the approach and/or scope of external auditors. As a consequence, the broader comprehensive view of control is applied limitedly. A more focused definition or an operationalization of the IIA definition may provide more clarity for the internal audit function itself and its environment. The familiar control elements such as budgets and performance management, process control, reliability of financial reporting, compliance and information technology are part of the scope of the interviewed internal audit functions. Broader management control elements such as strategy setting, execution, core values, structure, leadership and capabilities are less standard elements of the scope of all internal audit functions due to lack of knowledge, experience and confidence. However, the control problem of the firm, as the events of the various scandals and crises suggest, rest within these elements as well. Furthermore, the interviews indicated limited connection with institutional developments, meaning the emergence of intangible assets and decreasing importance of tangible assets, requiring a different approach to control and to audit. This study shows that the broadness of the scope of the internal audit functions is closely related to the size and team composition of internal audit functions and less directly influenced by their purpose and reporting line.

### 7.3 Implications of the findings of this study

The following implications can be noted after combining all areas of attention. The current state of internal audit as marked in the position paper of the IIA (2005, 2008) may need some revision to look ahead to 2020.

#### *Reason of existence of internal audit*

1. The requirement to set up an internal function as an *additional*, independent monitoring function depends on the size and complexity of a firm. This study explored a formula to determine whether or not a firm requires an internal audit function, based on a limited number of critical variables. This may prompt some firms to set up an internal audit function within Dutch listed firms.
2. The requirements defined in the regulatory context of the firm, such as in the Dutch Corporate Governance Committee (DCGC), to deploy an internal function are based on a narrow view of control (the reliability of the annual report) and, therefore, of internal audit. A more comprehensive view on control should be adopted by the DCGC, aligned with the current institutional context and economic changes.
3. Internal audit is a function within the internal organization of a firm. Internal audit is not a management tool but a monitoring function as part of the governance of a firm as a whole. Subsequently, a Management Board of a 2-tier structure is not solely responsible for internal audit, but shares this responsibility with the Audit Committee, i.e. the appointment of chief internal audit, the approval of plans and the discussion of the overall findings, conclusions and actions from internal audits. As a consequence, the scope of internal audit may then also include the Management Board and the strategy process.

#### *Scope of work of internal audit*

4. In order to be of value for firms, the economy and society, internal audit should focus on the meta-control of the firm and develop the skills and core competence needed for this role. Its primary role is to provide insight into and assurance of the different elements of the comprehensive control system and to have its related natural advisory role. Internal audit does not

provide consulting services<sup>78</sup>. It is suggested to adjust this in the IIA definition of internal audit.

5. The scope of internal audit covers, firstly, all the different levels of control (maintenance, adapting and reprogramming) and secondly, the areas of strategic, management and operational control<sup>79</sup>. Control over financial reporting is one of the basic building blocks for a firm to be in control, but this should not be the sole area of focus of an internal audit function.

#### *Conditions behind existence and scope of work of internal audit*

6. Professional internal audit associations provide standards for performing structured and disciplined internal audits. However, a broader set of literature provides the *norms* to use for assessing strategy, operations, reporting and compliance objectives. COSO is not a comprehensive control model and does not include sufficient management control language. This thesis described the broader set of literature and norms to be used.
7. Internal audit will, dependent on the purpose of their function<sup>80</sup>, have a sufficient level of multidiscipline in its team to cover the core competences of their firm in relation to risk areas. This is broader than just covering the different *R*-competencies.
8. In case there is sufficient reason to set up an internal audit function (which is broader than control over financial reporting) then this function should also have a sufficient level of resources available to cover all relevant areas and to be able to attain the objectives of their Audit Charter.
9. As described by Polanyi (1962: p. 112) different vocabularies for the interpretation of things divide group which cannot understand each other's way of seeing things and acting upon them. At present, much internal audit literature is still full of audit jargon and technical language. As a

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<sup>78</sup> There may be an exception for non-mature organizations where control processes need to be developed in case of a lack of control processes. In that case the internal audit function is not an assurance provider, but is more an internal consultant. This should be included explicitly as its role in the Audit Charter. However, this can never be a long-term internal audit role, because that is the role of assurance provider.

<sup>79</sup> All elements also cover financial and IT elements.

<sup>80</sup> Multidiscipline outside the *R*-competencies does not apply in case the purpose of the internal audit function is to limit its scope to internal control for financial reporting. This would be a narrow fulfillment of its role and may be captured under the corporate controller department of a firm.

consequence, people outside the audit world do not always understand the vocabulary and for example management may not get the full meaning.

10. Internal audit will not judge the set-up of specialized assurance functions as mentioned in the Dutch IIA position paper of 2005, but will need to integrate them within its function, such as HSE, Quality, and other compliance related functions<sup>81</sup>. This integrated approach will ensure sufficient coverage, prevent overlap and save compliance costs.
11. The external accountant is one of the external parties with whom internal audit aligns its work, as this is only a part of its work. This should also apply to other external parties such as DNB (De Nederlandse Bank) and AFM (Autoriteit Financiële Markten), etc. The thought behind this statement is mainly to limit the explicit and implicit dominance of external audit, also from an institutional context point of view, to be able to make the change in scope.
12. In 1999, the IIA made a shift in focus and key authors behind this shift (Krogstad, Ridley, & Rittenberg) referred in their article to a statement from Wayne Gretzky: *I skate to where the puck is going to be, not where it has been*. This is an inspirational slogan, which in a different context could also be used by the IIA in the current area; the IIA might start using more academic research on forward-looking developments to be able to timely adapt and reprogram when and where required, rather than do so in hindsight. This could even lead to the question whether Gretzky was using the right puck to begin with! At present, there is limited Dutch academic synergy between the IIA and Dutch firms to perform fundamental research to bring the profession to the next stage and/or ahead off new developments.

## 7.4 Limitations of this research

This research also has several limitations. Firstly, it is explorative by nature and relies for a large part on the research of literature on *internal audit* and the *control of the firm*. It covers a broad overview on literature from different angles and with limited empirical focus. Its explicit purpose was to focus on this broader set of multidisciplinary views and theories as well, instead of testing one theory with empirical data. This limits the possibility of statistically proved generalizations; however, it provides building blocks for the theoretical basis of the field of internal

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<sup>81</sup> Note: a risk & control function is not seen as an assurance function, as it supports management and does not provide internal assurance.

audit and a broader, multidisciplinary view on a control system of a firm. In addition, the exploratory approach is used to perform this fundamental research of integrative comprehensive perspective on internal audit and control.

Some empirical research has been performed in chapters 5 and 6, but there may be various parts that have not been empirically tested completely or with sufficient depth. In chapter 5, the existence of internal audit functions is investigated. These empirical findings should be interpreted in the right context, given the exploratory nature and relatively limited number of firms (61) taken into account. Future research on a larger scale is necessary to strengthen the results of this study. Cross country research could investigate the results in other countries as well. In addition, the current study has been performed on the basis on annual reports. There may be other relevant variables as well, such as the nature of work (manual labour, professional labour), role of technology and the application of IT within the different functions (a full enterprise system and the kind of business and business model that have not been taken into scope this time, as they require input from the organizations). Furthermore, there may be a risk of misinterpretation of information given the nature of the research by examination of annual reports and websites of the NYSE Euronext listed firms. Alternative research methods, such as interviews, may help to build on the results of this study.

There are also some limits to the empirical research in chapter 6. The results need to be seen in relation to the limited number of firms in scope (18). Future research on a larger scale is necessary to strengthen the results of this study. In addition, the current study has been performed based on interviews with internal audit functions and limited documentary research. There may be a risk of misinterpretation of information given the nature of the research. More in-depth research, possibly supported by questionnaires, may help to build on the results of this study.

## 7.5 Directions for future research

This study provides various possibilities for future research.

1. First of all, exploratory research has been performed on the existence of internal audit. There are some follow-up topics to be covered:
  - a. Based on this study, certain firms are expected to have an internal audit function, but have none. It may be interesting to perform a more in-depth study on these firms, to discover why they do not have an internal audit function. The same applies to the firms that have an internal audit function while it is not expected of them according to the researched variables.
  - b. In addition to the previous point, it may be interesting to perform future research on the existence of an internal audit function on a larger scale, to support the results of this study. Cross-country research could investigate the results in other countries as well.
  - c. The current study has been performed on the basis of annual reports. There may be other relevant variables that have not been taken into scope in this research as they require input from the organizations, such as the nature of work (manual labour, professional labour), the application of business models and its effect on IT. Alternative research methods, such as interviews, may help to build on the results of this study
2. Secondly, explorative research has been performed on the scope of internal functions, which leaves room for follow-up research opportunities:
  - a. Research that includes interviews with Management Board and Audit Committee members to create discussion on the present and future scope of internal audit. Current dominant logic and belief systems of these members may not be in line with the developments in internal audit and its contribution to the control of the firm. This also provides the opportunity to align different vocabularies for the interpretation of things.
  - b. This study already provides basic building blocks for the scope of internal audit functions, but these may be extended and be piloted at certain firms. Follow-up research can provide insights into possible attention areas and further extension of control elements to use in the scope of internal audits. This study can also include more in-depth study of the work programs related to internal audit functions to analyze the content of the different kind of audits.



- c. This research touched on the resourcing of internal audit functions, e.g. the minimum level of employees or the minimum network of people (internal and external). More fundamental research is required on this topic.
- d. Another interesting topic is the organization of internal audit and possibilities to integrate all assurance functions under the umbrella of internal audit. This from a cost / efficiency perspective (by preventing double activities) and from an organization perspective (overall, integrated view).
- e. Furthermore, the integration of management and audit language and norms is an interesting topic that would bring the internal audit world and management closer together.



## Appendix I: Samenvatting

Schandalen hebben het vertrouwen van investeerders in ondernemingen geschaad en de aandacht voor het *in-control* zijn van ondernemingen verhoogd. Dit heeft geleid tot de instelling van corporate governance committees die vereisten definieerden rondom de *control* systemen van beursgenoteerde ondernemingen. De aandacht is vooral gericht op de administratieve organisatie / interne controle rondom financiële processen. Echter, nieuwe schandalen zijn niet voorkomen met deze vereisten, hetgeen de vraag oproept of de wezenlijke elementen van *control* voldoende zijn geborgd in de corporate governance codes.

Verscheidene internationale corporate governance codes zijn opgesteld in een tijd waarbij economische veranderingen zich hebben voorgedaan. Recente economische literatuur beschrijft de transitie van fysieke activa naar immateriële activa en daarmee reikt het vernieuwde inzichten aan over de veranderende aard van ondernemingen. Deze verandering is niet geïdentificeerd en geadopteerd door management *control* academici en niet in de theorieën rondom governance, accounting en auditing. In de corporate finance literatuur is deze verandering beschreven als een verandering van *accounting profit* naar *economic profit*, hetgeen een andere manier van *control* en *assurance* vereist. Kaplan en Norton hebben de verandering in de aard van de onderneming en de wijze van waarop *control* kan worden vormgegeven, geoperationaliseerd in hun boeken.

Een andere observatie in deze studie betreft het ontbreken van een gemeenschappelijke, overkoepelende theorie rondom het concept *control*; verschillende concepten worden gehanteerd in verschillende studies, afhankelijk van het academische gebied.

Er is tot op heden beperkt Nederlands wetenschappelijk onderzoek uitgevoerd rondom interne audit, met uitzondering van Paape (2007) en De Bruijn (2010). Echter, er bestaat nog geen adequate theorie over de rol en bijdrage van interne audit in relatie tot het externe en interne *control* systeem van een onderneming. Dit beperkt de ontwikkeling van het interne audit vakgebied in relatie tot de ontwikkelingen in de economie, en meer specifiek micro-economie.

Het doel van dit onderzoek was het exploreren van de literatuur en huidige praktijk rondom interne audit om te komen tot inzicht in interne audits' theoretische en praktische bijdrage in relatie tot het *control* systeem van een onderneming. De

centrale vraagstelling is als volgt: Wat is de reden van bestaan en de reikwijdte van interne audit in relatie tot het *control* systeem van een onderneming.

Een eerste aandachtsgebied van deze studie betreft de achtergrond van interne audit. In algemene zin is interne audit ontstaan vanuit de accountancy en heeft zich getransformeerd naar een functie die meer is gericht op de operatie, risico management en corporate governance ondersteuning richting de Audit Committee en de externe accountant. De transformatie en expansie van de werkzaamheden lijken niet altijd theorie-gedreven of vraag-gedreven, maar aanbod-gedreven. Vanuit een academisch perspectief ontbreken fundamenteel, overkoepelende artikelen rondom interne audit en nieuwe theoretische inzichten.

Een tweede aandachtsgebied handelt over de exploratie van een theoretisch fundament waarbij de *theory of the firm* als uitgangspunt wordt genomen. Deze *theory of the firm* is niet homogeen en omvat verschillende gezichtspunten. Deze verschillende gezichtspunten (*agency*, *transaction costs* (TCE), *property rights* en *the resource and knowledge-based view* (RBV, KBV)) bieden verschillende complementaire dimensies voor het analyseren van de aard van ondernemingen en de rol van interne audit hierin. De verschillende gezichtspunten geven aan dat interne audit het management kan ondersteunen als *double loop control* mechanisme rondom potentiële informatie asymmetrie en *incentive issues* tussen de Audit Committee, Raad van Bestuur en lokaal management. Tevens benadrukt de *theory of the firm* de bijdrage van interne audit aan de prestatie en waarde creatie van een onderneming.

Een derde aandachtsgebied is de exploratie van een theoretisch fundament vanuit een *control* perspectief. Hierbij is de biologische cybernetische theorie geïdentificeerd als de formele *control* theorie, die samen met inzichten uit management *control*, organisatie theorie en gedragswetenschappen, wordt gehanteerd om te komen tot een overkoepelende theorie rondom *control* in relatie tot interne audit.

Een vierde aandachtsgebied betreft de exploratie van mogelijke kritische, verklarende variabelen voor het bestaan van interne audit functies in Nederland. Deze studie heeft de volgende significante, verklarende variabelen geïdentificeerd: *Turnover*, *Total Assets*, *FTE*, *Number of Countries*. Deze variabelen geven een indicatie van *omvang* en *complexiteit* van een onderneming. Tevens is een formule ontwikkeld voor het bepalen of een onderneming een interne audit functie nodig zou hebben.

Het vijfde aandachtsgebied behandelt de confrontatie tussen de werkelijke reikwijdte van interne audit functies van AEX ondernemingen in Nederland in relatie tot een breder, multidisciplinair beeld over een *control* systeem van een onderneming. Deze confrontatie maakte duidelijk dat de betrokken interne audit functies niet alleen focussen op de bestaande organisatie en processen, maar ook betrokken worden in de monitoring van de adaptie en herprogrammering van hun ondernemingen. Tevens bleek dat bij de meeste interne audit functies de nadruk ligt op de bekende *control* elementen zoals planning & control cyclus, processen, betrouwbaarheid van financiële rapportages, compliance en informatie technologie. Bredere management *control* elementen zoals strategie, kernwaarden, structuur, leiderschap en capaciteiten worden minder structureel gehanteerd door gebrek aan kennis, ervaring en vertrouwen. Echter, de *control* problemen bij ondernemingen, tevens leidend tot schandalen, hebben wel betrekking op deze *control* elementen. Het blijkt dat de brede insteek van interne audit functies kan worden gerelateerd aan de omvang en samenstelling van het interne audit team.

De implicaties van deze studie zijn in hoofdstuk 7 verder uitgewerkt in een aantal aanbevelingen. Deze implicaties hebben betrekking op de reden van bestaan van interne audit, de reikwijdte en de condities voor het functioneren van interne audit.

## **Appendix II: Overview on internal audit literature in academic magazines**

<b>Academic magazines</b>	<b>Leen Paape 1994-(April) 2005</b>	<b>May 2005 – Jan 2011</b>
Academy of Management Journal	0	0
Academy of Management Review	0	0
Accounting and Business Research	3	0
Accounting Auditing & Accountability Journal	1	1
Accounting, Organizations and Society	3	1
Administrative Science Quarterly	0	0
Advances in Management Accounting	0	0
Behavioural Research in Accounting	2	0
British Journal of Management	0	0
California Management Review	0	0
Contemporary Accounting Research	3	3
Critical Perspectives on Accounting	3	0
International Journal of Auditing	19	14
Journal of Accounting & Economics	0	0
Journal of Accounting Literature	0	0
Journal of Accounting Research	1	0
Journal of Economic Behaviour and Organization	0	0

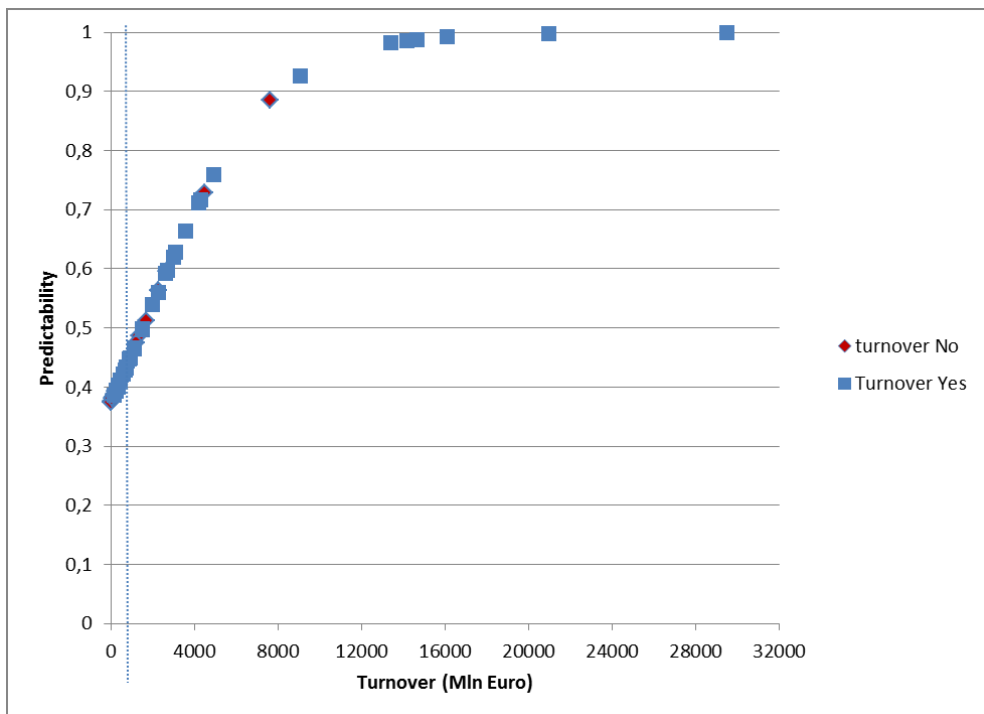
Journal of Financial Economics	0	0
Journal of Law, Economics and Organization	0	0
Journal of Management Accounting Research	1	0
Maandblad Accountancy en Bedrijfseconomie	10	3
Management Accounting Research	0	1
Management Science	0	0
Managerial Auditing Journal	155	27
Organization Science	0	0
Sloan Management Review	0	1
Strategic Management Journal	0	0
The Accounting Historians Journal	2	0
The Accounting Review	1	3
The Journal of Management Studies	0	0
NEW: Accounting Horizons	-	3
NEW: Accounting & Finance	-	4
NEW: The British Accounting Review	-	1
TOTAL	204	62

## Appendix III: Predictability of the existence of internal audit via logistic regression

This appendix includes the scatter diagrams concerning the predictability of the existence of internal audit via logistic regression of *turnover*, *total assets*, *fte*, *number of countries* and *inventory/total assets*.

### *Turnover*

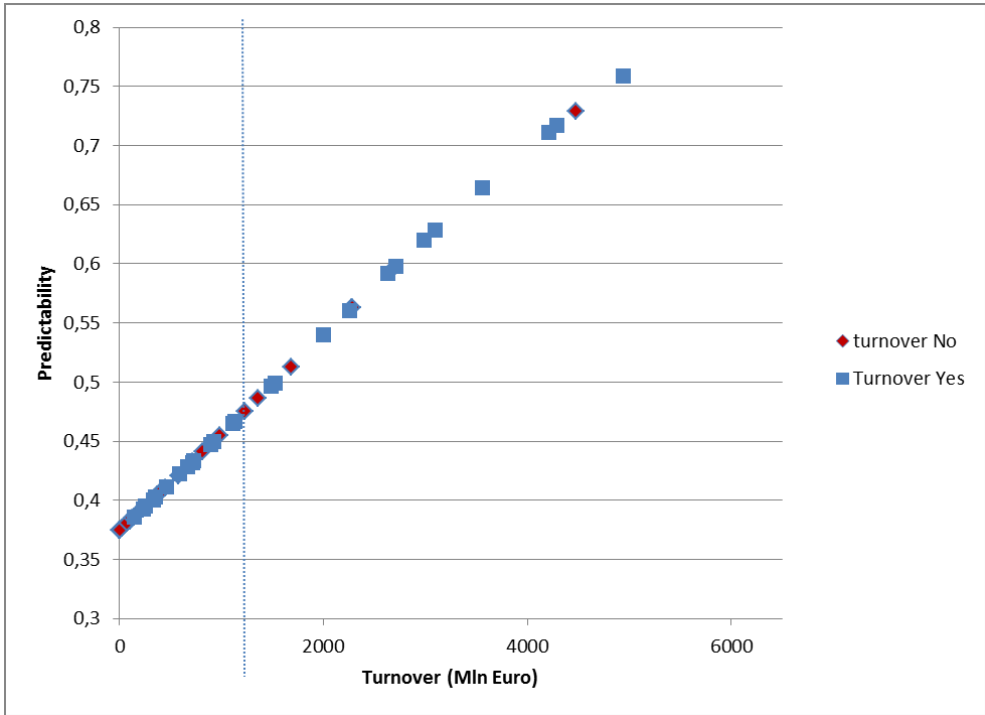
A first analysis is made of the predictability of the existence of internal audit via logistic regression in relation to *turnover* of the selected population. The results for the variable *turnover* are included in the scatter diagram below:





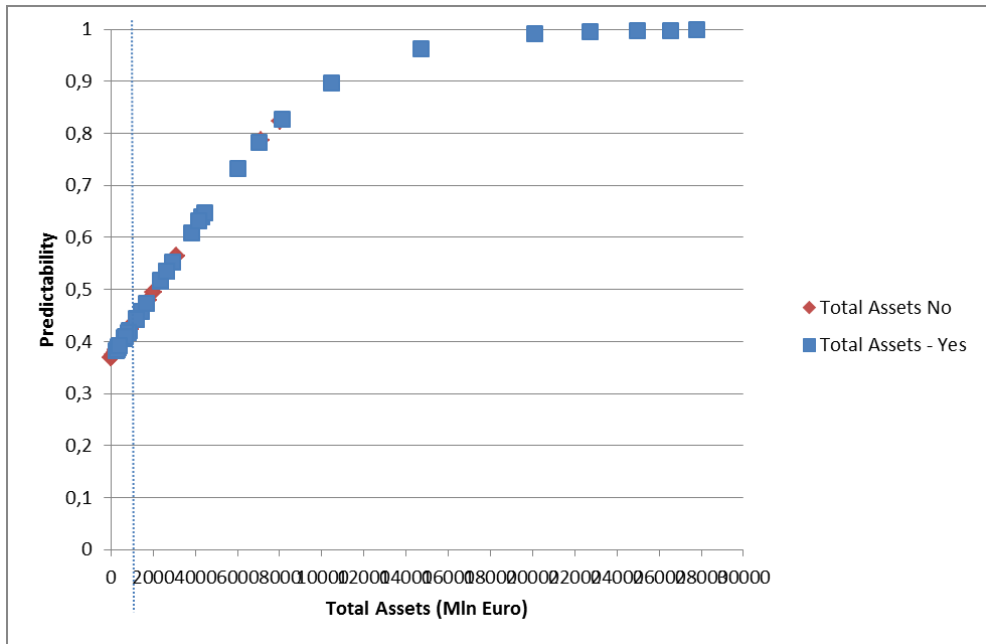
## Turnover

And the slide with zoom of predictability versus turnover:



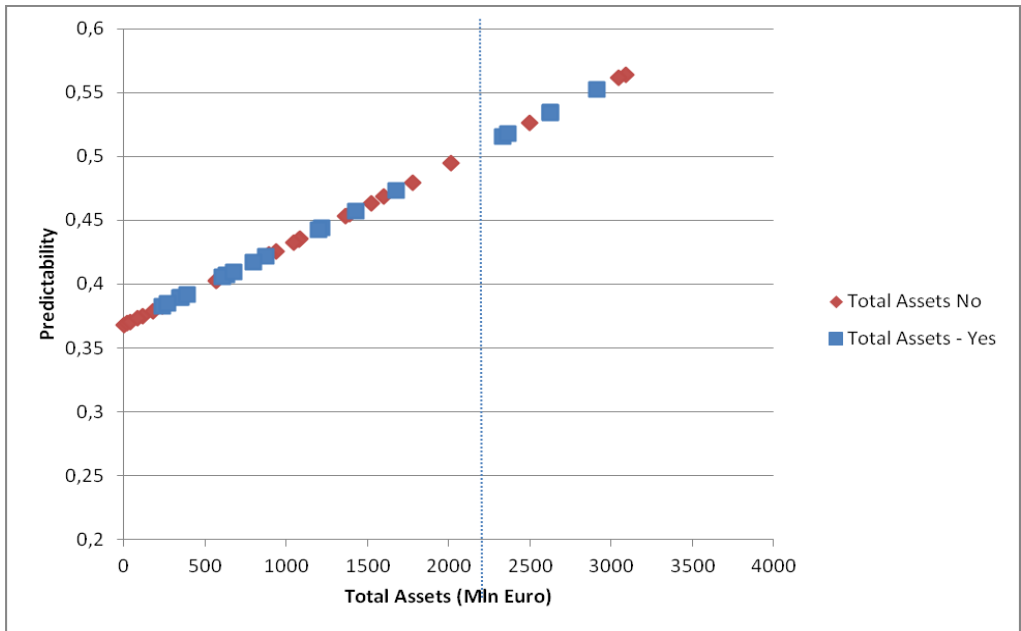
## Total assets

A second analysis is made of the predictability of the existence of internal audit via logistic regression in relation to *total assets* of the selected population. The results for the variable *total assets* are included in the scatter diagram below:



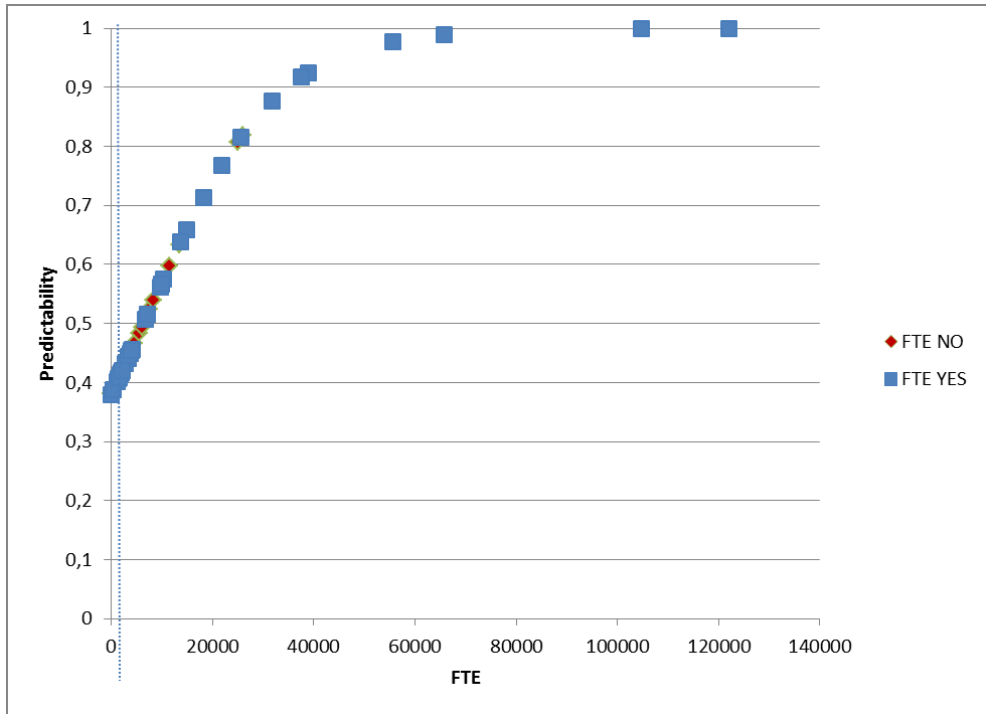
## Total assets

And the slide with zoom of predictability versus total assets:



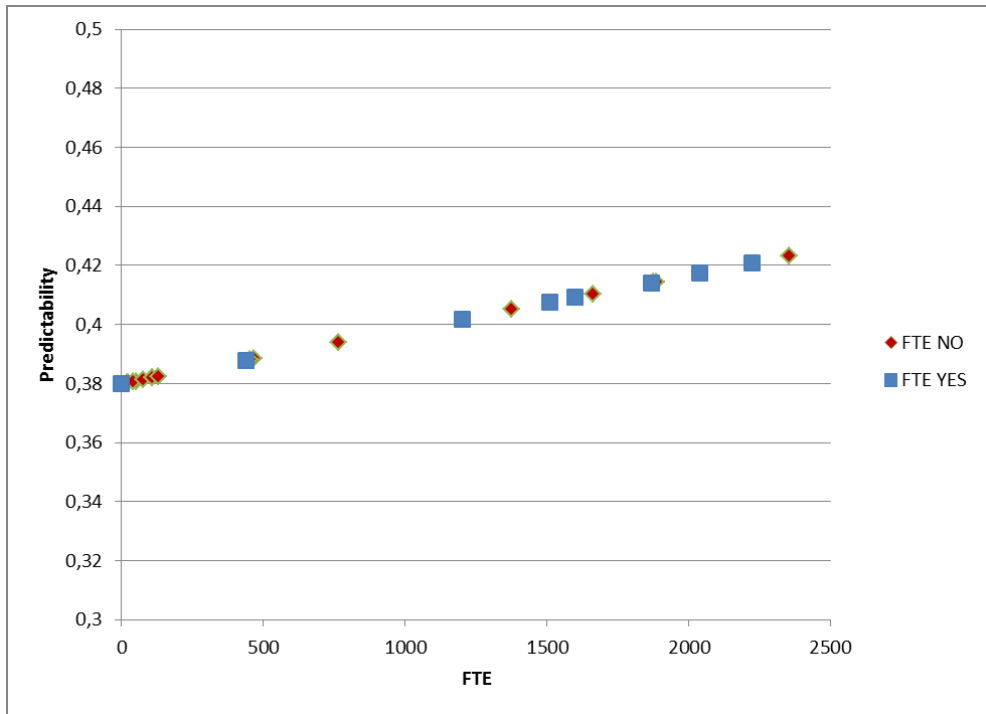
## *FTE*

A third analysis is made of the predictability of the existence of internal audit via logistic regression in relation to *FTE* of the selected population. The results for the variable *FTE* are included in the scatter diagram below:



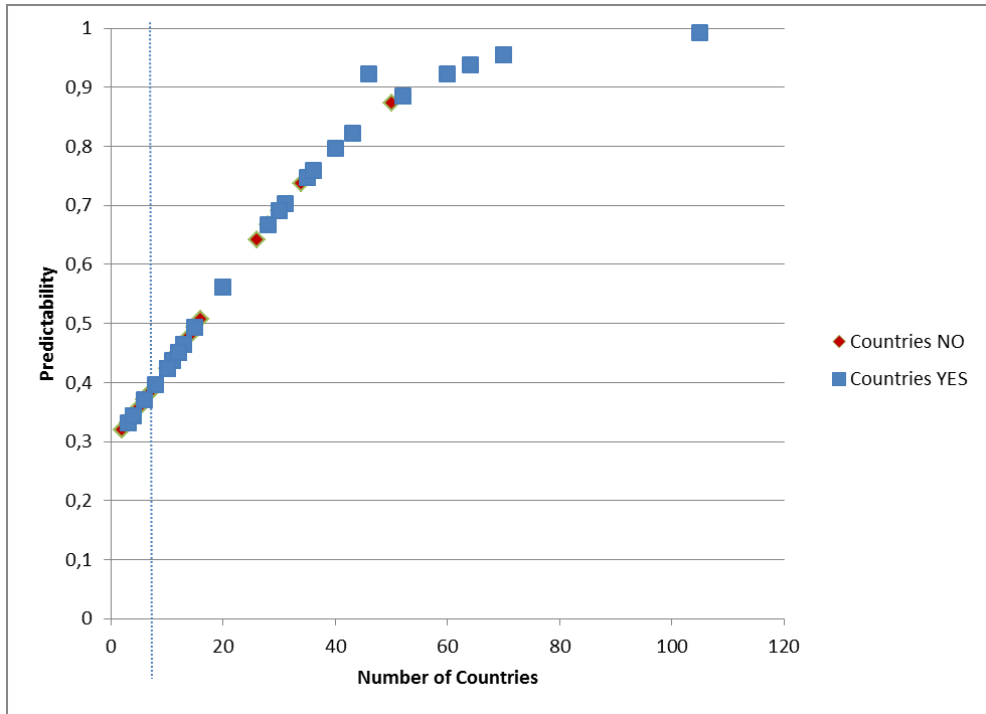
## *FTE*

And the slide with zoom of predictability versus FTE:



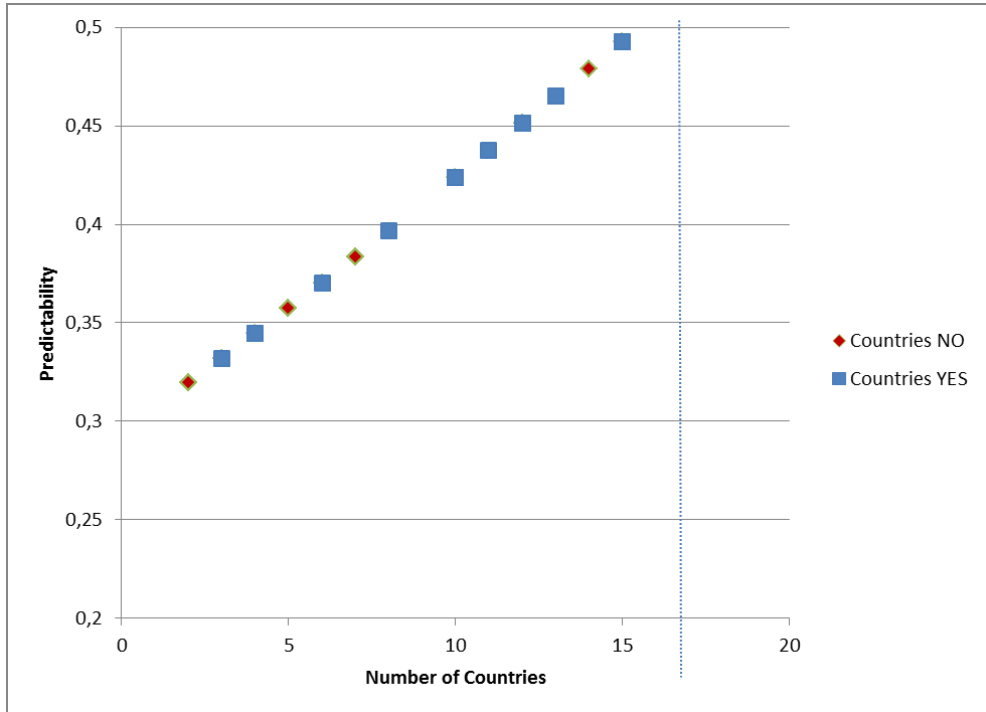
## Countries

A fourth analysis is made of the predictability of the existence of internal audit via logistic regression in relation to *countries* of the selected population. The results for the variable *countries* are included in the scatter diagram below:



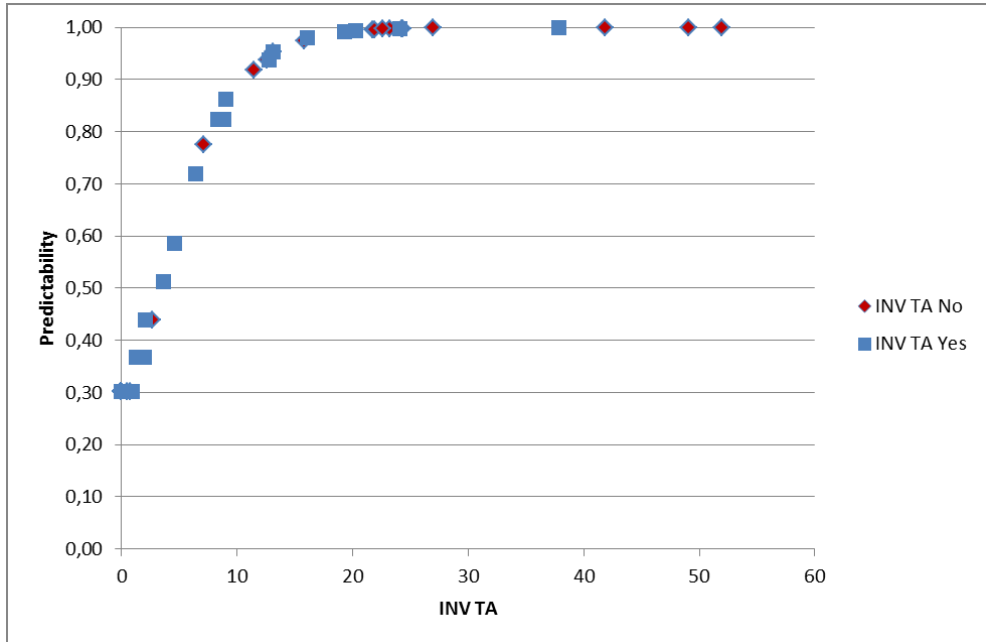
## Countries

And the slide with zoom of predictability versus number of countries:



### *Inventory / Total Assets*

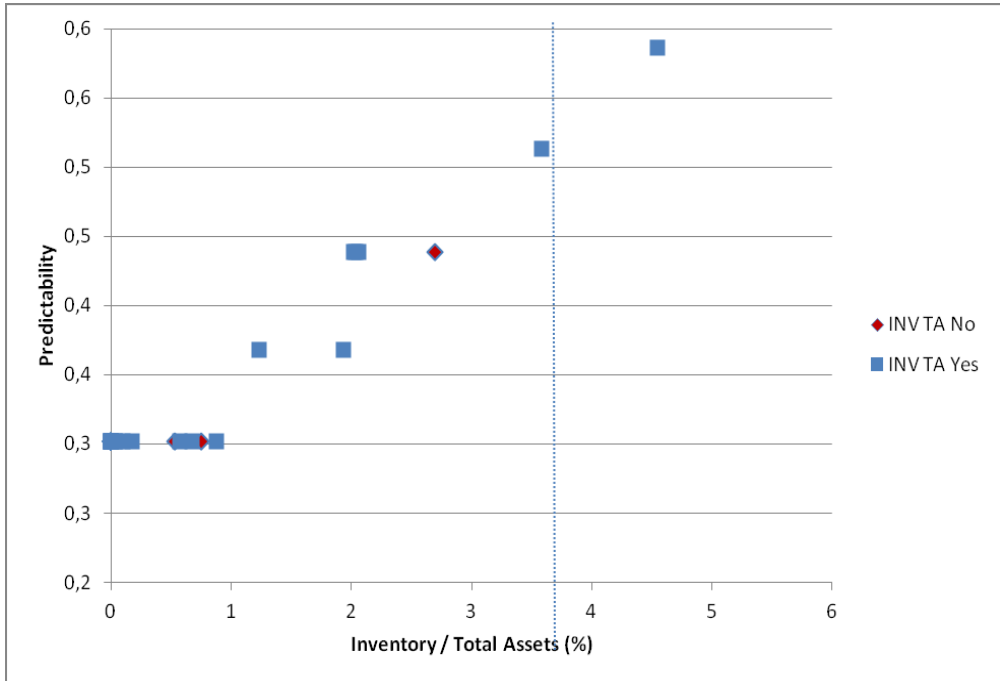
A fifth analysis is made of the predictability of the existence of internal audit via logistic regression in relation to *inventory/total assets* of the selected population. The results for the variable *inventory/total assets* are included in the scatter diagram below:





## *Inventory / Total Assets*

And the slide with zoom of predictability versus inventory/total assets:



## Appendix IV: Invitation to participate in Phd

Dear Sir/Madam,

I would like to invite you to participate in my doctorate thesis at the University of Amsterdam. My thesis is about the dynamics in corporate governance and more explicitly the role of internal audit in the control of the firm.

Currently, different concepts regarding control are assumed in various researches, dependent on the choice of academic field. As a result, no adequate theory exists on the role and contribution of internal audit in the control of the firm, hampering an adequate development of this profession in relation to developments in the economy.

I would like to involve you in this research to obtain in-depth, qualitative insights into your scope of work in general and in relation to the following adaptation levels:

<b>Levels</b>	<b>Description</b>
Maintaining the status quo	Maintaining an organization, in absence of external changes
Adapting	Adaptation of goal-oriented organizations to variation and change in external conditions
Re-programming	Reprogramming less successful goals and processes while preserving successful ones

All responses will be kept strictly confidential and will be used for this research only. The research group includes Dutch AEX firms that have an internal audit function. The interviews will be focused on the Head Internal audit.

Your participation would be very much appreciated. Should you have any questions, please contact me.

Sincerely,

Walter Swinkels

## **Appendix V: Questionnaire for Chief Audit Executive**

Purpose of this interview is to explore the current scope of work of internal audit and match it with a broader, multidisciplinary view on internal control of a firm. In case of differences, I would like to discuss the reasons behind these differences.

Name of organization:

Name & function of interviewee:

Date of interview:

### **Organizational questions:**

1. Structure and number of people within Internal Audit function
2. Background of Internal Audit members
3. Reporting lines of internal audit
4. Set up date of internal audit function
5. What was the trigger to set up internal audit and by whom
6. Are there other functions/functions involved in the risk/control area?

### **Internal audit scope questions:**

7. What is the purpose of the internal audit function (why does it exist)?
8. What are the subjects in the audit plan?
9. What subjects are not performed or additionally performed outside the audit plan?
10. Does the coverage of the audit plan and additional engagements lead to a sufficient level of assurance regarding the internal control system of a firm? Or what elements are missing?

**Control of the firm questions:**

11. Do you use a control framework as frame of reference, if yes, which one?
12. Did you *adopt* a control framework or *adapted* it?
13. Do you see internal audit as an expert in the area of control? Which parts (limits and contributions)?
14. Is internal audit involved in the process of the *In control statement*? If yes, what activities are performed?
15. Which of the elements below are part of your audit plan?

Levels	Description	Examples	Answers: yes (and what)/no
Maintaining the status quo	Maintaining an organization, in absence of external changes	Control around effectiveness of and solving issues with respect to: <ol style="list-style-type: none"> <li>1. Strategy setting, execution, budgets and performance monitoring</li> <li>2. Core values of a firm</li> <li>3. Structure</li> <li>4. Processes</li> <li>5. Financial reliability</li> <li>6. Leadership and capabilities people</li> <li>7. Compliance with internal and external laws and regulations</li> <li>8. Technology</li> </ol> <i>Additional elements?</i>	
Adapting	Adaptation of goal-oriented organizations to variation and change in external conditions	Control over adaptability of: <ol style="list-style-type: none"> <li>1. Strategy (focus, innovation)</li> <li>2. Core values of a firm</li> <li>3. Structure (fine tuning business and operating model, exploitation and exploration)</li> <li>4. Processes</li> </ol>	

		<ul style="list-style-type: none"> <li>5. Management information</li> <li>6. Leadership and capabilities people</li> <li>7. Compliance &amp; Influence external laws and regulations</li> <li>8. Technology</li> </ul> <p><i>Additional elements?</i></p>	
Re-programming	Reprogramming less successful goals and processes while preserving successful ones	<p>Control over reprogramming with respect to:</p> <ul style="list-style-type: none"> <li>1. Timely strategy change in new business areas</li> <li>2. Core values of a firm</li> <li>3. Integration new business models in structure</li> <li>4. Process restructuring</li> <li>5. Sensing emergent trends and changes (information)</li> <li>6. Leadership and capabilities people</li> <li>7. Compliance &amp; Influence external laws and regulations</li> <li>8. Technology</li> </ul> <p><i>Additional elements?</i></p>	

*Summary overview on levels of control*

<b>Levels</b>	<b>Strategic</b>	<b>Operational</b>	<b>Financial</b>	<b>Compliance</b>
Maintenance of status quo				
Adapting				
Re-programming				

End of Questionnaire

## Appendix VI: List of interviewed firms and persons

The following firms and persons have been interviewed for this study

<b>Name firm</b>	<b>Name person</b>	<b>Function</b>
Aegon	Ruurd van den Berg	Executive Vice-President Group Internal Audit
Ahold	Vincent Moolenaar	SVP Internal Audit
Akzo Nobel	Marjo van Ool	Corporate Director Internal Audit
ASML	Martin Reinecke	Director Internal Assurance Services
Boskalis	Eric Snaar	Head of Internal Audit
DSM	Jan Grooten	Audit Manager DSM Corporate Operational
Fugro	Peter van der Hak	Senior Controller / Internal auditor
Heineken	Joop Brakenhoff	Executive Director Global Audit
ING	Berry Wilson	Chief Auditor, Global Operations support
KPN	Piet Vrolijk	Chief Audit KPN Audit
Philips	Peter Baudewijn	Quality Assurance & Methodology Manager
Randstad	Albert Weenink	Director Group Business Risk & Audit
SBM Offshore	Thierry Gagliano	Corporate Audit Manager
Shell	Armand Lumens	Chief Internal Auditor
TNT	Michel Kee	Group Director Internal Audit
Tom Tom	Robert Schiering	Business Assurance Director
Unilever	Judhajit Basu	Director Corporate Audit
Wolters Kluwer	Ronald Alsen	Chief Audit Executive

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Scandals have undermined investor confidence in the management of firms and drawn global attention to how Management Boards of public firms are in-control of their operations. These scandals cleared the way for corporate governance committees to define new requirements on the control systems of public firms. However, the requirements of these committees did not prevent new problems with a number of firms, some of which published an in-control statement. This raises questions with respect to the effectiveness and completeness of the control of these firms, suggesting that possible quintessential elements or aspects are missing.

The internal audit profession has been involved only indirectly in the discussion on corporate governance in the Netherlands. This thesis explores a theory of internal audit in relation to the nature and the control systems of Dutch public listed firms. This thesis explores literature and current practices to obtain a clear view of internal audits theoretical and practical contributions to the reasons of existence and scope of work in the control system of a firm.

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