Internal Audit Effectiveness

Factors influencing management to listen to the internal auditor's risk warnings
A multi-method study from a behavioural decision making perspective

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Effectiviteit van internal audit

Factoren die het management beïnvloeden om naar de risico waarschuwingen van de internal auditor te luisteren
Een multi-methodestudie vanuit een perspectief van gedragsbeslissingen

Thesis

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by

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Violeta Verbraak-Kolevska,
Roosendaal, June 2018

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GLOSSARY

Auditee	One subjected to an audit (e.g. management of an organization, entity).
Bad news messages	Unwelcome but valuable and constructive risk warning messages issued by the internal auditors to the message recipients (e.g. (project) management) about risks that threaten the organization (e.g. projects and their status).
Escalating IS-project	Information Systems projects that receive a stable or even increasing amount of resources from decision makers even when strong signals are available that goal attainment of the project is no longer viable.
Internal auditor	The risk warning messenger who meets the professional standards of the Institute of Internal Auditing (IIA, 2004).
Internal Auditing	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 (Institute of Internal Auditors (IIA) definition).
Internal audit function	The department within an organization in which internal auditors perform their roles and responsibilities according to the definition of internal auditing provided by the IIA.
Nudging	Small cues in a message that could unconsciously be of influence on people's behaviour.
Social norm	The term 'social norm' can refer to 1. what is commonly done, what is normal (descriptive norms) and 2. what is commonly approved and disapproved, what ought to be done (injunctive norms).
Timing	The precise moment for doing something for optimum effect.

PREFACE

My PhD journey started some months before I took on the responsibility for the Audit Professional Practices department within a large Dutch Bank in January, 2014. This was a perfect timing to start studying the IA effectiveness because of three reasons.

Firstly, in my new role I was responsible amongst others, for delivering input to our performance reporting to senior management that includes various indicators of the effectiveness of our internal audit department. This provided me with more knowledge of and an insight in the indicators of the IA effectiveness giving me a great opportunity to think about additional indicators to improve IA effectiveness.

Secondly, in these times, senior management of the Bank was faced with important strategic decisions that had to be made quickly and in the right direction, making the effective internal auditor's risk warnings messages to become more necessary than ever.

Thirdly, the CEO read almost every audit report and showed a great support to our internal audit function by personally paying great attention to resolving serious audit issues. This triggered me to go after the effect of this support of senior management for the effectiveness of the IA function.

Being for almost 25 years in the audit profession, having done many audits, I had the wish to give something back to the internal audit profession, give my knowledge contribution to the new generations of internal auditors who will work in practice and academic research.

All the above played pivotal role in my motivation to start a research on IA effectiveness in such crucial times for the company. This thesis consists of four individual studies on indicators of IA effectiveness, which I realised in four years' time in parallel to my full time job.

I hope the results of my studies will help to improve practices and fill the knowledge gap in academic literature about IA effectiveness.

1 Introduction

The effectiveness of Internal Audit (IA) takes a prominent place in the Institute of Internal Auditing's (IIA's) definition but it is also frequently debated and challenged in practice. Evaluating and improving the effectiveness of risk management, control, and governance processes is the key statement of IA (IIARF, 2015).

Many incidents related to large corporate bankruptcies in the beginning of this century, caused some tension between the value that IA believes to provide and the value perceived by its customers. While the IIA sees IA as a pillar of corporate governance, some of its key stakeholders nowadays doubt its effectiveness and hence its value for the organization. In practice there are many occasions when audit issues addressed by the internal auditor are not always accepted by management and even though audit issues are accepted by management and corrective actions have been agreed, management turns a deaf ear to the internal auditor's risk warning and is continuing the 'wrongdoing'. As an illustration, we often hear about organizations experiencing large projects that are not successful but not stopped by management despite the risk warnings reported by the internal auditor asking for change of course in the project direction.

In academic literature the reluctance to hear 'bad news' is a phenomenon that has been typified as a 'deaf effect' (Cuellar, 2009; Cuellar et al, 2006; Keil and Robey, 2001). The deaf effect could unfavourably influence the effectiveness of the internal auditor. In their recent studies Nuijten (2012) and Nuijten et al, (2016) suggested that deaf effect events on strategic topics such as continuation of a 'troubled' IT-project could be considered as a deficiency in the IA's effectiveness. While the question arises whether IA acts effectively in deaf effect situations, in circumstances of disastrous business failures, this could be followed by the inevitable question 'where was the auditor again?'. This could

further raise the question if the IA was effective in providing its services to management, which may further have unfavourable effects for the IA function within the organization as well as for the internal auditing as a profession in general. Therefore, internal auditors, as risk warnings messengers, need better ways of gaining the attention of message recipients to overcome the deaf effect and thus contribute to the effectiveness of the IA.

IA effectiveness definitions

One of the older and most used definitions of the effectiveness of the IA function is the definition of Dittenhofer (2001). In general, Dittenhofer (2001) relates the effectiveness of something with the achievement of a desired condition and points out that the internal auditing process is effective when it functions in such a way as to accomplish the task described by the internal auditing objective. In line with this definition, Mihret and Yismaw (2007) stated that internal audit is effective if it meets the intended outcome it is supposed to bring about. According to these definitions, effectiveness is synonymous with the achievement of goals.

In the literature there are other definitions of IA effectiveness that are related to acceptance of the internal auditors recommendations for improvement. For example, Sawyer (1995) stated that the auditor's job is not done until defects are corrected and remain corrected. Sawyer (1995) stated that management's commitment to use audit recommendations and its support in strengthening internal audit is vital to audit effectiveness (Sawyer, 1995). One decade later, the IIARF (2015) defines the internal auditing as an independent activity that helps organizations to improve their operations (IIARF, 2015). In this regard, the IA function can be considered effective when organizations follow their internal auditors' (independent) advice for improvement (Lenz, 2013). Furthermore, Lenz and Sarens (2012) consider that the IA report as an output cannot be effective per se, but all what matters is the intended change triggered by this output as well as the specific outcome of it and possibly lasting impact that achieves the wanted improvement.

In line with these definitions, in this thesis we look at the IA effectiveness from the perspective of deaf effect i.e. willingness of management to listen or not to listen to the internal auditor's risk warning messages.

Deaf effect and IA effectiveness

The reluctance to hear bad news is a phenomenon that has been labelled in the literature as a 'deaf effect'. In this thesis we use the deaf effect phenomenon (Cuellar, 2009; Cuellar et al, 2006) to define the effectiveness of IA. Based on the Whistle-Blowing Theory, Cuellar (2009) defined deaf effect as a phenomenon 'when a decision maker doesn't hear, ignores, overrules a report of bad news to continue a failing course of action'. Keil and Robey (2001) defined the 'deaf effect' as a reluctance of project management to hear bad

news (i.e. unwelcome but yet valuable messages) about their projects and confirmed that deaf effect does occur. Recently, Nuijten (2012) and Nuijten et al, (2016) investigated some of the causal factors that influence the deaf effect and suggested that deaf effect can be considered as a deficiency in the IA's effectiveness, which could even be followed later by the inevitable 'where was the auditor' question in disastrous business failures. In his study, Nuijten (2012) explained comprehensively the two different roles of internal auditors, how they are related to corporate governance and how they are reflected in the relationship with managers. In explaining this, reference is made to the formalized role of the internal auditor as part of organizations' corporate governance frameworks, related to providing risk information to decision makers when the organization takes risks that might no longer be justifiable and consistent with the organization's interests. This corporate governance framework could be dominated by principles and assumptions of the Agency Theory (incongruent goals and information asymmetry) or Stewardship Theory (congruent goals and information sharing). This determines whether the internal auditors - as exponent of this corporate governance framework - are supposed to a) monitor management risk-taking and expose management failures and decisions that are not consistent with organization' interests, or b) contribute to management performance by challenging and improving decision-making. In the first condition (based on Agency Theory principles) the internal auditor will act as an opponent to management. In the second condition (based on Stewardship Theory), the internal auditor will act as a collaborative partner to management. According to the Stewardship Theory, managers would appear to be more receptive to (even negative results from) objective assessments performed by the internal auditors when they consider them to be collaborative partners instead of opponents or 'policemen'.

Focussing on the relationship between the messenger and the recipient at an interpersonal level: with the internal auditor in the role of the provider of a risk warning and with the project owner's relationship with the messenger (as a collaborative partner or as an opponent), based on empirical research, Nuijten (2012) and later Nuijten et al, (2016) provided evidence that managers (project owners) are more likely to listen to the risk warnings from an internal auditor who is seen as a collaborative partner, regardless of the objectivity and credibility of the internal auditor to make true assertions on risks. The managers are less motivated intrinsically to listen to the risk warning, when the messenger is seen as an opponent – such an internal auditor is often labelled as a 'policeman'.

We base our studies on the principles of Agency Theory and Stewardship Theory and the relationships according to these theories.

Identified knowledge gap in prior academic research

Prior research on factors influencing IA effectiveness has tended to focus predominantly on factors such as the acceptance and implementation of the audit recommendations, the size of the audit department, compliance with the auditing standards, the positioning of the Internal Audit department in the organization and relation with the Audit Committee, and interaction with line managers (Arena and Azzone, 2009), top management support (Cohen and Sayag, 2010; Van Peursem, 2005; Mihret and Yismaw 2007), staff expertise, executing the audit plan, audit communication (Mihret and Yismaw, 2007), organizational support' (Sarens and De Beelde, 2006a; 2006b).

Based on a literature review, Lenz and Sarens (2012) and Lenz et al, (2014) derived four key dimensions or categorical building blocks of effectiveness of the IA function: organization, IA resources, IA processes and IA relationships (see Figure 1-1 below).

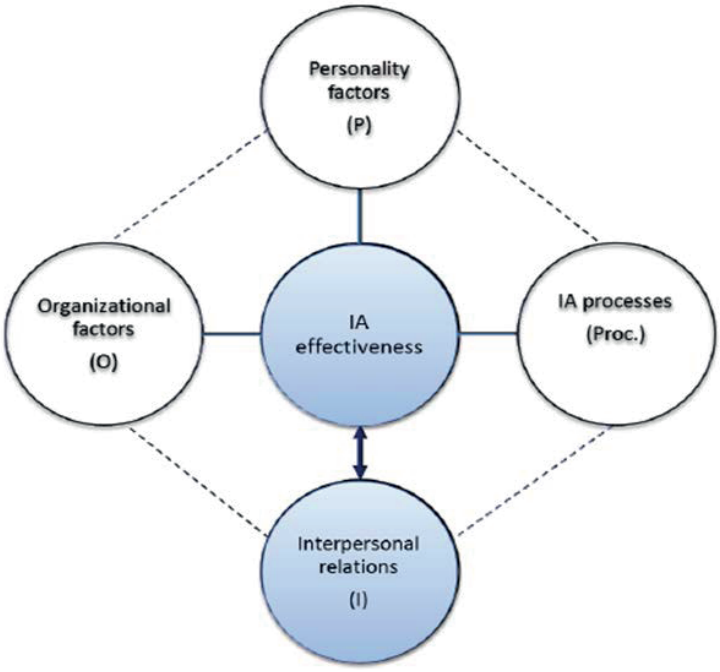

Figure 1-1. Building blocks of IAF characteristics according to Lenz and Sarens (2012), Lenz et al, (2014)

An overview of these dimensions (Lenz et al, 2014) follows below:

- Interpersonal relations: the IA relationships with other governance actors, namely senior management (SM) and the board/AC.
- Organizational factors: firm size, the overall governance context, and whether the organization has a legal requirement to establish an IA function, are considered as differentiators that can affect IA effectiveness, IA role and mandate.

- Personality factors: characteristics of the IA function as a whole and the characteristics of the individual auditor, communication skills and personal authority, stature and presence, strategic audit focus, the ability to exercise sound judgment, and the capacity to communicate clearly on audit issues.
- IA processes: compliance with the audit plan (i.e., the number of audits planned versus the number executed); compliance with a budget; degree of satisfaction with the IA as seen by auditees; audit time management (planning, fieldwork, closing); and reporting time management (i.e. planned versus actual reporting time).

From the above, we could establish that the IA effectiveness from the perspective of deaf effect i.e. willingness of management to listen or not to listen to the internal auditor risk warning messages is not addressed in one of these building blocks. We think this willingness of management to listen or not to listen to the internal auditor risk warning messages belongs to the interpersonal relationship block. This is one of the knowledge gaps we want to address with our thesis.

In the existing literature on IA effectiveness we identified some more knowledge gaps that we aim to fill in with our study. For this purpose we use the paper of Lenz and Hahn (2015) who performed a comprehensive review on the available literature on effectiveness of IA. By generally considering publications from 1999 onward, their paper provided a brief summary of what academic literature says about IA effectiveness. When providing a review of the existing empirical literature on IA effectiveness, Lenz and Hahn (2015) distinguished two different streams, the 'supply-side' perspective, i.e. empirical studies based on self-assessments of internal auditors, and the demand-side' perspective, i.e. empirical studies based on other stakeholders' perspectives. Stream 1 addresses the 'supply-side' perspective, empirical literature where internal auditors, mostly heads of IA (CAE), describe how they assess their effectiveness. The role of the CAE and the skills and competencies of internal auditors, organizational specifics, its politics and culture, support from senior management and the impact of the board, directly or through the audit committee (AC), are regarded as important factors (Lenz and Hahn, 2015). Stream 2 addresses the 'demand-side' perspective (i.e. meeting expectation of auditees) as it sheds light on empirical literature that discusses and analyses how clients, the customers and beneficiaries of the services rendered by the IA function perceive its value.

Lenz and Hahn (2015) consider IA effectiveness as a largely unaddressed area in academic research and based on their research suggested factors that influence IA effectiveness thereby focussing predominantly on the stakeholders ('demand-side') perspective. This gap in the literature was earlier reported by Soh and Martinov Bennie (2011) who posited that in practice, the most commonly employed measures of IA effectiveness are still related to delivery of the annual IA plan and the acceptance and

adoption of audit recommendations, hence focussing on the 'supply-side' perspective of the IA effectiveness.

By investigating other factors that may influence the effectiveness of IA we address this knowledge gap in the literature, thereby focussing on the 'demand-side' perspective and its link with the 'supply-side' perspective.

Another knowledge gap in the area of IA effectiveness we aim to address in our study relates to the relevance of nudging and timing for the IA effectiveness. While we could find many studies in the behavioural literature that address nudging (refer to Chapter 3 of this thesis), to our knowledge nudging concepts are not yet applied in academic research of IA effectiveness. Similarly, the influence of timing in general is relatively little examined in the organizational literature but in the IA effectiveness literature not yet addressed (refer to Chapter 4 and 5 of this thesis).

One final remark we want to make here is about the knowledge gaps in the literature related to Stewardship Theory. Davis et al, (1997) recommended to researchers to further examine the stewardship mechanisms, their relative performance, their interactions with psychological conditions and the situational contingencies impacting them. Furthermore, Davis et al, (1997) advised researchers to investigate the choice between Agency and Stewardship relationships over time, including interaction effects between the relationship and other organizational or psychological factors. With our study we hope to address some of these recommendations and to further advance the understanding of the Stewardship Theory. Hernandez (2012; p. 173) noted "to date scholars of Stewardship Theory have focused on distinguishing it from Agency Theory rather than advancing an understanding of the stewardship construct".

To summarize, with this study thesis we aim to contribute to fill the abovementioned knowledge gaps in the existing academic literature about IA effectiveness. Additionally, with this study we also aim to contribute to the literature by further extending previous examination on the deaf effect in the field of escalating IS-projects. Finally, we aim to gather knowledge that will further advance the understanding of the Stewardship Theory.

Research objective and scope

The objective of this study is as follows:

1. Identifying and recommending additional approaches and factors from the 'demand-side' perspective of IA effectiveness for reducing deaf effect and hence improving IA effectiveness;

2. Examining the main causal effects of additional contingency factors such as organization power of the internal auditor operationalized in top management support and nudging concepts including descriptive social norms and their interaction effects from the collaborative partner vs opponent perspective. Additionally, we examined what constitutes the right 'timing' for communicating the risk warnings by the internal auditor as a new contingency factor for IA effectiveness;
3. Combining both the 'supply' and the 'demand' side perspective of the IA effectiveness for finding better ways for meeting customer expectations.

We include here the collaborative partner vs opponent relationship between the internal auditor (messenger of risk warnings (bad news)) and the auditee (management – decision makers). The meaning of the collaborative partner vs opponent construct will be further explained in Chapter 2 and Chapter 3 of this thesis based on the Stewardship Theory and Agency Theory. The top management support construct is explained in Chapter 2 of this thesis based on the Whistleblowing Theory and literature on IA effectiveness. The nudging construct is detailed in Chapter 3 of this thesis and is based on the Focus Theory of Normative Conduct and Nudging concepts. Exploring the timing factors on the basis of the so called 'supply vs demand' side of the IA effectiveness will be explained in Chapter 4 and 5 of this thesis.

The scope of this study included the IA function being our unit of analysis and the internal auditor being the unit of observation. For the purpose of our study we defined IA effectiveness as the extent to which the internal auditor's message recipients (auditees) are willing to listen or not to listen to the internal auditors' risk warning message (so called 'deaf effect').

Focussing on the deaf effect as an indicator for IA effectiveness, in our studies described in Chapter 2 and 3 we made the assumption that a manager acts in the role of project owner who is not willing to listen to the risk warning message that an Information System project should be redirected or discontinued. In Chapter 4 and 5 a manager acts in the role of an auditee (management) who is not willing to listen to the risk warning messages related to risks involved in management's decision making in the organization in general. The messenger providing the risk warnings is our study is the internal auditor who is a credible source that makes true assertions based on thorough investigation in conformity with the internal auditing standards and requirements (Nuijten et al, 2016).

As our main research objective is related to investigating several different factors influencing the deaf effect as an indicator of IA effectiveness, we position our study in the field of academic research of IA effectiveness as well as deaf effect.

Research questions

In table 1-1 we present the Research Questions that are based on our scope and assumptions and that will form the starting point for the research design of our studies elaborated in Chapter 2 - 5 of this thesis.

Table 1-1. Research Questions

		Research Question	Type of Question	Chapter
1		Could the organization power of the internal auditor (through high or low top management support) be of influence on the deaf effect?	Why	2
	1.1	Could the messenger-recipient relationship (MRR) be of influence on the deaf effect?	Why	2
	1.2	Is the influence of MRR on the deaf effect moderated by the organization power of the internal auditor through top management support?	How	2
2		Are recipients less likely to exhibit the deaf effect when they are nudged by the messenger (i.e., internal auditor) with a descriptive social norm?	Why	3
	2.1	Does the messenger-recipient relationship (i.e., whether the messenger is seen as a collaborative partner or as an opponent) influence the effectiveness of nudging?	How	3
3		Which timing factors are proposed to be of influence on the Auditee's willingness to listen or not to listen to the Auditor's risk warning message?	Why	4
	3.1	How do the timing factors influence (in general) the auditee's decision to listen (or not to listen) to the risk warning message?	How	4
4		Which timing factors determine *when* is the right moment (thus, not too early and not too late) for the internal auditor to communicate the risk-warning message that makes the auditee listen to the internal auditor?	What	5

Framework Research Design

In table 1-2 we present the main characteristics of the conceptual and the technical research design that we use in our studies.

Table 1-2. Framework empirical research design

Conceptual Research Design	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Research Question	Explanatory	Explanatory	Explorative	Explorative
Effects	Main Moderation	Main Moderation	Main	Main
Dependent Variable	Continue	Continue	Deaf Effect (indicator of IA effectiveness)	Deaf Effect (indicator of IA effectiveness)
Independent Variable	Collaborative Top Management Support	Collaborative Nuding with Descriptive Social Norm	Timing factors	Timing factors
Theories	Stewardship Theory Whistleblowing Theory	Stewardship Theory Focus theory of Normative Conduct Nudging concepts	-	-

Technical Research Design	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Research Strategy	Laboratory Experiment	Laboratory Experiment	Focus Group interviews	Q Methodological study
Research Design	Between Group	Between Group	Mixed Design (qualitative data and content analysis)	Mixed Design (qualitative data and content analysis)
Participants	93 Students	171 Students	15 Internal auditors 15 Managers	26 Internal auditors 26 Managers
Data Analysis	Moderated Regression Analysis	Partial Least Squared	Iterative Coding	Q method factor analysis
Data Validity	MANOVA, Cronbach Alpha, AVE, Exploratory & Confirmatory Factor Analysis	MANOVA, Cronbach Alpha, AVE, Exploratory & Confirmatory Factor analysis	Protocol Exploratory analysis	Statement set database
Tool	SPSS rel 21	smartPLS rel 2.0	Atlas.ti	software PQ method (version 2.35).

Structure of this Thesis

Figure 1-2 shows an overview of the structure of this thesis. Chapter 2 is an experiment with students and investigates the influence of organization power of the internal auditor through top management support on effectiveness of IA, based on Whistle Blowing Theory. Similarly, Chapter 3 is an experiment with students and investigates how nudging with descriptive social norm influences effectiveness of IA, based on nudging concepts. Chapter 4 is an exploratory study on timing factors and examined which timing factors have influence on the IA effectiveness and hence influences decision makers to listen or not to listen to the risk warning messages of the internal auditor. Chapter 5 is a Q methodology research on the importance of timing for effectiveness of IA focussing on the understanding of the timing factors that might be of influence on the IA effectiveness and the importance thereof for the internal auditors and management (the auditees). In Chapter 6 we include our discussion about the most important findings and conclusions resulting of our studies in this thesis, theoretical and practical implications, the limitations and suggestions for further research and we end with a brief reflection about this thesis.

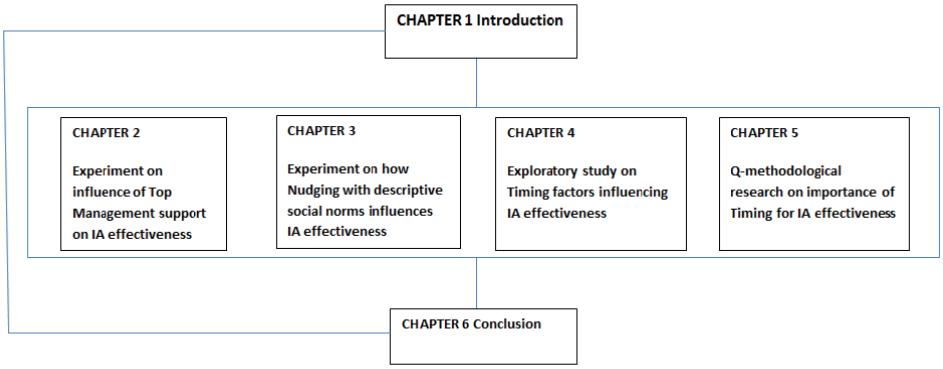

Figure 1-2. Structure of this thesis

This study offers is a multi-method approach of studying IA effectiveness. All four studies have been accepted by and presented at the European Conference on Internal Audit and Corporate Governance in April 2014 throughout April 2017. One study has been submitted to international journal and is in reviewing procedure. Two out of four studies are in preparation to be submitted to international journals in due course. In the below table 1-3 the results and the status of our studies in this thesis are described in more detail.

Table 1-3. Overview of the individual chapters of this thesis and their status

Chapter	Title	Results	Status	Outlet
1	**Introduction**			
2	**Does the Organization Power through Top Management Support help Internal Auditors reduce the Deaf Effect for Risk Warnings**	1) The continuation of a course of action (deaf response to a risk warning) is not significantly influenced by the organization power of the internal auditor. Based on literature we expected that high top management support would have a positive influence on internal audit effectiveness; however this is not always the case. 2) The influence of MRR on the deaf effect is strengthened when the messenger has low organization power. When the messenger has low organization power, decision makers are more likely to let their continuation-decision be influenced by the messenger-recipient relationship, i.e. when the messenger is seen as a collaborative partner rather than an opponent. 3) The results of our study indicate that high organization power of the internal auditor (through high top management support) is helpful and even necessary for reducing the deaf effect on risk warnings when the auditor is seen as an opponent. In the contrary, high organization power of the internal auditor (through high top management support) may be contra-productive and will not reduce the deaf effect on risk warnings when the auditor is seen as a collaborative partner.	Winner of the Best paper Award 2014 Final paper in preparation for resubmission in June 2018.	Presented in the 12th European Conference on Internal Audit and Corporate Governance in Italy Auditing: A Journal of Practice & Theory
3	**Nudging with Descriptive Social Norms to Overcome the Deaf Effect for IT Project Risk Warnings**	1) Nudging with a descriptive social norm can significantly reduce the deaf effect response to a risk warning issued by an internal auditor. 2) The influence of a descriptive social norm on the deaf effect is strengthened when the messenger is seen as a collaborative partner rather than an opponent. When the messenger is seen as a collaborative partner, decision makers are more likely to pay attention to the risk warning message of the internal auditor. However, when the messenger is seen as an opponent, nudging with a descriptive social norm is ineffective. 3) Decision makers are less likely to continue a failing course of action when the messenger who delivers a risk warning is seen as a collaborative partner rather than an opponent. This finding is consistent with a previously reported study and has replication value.	After an additional pilot with practitioners with Qualtrics, decision was made to finalize initial paper based on experiment with students. Final paper submitted in December 2017 and is under review.	Presented in the 13th European Conference on Internal Audit and Corporate Governance in United Kingdom EJIS

Table 1-3. Overview of the individual chapters of this thesis and their status (*continued*)

Chapter	Title	Results	Status	Outlet
4	**The influence of 'Timing' on the effectiveness of the Internal Audit function**	1) We identify and provide an overview of the timing factors that may be of influence on the effectiveness of the IA function and provide and obtain a better understanding thereof. These timing factors can serve as useful indicators for the Auditors and the Auditees for managing the effectiveness of the IA function. 2) The analysis of the data generated during all five Focus Groups interviews, revealed that the timing factors indicated by the participants are multiple and diverse, dependable whether these were indicated by the Auditees or the Auditors. In mostly all instances, we noted that both the Auditors and the Auditees recognize the these timing factors to be relevant for the effectiveness of the IA. In some instances the Auditors and the Auditees expressed a different view of the timing factors. 3) During the Focus Group discussions it appeared that the timing factors emerging from our discussions were experienced by the participants as 'eye opener' as they admitted to have not thought of the timing factors before to have an impact on the effectiveness of the internal auditor.	Paper is submitted and accepted for 16th European Conference on Internal Audit and Corporate Governance. Thereafter it will be prepared for submission in a Journal.	Presented in the 14th European Conference on Internal Audit and Corporate Governance in The Netherlands. Outlet to be decided
5	**Views on the Influence of 'Timing' on the Effectiveness of the Internal Audit Function: A Q-methodological Study**	Our study revealed five distinct views of auditors and auditees about the timing: Viewpoint 1 '*Communicate important issues immediately, no matter what*' can be found among both the auditors and the auditees. In this Viewpoint it was emphasized that important issues should be communicated immediately to auditees, no matter of other conditions such as e.g. the stage of the audit investigation and having collected sufficient fact evidence. In Viewpoint 2 'Establish good relation first, then communicate issues', both the auditors and the auditees shared the view that the quality of the relation the auditor has with the auditee is prevailing factor for the timing. Viewpoint 3 '*Communicate when changes are still possible, not afterwards*' can be also found among auditees and has a strong focus on hearing about the risks during decision making processes (e.g. strategic events, projects) when taking corrective actions are still possible and changes are made on time. Viewpoint 4 '*Communicate risk warnings when you have evidence*' is also a view that can be found among the auditors and the auditees. It emphasizes having sufficient fact evidence as a precondition for the timing of the communication of the risk warning message by the auditor. Viewpoint 5 "*Communicate immediately, and remain independent*" is shared view among auditors and auditees. In this Viewpoint the timing is not determined by what others prefer as timings related to subjective aspects. The immediate communication of serious issues is important but the emphasize is on the independence of the auditor when choosing the right timing for the communication of the risk warning message.	Final paper in preparation for submission in June 2018.	Presented in the 15th European Conference on Internal Audit and Corporate Governance in Greece. Auditing: A Journal of Practice & Theory
6	**Conclusion**			

Clarification of contribution

The researches as part of the thesis and the thesis as a final outcome are produced by the author (myself) in collaboration with the promotors (Prof. dr. H.R. Commandeur), co-promotor (Dr. A.L.P. Nuijten), Dr. Nick Benschop, Prof. dr. M. Keil and Prof. dr. Job van Exel. Below I indicate the contributions for each Chapter as follows:

- Chapter 1 & 6: Drafted by the author, improved and finalised based on review feedback by promotor and co-promotor.
- Chapter 2: The initial research ideas were result of preliminary discussions with the promotor and co-promotor. The author performed literature research, defined a research design, executed the experiment (data collection) and data analyses and wrote the paper included in this thesis. The promotor and co-promotor guided the author throughout the entire process by giving feedback and advice for improvements. The co-promotor provided guidance in the statistical analysis of the data collected by the experiment and the use of the tools for this purpose. The co-promotor and promotor provided feedback and input for rework of the paper wich is currently under review at a Journal.
- Chapter 3: The initial research ideas were result of preliminary discussions with the promotor and co-promotor. The author performed literature research, defined a research design, executed the experiment (data collection) and data analyses and wrote the draft paper included in this thesis. The promotor and co-promotor guided the author throughout the entire process by giving feedback and advice for improvements. The co-promotor provided guidance in the statistical analysis of the data collected by the experiment and the use of the tools for this purpose. The co-promotor and prof. dr. M. Keil provided feedback and valuable input for rework of the revised paper which is currently under review at a Journal.
- Chapter 4: The initial research idea was preliminary discussed and aligned with the promotor and co-promotor. The author performed the entire research by herself starting from literature research, defining the research design, execution of the qualitative research (data collection), data analyses and writing the papers included in this thesis. The promotor and co-promotor guided the author throughout the entire process by giving feedback and advice for improvements. For the data analysis Dr. Nick Benschop provided advice about tooling and its usage.
- Chapter 5: The initial research idea was preliminary discussed and aligned with the promotor and co-promotor. The author performed the entire research by herself starting from literature research, defining the research design, data collection and writing the draft paper. Prof. dr. Job van Exel performed the data analysis, reported the results and explained to the author the analysis method, the steps performed to come to the results based on the data. The promotor and co-promotor guided the author throughout the entire process by giving feedback and advice for improve-

ments, mostly focussed on the results of the study documented in the paper. The co-promotor and dr. Job van Exel provided further feedback and valuable input for rework of the revised paper which is currently in preparation for submission at a Journal.

2 Does the Organization Power through Top Management Support help Internal Auditors to Reduce the Deaf Effect for Risk Warnings?

CHAPTER OVERVIEW

Ignoring risk warnings, a phenomenon known as the deaf effect, can contribute to the problem of project escalation. Internal auditors, who issue risk warnings when a project is going away from the expected course, need to look for improved ways that could help message recipients to listen more to the risk warnings. In this paper, we investigate whether internal auditors could use their organization power through top management support to influence the deaf effect. Our scenario-based experiment showed no significant main effect of top management support on the deaf effect. Our study shed more light on this counter-intuitive result, since we found that top management support interacted with the messenger-recipient relationship. Top management support is helpful in reducing the deaf effect when the messenger is seen as an opponent and may be contra-productive when the messenger is seen as a collaborative partner.

Key words: deaf effect, internal audit effectiveness, organization power, top management support, internal auditor

2.1 INTRODUCTION

Project escalation (i.e., continued commitment to a failing project) is a common and costly problem that occurs in the context of information systems (IS) projects, often in spite of risk warnings issued by internal auditors. Internal auditors frequently notice that management turns a deaf ear to such warnings, a phenomenon known as the deaf effect (Keil and Robey, 1999, 2001). Internal auditors cannot be effective in stopping escalation if they cannot influence the deaf effect in such a way that managers (i.e. decision makers) heed their warnings. In this paper, we investigate whether internal auditors could use their organization power through top management support to help overcome the deaf effect.

While there have been a few studies of the deaf effect (Keil and Robey, 1999, 2001; Cuellar, 2009; Lee et al, 2014; Nuijten et al, 2016), they have tended to focus on characteristics of the messenger and the messenger's relationship with the recipient that tend to be stable and not easily changed. The management literature offers little evidence for the key role of top management support in the success of the organization processes and programs and in particular the internal audit function. Aside from one study by Sarens and De Beelde (2006b) that investigated the effect of 'organizational support' in internal audit practices, we know of no studies that have examined how auditors can use support from top management to contextualize their message so as to more strongly influence message recipients. With this study we aim to obtain a better understanding of the concept 'top management support' for internal audit and its influence on the internal audit effectiveness. Based on previous research (Keil and Robey, 2001; Cuellar, 2009; Lee et al, 2014; Nuijten et al, 2016), in this study we tested hypotheses about factors involved in causing the deaf effect and aim to contribute to an improved understanding of the deaf effect in escalating IT-projects that could further help the empirical research on the effectiveness of internal audit. Our aim is to examine the main causal and interaction effects regarding to how organization power through top management support influences the deaf effect for risk warnings by the internal auditor who is seen as a collaborative partner or opponent. Additionally, following Nuijten et al, (2016), we further examine whether decision makers are more likely to listen to the risk warnings from an internal auditor who is seen as a collaborative partner. We also examine whether decision makers will be less motivated to listen to the risk warning, when the messenger is seen as an opponent – such an internal auditor is often labelled as a 'policeman'.

The paper is organized as follows. We start with an overview of deaf effect literature and further describe our research model and hypotheses. Next, we describe our research methodology, followed by the results we obtained. We conclude the paper with discussion and implications for research as well as practice.

2.2 LITERATURE REVIEW AND THEORY BASE

Keil and Robey (1999) were first to introduce the term 'deaf effect' and defined it as a situation in which actors in organizations "turn a deaf ear to signs of trouble." In their articles Keil and Robey (1999; 2001) present specific examples of the deaf effect in IT projects based on interviews with both internal and external auditors who expressed their frustration in blowing the whistle on a troubled project only to find that their risk warnings were ignored (or even worse, being fired from their job). Following these first field-based observations of the deaf effect, other researchers including Cuellar (2009) started scenario-based laboratory experiments to investigate the factors that influence the deaf effect. For example, Cuellar et al, (2006) found that a significant predictor of the deaf effect was the messenger credibility. In addition to the messenger credibility, Lee et al, (2014) found that role prescription of the messenger was an important factor of the deaf effect.

In their recent paper Nuijten et al, (2016) suggest that the messenger-recipient relationship (MRR) is a key factor that influences the deaf effect. More specifically, Nuijten et al, (2016) draw on stewardship theory and show that when an auditor is seen as a collaborative partner, message recipients will be more likely to listen to the risk warnings reported by the internal auditor. Inspired on stewardship theory they suggested that decision makers are more likely to be responsive to risk warnings when the messenger aims at contributing to management performance instead of exposing management failures. In our research, we leverage the work of Nuijten et al, (2016) by examining how the organization power of the internal auditor through top management support can be used in a way that message recipients will be willing to turn less deaf ear to the risk warnings of the messenger.

Our study draws further on the whistle-blowing effectiveness theory (Near and Miceli, 1995). Near and Miceli (1995) argue that the effectiveness of whistle-blowing is based on the personal characteristics (credibility and power) of the whistle-blower and the compliant recipient, moderated by the support for the whistle-blower and the wrongdoer as well as situational and organizational characteristics of the wrong-doing. In their model (Near and Miceli, 1995), the relative credibility and power of those actors was central referring to internal auditors who have – in certain situations – role prescribed power and authority (so one would expect them to be effective whistle-blowers, according to Near and Miceli's model). In their model, the Whistle-Blower's power variable is measured by several operational measures and support from superiors is one of these operational measures. Similarly, in our study we use the top management support to internal auditors in the organization as an operational measure of organization power of the internal auditor.

While prior research has advanced our understanding of the deaf effect, the effect of organization power through top management support, to our knowledge has not been examined in this context. This gap in our understanding is an important one to explore because there are good theoretical reasons to believe that top management support could reduce the deaf effect.

2.3 RESEARCH MODEL AND HYPOTHESES

We based our model and hypotheses on stewardship theory (Davis et al, 1997) and whistle-blowing theory (Near and Miceli, 1995). Following Nuijten et al, (2016) in our study we focused on the relationship between the messenger and the recipient at an inter-personal level: with the internal auditor in the role of the provider of a risk warning and the decision maker in the role of recipient of the risk warning. Within the messenger-recipient relationship, the internal auditor can be seen as a collaborative partner or as an opponent.

We have defined the following research questions: 1) could the organization power of the internal auditor (through high or low top management support) be of influence on the deaf effect?, 2) could the messenger-recipient relationship (MRR) be of influence on the deaf effect and (3) is the influence of MRR on the deaf effect moderated by the organization power of the internal auditor through top management support?

Consistent with previous studies on the deaf effect, the variable that we aim to explain in our study is whether or not decision makers are likely to continue a troubled IT-project after the internal auditor provides a risk warning that the project should be stopped or redirected and not continued as planned. In figure 2-1 we present our research model.

Organization Power is operationalized through top management support and acts as a quasi-moderator in our research model. Following Nuijten et al, (2016), our research model contains the messenger-recipient relationship (MRR) as an independent variable. Furthermore, consistent with previous studies, we included the decision makers' individual risk propensity, gender and years of work experience in our model. Our study differs from Nuijten et al, (2016), since we did not include the relevance that individuals assigned to the message and the perceived risks in our model, for the reason that we did not want to overcomplicate our model and that those variables did not contribute to the underlying logic of our model. This was confirmed by the results of our measurements of those two variables, so for those reasons we decided to keep them out of the research model that we present in figure 2-1 and that we will further elaborate throughout this section.

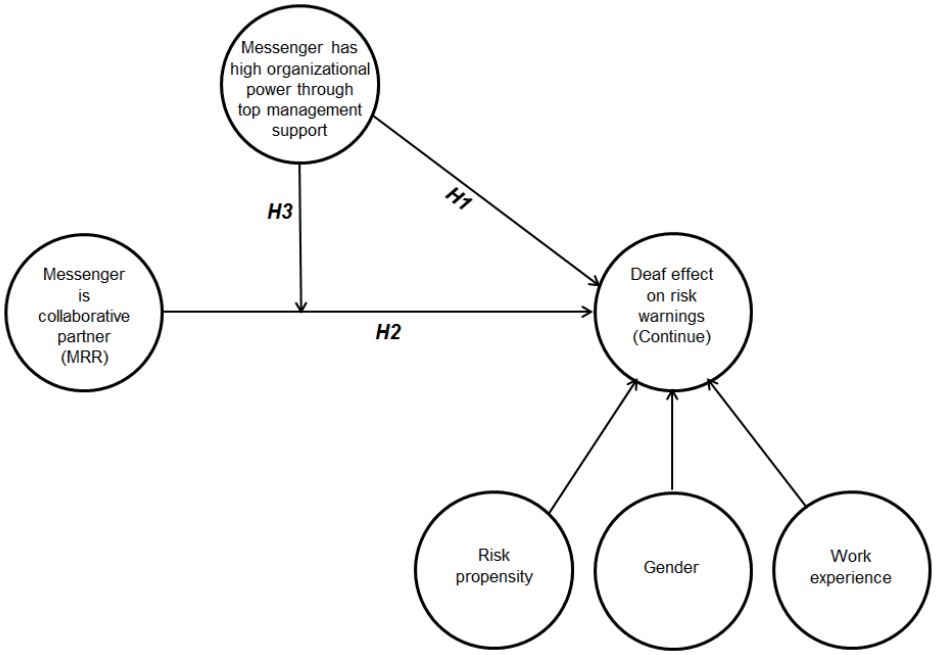

Figure 2-1. Research model

Hypotheses

Main Effect of high vs. low organization power on continuation of a course of action

According to Near and Miceli (1995), whistle-blowers with power may be less likely to experience retaliation. In their research Near and Miceli (1995) found that whistle-blowers who lacked support from either top management or their immediate super supervisors, were much more likely to suffer reprisal, confirming in another study that federal whistle-blowers who suffered retaliation were less likely to be effective than those who did not (Miceli and Near, 2002). The study on the predictors of external whistleblowing by Sims and Keenan (1998), showed that the whistleblowing reporting will be encouraged if the immediate supervisor of a potential whistle-blower is perceived as supporting.

In the area of internal audit effectiveness, several recent studies have also demonstrated that support for internal auditing by top management is an important determinant of its effectiveness. Mihret and Yismaw (2007) performed a case study on the internal audit effectiveness within the Ethiopian public sector and found that management support to the internal auditor is one of the two most important factors (the other being internal audit quality) influencing internal audit effectiveness. Management support in their study was defined as the management commitment to implement the audit recommendations and maintain a strong internal audit department. Cohen and Sayag (2010) performed an empirical examination of the effectiveness of internal auditing in

Israeli organizations. Their correlation and regression analysis showed support from top management to be the main determinant of internal audit effectiveness. Similarly, Van Peursem (2005) links the internal audit effectiveness with management support and found indications that acting alone and without broad management support, can be truly ineffective for internal audit.

Based on existing theories in other research areas, like applied psychology (Eisenberger and Huntington, 1986), Sarens and De Beelde (2006b) measured organizational support towards a focus on the internal auditing function as a whole within six Belgian companies and found evidence that the opinions and recommendations of an internal audit activity that receives more support by top management and more accepted and appreciated by the people in the organization. In their further research, Sarens and De Beelde (2006a) found that the overall acceptance and appreciation of the internal audit within a company is strongly dependent upon the support they receive from senior management. Similarly, other studies found that support from senior management is fundamental for internal audit effectiveness (Sawyer, 1973; Cohen and Sayag 2010; Mihret and Yismaw 2007; Sarens and De Beelde 2006a; 2006b).

So, in our study we posit that the higher the messenger's organization power (through high top management support) the less likely the manager will continue the course of action. This represents a negative causal relationship between organization power and deaf effect. This results in the following hypothesis:.

H1. *Decision makers are more likely to continue a course of action (respond deaf to a risk warning) when the messenger has low organization power.*

Main Effect of the messenger-recipient relationship on continuation of a course of action

In deaf effect situations within our domain of interest, the internal auditor plays the role of the messenger who delivers a risk warning to a recipient (and decision maker) who must decide whether or not to take corrective action or not to listen to the risk warning and continue the project as planned. Nuijten et al, (2016) differentiate between a messenger-recipient relationship (MRR) in which the internal auditor is seen as a collaborative partner and one in which the internal auditor is seen as an opponent. In their study, Nuijten et al, (2016) found that decision makers are more likely to heed the auditor's risk warning and discontinue the course of action when the messenger is seen as a collaborative partner instead of an opponent. In our study, we re-test the effects of the MRR on the deaf effect through replication. Thus, we hypothesize the following:

H2. *Decision makers are less likely to exhibit the deaf effect and continue a failing course of action when the messenger issuing risk warnings and advocating project redirection is seen as a collaborative partner.*

Moderating Effect of high vs. low organization power on continuation of a course of action

Besides on the main effect of Organization Power on the continuation decision by the message recipient, our interest in this research concerns the interaction effect of the organization power through top management support can have with the messenger-recipient relationship (MRR). As we theorized earlier, Near and Miceli (1995) argue that the effectiveness of whistle-blowing is based on the personal characteristics (credibility and power) of the whistle-blower and the compliant recipient, moderated by the support for the whistle-blower and the wrongdoer as well as situational and organizational characteristics of the wrong-doing. Based on that, we theorize that the organization power of the messenger through top management support moderates the influence of MRR on the deaf effect. We expect that managers are more reluctant to listen to a risk warning when the messenger is seen as an opponent as opposed to a collaborative partner. However, when this opponent messenger has high organization power through top management support, managers will be more likely to listen to the warning even though it comes from an opponent.

So, in the high organization power conditions, the influence of MRR on the decision to continue is weaker. We expect that in the high organization power conditions decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent. In the situation when the messenger will have low organization power through low top management support, the decision maker will become more reluctant to listen to an opponent messenger, while the decision maker is still likely to listen to the messenger who is seen as a collaborative partner. For this reason, we expect that the influence of the MRR on the deaf effect will be stronger under the condition of low organization power of the messenger and weaker under the condition of high organization power. This results in the following hypothesis for the moderating effect:

H3. *The messenger's organization power moderates the influence of MRR on the deaf effect. Specifically, the influence of MRR on the deaf effect is strengthened when the messenger has low organization power.*

2.3 METHOD

To test our hypotheses, we conducted one scenario-based laboratory experiment. We created the setting for the investigation of the phenomenon and we had control over the independent variable(s) and the random assignment of the participants to the treatment and non-treatment conditions (Boudreau et al, 2001). We manipulated messenger-

recipient relationship (MRR) and organization power through top management support in 2x2 factorial design.

Participants

For our experiment we used a group of 93 post-graduate students of accounting at a Belgian University. The students were in average 22.6 years old (s.d. 2.4) and had an average work experience of 0.24 years (s.d. 0.75). 87 percent of the students had a European nationality dominated by Belgian citizens. 56 percent were male and 44 percent were female. None of the participants were involved in pilot-testing of our scenario for the purpose of this study.

The students participated in the experiment on a voluntary basis in the last 20 minutes of their courses. We told the participants that this was an experiment study about business decision making in a strategic information system project situation and that their answers would remain anonymous. We randomly assigned each participant to one of the experimental scenarios. From the 93 returned envelops there were 15 forms that we could not use for analysis since the main question (decision) and some other questions were not answered in an unambiguous way (missing, scratched or multiple answers).

In our study we used student subjects as surrogates for managers. Previous studies on the deaf effect has employed student subjects (Cuellar et al, 2006; Lee et al, 2014). While the appropriateness of student subjects has been debated, Keil et al, (2007) argue that data from student subjects in studies focusing on experiments and theory application such as ours, are acceptable (Keil et al, 2007). Harrison and Harrrell (1993) and Sitkin and Weingart (1995) suggest that the use of student subjects is often appropriate when the experiment involves human decision making. According to Ashton and Kramer (1980), p. 3 "real-world decision makers possess information-processing characteristics and biases that are extremely similar to their student counterparts". This is also supported by Nuijten et al, (2016) who tested a core model of the deaf effect including the MRR construct with both students and practitioners and found that results of the experiment were consistent regardless of the type of subject used. Finally, Cook and Campbell (1979) stated that, in practice, external validity is often sacrificed to achieve internal and construct validity and for the greater statistical power that comes through having isolated and controlled settings (e.g. classroom), standardized procedures and homogenous respondent populations. For these types of validity, homogenous samples, such as student subjects, and laboratory experiments are more important than the degree to which they function as exact surrogates for practitioners. For theory testing, after internal validity is achieved, external validity is addressed by testing across multiple contexts with different types of participants.

Scenario and Treatments

In our scenario the participants were asked to consider themselves to be the project owner of an information technology project within an insurance company. The scenario used in this experiment was based on one used by Nuijten et al, (2016) and describes a situation in which the project owner is informed that Mr. Johnson from the internal audit department has recently found serious issues with the project and recommends that the project should be redirected (i.e., not continue as planned).

Consistent with Nuijten et al, (2016), we independently manipulated the messenger-recipient relationship (MRR) to be either collaborative or not. The treatment of the relationship between the messenger and the decision maker was phrased as follows for the low stewardship relation (low collaborative partnership):

> *Mr. Johnson has a long history of working AGAINST IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an OPPONENT WHO IS NOT TO BE TRUSTED.*

The high stewardship relation treatment contained elements of being seen as a 'collaborative partner' and was phrased as follows:

> *Mr. Johnson has a long history of working COLLABORATIVELY with IS project teams with the goal of helping to identify and manage project risks, thus enabling project owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a TRUSTED PARTNER to management.*

We rephrased this scenario with the typical element – organization power – that we developed for this study.

The HIGH- organization power was phrased as follows:

> *Within the company, internal auditors receive an enormous support by the executive board. Strong top management support is shown by the fact that executive board pays great attention on implementing audit recommendations by project owners and even follows up personally on that. As a consequence, Mr. Johnson in his role as an internal auditor has a very STRONG ORGANIZATION POWER within the company.*

The LOW- organization power was phrased as follows:

> *Within the company, internal auditors receive a very poor support by the executive board. Poor top management support is shown by the fact that executive board does*

NOT pay attention to implementing audit recommendations by project owners and does NOT follow up on that in any fashion. As a consequence, Mr. Johnson in his role as an internal auditor has a very LOW ORGANIZATION POWER within the company.

Constructs and Measures

Our independent variables were manipulated and treated as dichotomous variables. The high vs low level of organizational power of the internal auditor through top management support was recorded in the variable OrgPower (1=high organization power; 0=low organization power. Messenger recipient relationship was recorded in the variable MRR (1=collaborative partner; 0=opponent).

In our experiment we use the decision to continue a troubled information systems project (Continue) despite the auditor's risk warning and recommendation to redirect the project as the dependent variable. Consistent with Nuijten et al, (2016) we assessed this construct by applying two measurement items (Continue1 and Continue2).

Consistent with prior studies (Keil et al, 2000; Cuellar et al, 2006), risk propensity (RiskProp) was measured using four items adapted from Sitkin and Weingart (1995). In the Appendix all of the construct measures that were employed are shown.

2.4 RESULTS

Table 2-1 presents the construct reliability cronbach's alpha scores measuring the internal consistency with a given construct's items (weighting them all equally). Hair et al, (1998) note that a cronbach's alpha score slightly lower than 0.7 might still be acceptable for exploratory research and Nunnally (1967) recommends a threshold value of only 0.6 for exploratory research. In the table 1a we present the cronbach's alpha scores we obtained. We conclude that the reliability of our measurements of the constructs meet the thresholds.

Table 2-1. Reliability of Measurements

Contruct	Items	Cronbach alpha
Continue	2	0.900
MRR_{mc}	3	0.785
$OrgPower_{mc}$	4	0.922
RiskProp	4	0.846

Convergent and Discriminant Validity

We performed a Principal Components Analysis, which is an exploratory factor analysis of clustering measurements into factors. We assessed whether or not our measurement-

variables, that are supposed to tap into the same construct, indeed stick together and are not sticking too much to measurements that were supposed to tap into other constructs. We used Varimax rotation and a fixed number of factors that was equal to the number of variables. The results are presented in table 2-2 below.

Table 2-2. Construct Validity

	Component					
	1	2	3	4	5	6
Continue1	.015	.124	-.363	**.867**	-.075	.065
Continue2	-.045	.178	-.288	**.897**	-.002	.036
$MRR_{mc}1$	.054	.034	**.796**	-.164	-.013	-.018
$MRR_{mc}2$	.077	-.117	**.770**	-.145	-.147	-.111
$MRR_{mc}3$	-.019	-.009	**.844**	-.306	.146	-.057
$OrgPower_{mc}1$	**.903**	-.008	-.105	-.023	.050	-.117
$OrgPower_{mc}2$	**.930**	-.018	.163	-.005	-.015	.098
$OrgPower_{mc}3$	**.883**	-.074	.137	-.011	-.031	.127
$OrgPower_{mc}4$	**.931**	.021	-.046	-.004	.028	-.080
Gender	.050	.242	-.025	-.067	**.935**	.034
RiskProp1	-.060	**.847**	.056	.195	.164	-.011
RiskProp2	-.024	**.820**	.085	.126	.070	.067
RiskProp3	-.160	**.738**	-.087	.045	.254	-.110
RiskProp4	.147	**.839**	-.063	-.038	-.108	-.083
WorkExp	.014	-.089	-.155	.074	.030	**.965**

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization.

The items in table 2-2 correlate higher with their own "construct" (factor) than they correlate with others (Shadish et al, 2002). The convergent and discriminant validity is confirmed in this table.

Manipulation Validity

In order to assess whether or not the treatments are effective as intended, we tested manipulation validity following the procedure as proposed by Straub et al, (2004). As part of our between-subject experiment design, we intentionally exposed subjects to different treatments in order to control that our manipulation check variables (MRRmc and OrgPowermc) sufficiently vary across treatment-groups. In table 2-3 we present the mean values of the manipulation check variables MRRmc and OrgPowermc for each of the four treatment conditions. As expected from our pre-tests, we find the variable MRRmc to be different in the MRR high (partner) and low (opponent) conditions, with

only minor movement on the OrgPower high and low conditions. And we find the variable OrgPowermc to be different on the OrgPower low and high conditions, without changing as the result of the MRR treatment conditions. This indicates that the treatments are effective in size and direction.

Table 2-3. Mean Values of MRRmc and OrgPowermc per treatment condition

	OrgPower low		OrgPower high			
MRR low (opponent)	MRR_{mc}	3.74(1.41)	MRR_{mc}	4.02(0.93)	MRR_{mc}	3.86 (1.22)
	$OrgPower_{mc}$	2.90(1.32)	$OrgPower_{mc}$	4.97(0.71)	$OrgPower_{mc}$	3.82 (1.50)
	N=21		N=17		N=37	
	N=21		N=16		N=38	
MRR high (partner)	MRR_{mc}	5.68(0.82)	MRR_{mc}	5.18(1.05)	MRR_{mc}	5.40 (0.98)
	$OrgPower_{mc}$	2.27(0.90)	$OrgPower_{mc}$	6.00(0.84)	$OrgPower_{mc}$	4.32 (2.06)
	N=18		N=23		N=41	
	N=18		N=22		N=40	
	MRR_{mc}	4.64 (1.52)	MRR_{mc}	4.70 (1.15)		
	$OrgPower_{mc}$	2.61 (1.17)	$OrgPower_{mc}$	5.55 (0.93)		
	N=39		N=39			

Table 2-4 shows the results of an MANOVA in which the treatment conditions are entered as independent variables and the MRRmc variable and OrgPowermc variable are considered to be the dependent variables. The table shows that the MRR treatments are highly significant (at .000) on their own MRRmc variable and that OrgPower is not significant (.349) at that variable. The table also shows that the OrgPower treatments are highly significant (at .000) on its own OrgPowermc variable and that the MRR treatments are not significant (.685) at that variable.

We consider the R2 of .319 and .698 to be acceptable as a result of the iterative testing and improving the treatment-conditions (and reducing background noise) in the scenario that was performed. We consider our manipulation tests to have sufficiently covered the testing techniques for manipulation validity as proposed by Straub et al, (2004).

Table 2-4. Manipulation Test 2x2 MANOVA

	Dependent variable MRR_{mc} [a]		Dependent Variable $OrgPower_{mc}$ [b]	
Independent variable	Type III Sum of Squares	F-Value (Sig)	Type III Sum of Squares	F-Value (Sig)
Main Effect MRR	44.293	35.779(.000)	.888	.888 (.349)
Main Effect OrgPower	.206	.166 (.685)	154.439	154.458(.000)
Interaction Effect MRR * OrgPower	2.692	2.174 (.145)	12.814	12.816 (.001)

a) R^2 is .319 and b). R^2 is 698

Regression Analysis on Main and Moderating Effects

In order to test whether moderation effects could be found, we followed procedures according to (Sharma et al, 1981). Additionally we used the operational guidance on multiple-regression of interaction effects as presented by Jaccard and Turrisi (2003) and Aiken and West (1991). Table 2-5 shows the results of the moderated regression analyses with Continue as the dependent variable. The presentation of moderation effects is adopted from Tanriverdi (2006).

Table 2-5. Moderated Regression Analysis on Continue

Variable(s) Entered	Model 1 Controls	Model 2 Main Effect	Model 3 Main Effect	Model 4 Interaction
Gender	-.154	-.152	-.100	-.077
WorkExp	.219	.219	.118	.114
RiskProp	.315**	.313*	.248*	.248*
OrgPower		-.016	-.003	.010
MRR			-.414***	-.424***
MRR x OrgPower				.207*
R^2	.121	.121	.279	.321
F	3.262	3.282	18.386	22.606
ΔR^2	.121	.000	.158	.042
ΔF	3.262*	.020	15.104***	4.220*

*+p<.1, *p<0.05, **p<0.01, ***p<0.001*
Dependent variable is Continue

For interpretation of the model, we first took into account the subjects of our study and the control variables. We found WorkExp not to be significant, where it was found to be significant in earlier studies (Cuellar et al, 2006; Cuellar et al, 2007). This could be explained by the low level and low variance in working experience of the subjects that participated in this experiment. The control variables Gender, WorkExp and RiskProp are presented in Model 1. Model 2 consists of the control variables of model 1, extended

with OrgPower. Model 2 does not confirm a significant negative influence of OrgPower on the decision to continue as was expected from earlier studies and hypothesized here as hypothesis 1. From model 3 we conclude that MRR has a significant negative effect on Continue, which confirms hypothesis 2.

In hypothesis 3 we proposed that the negative influence of MRR on Continue would be weaker in the high organization power domain and stronger in the low organization power domain. Therefore, we expect to find a significant positive regression coefficient for the interaction variable MRR x OrgPower in model 4. We found hypothesis 3 confirmed in table 2-5. According to the procedures of Sharma et al, (1981), we conclude that OrgPower is a moderator on the relationship between MRR and Continue, since it only acts as a moderator and it has no a direct effect on Continue.

For interpretation purposes we present the regression plots in figure 2-2 below. The figure shows the regression lines for the high and low values of organization power. The regression lines are not parallel, and do intersect within the range of treatment and measurement conditions we used in our experiment. Since the order of the two regression lines changes, this type of interaction is called "disordinal" (Jaccard and Turrisi, 2003, p.78).

The results of the moderation analysis show that the interaction effect between MRR and OrgPower is consistent with our expectations.

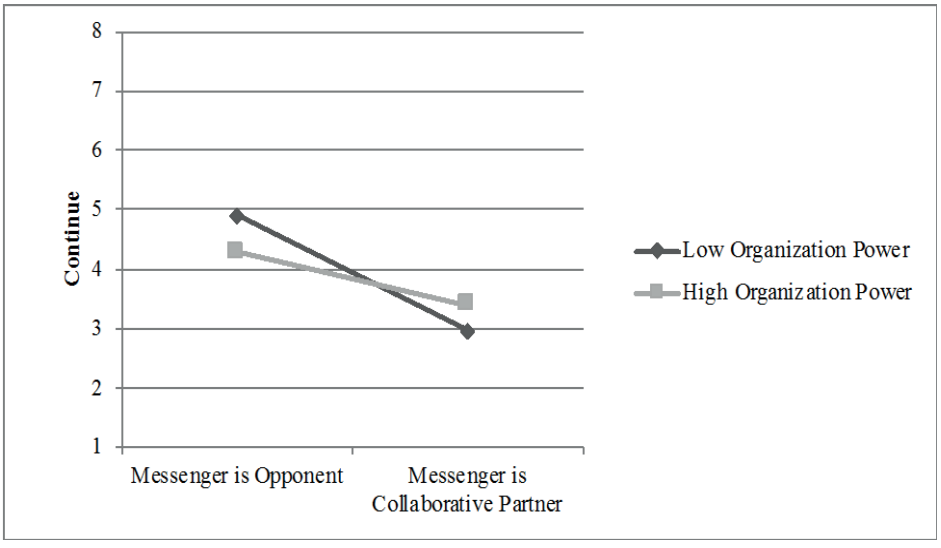

Figure 2-2. Regression plots with Organization Power as moderator

Figure 2-2 shows that the regression line in the high organization power conditions is more flat than in the low organization power conditions, which reflects the interaction effect as confirmed in hypothesis 3. The influence of MRR on the deaf effect is weaker in

conditions of low organization power and stronger in conditions of high organization power.

As indicated in this study, in the low organization power conditions, decision makers might show competitive arousal when the message comes from an opponent and they are more likely to continue the project and respond deaf to the risk warning. In the low organization power condition, the decision maker is still likely to listen to the risk warning if the messenger is seen as a collaborative partner. We expected that in the high organization power conditions decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent, however the results showed this is not the case. This is also shown in figure 2-2. We had expected to find an ordinal interaction in which the regression line that represents the high organization power conditions would remain below the regression line that represents the low organization power conditions. Interestingly, the two regression lines in figure 2-2 cross, which indicates that high organizational power through top management support not always helps to reduce the deaf effect. The left side of figure 2-2 shows that high organizational power through top management support is helpful to reduce the deaf effect when the messenger, i.e. the internal auditor, is seen as an opponent. The right side of figure shows that high organizational power through top management support is contra productive in case the messenger is seen as a collaborative partner, since it will increase the deaf effect instead of reducing it.

2.5 DISCUSSION

Before discussing the limitations of our study and the ideas for further research, we consider the main findings and the implications. The study's three main findings are:

(1) The continuation of a course of action (deaf response to a risk warning) is not significantly influenced by the organization power of the internal auditor. Based on literature we expected that high top management support would have a positive influence on internal audit effectiveness; however this is not always the case (H1 not confirmed in our experiment);

(2) The influence of MRR on the deaf effect is strengthened when the messenger has low organization power. When the messenger has low organization power, decision makers are more likely to let their continuation-decision be influenced by the messenger-recipient relationship, i.e. when the messenger is seen as a collaborative partner rather than an opponent.

(3) We expected that in the high organization power conditions decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent. However, the results of our study indicate that

high organization power of the internal auditor (through high top management support) is helpful and even necessary for reducing the deaf effect on risk warnings when the auditor is seen as an opponent. In the contrary, high organization power of the internal auditor (through high top management support) may be contra-productive and will not reduce the deaf effect on risk warnings when the auditor is seen as a collaborative partner.

This study is perhaps a first attempt to examine the deaf effect with moderation analysis providing an insight into the effects of the organization power of the internal auditor on deaf effect in the context of IT-projects. This study introduced and tested the effects of two variables – (1) the organization power of the internal auditor – on the decision to continue a course of action despite the risk warning – and (2) messenger-recipient relationship. The second construct had been recently tested by Nuijten et al, (2016) in the context of the deaf effect. The first construct had not been tested in the context of the deaf effect earlier. The question of whether the messenger is seen as a collaborative partner or as an opponent highly influenced the continuation decision (deaf effect) of the decision maker. The construct on the messenger-recipient relationship was derived from stewardship theory and our results were consistent with expectations according to stewardship theory. We contribute to research on stewardship theory by providing stronger evidence for the impact of MRR on the deaf effect and further testing it at a micro inter-personal level between the internal auditor and senior management.

The organization power of the internal auditor through top management support did not appear to have a main effect on the continuation decision in a way that was expected from whistle-blowing theory. As expected, the organization power through top management support for internal audit turned out to be a strong moderator for the MRR in the proposed direction, but it did not turn to have a significant main effect on the continuation decision (H1 was not confirmed). This might be explained by our finding that high organization power of the internal auditor who is seen as a collaborative partner may have a contra productive effect on the decision to continue a course of action.

In this study we confirmed that decision makers are less likely to turn a deaf effect to risk warnings, when the messenger is seen as a collaborative partner. Additional practical implication of this study is that the organization power of the internal audit function plays a role in the MRR relationship on the deaf effect. This includes the level of support the internal auditor receives from top management. Although one may think the hypotheses in our experiment were not difficult to predict, yet our results were surprising and brought originality in this area of academic research. More specifically, our experiment found empirical support for the moderating role of the decision maker's organization power on the relationship between MRR and the deaf effect. When the internal auditor is seen as an opponent and has a high organization power through top management support, the decision makers will tend to turn less deaf ear to the risk

warnings of the internal auditor who therefore will be more effective. While it may seem to be logical that in the high organization power conditions decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent, this study suggests that the advantage of high organization power does not always reduce the deaf effect and can be even contra productive in case the internal auditor is seen as a collaborative partner. Our study provides evidence that high organization power through high top management support is helpful and even necessary for reducing the deaf effect on risk warnings when the internal auditor is seen as an opponent.

Knowing how the opponent and collaborative partner role interact with organization power of the internal auditor and the effects thereof on deaf effect, the internal auditor could consider switching between these two roles to reduce deaf effect on the risk warnings and hence increase internal audit effectiveness. The results of our study could help internal auditors to upgrade the internal audit profession by improving their skills and expertise enabling them deploying these two roles in communication of the risk warnings more effectively. We support other researches to further explore this challenging area of internal audit effectiveness.

Limitations and further research

Our study has several limitations. It is possible that the results would be different in other settings as there are other organizational and political factors that may also affect managers' deaf effect responses to risk warnings. Therefore, any generalization of the findings of this study to other settings should be treated with caution.

The experiment conducted in this study allowed us to achieve high internal validity and therefore it took a necessarily narrow focus and small number of variables so as to achieve a high degree of control over extraneous variables. The use of post-graduate student participants could also restrict external validity of our results. Although the use of students for this experiment we justify by aiming to generalize our conclusions to theory and not to particular population, for further research we need to replicate the organization power part of the experiment in different experimental conditions with more experienced participants as well.

Our measures of the OrgPower construct in the context of internal auditor – manager relationship were self-developed given our particular level (inter personal) and context. Although they were derived from literature, tested and improved in the preparations of this study and shared with experts, they ask for more refinement and testing in further research.

In our study we focus on the deaf effect at the level of the internal auditor as provider of an objective assessment and the decision taker's view on the messenger (as a collaborative partner or an opponent) as a determinant. This inter-personal view is only

one level in the corporate governance framework implementation following stewardship theory principles. We did not study the possible effects at a department-level or at an organizational corporate governance level and we recommend to examine these in future research. Despite the above limitations, this study shows the importance and relevance of a scientific examination of internal audit effectiveness and the deaf effect as one of its determinants. To our knowledge, only a few academic studies have examined the role of the organization power (through top management support) of the internal auditor in the effectiveness of internal audit, and even fewer have researched this issue empirically.

In our study we operationalized organizational power through top management support following the line of reasoning from whistle-blowing theory. Although internal audit literature confirms that top management support is a highly relevant way to obtain organizational power, we should realize that internal auditors might also find other ways to build organization power, for example through highly recognized expertise. Our results not necessarily apply to the full spectrum of different ways to obtain organization power and future research on this topic is highly recommended.

Finally, we realize that our manipulation of high organization power through top management support may put the spotlight on the negative repercussions if managers in the organization would ignore the risk warning of the internal auditor. As we know from framing literature, such framing in terms of losses might influence decision makers' risk taking preferences and thus could influence their decisions to continue a course of action despite the risk warning of the internal auditor. For that reason, it may be interesting to pursue future research on top management support that puts a spotlight on the positive side and gains in case decision makers would implement audit recommendations.

To our knowledge, our study is the first to identify this finding and we recommend challenging it in further research. For example, one could explore more in detail what constitutes effective top management support, how much it would be enough, when it could be excessive and inappropriate and what are its effects on the relation between the messenger and the recipient on a long run. Furthermore, student subjects with more work experience or managers from the field could be considered in a follow up study.

APPENDIX 1.

SCENARIO (Experiment)

Imagine that you are the Senior Vice President of the Pensions Operations department within a large insurance company. You inherited a prestigious IS-project called PENSION-VIEW. As **Project Owner**, **you** became responsible for the successful implementation of PENSION-VIEW and for realizing the benefits for your organization with this in-house developed system.

With this IS-project you could be the first insurance company in the market that grants all citizens (customers and potential customers) access to the complete set of their personal pension information. If your insurance company is the first in the market to provide this service at a reliable level, the expected gain to your company would be 60 million euros, as documented in a detailed business case for the project.

Your main competitors have all decided to wait for the supplier of a standard software-package to provide a module to the insurance-market that integrates and presents their pension data. If your implementation is too late or does not prove reliable during the first month of operations, you will miss your competitive advantage and your organization will gain nothing.

The main challenge and risk of the PENSION-VIEW project are the large number of interfaces to retrieve reliable information from other information systems that contain pension data.

Your PENSION-VIEW project is close to implementation and under time-pressure to continue implementation as planned.

According to standard procedures, Mr. Johnson of the Internal Audit department has recently reviewed the testing-procedures of your project.

Mr. Johnson reports that he has found serious weaknesses in the design and execution of the testing activities on the data exchange with other information systems.

As a consequence, he reports that the project should be redirected and should not be continued as planned.

Scenario 1 (positive manipulation) ***(OrgPower = High):*** Within the company, internal auditors receive an enormous support by the Executive Board of the company. Strong top management support is shown by the fact that Executive Board pays great attention on implementing audit recommendations by project owners and even follows up personally on that. As a consequence, Mr. Johnson in his role as an internal auditor has a very **STRONG ORGANIZATION POWER** within the company.

Mr. Johnson has a long history of working **COLLABORATIVELY** with IS project teams with the goal of helping to identify and manage project risks, thus enabling project

owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a **TRUSTED PARTNER** to management.

Scenario 2 (negative manipulation) ***(OrgPower = Low)***: Within the company, internal auditors receive a very poor support by the Executive Board of the Bank. Poor top management support is shown by the fact that Executive Board does **NOT** pay attention to implementing audit recommendations by project owners and does **NOT** follow up on that in any fashion. As a consequence, Mr. Johnson in his role as an internal auditor has a very **LOW ORGANIZATION POWER** within the company.

Mr. Johnson has a long history of working **AGAINST** IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an **OPPONENT WHO IS NOT TO BE TRUSTED**.

Scenario 3 (positive manipulation) ***(OrgPower = High):*** Within the company, internal auditors receive an enormous support by the Executive Board of the Bank Strong top management support is shown by the fact that Executive Board pays great attention on implementing audit recommendations by project owners and even follows up personally on that. As a consequence, Mr. Johnson in his role as an internal auditor has a very **STRONG ORGANIZATION POWER** within the company.

Mr. Johnson has a long history of working **AGAINST** IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an **OPPONENT WHO IS NOT TO BE TRUSTED**.

Scenario 4 (negative manipulation) ***(OrgPower = Low)***: Within the company, internal auditors receive a very poor support by the Executive Board of the Bank. Poor top management support is shown by the fact that Executive Board does **NOT** pay attention to implementing audit recommendations by project owners and does **NOT** follow up on that in any fashion. As a consequence, Mr. Johnson in his role as an internal auditor has a very **LOW ORGANIZATION POWER** within the company.

Mr. Johnson has a long history of working **COLLABORATIVELY** with IS project teams with the goal of helping to identify and manage project risks, thus enabling project owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a **TRUSTED PARTNER** to management.

As you left the meeting room, you saw two courses of action. You could decide to redirect the project (thus, not continue as planned). Or, you could decide to continue (thus, move the system into production as planned).
You must decide which of the two courses of action to take.

MEASURES

Continue (dependent variable)

Variable	Item Wording
Continue1	(1=Definitely Redirect; 8=Definitely Continue) Indicate whether you would decide to continue the project as planned or redirect, and how strong your leaning would be
Continue2	(1=Strongly Disagree; 7=Strongly Agree) I will certainly continue the PENSION-VIEW project as planned (i.e., without redirection)

MRR (independent variable)

Variable	
MRR	(1=Collaborative partner; 0=Opponent)

OrgPower (moderator variable)

Variable	
OrgPower	(1=High Organization Power; 0=Low Organization Power)

MRR_{mc} (used as a manipulation check)

Variable	(Anchors), Item Wording
$MRR_{mc}1$	(1=Strongly Disagree; 7=Strongly Agree) I consider Mr. Johnson to be a trusted partner to my PENSION-VIEW project
$MRR_{mc}2$	(1=Strongly Disagree; 7=Strongly Agree) I consider Mr. Johnson to be a collaborative partner to my PENSION-VIEW project
$MRR_{mc}3$	(1=Non-Trusted Opponent; 7=Trusted Partner) I consider Mr. Johnson to be a _____ to my PENSION-VIEW project

$OrgPower_{mc}$ (used as a manipulation check)

Variable	(Anchors), Item Wording
$OrgPower_{mc}1$	(1=Strongly Disagree; 7=Strongly Agree) Mr. Johnson has a high organization power within the company
$OrgPower_{mc}2$	(1=Strongly Disagree; 7=Strongly Agree) Mr. Johnson is highly supported by executives in the company
$OrgPower_{mc}3$	(1=Strongly Disagree; 7=Strongly Agree) Mr. Johnson is poorly supported by executives in the company
$OrgPower_{mc}4$	(1=Low Organization Power; 7=High Organization Power) Mr. Johnson has a _____ organization power in the company

Risk Propensity (used as a control variable)

Variable	Item Wording (Anchors: 1=Extremely LESS likely than others; 7=Extremely MORE likely than others)
RiskProp1	Your tendency to choose risky alternatives based on the assessment of other people on whom you must rely
RiskProp2	Your tendency to choose risky alternatives relying on an assessment that is high in technical complexity
RiskProp3	Your tendency to choose risky alternatives which could have major impact on the strategic direction of your organization
RiskProp4	Your tendency to choose risky alternatives despite considerable failures in risky choices you made in the past

3 Nudging with Descriptive Social Norms to Overcome the Deaf Effect for IT Project Risk Warnings

CHAPTER OVERVIEW

Information technology (IT) project escalation (i.e., continued commitment to a failing IT project) is both a common and costly problem for organizations. Internal auditors, who are role prescribed to issue risk warnings should they determine that a project is going awry, complain that senior management, as message recipients, often turn a deaf ear to such warnings. This phenomenon, known as the deaf effect, can contribute to the problem of project escalation. To overcome the deaf effect, internal auditors, as messengers, need better ways of gaining the attention of message recipients. In this paper, we investigate the concept of nudging with descriptive social norms as a technique that internal auditors could use to help overcome the deaf effect. Specifically, we focus on two questions: 1) are recipients less likely to exhibit the deaf effect when they are nudged by the messenger with a descriptive social norm?, and 2) does the messenger-recipient relationship (i.e., whether the messenger is seen as a partner or as an opponent) influence the effectiveness of nudging? To address these questions, we conducted a scenario-based experiment. Our results showed that: (1) the deaf effect was reduced when the messenger included a descriptive social norm in the risk warning message, and (2) the influence of the descriptive norm on the deaf effect was moderated by the messenger-recipient relationship. Specifically, the inclusion of a descriptive social norm in the risk warning was more effective when the messenger was seen as a partner rather than an opponent.

Key words: IT project escalation, deaf effect, nudging, descriptive social norm, internal audit effectiveness, internal auditor

3.1 INTRODUCTION

Information technology (IT) project escalation (i.e., continued commitment to a failing IT project) occurs quite frequently (30-40% of projects are affected) and represents a waste of valuable organizational resources, as these projects tend to receive continued funding in spite of the fact that they are unlikely to ever deliver the business value for which they were undertaken. Internal auditors represent a valuable line of defence against such waste, as they are role prescribed to issue risk warnings should they determine that a project is going awry. Yet, clearly internal auditors cannot be effective in halting escalation unless they can get senior managers to heed their warnings. Too often, internal auditors complain that senior management turns a deaf ear to such warnings, a phenomenon known as the deaf effect (Keil and Robey, 1999; 2001).

While there have been a few studies of the deaf effect (Keil and Robey, 1999; 2001), they have tended to focus on characteristics of the messenger and his/her relationship with the recipient that tend to be stable and not easily changed. What is needed and largely missing from the extant literature is knowledge about what the auditor can do to craft the message in a way that overcomes the deaf effect. Aside from one experiment by Nuijten et al, (2016) that investigated the effect of gain-loss framing, we know of no studies that have examined how auditors can contextualize their message so as to more strongly influence message recipients. In this paper, we draw on the concept of nudging with descriptive social norms (Cialdini and Goldstein, 2004) as a technique that internal auditors could use to help overcome the deaf effect. Nudging stems from the idea that small changes in the way that information about choices are presented can lead to better decisions. Thaler and Sunstein (2009), along with others, argue that using descriptive social norms can influence the decision making of individuals in such a way as to produce desired behaviour without forcing compliance.

In this study, we examine whether nudging with descriptive social norms has the potential to help auditors to overcome the deaf effect by inducing message recipients to be more receptive to risk warnings. Our aim is to address two research questions: 1) Are recipients less likely to exhibit the deaf effect when they are nudged by the messenger (i.e., internal auditor) with a descriptive social norm?, and 2) Does the messenger-recipient relationship (i.e., whether the messenger is seen as a partner or as an opponent) influence the effectiveness of nudging?

The remainder of the paper is organized as follows. First we situate our study within the small, but growing, stream of literature on the deaf effect in information systems projects. Then we provide a brief overview of nudging and the theory on why descriptive social norms can be an effective tool for nudging. After introducing our research model and hypotheses, we describe our research methodology, followed by the results

we obtained. We conclude the paper with discussion and implications for research as well as practice.

3.2 LITERATURE REVIEW AND THEORY BASE

Keil and Robey (1999, p. 82) coined the term "deaf effect," defining it as a situation in which actors in positions of authority "turn a deaf ear to signs of trouble." In this and a subsequent article (Keil and Robey, 2001) they provide specific examples of the deaf effect in IS projects based on interviews with both internal and external auditors who spoke of their frustration in blowing the whistle on a troubled project only to find that their risk warnings were ignored (or worse, caused them to be fired from their job). Following the initial field-based observations of the deaf effect reported by Keil and Robey (1999; 2001), several researchers including Cuellar (2009) began to conduct scenario-based laboratory experiments to investigate the factors that influence the deaf effect. In a recent paper Nuijten et al, (2016) draw on stewardship theory and show that when an auditor is seen as a collaborative partner, message recipients will be less likely to turn a deaf ear to risk warnings issued by the auditor. The theory behind this is that decision makers are more likely to be responsive to risk warnings when the messenger has the clear goal to contribute to management performance instead of exposing management failures. Thus, prior research suggests that the messenger-recipient relationship (MRR) is a key factor that influences the deaf effect. In our research, we leverage the work of Nuijten et al, (2016) by examining how the information delivered by a messenger can be presented in a way that provides a further nudge to the recipient.

Behavioural economists have introduced the idea that nudging can be an effective means of eliciting desired behaviour without exercising strong forms of control or forcing compliance (Thaler and Sunstein, 2009). The concept of nudging relates to the messenger-recipient relationship in the sense that nudging occurs within the context of that relationship and it involves presenting information in a way that promotes a desired response without forcing compliance. In this study, we develop a research model that brings together nudging and MRR.

Specifically, we posit that nudging with descriptive norms will be more effective when the technique is used in a stewardship based model whereby the descriptive norms being espoused by the messenger are generated in an MRR context in which the messenger is viewed as a partner rather than an opponent.

While prior research has advanced our understanding of the deaf effect, the effect of nudging with descriptive social norms has not been examined in this context. This gap in our understanding is an important one to explore because nudging with descriptive

social norms represents an intervention that would be easy to implement in practice and there are good theoretical reasons to believe that it could reduce the deaf effect.

Nudging with Descriptive Social Norms

One of the most effective ways to nudge is through social influence (Thaler and Sunstein, 2009). For example, it has been shown that the behaviour of peers affects productivity and tax compliance in field settings (Tayler and Bloomfield, 2011). Similarly, Mas and Moretti (2009) found that cashiers in a retail setting became more productive when a highly productive worker was introduced into their shift. Examples like these clearly show that the social influence of peers can be significant.

The cumulative findings from prior research on normative social influence show that the actions of other people have a powerful effect on both behavioural intentions and actual behavior (Sherif, 1936; Deutch and Gerard, 1955; Cialdini et al, 1990; Cialdini and Goldstein, 2004; Jacobson et al, 2011). Many norms-based interventions appear to have an influence on human behavior (e.g. Cialdini et al, 1990; Cialdini et al, 1991; Cialdini, 2005; Schultz et al, 2007; Griskevicius et al, 2008) and numerous studies can be found on the effect of descriptive social norms in the areas of sociology, psychology and behavioural research. Research has shown that communicating a descriptive social norm (i.e., how most people behave in a given situation) induces conformity to the communicated behavior (Nolan et al, 2008; Schultz, 1999; Griskevicius et al, 2006).

Thaler and Sunstein (2009) further explain the use of a descriptive social norm in nudging and its positive effects on eliciting desired behavior. They recount numerous examples in which messengers can nudge individuals to behave in a certain way simply by informing them about what other people are doing. One example of this is the online promotion of organ donation in the state of Illinois where their website brings the power of social norms into play by plainly stating: "87% of adults in Illinois feel that registering as an organ donor is the right thing to do" (Thaler and Sunstein, 2009, p. 184). Such nudges work because we generally like to do what most other people consider to be the right thing to do in a given situation.

3.3 RESEARCH MODEL AND HYPOTHESES

Influence of descriptive social norms and how they could apply to the deaf effect

Descriptive social norms can serve as a decisional shortcut for behaviour (Cialdini et al, 1990). They are thought to influence behaviour because they provide information about the right way to act in certain situations (Cialdini, 1984; Cialdini and Goldstein, 2004; Jacobson et al, 2011). For example, Goldstein et al, (2008) examined how hotel guests

behave when a card has been placed on the bathroom towel rack asking them to reuse their towels. In a field experiment, they tried to increase towel reuse by testing the effect of putting different messages on the card. One of the messages included a social norms appeal, stating "JOIN YOUR FELLOW GUESTS IN HELPING TO SAVE THE ENVIRONMENT," and emphasized that the majority of hotel guests reuse their towels. This message proved to be much more effective than messages without a social norms appeal such as "HELP SAVE THE ENVIROMENT." Similar results were also obtained by other researchers, for example, by Schultz et al, (2008) (in their towel re-use experiment in hotel rooms), Lapinski et al, (2013) (for the effects of social norms and behavioural privacy on hand washing), Maloney et al, (2013) (on effects of descriptive norms on voting behavior), and Lapinski et al, (2007) (water conservation attitudes and behavior).

Mollen et al, (2013), examined the influence of social norms on food choices by conducting a field experiment in an on-campus food court. Effects of different messages on students' food choice were compared against each other and a no-message control condition. They found that a healthy descriptive norm message resulted in healthier choices as compared with the no norm control condition. Similarly, in an experiment with 1,200 Australian citizens, Wenzel (2005a; 2005b) found that simply informing taxpayers of the high rate of compliance increased compliance levels.

Similarity enhances the power of descriptive social norms. Cialdini and Goldstein (2004) posited that when making choices, people look at those who are similar to them. For example, Nolan et al, (2008) found that California residents' energy saving was mostly influenced by their belief that other people were saving energy (the social norm). Moreover, the key factor for their choice to save energy was specifically which other people – other Californians, other people in their city, or other people in their specific community. Based on the idea that people are most influenced by similar others, the effect of social norms became stronger as the group was becoming closer and more similar to the people of their own community. Similarly, in the Goldstein et al, (2008) experiment on hotel towel reuse described earlier, the most effective message displayed to the guests was the one mentioning that the majority of guests had reused their towels when staying in the specific hotel room in which the guest was staying (Goldstein et al, 2008).

On the basis of the abovementioned literature related to nudging and descriptive social norms, we theorize that when decision makers are nudged by an internal auditor with risk warnings containing a descriptive social norm they will be more likely to listen to these risk warnings. The underlying logic for this assertion is that decision makers are more likely to heed the advice of the internal auditor if they believe that their peers, when facing similar situations, tend to follow the advice of the auditor with respect to risk warnings. Thus we state the following hypothesis:

H1. *Decision makers will be less likely to exhibit the deaf effect and continue a failing course of action when the risk warnings and recommendations communicated by the messenger contains a descriptive social norm indicating what the decision makers' peers normally do under these circumstances.*

While this would appear to be a straightforward and therefore potentially uninteresting hypothesis, it is important to note that descriptive social norms may not always be effective (Jacobson et al, 2011). Indeed, there is no guarantee that providing a descriptive social norm will work as intended. For example, in an attempt to reduce the theft of petrified wood from Arizona's Petrified Forest National Park, visitors were exposed to the following message: "Many past visitors have removed petrified wood from the Park, changing the natural state of the Petrified Forest" (Cialdini, 2003; Cialdini et al, 2006). While the message was designed to reduce the theft of petrified wood, it had the unintended effect of increasing the theft of wood by about 8%, as people interpreted the salient message to be "theft is common" rather than "theft is bad" (Griskevicius et al, 2006). Similarly, Schultz et al, (2007) in their field experiment on household energy consumption also showed that normative messages could have undesirable effects. Following this, it is by no means certain that in our study context, nudges based on a descriptive social norm will necessarily have the desired effect in terms of reducing the deaf effect.

Influence of messenger-recipient relationship on the deaf effect

In deaf effect situations, messengers report risk warning messages to decision makers who have the choice to assign relevance to these messages and take corrective action or not to listen to the risk warning and continue the project as planned (Nuijten et al, 2016). In our domain of interest, the auditor plays the role of the messenger who delivers a risk warning and the project owner plays the role of the recipient (and decision maker) who must decide whether or not to act on the risk warning. Nuijten et al, (2016) differentiate between a messenger-recipient relationship (MRR) in which the auditor is seen as a collaborative partner and one in which the auditor is seen as an opponent. In their study, Nuijten et al, (2016) found that decision makers are more likely to heed the auditor's risk warning and discontinue the course of action when the messenger is considered to be a collaborative partner instead of an opponent. In our study, we re-test the effects of the MRR on the deaf effect. Thus, we hypothesize the following replication hypothesis:

H2. *Decision makers will be less likely to exhibit the deaf effect and continue a failing course of action when the messenger issuing risk warnings and advocating project redirection is seen as a collaborative partner.*

Interaction of messenger-recipient relationship and descriptive social norms

Lapinski and Rimal (2005) and Rimal et al, (2005) suggest the need to understand the role of potential moderators that can influence the nature of the relationship between descriptive social norms and behaviours. In a study along these lines, Berger and Rand (2008) show that descriptive social norms can actually decrease (rather than increase) compliance when the descriptive social norm is associated with an undesirable group. Extrapolating from this finding, we theorize that it may also be important to consider the source of the descriptive social norm and how the target recipient views the source. Prior work has shown that decision makers are more receptive to a risk warning when it comes from an internal auditor who is perceived as a Collaborative Partner rather than an Opponent (Nuijten et al, 2016). Thus, decision makers are more likely to listen to a risk warning when the messenger is someone who aims to help management instead of revealing management's non-performance.

Based on the above, we theorize an interaction between the messenger-recipient relationship (MRR) (i.e., whether the messenger is seen as a Partner or an Opponent) and the use of a descriptive social norm designed to nudge behaviour. Specifically, we theorize that decision makers should be more receptive to a risk warning message containing a descriptive social norm when it comes from an internal auditor who is seen as a Collaborative Partner then when it comes from an internal auditor who is considered to be an Opponent. In other words, MRR is likely to moderate the relationship between a descriptive social norm and the deaf effect. Specifically, we expect that when the messenger is seen by the decision makers as a Collaborative Partner, the influence of the messenger's use of a descriptive social norm in reducing the deaf effect will be greater. We also expect that when the messenger is seen as an Opponent the messenger's use of a descriptive social norm will be less effective and may even backfire. Thus, we state the following hypothesis:

> **H3.** *The MRR (i.e., whether the messenger is seen as a Partner or an Opponent) will moderate the influence of a risk warning message containing a descriptive social norm on the deaf effect. Specifically, the recipient will be more likely to listen to a risk warning message containing a descriptive social norm when the messenger (i.e., auditor) is seen as a Collaborative Partner. Conversely, a risk warning message containing a descriptive social norm will be less effective or even counterproductive when the messenger is seen as an Opponent.*

Based on our literature review and theorizing, we developed the research model shown in Figure 3-1 which we test in this study.

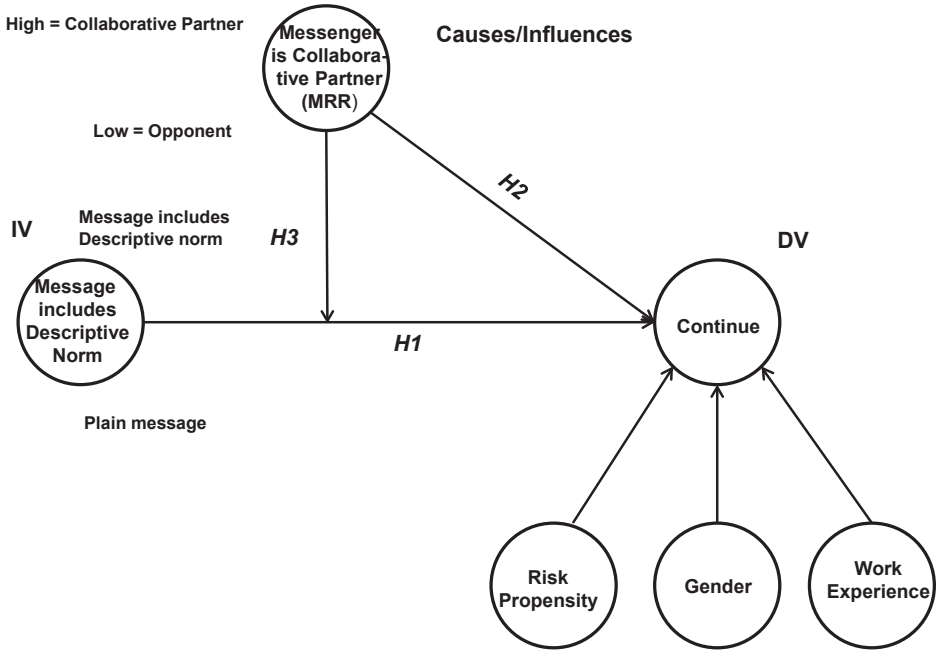

Figure 3-1. Research Model

As shown in the model, our dependent variable is a decision-maker's willingness to continue a troubled project, which serves as a proxy for the deaf effect, as it provides an indication of the degree to which the auditor's risk warning and recommendation to redirect the project influences the decision-maker. Our predictor variable is whether or not the message delivered by the auditor contains a descriptive social norm. The model suggests that MRR (whether the messenger is seen as a Collaborative Partner or an Opponent) will moderate the relationship between a descriptive social norm and the deaf effect.

In our analysis, gender, work experience, and risk propensity were included as control variables. We based this inclusion on the results of prior work by Cuellar et al, (2006) revealing that the deaf effect can be influenced by both gender and work experience, as well as prior work by Lee et al, (2014) showing that risk propensity can also influence the deaf effect.

3.4 METHOD

To test our model we conducted a scenario-based laboratory experiment. We created the setting for the investigation of the phenomenon and we had control over the in-

dependent variable(s) and the random assignment of the participants to the treatment and non-treatment conditions (Boudreau et al, 2001). We manipulated the risk warning message of the internal auditor (by including or not including nudging with a Descriptive Social Norm) and the Messenger-Recipient Relationship (MRR) (Collaborative vs. Opponent) in a 2x2 factorial design.

Participants

Our participants consisted of 171 undergraduate students who were enrolled in Accounting and Information Systems courses at two Belgian Universities. The students had an average age of 23 years and an average work experience of 1.5 years. Seventy-five percent of the students had a European nationality and the majority were Belgian citizens. Sixty-three percent were male and 37% were female.

Prior to starting the experiment at the beginning of class, participants were told that the study was about business decision making in an information system project situation. Participation in the experiment was voluntary and participants were told that their answers would be anonymous. Then we assigned randomly participants to one of the four experimental scenarios (i.e. treatment groups). Of the 171 responses, 147 were usable; 24 responses could not be used either because they were incomplete or because multiple responses were provided to the main question (i.e., the decision to continue).

Keil et al, (2007) and Keil and Park (2009) provide an extensive discussion of the appropriateness of student subjects in the immediate domain of experiments involving bad news reporting on IT projects. They state that the decision to use student subjects must be evaluated on a case-by-case basis (Keil and Park, 2009) and argue that for studies focusing on theory application such as ours, data from student subjects are acceptable (Keil et al, 2007). While the appropriateness of student subjects has been debated, Sitkin and Weingart (1995) suggest that the use of student subjects is often appropriate when the experiment involves human decision making. Prior research on the deaf effect has employed student subjects (Cuellar et al, 2006; Lee et al, 2014). Moreover, Nuijten et al, (2016) tested a core model of the deaf effect including the MRR construct with both students and practitioners and found that the pattern of results was consistent regardless of the type of subject used in the experiment. This finding is consistent with prior work showing that "real-world decision makers possess information-processing characteristics and biases that are extremely similar to their student counterparts" (Ashton and Kramer, 1980, p. 3). Finally, according to Cook and Campbell (1979), it is perfectly appropriate to trade off some external validity in order to achieve strong internal validity. In this respect, experiments with student subjects are beneficial because they provide a relatively homogenous subject pool, and enable the experiment to be conducted in an isolated and controlled setting (i.e. a classroom), using standardized procedures. Once internal validity has been established for the purpose of theory testing, external valid-

ity can be further addressed by testing across multiple contexts and different types of participants.

Scenario and Treatments

In our scenario we asked the participants to consider themselves to be the project owner of an information systems project within an insurance company. The scenario used in this experiment was based on one used by Nuijten et al, (2016) and involves a situation in which the subject (playing the role of a project owner) is informed that Mr. Johnson from the Internal Audit department has recently found serious problems with the project and advises that the project should be redirected (i.e., not continue as planned).

Consistent with prior studies in behavioural economics that have used similar treatments (e.g., Goldstein et al, 2008; Kredenster et al, 2012), we created the following message for our descriptive social norm treatment: "Mr Johnson informed you that MOST of your PEER COLLEAGUES Project Owners within THIS company REDIRECT the project under these circumstances. Subsequently, Mr. Johnson advised you to JOIN YOUR FELLOW PEERS and REDIRECT the project LIKE YOUR PEERS DO." As a control, we crafted the following message that did not include a descriptive social norm: Mr. Johnson advised you to REDIRECT the project.

In a manner consistent with Nuijten et al, (2016), we independently manipulated the messenger-recipient relationship (MRR) to be either collaborative or not. For the collaborative treatment, we stated: "Mr. Johnson (the Internal Auditor) has a long history of working COLLABORATIVELY with IS project teams with the goal of helping to identify and manage project risks, thus enabling project owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a TRUSTED PARTNER to management." For the opponent treatment, we stated: "Mr. Johnson (the Internal Auditor) has a long history of working AGAINST IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an OPPONENT WHO IS NOT TO BE TRUSTED."

The complete scenario and manipulations can be found in the Appendix.

Constructs and Measures

Our independent variables were manipulated and treated as dichotomous variables. The presence or absence of a descriptive social norm was captured in the variable SocNorm (1=Message including a descriptive social norm; 0=Message without a descriptive social norm). Messenger recipient relationship was captured in the variable MRR (1=collaborative partner; 0=opponent).

In our experiment we use the decision to continue a troubled information systems project (Continue) despite the auditor's risk warning and recommendation to redirect the project as the dependent variable. Consistent with Nuijten et al, (2016) we assessed this construct by applying two measurement items (Continue1 and Continue2).

Consistent with prior studies (Keil et al, 2000; Cuellar et al, 2006), risk propensity (RiskProp) was measured using four items adapted from Sitkin and Weingart (1995). In the Appendix all of the construct measures that were employed are shown.

3.5 RESULTS

Manipulation Checks

We conducted manipulation checks to ensure that our treatments were effective. The descriptive social norm manipulation check consisted of a single item which was used to assess whether subjects noticed and were able to recall whether or not the scenario contained a descriptive social norm. Possibly due to the placement of the manipulation check at the end of the experiment, it may have been difficult for participants to remember the details of the manipulation and thus forty-four participants did not pass the manipulation check question. To be on the conservative side and to ensure the manipulation validity of our study we only included respondents who passed the manipulation checks on social norms. Thus, we retained 103 responses for subsequent analysis.

As a manipulation check for MRR we adopted the 3-item scale used by Nuijten et al, (2016). A two-way ANOVA with interaction was conducted by entering the manipulations as independent variables and using the MRR manipulation check as the dependent variable. The two-way ANOVA confirmed that the MRR manipulation was effective and that there was no significant interaction effect. The results of this ANOVA are shown in Table 3-1a.

Table 3-1a. Manipulation Test ANOVA

Independent variable	Type III Sum of Squares	F	Sig.
Main Effect SocNorm	.468	.366	.547
Main Effect MRR	126.611	99.058	.000
Interaction Effect SocNorm * MRR	.097	.076	.784

Dependent Variable: MRR-manipulation check

R2 is .501

Measurement Model Assessment

For testing our research model, we chose Partial Least Squares (PLS) analysis. By using PLS we could assess both the measurement model and structural model together (Gefen et al, 2000; Gefen et al, 2011).

SmartPLS (Ringle et al, 2005) version 2.0 was used for the analysis. Before testing our structural model, we determined the validity of our measurement model through tests of convergent and discriminant validity as described by Chin (1998) and Fornell and Larcker (1981).

Convergent validity

Two different assessments were made for convergent validity: (1) individual item reliability, and (2) construct reliability. Individual item reliability was assessed by examining the item-to-construct loadings for each construct that was measured with multiple indicators. In order for the shared variance between each item and its associated construct to exceed the error variance, the standardized loadings should be greater than 0.70. As seen in Table 3-1b, all of our loadings exceeded this threshold.

Table 3-1b. Item to Construct Loadings

Construct	Item	Item-to-Construct Loading
Continue	Continue1	0.971
	Continue2	0.967
Risk Propensity	RiskProp1	0.791
	RiskProp2	0.819
	RiskProp3	0.791
	RiskProp4	0.775

We also considered the construct reliability for each block of measures, as shown in Table 3-1c. Composite reliability scores and Cronbach's alpha scores both measure the internal consistency among a given construct's items. Unlike Cronbach's alpha, the composite reliability score does not assume that all indicators are equally weighted. Therefore Cronbach's alpha tends to be a lower bound estimate of reliability (Chin, 1998). Bearden et al, (1993) claim that a score of .7 indicates extensive evidence of reliability. Table 1c shows that the reliability for each of our constructs exceeds this threshold. Fornell and Larcker (1981) view Average Variance Extracted (AVE) as a measure of construct reliability. The guideline threshold for AVE is 0.5, which means that 50 percent or more of variance of the indicators is accounted for (Chin, 1998). As Table 1c indicates, both of the multi-item constructs in our measurement model exceeded the established criterion for AVE.

Table 3-1c. Construct Reliability

	AVE	Composite Reliability	Cronbach's Alpha
Continue	0.939	0.968	0.935
RiskProp	0.631	0.872	0.805

Discriminant validity

We conducted two tests for discriminant validity. First, we calculated each indicator's loading on its own construct as well as its cross-loadings on all other constructs. In Table 3-2 we see that each indicator loads higher on its own construct than it does on any other constructs. We also see that the indicators for a given construct have a higher loading with their own construct than do the indicators associated with any other construct. This provides good evidence of discriminant validity (Chin, 1998).

Table 3-2. Item to Own Construct Correlation vs Correlations With Other Constructs

Construct	Item				
		Continue	Gender Expt2	RiskProp Expt1	WorkExp
Continue	Continue1	**0.97**	0.12	0.42	-0.01
	Continue2	**0.96**	0.17	0.39	0.05
RiskProp	RiskProp1	0.32	0.04	**0.79**	0.08
	RiskProp2	0.34	0.16	**0.81**	0.10
	RiskProp3	0.32	0.05	**0.79**	-0.02
	RiskProp4	0.34	0.12	**0.77**	-0.01
WorkExp	WorkExp	0.01	-0.10	0.04	**1.00**
Gender	Gender	0.15	**1.00**	0.12	-0.10

PLS Structural Model Assessment

Having an adequate measurement model in place, we tested our hypotheses by examining the structural model. The explanatory power of a structural model can be evaluated by examining the R-squared value for the ultimate dependent variable. Figure 3-2 shows that the explanatory power of our structural model is adequate with an R-squared of .422 for our dependent variable Continue.

After calculating path estimates for the structural model, we applied bootstrapping to generate the corresponding t-values. With significance levels of .05, .01 and 0.001, the t-values for a one-tailed test would be 1.645, 2.326 and 3.091, respectively (which is acceptable given the directional nature of the hypotheses). Path coefficients and t-values for the models are presented in figure 3-2.

As shown in figure 3-2, the SocNorm to Continue path is significant (path-coefficient of -0.150 and t-value of -1.805 and p= 0.036) and in the expected direction, thus indicating support for Hypothesis 1. The figure also shows that the path from MRR to Continue is significant (path-coefficient of -0.441 with t-value of 5.325 and $p < 0.001$) and in the expected direction, thus indicating support for Hypothesis 2.

In order to test our moderation hypothesis, we constructed an interaction term using the product indicator procedure as described by Chin et al, (1996). Figure 3-2 shows that the interaction term (SocNorm x MRR) was significant at the $p < .05$ level in a 1-tailed test (t=- 1.730 and $p = 0.042$), indicating that the effect of SocNorm on the deaf effect is strengthened when we shift from a messenger who is seen as an Opponent to one who is seen as a Partner. This result supports Hypothesis 3.

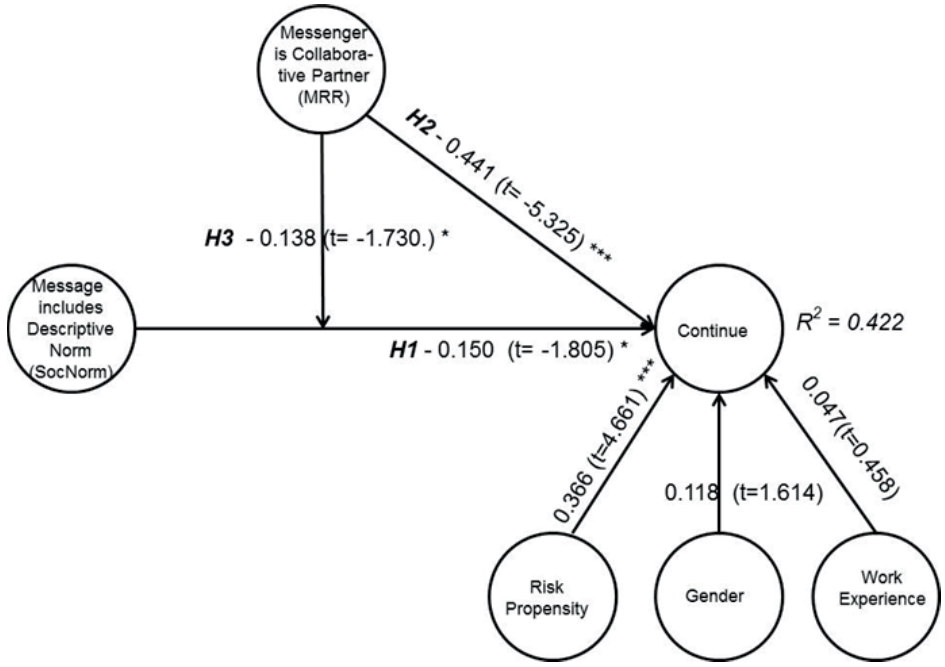

Figure 3-2. Structural Model Results
*significant at $p < .05$ level (one-tailed test)
** significant at $p < .01$ level (one-tailed test)
*** significant at $p < .001$ level (one-tailed test)

For interpretation of the moderating effect we present the interaction plot in Figure 3-3 below. In order to facilitate accurate interpretation of the figure, we performed a regression analysis in which we used the standardized versions of our control variables, i.e. risk propensity, gender and work experience, as suggested by Dawson (2014). Consistent with Aiken and West (1991), two lines were plotted, each representing one of the two

values of the moderator (MRR). The lines are not parallel, but do not intersect within the scale of treatment and measurement conditions we used in our experiment. As the sequence of the two lines stayed unchanged, this type of interaction is called "ordinal" (Jaccard and Turrisi, 2003, p.78).

The results of the moderation analysis show that the interaction effect between SocNorm and MRR on Continue is consistent with our expectations.

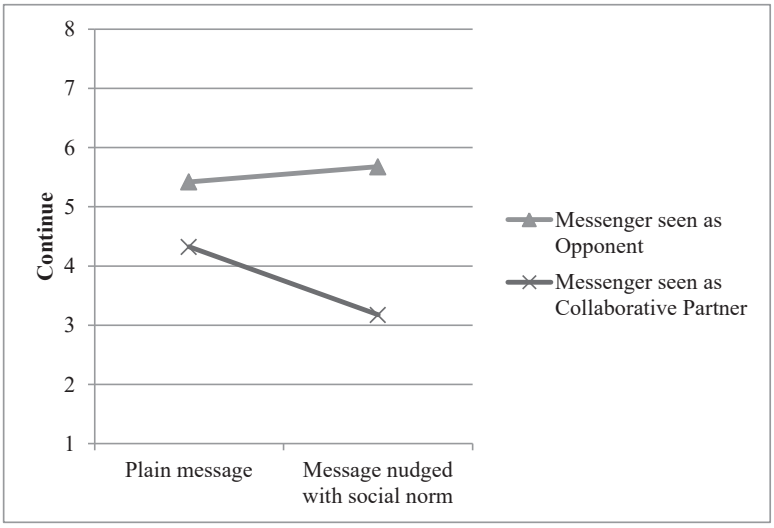

Figure 3-3. Interaction plots with MRR as moderator

We performed simple slope tests of these lines to determine if their slopes are significantly different from zero. As we can see from Figure 3-3, nudging with a descriptive social norm has the intended effect - i.e., reduces the deaf effect (as measured by the decision to continue) when the risk warning message comes from an internal auditor who is seen as a Collaborative Partner. To confirm this we performed a simple slope test in SPSS. The simple slope test revealed that the slope of this line was significantly different from zero (std. beta = -.326; p = .019). Based on the interaction plot, nudging with a descriptive social norm appears to have no effect or even a slightly opposite effect when the risk warning message comes from an internal auditor who is seen as an Opponent. A simple slope test revealed, however, that the slope of this line was not significantly different from zero (std. beta = .094; p = .525).

3.6 DISCUSSION

Before discussing the implications of our study, it is appropriate to consider the main findings and the limitations. The study's three main findings are:

(1) Nudging with a descriptive social norm can significantly reduce the deaf effect response to a risk warning issued by an internal auditor.

(2) The influence of a descriptive social norm on the deaf effect is strengthened when the messenger is seen as a Collaborative Partner rather than an Opponent. When the messenger is seen as a Collaborative Partner, decision makers are more likely to pay attention to the risk warning message of the internal auditor. However, when the messenger is seen as an Opponent, nudging with a descriptive social norm is ineffective.

(3) Decision makers are less likely to continue a failing course of action when the messenger who delivers a risk warning is seen as a Collaborative Partner rather than an Opponent. This finding is consistent with a previously reported study (Nuijten et al, 2016) and has replication value.

Limitations

This research involved a laboratory experiment which allowed us to achieve high internal validity but at some cost in terms of external validity. Experimental designs for studies such as ours should not be evaluated based on the degree to which they reflect actual organizational settings, but rather on whether they contribute to our ability to test causal relationships that extend our understanding of human decision making (Dobbins et al, 1988). To achieve a high level of internal validity our study took a necessarily narrow focus and involved a small number of variables so as to achieve a high degree of control. Hence, in our experimental approach we were unable to include all the complexities of real work situations. This trade-off of higher internal validity for lower external validity is common in laboratory experiments and should not be considered to be a flaw. At the same time, any generalization of the findings of this study to other settings should be done with caution. It is possible that the results would be different in other settings as there are other organizational and political factors that may also affect managers' deaf effect responses to risk warnings.

The use of student participants could also limit the external validity of our results. Although students often serve as valid surrogates for managers in this type of research, further research is needed to determine if these findings can be replicated with more experienced participants.

Despite the above limitations, this study contributes to our understanding of how internal auditors can reduce the deaf effect and thereby influence the trajectory of troubled IS projects by issuing risk warnings that contain descriptive social norms. This

is the first empirical study that we are aware of that examines whether nudging with a descriptive social norm can improve the effectiveness of the Internal Audit function with respect to the management of IT projects.

Implications

Prior research on the deaf effect has focused on characteristics of the messenger and his/her relationship with the recipient that tend to be stable and not easily changed. By focusing on what the auditor can do to craft the message in a way that overcomes the deaf effect, our research contributes to this discourse and addresses an important theoretical gap. Specifically, we introduce a novel research model that builds on prior work by Nuijten et al, (2016) and combines MRR with the idea of nudging with descriptive social norms.

Ours is the first study to show that nudging with a descriptive social norm can significantly reduce the deaf effect response to an auditor's risk warning. Further, our results suggest that nudging with descriptive norms is more effective when the technique is used in a stewardship based model whereby the descriptive norms provided by the messenger take place in an MRR context in which the messenger is viewed as a partner rather than an opponent. Finally, our results confirm the findings of Nuijten et al, (2016) who reported that when the messenger is seen as a collaborative partner this can have a direct impact in terms of reducing the deaf effect.

The study has important practical implications because it suggests that auditors can use tactics from behavioural economics (i.e. nudging) to reduce the deaf effect. Unlike other factors which have been discussed in the deaf effect literature, nudging is a technique that can be quickly and easily applied. That being said, the effectiveness of nudging will be maximized when auditors have invested the time to establish collaborative relationships with the managers to whom they must deliver risk warnings.

Further research is warranted to explore the effect of other types of nudging on the deaf effect response to risk warnings. One approach is to make things easy for message recipients by, for example, minimizing bureaucratic procedures or obstacles that could prevent them from taking appropriate actions to deal with risks. Another approach might be to change the character of project review meetings so that the default is that a project will not go forward in the presence of major risks that remain unaddressed. Conversely, if the situation can be structured in a way such that ignoring the auditor's risk warning and pressing forward requires effort to justify, this will have the effect of nudging the recipient in the desired direction. Another approach to nudging could involve choosing the best time in which to deliver the risk warning. For example, it may be the case that a recipient will be more likely to act on a risk warning immediately after a performance appraisal as opposed to before such an appraisal takes place. We hope that our work will encourage others to investigate other types of nudging that could be effective in reducing the deaf effect.

APPENDIX 1.

Scenario and Measures

Imagine that you are the Senior Vice President of the Pensions Operations department within a large insurance company. You inherited a prestigious IS-project called PENSION-VIEW. As Project Owner, YOU became responsible for the successful implementation of PENSION-VIEW and for realizing the benefits for your organization with this in-house developed system.

With this IS-project you could be the first insurance company in the market that grants all citizens (customers and potential customers) access to the complete set of their personal pension information. If your insurance company is the first in the market to provide this service at a reliable level, the expected gain to your company would be 60 million euros, as documented in a detailed business case for the project.

Your main competitors have all decided to wait for the supplier of a standard software-package to provide a module to the insurance-market that integrates and presents their pension data. If your implementation is too late or does not prove reliable during the first month of operations, you will miss your competitive advantage and your organization will gain nothing.

The main challenge and risk of the PENSION-VIEW project are the large number of interfaces to retrieve reliable information from other information systems that contain pension data.

Your PENSION-VIEW project is close to implementation and under time-pressure to continue implementation as planned.

According to standard procedures, Mr. Johnson from the Internal Audit department has recently reviewed the testing-procedures of your project.

Mr. Johnson reports that he has found serious weaknesses in the design and execution of the testing activities on the data exchange with other information systems that may lead to reliability problems in the first month of operations with severe consequences for the company. As a consequence, he reports that the project should be redirected (thus, not continue as planned).

Scenario 1 (with manipulation) (SocNorm = Nudged (Normative) message):

Mr. Johnson (the Internal Auditor) has a long history of working COLLABORATIVELY with IS project teams with the goal of helping to identify and manage project risks, thus enabling project owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a TRUSTED PARTNER to management.

Mr Johnson informed you that MOST of your PEER COLLEAGUES Project Owners within THIS company REDIRECT the project under these circumstances. Subsequently,

Mr. Johnson advised you to JOIN YOUR FELLOW PEERS and REDIRECT the project LIKE YOUR PEERS DO.

Scenario 2 (without manipulation) (SocNorm = Not Nudged (Plain) message):
Mr. Johnson (the Internal Auditor) has a long history of working AGAINST IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an OPPONENT WHO IS NOT TO BE TRUSTED.

Mr. Johnson advised you to REDIRECT the project.

Scenario 3 (with manipulation) (SocNorm = Nudged (Normative) message):
Mr. Johnson (the Internal Auditor) has a long history of working AGAINST IS project teams with the goal of exposing project failings, thus embarrassing project owners. He is seen as policeman who does not add any value to the development process. Thus, Mr. Johnson is treated as an OPPONENT WHO IS NOT TO BE TRUSTED.

Mr Johnson informed you that MOST of your PEER COLLEAGUES Project Owners within THIS company REDIRECT the project under these circumstances. Subsequently, Mr. Johnson advised you to JOIN YOUR FELLOW PEERS and REDIRECT the project LIKE YOUR PEERS DO.

Scenario 4 (without manipulation) (SocNorm = Not Nudged (Plain) message):
Mr. Johnson (the Internal Auditor) has a long history of working COLLABORATIVELY with IS project teams with the goal of helping to identify and manage project risks, thus enabling project owners to be successful. He is seen by the project management as adding value to the process. Thus, Mr. Johnson is treated as a TRUSTED PARTNER to management.

Mr. Johnson advised you to REDIRECT the project.

As you left the meeting with Mr. Johnson, you saw two courses of action. You could decide to REDIRECT the project (thus, not continue as planned). Or, you could decide to CONTINUE as planned (thus, move the system into production as planned).

You must decide which of the two courses of action to take.

MEASURES

Continue (dependent variable)

Variable	Item Wording
Continue1	(1=Definitely Redirect; 8=Definitely Continue) Indicate whether you would decide to continue the project as planned or redirect, and how strong your leaning would be
Continue2	(1=Strongly Disagree; 7=Strongly Agree) I will certainly continue the PENSION-VIEW project as planned (i.e., without redirection)

MRR (moderator variable)

Variable	
MRR	(1=Collaborative partner; 0=Opponent)

SocNorm (independent variable)

Variable	
SocNorm	(1=Message including a descriptive social norm; 0=Message without a descriptive social norm)

MRR_{mc} (used as a manipulation check)

Variable	(Anchors) Item Wording
$MRR_{mc}1$	(1=Strongly Disagree; 7=Strongly Agree) I consider Mr. Smith to be a trusted partner to my PENSION-VIEW project
$MRR_{mc}2$	(1=Strongly Disagree; 7=Strongly Agree) I consider Mr. Smith to be a collaborative partner to my PENSION-VIEW project
$MRR_{mc}3$	(1=Non-Trusted Opponent; 7=Trusted Partner) I consider Mr. Smith to be a _____ to my PENSION-VIEW project

Risk Propensity (used as a control variable)

Variable	Item Wording (Anchors: 1=Extremely LESS likely than others; 7=Extremely MORE likely than others)
RiskProp1	Your tendency to choose risky alternatives based on the assessment of other people on whom you must rely
RiskProp2	Your tendency to choose risky alternatives relying on an assessment that is high in technical complexity
RiskProp3	Your tendency to choose risky alternatives which could have major impact on the strategic direction of your organization
RiskProp4	Your tendency to choose risky alternatives despite considerable failures in risky choices you made in the past

4 The influence of 'Timing' on the effectiveness of the Internal Audit function

CHAPTER OVERVIEW

The focus of this paper is on the factors that determine the timing of the risk warning message communication by the internal auditor and hence that might be of influence on the effectiveness of Internal Audit (IA). While there has been a lot of research on various factors influencing IA effectiveness, to our knowledge, no attention has been paid for exploring timing in relation to IA effectiveness. In this study we investigate which factors determine the right timing (not too learly and not too late) for the internal auditor to communicate the risk warning message so that IA will be more effective. For the purpose of our study we defined IA effectiveness as the extent to which the auditee is willing to listen to the risk warning messages and implement the internal auditor's advice. We applied a Focus Groups research method by performing Focus Group interviews with internal auditors as well as auditees that were asked to freely discuss about these timing factors from their experience.

To our knowledge, this exploratory study is first within the research of IA effectiveness that obtained an overview of and insight in the various factors that might influence the right timing for communication of the risk warning message by the internal auditor. In general, the internal auditors and the auditee's agree with each other with regard to the importance of these timing factors for the effectiveness of the IA. There where discrepancies were noted in this respect, more alignment between the internal auditors and the auditees is required as to the right time to act.

In this paper we discuss the results and the implications of our qualitative study, both for research and practice of internal auditing. With this study we contribute to the knowledge of the factors influencing the IA effectiveness as well as the better understanding of 'timing' in decision making processes.

Keywords: timing factors, internal audit effectiveness, internal auditor, risk warning messages, focus groups

4.1 INTRODUCTION

"Timing matters. And it matters in every aspect of business: from the launch of a new product to decisions about when to change strategic direction, spin off part of a company, accept a counteroffer, or invest in new equipment. History is full of innovative products and services that failed because they were too early. The market wasn't ready. The technology had too many bugs. Supporting infrastructure didn't exist. More commonly, in a world racing on steroids, the fatal flaw is being late. We should have moved more quickly. Our strategy would have worked if only we had executed earlier. Timing is everything. Act too early or too late, and the results can be disappointing – or even disastrous." *(Albert, 2013, p.1).*

If the timing is everything in every aspect of the business to make a difference between success and disaster, it is also a relevant factor for the effectiveness of the Internal Audit (IA). With our study we aim to investigate these timing factors that may be of influence on the IA effectiveness.

The internal Auditor performs the audit according to prescribed audit methodology and standards. The audit process has its own planning and sequential steps and own rhythm. At the same time, the internal auditor operates in a dynamic organizational environment that has its own tempo and dynamic. In certain situations the internal auditor needs to communicate the findings and recommendations (i.e., the risk warnings) even though the audit investigation is not yet finalised, simply because the time is right to act and make a difference. In other situations the auditor considers to wait and holds reporting of findings and recommendations since the time is not right yet.

This brings us to the question 'which timing related factors determine that the time is right (not too early and not too late) for the internal auditor to communicate the risk warnings to the auditee so that the auditee will follow the internal auditor's advice?'

We know little about when is the time right for the internal auditor to communicate the risk warnings to the auditees. Lenz et al, (2014) found that the IA function can be considered effective when organizations follow their internal auditors' (independent) advice for improvement. According to Lenz and Sarens (2012) the IA report is an output that is effective when it may trigger intended change, and it is that intended change - that specific outcome and possibly lasting impact that accomplishes the desired improvement - that matters. And if the timing of 'when to act' is everything and it matters (Albert and Bell, 2002), we make the assumption that the timing of the internal auditor's trigger of the intended change matters in being effective.

Prior research on factors influencing IA effectiveness has tended to focus predominantly on factors such as the acceptance and implementation of the audit recommendations, the size of the audit department, compliance with the auditing standards, the positioning of the IA department in the organization and relation with the Audit Com-

mittee, and interaction with line managers (Arena and Azzone, 2009), top management support (Cohen and Sayag, 2010; Van Peursem, 2005; Mihret and Yismaw 2007), staff expertise, executing the audit plan, audit communication (Mihret and Yismaw, 2007), organizational support' (Sarens and De Beelde, 2006a and 2006b). Lenz and Hahn (2015) performed an comprehensive review on the available literature on effectiveness of IA and we note timing has not been addressed as a factor for IA effectiveness. Recent research by Nuijten (2012), Nuijten et al, (2014) and Nuijten et al, (2016) focussed on causes of deaf effect (the reluctance of the message recipient to hear risk warnings issued by the messenger) on strategic topics such as continuation of an escalating IS-project and suggested that deaf effect can be considered as a deficiency in the IA's effectiveness.

Despite the abovementioned and many other studies on the effectiveness of IA, our knowledge of the relevance of timing factors on the IA effectiveness is limited. Similarly, in the organizational literature there are not much studies on point-moment problems i.e. as a situation unfolds, when is the right moment to act (Albert and Bell, 2002).

With our research we aim to examine which timing related factors have influence on the IA effectiveness, which for the purpose of this study we relate to the deaf effect (Nuijten et al, 2012; 2014; 2016) i.e., the auditee's willingness to listen or not to listen to the internal auditor's risk warning message. We furthermore address an important theoretical gap concerning the effectiveness of IA and timing factors and aim to contribute to an improved understanding of the factors influencing IA effectiveness in general. With this study we also aim to contribute to the organizational literature of timing by providing input to better understand timing factors in decision making processes in general.

From a practical perspective, we aim at providing the internal auditors relevant input so that they can use the information about the right timing of their communication of risk warning messages to more effectively convince the auditees to accept and implement audit recommendations.

We address our questions in a qualitative research by using the Focus Groups interviews research method.

The paper is organised as follows: we start with a brief overview of the literature on the IA effectiveness and timing in general. We further describe our research question and research methodology. Then we further elaborate on our results followed by a discussion on the implications of our study for research as well as practice. In the Annexes we present the Focus Groups interview guide including the questions we used in our study as well as the comprehensive coding list including the code definitions that emerged from our study.

4.2 LITERATURE REVIEW

Our literature review aims to address an important knowledge gap concerning the IA effectiveness and the factors that determine the right timing for communicating the risk warnings by the internal auditor. During our literature review we were able to find a lot of research on effectiveness of the IA function; however we could not find researchers who specifically paid attention to the timing factors in terms of 'when is the right timing for the internal auditor to act', how and why these factors contribute the internal auditor's effectiveness.

Below we view a number of examples of recent literature to show the knowledge gap in the area of IA effectiveness, concerning the timing of the internal auditor's communication of the risk warning messages to the auditee.

We first start with a brief overview of timing literature from the organizational research followed by an overview of literature from the area of effectiveness of IA.

Timing in the organizational literature

Albert and Bell (2002) comprehensively examined the organizational literature and concluded there is a little research on point-moment problems i.e. as a situation unfolds, when is the right moment to act? (Albert and Bell, 2002). In the literature, timing questions are mostly focused on sequencing problems (Lieberman & Montgomery, 1988), rate problems (Eisenhardt, 1989; Brown and Eisenhardt, 1998, Gersick, 1989), synchrony problems (Perlow, 1999), deadlines (Waller et al, 2001), and duration and coordination (Ancona et al, 2001a). Twersky and Kahneman (1974) have examined errors and biases in decision making heuristics, but not specifically how these errors and biases influence the decision when to act (Albert and Bell, 2002). In the area of innovation literature, Tyre and Orlikowski (1994) examined the patterns of timing of adaptations of technologies that support productive operations. Rogers (1983) states that when organizations rush and introduce new technologies too early, they fail to identify and correct problems that later hamper productive use of the technology.

Mitchell and James (2001) examined the role of timing in theory development and research methodology and found that in any investigation of a causal relationship between X and a Y, the time when X and Y occur and are measured is crucial for determining whether X causes Y, as well as the true strength of that relationship. They however did not examine when is the right time of X and Y to occur so that their causal relationship is the strongest. Blount and Janicik (2001) examined how organizational actors respond when timing changes affect their own personal schedules and asserted that the successful timing of organizational activities depends not only on effective planning and coordination but also on temporal responsiveness-the ability of organizational actors to adapt the timing of their activities to unanticipated events.

Although the importance of timing is acknowledged in the literature (Blount and Janick, 2001, Ancona, et al, 2001b, Lawrence 1988, Albert and Bell, 2002), we still do not know much about when is the right point of moment to act. Hence, we know little about when is the right moment for the internal auditor to communicate the risk warning message to the auditees so that the auditee is more willing to listen to this risk warning message.

Internal Audit effectiveness

In the literature various scholars have defined 'effectiveness' in general and 'effectiveness of IA' in particular. According to Dittenhofer (2001) something is "effective" when it is adequate to achieve a desired condition. In relation to the internal auditing process, Dittenhofer (2001) posited that the achievement of the internal auditing process is when internal auditing accomplishes the task described by the internal auditing objective'. From that perspective, effectiveness is synonymous with the achievement of goals.

Internal auditing as an independent activity that helps organizations to improve their operations (IIARF, 2015). In this respect, Lenz (2013) pointed out that the IA function can be considered effective when organizations follow the internal auditors' (independent) advice for improvement (Lenz, 2013).

Furthermore, Sawyer (1995) considers management's commitment to use audit re Sawyer (1973) stated that management acceptance of, and support for, the Internal Audit function has long been seen as critical to the success to that function. commendations and its support in strengthening internal audit is vital to audit effectiveness (Sawyer, 1995). And Lenz and Sarens (2012) consider the IA report is effective when it brings to the intended change and accomplishes the desired improvement, which is all what matters.

In the internal auditing literature we could find a lot of research on effectiveness of the IA function; however we could not find researchers who specifically paid attention to the question which timing factors determine the right time of the internal auditor's communication of risk warnings, how and why these factors contribute the Auditee to listen or not to listen to the Auditor's risk warning message.

We address this knowledge gap below in this paper by showing some examples of researches in the area of IA effectiveness.

Mihret and Yismaw (2007) conducted a case study to identify factors impacting the Internal Audit effectiveness and stated that the Internal Audit is effective if it meets the intended outcome it is supposed to bring about. They used a model in their case study, which considers four potential factors – internal audit quality, management support, organizational setting, and Auditee attributes to explain audit effectiveness. They showed that interaction of these factors improves audit effectiveness; however their model did

not consider the 'when' (timing) aspect of the Auditor's communication of the risk warning messages to the Auditees.

Cohen and Sayag (2010) conducted an empirical examination of the IA effectiveness determinants and found evidence showing that next to top management support, organizational independence and career and advancement, also the quality of audit work in terms of compliance with formal standards as well as a high level of efficiency in the audit's planning and execution improves the audit's effectiveness. The timing factors however are not part of these determinants of the IA effectiveness. Mihret et al, (2010) provided propositions and research agenda on potential antecedents of internal audit effectiveness and its possible association with company performance. The timing of the Auditor's communication is however not mentioned among these antecedents of internal audit effectiveness. Similarly, Arena and Azzone (2009) summarise three approaches employed in the extant literature to evaluate IA effectiveness: (1) those using the level of implementation of internal audit recommendations (Mihret and Woldeyohannis, 2008; Arena and Azzone, 2009); (2) output or outcome measures (using opinion of internal audit customers, for example management (Arena and Azzone, 2009) and (3) process measures (compliance with the Statements for the Professional Practice of Internal Auditing) (Al-Twaijry et al, 2003). According to Soh and Martinov Bennie (2011) in practice, the most commonly employed measures of IA effectiveness are still related to its efficiency with regard to delivery of the annual IA work plan and the acceptance and adoption of IA recommendations. These measure still do not include the timing of the communication of the risk warning messages by the Internal Auditor.

Based on survey data from 46 heads of internal audit (chief audit executives, CAEs) in private organizations in Germany, Lenz and Sarens (2012) and Lenz et al, (2014) identified four key dimensions or categorical blocks of effectiveness of IA functions: organization, IA resources, IA processes and IA relationships. Although quite comprehensive tough, this study do not include the timing dimension that may be of influence on the effectiveness of the internal auditor.

Another paper worth mentioning here is the paper of Lenz and Hahn (2015). Recently, Lenz and Hahn (2015) performed a comprehensive review on the available literature on effectiveness of IA. By generally considering publications from 1999 onward, their paper provided a synopsis of what academic literature says about IA effectiveness. When providing a review of the existing empirical literature on IA effectiveness, Lenz and Hahn (2015) distinguished two different streams, the "supply-side" perspective, i.e. empirical studies based on self-assessments of the Auditors, and the "demand-side" perspective, i.e. empirical studies based on other stakeholders' perspectives. While Stream 1 and stream 2 address important factors of the internal audit effectiveness, the subject matter related to role of the timing factors in the internal audit effectiveness is still underexamined area.

Elliott et al, (2007) do not examine the timing factors as to the right moment for the internal auditor to act but in their paper they make the assertion that IA reports are not always well received, they are sometimes not perceived well and their findings are not always viewed as particularly significant, at times as trivial. This could be an indication that there are factors that could be determinants of the 'right moment' for the Internal Auditor to communicate the risk warnings so that the Auditee will view his/her message as particularly significant in trivial moments and will listen to it.

The above examples of studies on IA effectiveness do not consider the timing factors that may be of influence on the effectiveness of the IA. Therefore with this study we are attempting to identify the timing factors influencing the right moment for the internal auditor to communicate the risk warning message to the auditee so that the auditee will be willing to listen more to this risk warning message. This is related to both the timing of the reporting/communicating the risk warning messages (when is the best time to address a potential audit issue) by the internal auditor as part of planned audit engagements but also to the communication of the risk warning messages outside audit assignments (like for example during account management meetings with auditees or other occasions when the auditor has contact with the auditee).

4.3 RESEARCH QUESTION

We define the following research question:

	Research Question	Type of Question
1	*Which timing factors are proposed to be of influence on the Auditee's willingness to listen or not to listen to the Auditor's risk warning message?*	Why (Causal relationship)
1.1	*How do the timing factors influence (in general) the Auditee's decision to listen (or not to listen) to the risk warning message*?	How

Based on our literature review for the purpose of this study, we define the effectiveness of IA function as Auditee's willingness to listen or not to listen to the Auditor's risk warning message.

In this study we do not use a model based on a specific theory on which to base our analysis of the timing factors we want to explore.

4.4 RESEARCH METHOD

In this section we elaborate thoroughly our systematic approach we employed for data gathering and their analyses. In line with Gioia et al, (2012) in this section we explain exactly what we did in designing and executing the study and the procedures we used to define our categories, themes, and dimensions.

Focus Groups interviews design

This study is a qualitative exploratory study based on a Focus Groups interviews method.

Focus groups are first mentioned as a market research technique in the 1920s (Basch, 1987) and were used by Merton in the 1950s to examine people's reactions to wartime propaganda (Kitzinger, 1994). Morgan (1997) defines Focus Groups as a research technique that collects data through group interaction on a topic determined by the researcher. "A Focus Group isn't just getting a bunch of people together to talk" (Krueger and Casey, 2009, p. 2). A Focus Group is a special type of group in terms of purpose, size, composition and procedures. It is a way to better gather information to understand how people feel or think about an issue, product or service. Focus Groups are used to gather opinions (Krueger and Casey, 2009, p. 2). The group is 'focused' in the sense that it involves some kind of collective activity – such as viewing a film, examining a single health education message or simply debating a particular set of questions (Kitzinger, 1994).

Focus Groups are relatively inexpensive and can provide fairly dependable data within a short time frame (Sekaran and Bougie, 2013, p. 113).

The purpose of our study is to identify the timing factors that may be of influence of IA effectiveness and look for any patterns of these timing factors. We intend to use the qualitative data obtained in our Focus Groups interviews to deeper understand the phenomenon under investigation and for later quantitative testing in our next study. The output of the session is a list of ideas and behavioural observations, which we aim to use for quantitative testing in further research. In exploratory research, the qualitative data that Focus Groups produce may be used for enriching all levels of research questions and hypotheses, and for comparing the effectiveness of design options (Blumberg et al, 2014, p. 157). Therefore we believe that this method will be most suitable to apply in our study.

In our Focus Group interviews we were interested in what the internal auditors and the auditees think about the timing factors that may influence the effectiveness of IA function as well as how they think and why they think as they do. According to Sekaran and Bougie (2013) Focus Groups discussions on a specific topic at a particular location and at a specified time provide the opportunity for a flexible, free-flowing format for the members. Therefore we invited the participants to talk freely in their native language on

the subject and we used unstructured open- ended questions. This was in accordance with the approach by Sekaran and Bougie (2013) who say that the unstructured and spontaneous responses are expected to reflect the genuine opinions, ideas, and feelings of the members about the topic under discussion (Sekaran and Bougie, 2013, p. 113-114).

The goal of our study is to go 'in-depth' into the topic, and therefore we spend large amount of time conducting the research with a relatively small number of people. Therefore our study is not intended to generalize.

We planned two Focus Groups interviews with representatives of Internal Audit and two Focus Groups interviews with representatives of management (the 'Auditee') within a large Dutch financial institution. This is in line with the Focus Groups approach (Kitzinger, 1994) according to which many 'focus group studies' rely on no more than 4 or 5 groups, and this may be a perfectly adequate number when working with particular populations (Kitzinger, 1994). Morgan (1997, p. 43-45) recommends conducting three to five Focus Groups interviews to obtain trustworthy answer to the research question as more groups seldom provide meaningful new insights and are costly. Additionally, we applied a mix-and-match design according to Morgan (1997). This implies that next to the four homogenous Focus Groups, we planned one mixed Focus Group interview (three representatives of internal auditors and three representatives of the auditee together). By having a mixed discussion, we aimed at obtaining new statements that would not come up among those who will share the same perspective (Morgan 1997, p. 68).

Our decision of whom to invite in the Focus Groups interviews was driven by the purpose of our study In Focus Group research the strategy is to use "purposeful" sampling whereby the researcher selects participants based on the purpose of the study (Krueger and Casey, 2009, p. 64; Morgan 1997, p. 35). According to Morgan (1997) a randomly sampled group is unlikely to hold a shared perspective on the research topic and may not even be able to generate meaningful discussion. As the purpose of our study is to explore and understand the timing factors that are of influence on the right timing the internal auditor to communicate the risk warning message to the auditees so that the auditee will be willing to listen or not listen to this message, we distinguished two types of participants in our study: the internal auditors and the auditees. Separating the participants in two groups was based on the procedures by Krueger and Casey (2009) who recommend doing so in order to be able to compare and contrast how the internal auditors and auditees talk about the issue under investigation. (Krueger and Casey, 2009, p. 66-67).

In line with Morgan (1997), we composed our Focus Groups of homogenous groups of people – people with something in common that is relevant to the topic of the study. The goal is homogeneity in background and not in attitudes (Morgan, 1997, p. 35-37).

Thus, our Focus Groups were homogenous in nature as we defined two Focus Groups consisting of internal auditors and two consisting of representatives of the auditee and one mixed group of internal auditors and auditees.

All the Focus Group interviews were conducted by the researcher. Each Focus Group consisted of six participants. This choice was made based on the approach of Krueger and Casey (2009) who defined the ideal size of a Focus Group for most non-commercial topics to be five to eight participants. According to Krueger and Casey (2009) the quality of the study is not dependent on the size of the sample but the intent is to achieve 'theoretical saturation' which is akin to redundancy (Krueger and Casey, 2009).

Most of the research participants in our Focus Groups already knew each other. This choice was based on available guidance we could find in the literature. Decisions for choice between strangers and acquaintances should rely on the basic criterion of whether a particular group of participants can comfortably discuss the topic in ways that are useful to the researcher (Morgan, 1997, p. 37-38). At the other hand, we could not avoid that the participants were acquaintances to each other due to the organizational setting in which we conducted our research. The fact that research participants already knew each other had the additional advantage that friends and colleagues could relate each other's comments to actual incidents in their shared daily lives (Kitzinger, 1994). According to Morgan (1997), in some cases, it may be almost impossible to recruit a full group of acquaintances (e.g. among service recipients); in other cases, it may be almost impossible to avoid (e.g. in organizational settings).

Tables 4-2 throughout 4-6 in Annex 2 provide an anonymized insight into the background of our respondents.

Data collection

Throughout the study we used accepted systematic procedures for data collection, data handling and data analysis. The conclusions of our study are drawn on the level of the Internal Audit function being our unit of analysis (the 'thing') we study (Blumberg et al, 2014; Sekaran and Bougie, 2013). The data for the purpose of this study has been collected at individual level of observation i.e. the level of internal auditor and auditees.

As explained earlier, we conducted five Focus Group interviews of approximately 1 hour. With the fifth interview we reached the goal of 'saturation', which was the point at which additional data collection no longer generated new understanding about the topic (Morgan, 1997, p. 43).

Each Focus Group interview lasted approximately 1 hour and was tape recorded.

For conducting our interviews we created and followed accepted protocol according to Krueger and Casey, (2009) to ensure that results are trustworthy and accurate (see Appendix 1). To determine whether the topic will work in a Focus Group setting we discussed the approach with and obtained input from other professionals.

We asked open-ended questions about the timing factors that may be of influence of IA effectiveness during the interview. For Krueger and Casey (2009), open-ended questions are a hallmark of Focus Group interviewing. These questions imply that a few words or a phrase are insufficient as an answer and they trigger explanations, descriptions or illustrations (Krueger and Casey, 2009, p. 200-202).

During the interviews, the researcher listened carefully to the participants. The researcher took brief minutes by writing key words and phrases per participant. During the interviews, we asked participants to explain their responses if these were unclear to us. At the end of each interview, a summary of the key findings was created by the researches and the participants were asked to confirm or adjust the summary if incorrect or incomplete (Krueger and Casey, 2009, p. 200-202).

From each taped recorded interview we produced a literal transcript that was executed by an independent service provider. This resulted in approximately 25 pages transcript per interview. The transcripts were checked by the researcher for completeness and correctness and corrected where necessary.

Coding

First Cycle coding

The purpose of our data analysis is to identify the factors determining the right timing for communicating the risk warning message by the internal auditor and hence that may be of influence of IA effectiveness. We also looked for any patterns of these timing factors. We performed our data analysis by using the text analysis software Atlas.ti.

Based on the iterative coding approach of Saldana (2013), we divided our coding into two stages: First Cycle and Second Cycle coding. For the First Cycle coding we applied the coding procedures for descriptive coding according to Miles et al, (2014). A descriptive code assigns labels to data to summarize in a word or short phrase – most often a noun – the basic topic of a passage of qualitative data and eventually provide an inventory of topics for indexing and categorizing (Miles et al, 2014, p. 74).

We developed a coding scheme with codes that emerged after conducting all our interviews. This coding scheme included different descriptive codes by which we identified and classified specific words or phrases in the text related to the timing factors. As we could not find previous studies that explore the timing factors related to the effectiveness of the IA function, our coding approach was not set before going to the interviews and we did not define in advance a list of codes or phrases based on theory regarding the timing factors. Our codes emerged from and were defined during the First Cycle coding process.

According to Miles et al, (2014, p. 81-85) codes will drive the retrieval and organization of the data for analysis and therefore they must be precise and their meaning shared amongst analysts. Miles et al, (2014) explain that whether codes are pre-specified or

developed along the way, clear operational definitions are required so they can be applied consistently by a single researcher over time, and multiple researchers will be thinking about the same phenomena as they code (Miles et al, 2014, p. 84). Similarly, as we developed our codes iteratively along the way, we made clear and precise rules and definitions for each code we applied. Each code definition included the description of the code (the 'what') and whether the source of the code was the Auditor or the Auditee (the 'who'). According to Weber (1984), the advantage of codes that are explicit, clear and precise is that such explicit codes should generate similar results in different context, which can establish a high level of reproducibility.

Based on the approach of Miles et al, (2014) we further discussed our code rules and definitions with other researchers that resulted in their improvement and fine-tuning as the study proceeded.

Second Cycle coding

In the First Cycle coding we initially summarized segments of data and detected reoccurring patterns. We then proceeded with the Second Cycle coding by pattern coding. With pattern coding as a Second Cycle method, we grouped these summaries into a smaller number of categories, themes, or constructs (Miles et al, 2014, p. 86). This is also in line with the Second Cycle approach by Saldana (2013) who prescribed collapsing the original number of First Cycle codes into a smaller number as the data is reanalysed and this way it could be found that larger segments of text are better suited to just one key code rather than several smaller ones (Saldana, 2013, p. 206-209).

Consistent with this approach, we grouped the First Cycle codes in categories or themes resulting in key codes including the codes that have something in common with each other. For this we followed an iterative process again as we did during the First Cycle coding (Miles et al, 2014, Saldana, 2013, p. 70-93). Consequently we improved the themes by eliminating duplicate or redundant themes, combining and reorganising the themes.

All the individual codes, their coding definitions along with a list of words, phrases and sentences that qualify for receiving a code as well as the code categories are provided in the Coding schemes in tables 4-8 throughout 4-25 in the Appendix 3. The categories we defined and the category definitions according to which the individual codes were assigned to a category can be found in table 4-7, in the same Appendix of this paper.

4.5 RESULTS

As described in the previous section, we scanned all five transcripts of the Focus Group interviews for specific words and phrases that can be associated with the factors that

determine the right timing for the internal auditor to communicate the risk warning message to the auditee.. After completion of our coding procedures, we proceeded with performing an analysis to see what timing factors were indicated by the internal auditors and the auditees when talking about IA effectiveness and we analysed the differences.

During the iterative coding and analysis we identified various timing factors which were mentioned by the internal auditors and the auditees to be of importance for the IA effectiveness. This list might be useful since it could be used in future research of IA effectiveness in specific as well as the timing in general.

Table 4-1 lists the timing factors mentioned by the internal auditors and the auditees per category in alphabetical order (based on Atlas.ti). It shows how often timing factors were mentioned by the internal auditors and the auditees during the interviews. We conducted five Focus Group interviews and the fifth interview reached the point of 'saturation' as the additional data collection no longer generated new timing factors. In the two interviews with only internal auditors and one mixed interview, which together lasted approximately three hours, there were in total 109 instances of timing factors. Similarly, in the two interviews with only auditees and one mixed interviews, which together also lasted approximately three hours, there were in total 102 instances of timing factors.

As with other qualitative methods of data collection, there are no hard and fast rules when it comes to reporting results. Our study sought to obtain perceptions of people on a complex topic. According to Krueger and Casey (2009) no instrument is available to measure the multiple views obtained on a complex concept (Krueger and Casey, 2009, p. 201). According to Morgan (1997), there are three basic factors that influence how much emphasis a given topic should receive in interpreting and reporting focus group data: how many groups mentioned the topic, how many people within each of these groups mentioned the topic, and how much energy and enthusiasm the topic generated among participants (Morgan 1997, p. 63).

Additionally, according to Morgan (1997) quantitative uses of coding are possible as these could be useful in analysing data from focus groups (Morgan, 1997, p. 61). According to Miles et al, (2014) in qualitative research a lot of counting occurs when a theme or a pattern is being isolated as this is done based on something that (a) happens a number of times and (b) consistently happens in a specific way. The estimations we make in our qualitative analysis like "important", "significant", or "recurrent", are, in part, based on counting, comparisons, and weights (Miles et al, 2014, p. 282).

Table 4-1. Summary of occurrences of timing factors by Auditors and Auditees

Category Timing factors	Occurrences Auditors	Occurrences Auditees
Alignment	9	9
Audit issue classification	5	9
Audit opinion	1	1
Audit procedures	19	19
Auditee's agenda	13	13
Change	10	8
Character	3	1
Content	2	0
Design phase	3	0
External factors	1	2
Focus	1	6
Incidents	3	6
Preference	5	5
Project	4	7
Regulator	2	3
Relation Auditor-Auditee	4	1
Strategic events	8	3
Type of audits	16	9

Simple counting of codes without performing any statistical tests was applied for analysing content of Focus Groups in the study of Morgan and March (1992). Also Shively (1992) has used comparisons between ethnic groups by descriptive counting. Similarly, in their school improvement study, Miles et al, (2014), did a content analysis of the responses, totalled them and derived a display of the results (Miles et al, 2014, p. 283).

Following the examples in the abovementioned studies, we first analysed the data collected from our Focus Groups interviews by counting how often certain timing factors were mentioned during the interview and by which group. Although we paid attention to how frequently the timing factors were mentioned by the internal auditors and the auditees, we did not assume that what is said most frequently is most important. Krueger and Casey (2009) advise that sometimes a really key insight might have been only said once in a series of groups (Krueger and Casey, 2009, p. 121). Krueger and Casey (2009, p. 127) further advise to pay attention to frequency, but counting things up as numbers can be misleading in focus groups reports. In line with Krueger and Casey (2009, p.127), we did not include numbers in our analysis but we used modifiers like no one, some, a few, most or all.

We devoted some more space to explaining and comparing the emerging themes and patterns derived of our data from the internal auditors and the auditees. We compared and contrasted across groups and described what was said in the groups (Krueger and

Casey, 2009, p. 121). As advised by Gioia et al, (2012), we included informant quotes to be able to see the linkages among the quotes in the text and the identified concepts/ themes and dimensions.

Identified timing factors

In the below section we describe the outcomes of our analysis of the timing factors. Our first outcome is the list of timing factors influencing the IA effectiveness that were identified by the internal auditors and the auditees in the Focus Groups interviews. We identified in total 47 timing factors (refer to table 4-8 throughout 4-25 in Appendix 3) and we categorised these into 18 timing factors categories (refer to table 4-1 above).

The second outcome of our study is obtaining an insight of which timing factors are the internal auditors' and auditees' opinions in line which each other (with regard to number of occurrences) as well as in their opinions that differ from each other (with regard to number of occurrences).

As earlier described in this paper, we first counted how often the identified timing factors were mentioned during the Focus Groups interview and by which group. But we did not assign any importance based on the number of occurrences of the mentioned timing factors (Krueger and Casey, 2009).

The full excel overview of the timing factors, the number of their occurrences and quotes can be obtained from the researcher upon request.

Balanced view

In this paper first we show (in alphabetical order) the timing factors identified in our study for which we see a pattern of balanced view (i.e. equal number of occurrences) between the internal auditors and the auditees. We continue with examples of different views (differences in number of occurrences) as to the role that these timing factors may have for determining the right timing for the internal auditor to act and hence for the IA effectiveness.

Alignment

For the timing factor *alignment* both the internal auditors and the auditees showed a balanced view i.e. equal number of occurrences. (refer to table 4-8 in Appendix 3). From the various identified alignment timing factors (refer to table 4-8 in Appendix 3), the auditees mentioned *the alignment among the three line of defence functions* the most. One of the auditee's said (quote translated from Dutch): *"It is nonsense if the Auditor reports on a certain issue when the second line is not yet ready with its investigation"*. This is in line with what the internal auditors said as one of the internal auditors said (quote translated from Dutch): *"The alignment among the first, second and the third line of defence is very important for the timing: first line identified issues first, thereafter second line does its check*

and the third line (internal auditor) comes after the first and the second line have done their job. This way, the Auditor will be able to communicate the right message to Auditee".

Audit opinion

The analysis of our data showed that the internal auditors and the auditees mentioned this factor in equal instances (only once) but their views were different with regard to the content of the timing factor. So, one of the auditee's said (quote translated from Dutch): *"The auditor is always too late in communicating the audit opinion. The audit opinion is based upon a situation at an X-point of time and at the time that his message comes to upper management it is too late as they are more up to date and have already resolved the issue".* While one of the internal auditors said (quote translated from Dutch): *"The acceptance of the auditor's message depends on the context defined by the auditor. And if the auditor has created a context by communicating an audit opinion of the report as 'weak, he can start with communicating this audit opinion early so that the auditee will react on the issues smoothly. If the audit opinion is 'adequate' and this is early communicated then nobody will pay attention to the audit issues".*

Audit procedures

The analysis of the interviews shows that *audit procedures* (refer to table 4-11 in Appendix 3) as a timing factor was mentioned most frequently and in equal occurrences by both the internal auditors and the auditees. This may be an indication that both the internal auditors and the auditees recognised the *audit procedures* equally as an timing factor and they both consider this timing factor to have an equal influence on the right moment the internal auditor to communicate the risk warning message to the auditee.

From all the combined instances of *audit procedures* identified during the interviews with internal auditors, the audit procedures related to having *periodic update meetings with the auditee* during the audit and the audit procedures related to having *sufficient audit evidence prior to communicating the risk warning message* were mentioned the most. With regard to the audit procedures related to the periodic update meetings, one of the internal auditors said (quote translated from Dutch): "*We introduced weekly update meetings with the auditee because they requested these meetings from us. The auditees did not want to be surprised by us if we communicate our issues at the end of the audit. And this has to do with the timing*". This was confirmed by the internal auditee as one of the auditees said (quote translated from Dutch): "*The best practice that I experience is that I agree with the Auditor to have weekly meetings during the audit. Even if we seat half an hour together to discuss about potential audit issues, that helps me in the discussio*n later *on and in taking action for resolving the issues"*.

With regard to the *audit procedures related to having sufficient audit evidence prior to* com*municating* one of the internal auditors said (quote translated from Dutch): *"At one*

hand as an auditor you want to signal a high risk issue as soon as possible but at the other hand you still have to properly investigate the matter in order to determine the impact of the issue". This seems to be partly in line with the expectation of the auditee as one of the auditees said (quote translated from Dutch): "*There should be an evidence of course, there should be a feeling that something is wrong, but I do not like to wait six months to hear of it. I want the Auditor to walk into my office right away and inform me about the issue*".

From all the combined instances of *audit procedures* identified during the interviews with auditees, the *audit procedures related to the factual accuracy* of the identified audit issues by the internal auditor and the *audit procedures related to the auditor's audit time schedule* were mentioned the most. One of the auditees said the following regarding the audit procedures related to the factual accuracy of the identified audit issues (quote translated from Dutch): *"The moment when the Auditor aligns the factual accuracy of the audit issue with the Auditee is of crucial importance for acceptance of the audit recommendations by the Auditee*". This was found also addressed by the internal auditors as one of the internal auditors said (quote translated from Dutch): *"We can communicate our audit issue at once but in our methodology we have to do a factual accuracy check before we communicate our audit issue. So, the communication is done in several steps"*.

Auditee's agenda

As with the audit procedures, the combined instances of the *auditee's agenda* as a category of timing factors was in general also identified significantly more often compared to the other identified timing factors (refer to table 4-12 in Appendix 3). The auditees and the internal auditors indicated this factor in equal number of occurrences. Specifically, from the interviews we noted that *the auditee's agenda related to too busy periods* of the auditee throughout the year was mentioned in equal instances by the internal auditors and the auditees. As an illustration, one of the auditees said (quote translated from Dutch): *"I have experienced very often when we have very busy periods we ask the Auditor to come one month later because then we can be able to listen to his message*". This view is shared by the internal auditors as one of the internal auditors said (quote translated from Dutch): *"I am doing an audit within a department and I know, two weeks in the month you are not welcome as they are doing their reconciliations and closures. In this period the Auditee is not receptive for our message"*.

From the collected data in the interviews we noted some instances when the internal auditors mentioned *the auditee's agenda related to their appraisal cycles by the end of the year* to have a role in determining the right timing of the internal auditor's risk warning message. For instance, one of the internal auditors said (quote translated from Dutch): *"We notice that in the last time it is more and more difficult to us to report on audit issues as we are moving towards the end of the year because everyone wants to have a clean sheet at the end of the year. And this has to do with the Auditees appraisals and KPI's and that kind of*

things". This view was also expressed by the auditees in two instances during our interviews. For instance, one of the auditees said (quote translated from Dutch): *"Sometimes I have the feeling that we do not want to get any audit issue from the Auditors at the end of the year. This has to do with our various KPI's etc. etc."*. It is interesting to note that in all four interviews this timing factor was mentioned by both the internal auditors and the Auditees; however in the fifth interview which was mixed interview with internal auditors and auditees this timing factor was not mentioned at all by both parties. This may indicate that the appraisal cycles and the KPI's of the auditees is a sensitive topic and the internal auditors and the auditees presumably do not feel comfortable to discuss this topic in a mixed Focus Group interview.

Another factor influencing the timing of the internal auditor's risk warning message identified by the auditees is the *auditee's agenda related to the occasions when the auditees are themselves busy improving their organization*. In this respect, one of the auditees said (quote translated from Dutch): *"Nothing is more annoying than when we are long busy by ourselves with building something and the Auditors come later with his message 'by the way you have forgotten to build a dual control somewhere'. Then it is too late, it costs much money and much hassle"*.

Only one internal auditor in the interviews mentioned this timing factor in relation to the effectiveness of the IA. The internal auditor said (quote translated from Dutch): *"You are aware that the Auditee knows that many things are not in order and they have many things to do on their own to improve. In these cases you report issues that are already known to Auditee and I ask myself if this is effective with regard to timing of our audit communication"*.

Preference

The *preference* as a timing factor was also mentioned in equal number of occurrences by the internal auditors and the auditees. They both have a similar view regarding the role of this timing factor for the IA effectiveness. As an illustration, one of the auditee's said (quote translated from Dutch): *" I want to be informed by the auditor about the issues as soon as possible and prefer they not to wait till the audit is finalised. Timely interaction with the auditor is for me very important so that I can take timely action. For acceptance of the auditor's issues I find this very important".* This is in line with what the internal auditors said as one of the internal auditors noted (quote translated from Dutch): *"My own experience, actual more personal rule, is that the earlier you communicate your message to the Auditee the better. In a later stage you can communicate these issues again but then is much more easier".*

Different view

Below we proceed with showing the timing factors identified in our study for which we see a pattern of different view (with regard to number of occurrences) between the internal auditors and the auditees as to the role that these factors may have for determining the right time of the internal auditor to communicate the risk warning message and hence to the effectiveness of IA function.

Audit issue classification

Audit issue classification as a combined timing factor was mentioned more often by the auditees compared to the internal auditors (refer to table 4-9 in Appendix 3). The *risk indication* was mostly mentioned by the auditees to be a determinant for the right timing of the internal auditor's risk warning message. As an illustration, one of the auditees said (quote translated from Dutch): "*The earlier I know of a high risk issue the better. But I have now received a report with two high risk issues in it, which I see after two months from the start of the audit. I think, this way I cannot take the Auditor seriously"*. One of the internal auditors said (quote translated from Dutch): *"For critical or high risk findings we have our audit rules to communicate the message directly at the moment we have identified the risk"*.

Change

On the basis of the interviews, we noted that *change* as a category of timing factors was identified frequently (refer to Table 4-13 in Appendix 3). The internal auditors indicated the this timing factors more often than the auditees. From the combined instances, *change in staff* as a timing factor was indicated by the internal auditors and by the auditees the most. One of the internal auditors said (quote translated from Dutch): *"Recently in two audits we experienced that Auditee said to us that we are too early because they have just appointed new management"*. The opposite was said by one of the auditees (quote translated from Dutch): *"If the manager of a certain department has just started, the Auditor is more than welcome to give a kind of 'baseline' recommendations"*.

Change in processes as a timing factor was viewed in equal occurrences by both the internal auditors and the auditees. In this respect, one of the auditees said (quote translated from Dutch): *"If I have to start with designing an purchase process tomorrow, then I want to have the Auditors with their recommendations day before yesterday"*. This is in line with what one of the internal auditors said (quote translated from Dutch): *"In cases when the Auditee is redeveloping a certain process, it is much cheaper and effective if we look at the process change at the moment of the change and give our recommendation during this change instead waiting to do the audit as planned by the end of the year"*. Interestingly, one another internal auditor said the opposite of what the colleague has said (quote translated from Dutch): *"I think we have become much more flexible because if the auditee is in the middle of remediation or revising a process or has any other issues to solve, you*

have to have a good reason to do the audit. It is much better to postpone it till the auditee has finished".

Character

The factor *Character of the internal auditor* as a timing factor was mentioned only once by the auditees compared to the internal auditors who mentioned this factor twice during the interviews. One of the internal auditors said (quote translated from Dutch): *"There is something in the character of the auditor that determines the timing of his/her communication. I used to know auditors that can connect with management more easy than others"*. While one of the auditee said (quote translated from Dutch): *"I think that sometimes the auditor are too nice. Or they do not dare to report their issues immediately but wait long and hesitate to communicate their message"*.

External factors

The external factors related to *market developments* as a timing factor was identified once by the internal auditors and in two instances by the auditees and both groups agree with regard to the meaning of this timing factor. During the Focus Groups interviews one of the internal auditors said (quote translated from Dutch): *"I think the timing of the auditor's message should go along with the developments in the outside market"*. While one of the auditees illustrated this timing factor as an indicator for the IA effectiveness through an example saying (quote translated from Dutch): *"If you look what happens with the oil sector at the moment, then this should be trigger for the auditor to look at the impact of these outside developments within the organization at that moment and not wait until 2018 when it could be too late"*.

Focus

With regard to *focus* as a timing factor, we noted notable discrepancy between the number of occurrences in the Focus Groups interviews with internal auditors and auditees. While the internal auditors mentioned this timing factors only once, the auditees talked about the importance of both internal auditor's focus and auditee's focus as timing factor in six instances. So, one of the auditee's said (quote translated from Dutch): *"When we have certain topics that are very important, we want the auditor to look at these at a certain moment. My experience is that the auditor is very sensitive in such moments and respond to it accordingly"*. One of the auditors said (quote translated from Dutch): *"In times when certain topics are very topical to management you do not have to do much as an auditor to have an impact"*.

Incidents

The *incidents* as a timing factor were mentioned in some more instances by the auditees compared to the internal auditors. One of the auditees said (quote translated from Dutch): *"Let me tell you an example. When we had a recent cybercrime incident, the Auditor came afterwards when the incident has already happened. It was too late. The calf had been droned already! Where was the Auditor one year before this incident happened"*? This is also illustrated by one of the internal auditors who said: "*There are several topics, such as cybercrime incidents, where timing does not play any role. In this case you do not need to think about when it would be a good timing to report on this topic but you can do that at any time because the Auditee is alert for this topics"*.

Project

Both the internal auditors and the auditees identified *Project* as a timing factor that has a role in determining the right moment for the internal auditor to communicate the risk warnings to the auditees. The internal auditors mentioned this factor in less occurrences than the auditees did. One of the internal auditors pointed out the exact moment for the internal auditor to act and said (quote translated from Dutch: *"The 'go-no go' decision moment of a project is an important moment to report your issues so that the Auditee can take additional actions for issue resolution.* Similarly, one of the auditees emphasised the moment when the internal auditor is too late with his risk warning messages and said (quote translated from Dutch):" *If you want to audit a project then give your input during the project or prior to start of the project. But do not come afterwards to give me a kind of a 'report mark' when I have already finalised the project".*

Regulator

The *Regulator's requests and investigations* were also identified to be a timing factor that plays a role for the right moment for the internal auditor to act i.e. to communicate the risk warning message. Both the internal auditors and the auditees identified this timing factor with a slight difference as to the number of the occurrences in favour of the auditee. With regard to this factor, one of the internal auditors said (quote translated from Dutch): *"It can be that timing is also determined by the regulators. If we know that the regulator will come in to do a certain research, then we can report our recommendation earlier to the Auditee and they will be more ready to listen to us".* This was also confirmed by one of the auditees who said (quote translated from Dutch): *"There are regulatory driven audits resulting from regulator involvement or regulator's letters, and there is little to do as to the timing of these audits. They should be done and we have little to say about it".*

Relation Auditor-Auditees

The *Relation between the Auditors and the Auditees* was recognised by both the Auditors and Auditees as a timing factor relevant for the effectiveness of the Internal Auditor. The Auditors mentioned this timing factor more often as the Auditees identified this factor in only once instance. So one of the Auditors said (quote translated from Dutch): *"If the auditor has a good relation with the Auditee and the auditor is trusted by the Auditee, then the auditor knows that at the moment he communicates his message to the Auditee he will listen to the auditor's message. So, in this case you cannot make much mistakes with the timing of your message". The* Auditee said (quote translated from Dutch): *"In the past, the relation with the auditors was not so good and in these times the auditor's messages were not easy accepted. by us no matter the timing of the message".*

Strategic events

The *Strategic events* as a timing factor was mentioned much more often by the internal auditors compared to the auditees. With regard to the *Strategic events related to critical management decisions* (e.g. related to Initial Public Offering (IPO), go-no go decisions, decision to continue or discontinue a business), one of the internal auditors said (quote translated from Dutch):*" In the times of the IPO, the Auditee was much more ready to listen to our recommendations and came directly into action".* This timing factor was also identified by the auditees during the interviews as one of the auditees said (quote translated from Dutch): *"Prior to the IPO, we had several audit issues that we paid insufficient attention to. At the moment when IPO decision was close, suddenly these audit issues became very important and we had to resolve them as soon as possible".*

Type of audits

As it can be seen from table 4-1, the timing factor related to the *type of audits* was perceived by the internal auditors also to have an impact on the IA effectiveness. The auditees recognise this timing factor as well but in much smaller number of instances. From all identified types of audits during the interviews (refer to table 4-25 in Appendix 3), we noted that the auditee did not mention the role of the timing in *continuous auditing, audits on existing processes, maintenance audits, post-mortem audits and theme audits*. We assume the reason for this could be that auditees are not familiar with the different types of audits or they are aware of these but have no experience with regard to the role of the timing for communicating the risk warning message to them by the internal auditor. The internal auditors considered all the identified types of audits to play a role in the timing of the internal auditor's risk warning message.

For both the internal auditors and the auditees the *timing in mandatory audits and soft controls audits* during the interviews were recognised in equal number of occurrences. One of the internal auditors said the following about the timing factors in mandatory

audits (quote translated from Dutch): *"If we say to the Auditee that a certain audit must be done tomorrow, than this audit is mandatory audit and the timing is different from the regular planned audits. For it brings sense of urgency on all sides and the communication of the audit issues goes more smooth"*. The auditees showed a different view related to this factor as one of the auditees said (quote translated from Dutch): *"The mandatory audits have to be simply done no matter whether we find it nice or not nice. The timing in these audits has no role as the audit must be done. But for many other types of audits I think that the Auditor has to make better link with my management agenda, and in this case the timing is very important to me"*.

The internal auditors and the auditees find the *timing related to soft controls audits* to be important but showed different views during the interviews. For example one of the Auditors said (quote translated from Dutch): *"When you want to include behaviour issues in your message, then the right timing to do that is the final closing meeting and not before that. In this meeting the Auditee will show their culture and you can include that in your audit opinion"*. While one of the auditees said (quote translated from Dutch): *"If the Auditor has found governance or soft controls related issues, I think he/she should put these* issues on the table as soon as possible".

From our interviews with the internal auditors we noted one interesting metaphor as to the right time the internal auditor to act in so called post-mortem audits. In this occasion, one of the internal auditors said (quote translated from Dutch): *"If you do a kind of post-mortem audit just after the placing of the 'monument', this is a right timing, but six months later you are too late"*.

Timing factors identified by the internal auditors but not by the auditees and vice versa

We conclude this section by showing the timing factors mentioned by the internal auditors but not by the auditees and vice versa.

From the data collected during the Focus Groups interviews we identified that the auditees did not identify content of the internal auditor's message and design phase as timing factors for the effectiveness of the internal auditor. These factors were however identified by the internal auditors although small number of instances. So, with regard to the *content* of the internal auditor's message, one of the internal auditors said (quote translated from Dutch): *"At the moment when you communicate something to people and they understand what you want to say, they cannot do something else then accept your message. This is the right moment for the auditor to push ahead towards solutions"*. With regard to *design phase* one of the internal auditors said (quote translated from Dutch): *"You can already look at the design of something. And then you are in time because then the Auditees want to have your advices and learn from you"*.

Also, the timing factor *Character of the auditee* was mentioned only once by the internal auditors during the interviews but not mentioned by the auditees. The internal auditor who identified this factor and said (quote translated from Dutch): *"There other 'soft' factors that play a role for the auditor to choose how to approach the Auditee and when. Because if you know in advance that the Auditee is a surly person, then you have to think carefully about what would be a handy timing to approach this person".* Only two internal auditors identified the timing factor *Strategic events-separation & integration* emphasising its great importance. To illustrate this, one of the internal auditors said (quote translated from Dutch): *"I was involved in a very important separation and integration programme where every hour was of a crucial importance for the Auditee. In this situation, the Auditee wanted to know of my audit concerns within 5 minutes"*.

As to the timing factor related to the *audit procedures concerning the auditor's audit time schedule* one of the of the auditees said (quote translated from Dutch): *"Because the audit department had to finalise all audits of the previous year till January 2016, it is my perception that the internal Auditors communicated their risk messages and reports before the deadline in a hurried way instead of having finalised their investigation properly. So, in this case the internal deadlines determined the timing of the auditor's message"*. Interestingly, this timing factor was not mentioned by the internal auditors in the Focus Groups interviews. This may indicate that the internal auditors do no perceive this factor to play a role in the determination of the right timing for the internal auditor to communicate the risk warning message. This shows that the internal auditors and the auditees have different opinions with regard to this timing factor and its role for the IA effectiveness.

4.6 DISCUSSION

In this section we will be discussing the main findings of our study, the implications of our study for research and practice and the limitations of the study and suggestions for further research.

Main Findings

As our study was exploratory in its nature we firstly achieved to identify the timing factors that may be of influence on the IA effectiveness and obtain a better understanding thereof. The overview of these timing factors we provided with this study can help internal auditors and auditees to identify the right timing for communication of the risk warning messages by the internal auditors and hence can be useful for managing the effectiveness of the IA effectiveness.

Secondly, the analysis of the data generated during all five Focus Groups interviews, revealed that the timing factors indicated by the participants are multiple and diverse,

dependable whether these were indicated by the auditees or the internal auditors. In majority of the instances, we noted that both the internal auditors and the auditees recognise these timing factors to be relevant for the effectiveness of the IA. In a small number of instances the internal auditors and the auditees expressed a different view of the timing factors. This information identified in our study could be of used by the internal auditors and the auditees to start a discussion with each other and align their understanding as to when is the right timing for communicating risk warning message by the internal auditor in such a way that the internal auditor can have the most impact for the organization.

Thirdly, during the Focus Groups discussions it appeared that the timing factors emerging from our discussions were experienced by the participants as 'eye opener' as they recognised to have not yet thought of these timing factors and their possible impact on the effectiveness of the internal auditor.

The timing factors identified in our study can be of importance to both the internal auditors and the auditees as these can facilitate them to better attune with each other as to when is the right time to communicate the risk warning message by the internal auditors and better adapt the timing of their activities to unanticipated events.

Implications for theory and practice

As discussed earlier in this paper, prior research on effectiveness of the IA function (Lenz and Hahn, 2015) was mainly focussed on the 'supply-side' perspective Internal Audit (e.g. the role of the Chief Audit Executive, the skills and competencies of the internal auditors, the organizational specifics, its politics and culture, the support from senior management and the impact of the board, directly or through the audit committee (AC)). The 'demand-side' perspective of the other stakeholders (e.g. whether management will or will not implement recommendations made by the internal auditor) is still under-examined area (Lenz and Hahn, 2015). Our study adds a new dimension to this 'demand-side' perspective as our study results showed that the timing are recognized by both the internal auditors and the auditees as an important element for accepting the internal auditor's recommendations by the auditees and hence an important factor for IA effectiveness. Our study indicates that the timing of the communication of the risk warning messages by the internal auditor to the auditees do matter in perceiving the internal auditor's warning messages to be significant in trivial moments of time Elliott et al, (2007).

Next, our study adds the timing dimension to the Mihret and Yismaw's (2007) model of IA effectiveness, which considers four potential factors – internal audit quality, management support, organizational setting, and auditee attributes – to explain audit effectiveness. The interaction between these factors and the timing factors we identified in this study may potentially improve audit effectiveness.

Our study resulted in an overview of different factors determining the right moment for the internal auditor to act. Based on the statements given by the internal auditors and the auditees during the Focus Groups interviews, we could distinguish three groups of timing factors as shown below:

1. *Standard timing factors* emerging from regular 'business as usual' situations. Examples are timing factors related to alignment, audit procedures and auditee's agenda. These timing factors could be easily recognised and are repetitive in their nature.
2. *Mandatory timing factors* emerging from regulator's requests that are unavoidable and cannot be postponed. These timing factors could also be easy to identify by both the internal auditors and the auditees as the timing emerges from a mandatory event whose timing is known on beforehand.
3. *Special timing factors* emerging from exceptional situations that require special attention by the auditees and the internal auditors. These are not standard and easy to identify timing factors as these occur based on unanticipated and complex events. Examples are timing factors related to incidents, audit issue risk classification, change, strategic events, projects, audits abroad, and soft controls audits.

Based on the assertion made by Mitchell and James (2001) that the successful timing of organizational activities depends not only on effective planning and coordination but also on temporal responsiveness - the ability of organizational actors to adapt the timing of their activities to unanticipated events, we assume that the ability of the internal auditor to adapt the timing of the communication of the risk warning messages to standard ('business as usual'), mandatory or special (unanticipated) events within the organization is a very important element for the IA effectiveness.

We furthermore believe that our study provides input that could be used as an interesting path for obtaining more support to the Music Theory concepts, similarly to what Albert and Bell (2002) did in their paper. By applying Music Theory concepts such as tonality, rhythm, musical shape, and harmony, Albert and Bell (2002) analysed why the FBI launched its assault upon David Koresh's compound in Waco, Texas, when it did. In their paper Albert and Bell (2002) advised that to understand timing, one must understand the mechanisms that create and release tension, that generate a sense of movement and pattern, and that stimulate the need for and produce closure and rest. Similarly, in further research we could do more research work based on these Music Theory concepts to be able to better understand the identified timing factors in our study and deploy these more effectively in the area of internal auditing and its effectiveness.

Our study has also practical implications. During the interviews the participants indicated they were unaware of the timing factors that may play a role in the effectiveness of the internal auditor's risk warning message. Consequently, an important practical implication of this study is that the internal auditors and the auditees became aware of

the existence of factors determining the right timing for the internal auditor to act as well as and the role thereof for the IA effectiveness. Our study did not aim at providing a recipe for determining the right timing of the communication of the risk warnings but provided and overview of the these timing factors, which we recommend to the internal auditors and auditees to use when they enter in a discussion about the timing as these could help them is determining the right moment to act.

Our study has also practical implications for the skills required from the internal auditor dependable on the type of timing factors that influence the internal auditor's effectiveness. A potential implication could be that in standard ('business as usual') situations, the organization will require internal auditors who are more skilled for performing repetitive and predictable tasks while for special and unanticipated events the internal auditors would be required to possess skills of agility and communication sensitivity. Distinguishing between different timing factors and linking these with the required internal auditor skills will presumably contribute to upgrading the IA function.

The knowledge about the existence of timing factors identified in our study as well as the awareness of their diversity and different nature, can further contribute to the internal auditors and the auditees to attune with each other the right moment of the action and improve their skills and responsiveness as well as to better adapt the timing of their activities to predictable or unpredictable events. We presume our study provides the internal auditors with useful indicators of the timing factors to better manage and improve the effectiveness of IA.

Limitations and suggestions for further research

We finalise this paper with stating the limitations and giving suggestions for further research.

Our study is an important first step towards understanding the timing factors as to when is the right time to act for the internal auditor in the context of IA effectiveness. Our study has however some limitations, which we discuss below.

Our study is exploratory in nature and it is based on interviews only within one large financial institution in The Netherlands. Therefore, one should be cautious in generalising the outcomes of this study. It is possible that the results would be different in other settings as there may be other timing factors that may also affect the right moment of the internal auditor's communication of the risk warning message. In the follow up of this study we could further explore the effect of the timing factors on the IA effectiveness in different settings like smaller financial institutions, insurance companies, within The Netherlands and/or abroad.

During our interviews, timing factors related to audits performed abroad were mentioned in very small instances. As the timing factors may be different for audits abroad

due to many reasons, further research is needed to obtain better view on and the importance of these timing factors for the IA effectiveness.

Also, our study provided first insights into the timing factors that determine the right timing for the internal auditor to communicate the risk warning messages to the auditee. These timing factors have different meanings and can be interpreted in various ways with regard to their importance for the IA effectiveness. Further quantitative research is needed to obtain empirical support to be able to make further analysis of these timing factors for the level of their importance and making comparisons thereof between groups. In the next study it could be therefore interesting to consider performing a Q methodological study that could provide more qualitative and quantitative support for the timing factors identified in our study, enabling ranking and comparisons of the factors for their importance by Q methodological factor analysis.

Our study could also be followed up by further investigating whether the timing factors we identified could be of influence on the deaf effect (i.e., reluctance of the message recipient to hear risk warnings of the messenger) for risk warning messages being as mediator or moderator between the internal auditor and the deaf effect.

Despite the limitations, our study shows the importance and the relevance of a scientific examination of the timing factors that may affect the effectiveness of the IA function. Academic studies that have (qualitatively as well as empirically) examined the role of the timing factors in the effectiveness of IA are, to our knowledge, not yet available. We believe our study opens up new challenges for future research and we encourage others to advance our understanding of the timing factors in the context of the IA effectiveness.

APPENDIX 1.

Focus Group Interview protocol

Introduction Interview with Internal Auditor:
Good afternoon and welcome. Thanks for taking the time to join our Focus Group interview. We invite you to tell us about your experiences about the timing factors that influence Auditees' decision to continue or redirect a risky-course of action after your reported your risk warning message (written or oral).

The internal auditor performs the audit according to prescribed audit methodology and standards The audit process has its sequential steps and own planning. At the other hand, the audit takes place in a dynamic organizational environment that has its own tempo and dynamic.

In our study we propose that the timing for reporting of the risk warning message by the internal auditor influences the effectiveness of the internal auditor (to listen or not to listen to the risk warning message by the internal auditor).

Introduction Interview with Auditees:
Good afternoon and welcome. Thanks for taking the time to join our Focus Group interview. We invite you to tell us about your experiences about the timing factors that influence your decision to continue or redirect a risky-course of action after the internal auditor reported to you his risk warning message (written or oral).

The internal auditor performs the audit according to prescribed audit methodology and standards The audit process has its sequential steps and own planning. At the other hand, the audit takes place in a dynamic organizational environment that has its own tempo and dynamic.

In our study we propose that the timing for reporting of the risk warning message by the internal auditor influences the effectiveness of the internal auditor (to listen or not to listen to the risk warning message by the internal auditor).

For both interviews with Internal Auditor and Auditee:
Please talk freely about the timing factors or conditions that were of influence on your decision to listen or not to listen to the auditor's risk warning message.

We want to tap into your experiences and your opinions about these timing factors.

There are no right or wrong answers. All points of view are welcome. Please feel free to share your point of view even if it differs from what others have said.

Our study is not aimed to reach agreement on the content but on better understanding (causes, indicators and effects) of the timing factors related to IA effectiveness.

We will capture and transcript for methodological reasons. Of course we maintain full confidentiality on the information you share with us. We will exclude all names or identities from our transcription.

Please talk freely. If you have a cell phone, please put it on a quite mode.

Our study consists of two questions related to the timing factors that may be of influence on the IA effectiveness within ABN AMRO Bank. The questions are:

Questions for the Internal Auditor:

Question 1: Which timing factors are proposed to be of influence on the Auditee's willingness to listen or not to listen to the auditor's risk warning message? (Why)

Question 2: How do the timing factors influence (in general) the Auditee's decision to listen (or not to listen) to the risk warning message?

Questions for the Auditee:

Question 1: Which timing factors are proposed to be of influence on your willingness to listen or not to listen to the auditor's risk warning message? (Why)

Question 2: How do the timing factors influence your decision (in general) to listen (or not to listen) to the risk warning message?

APPENDIX 2.

Anonymous Description of Respondents

Table 4-2. Anonymous Description of Respondents in first Focus Group interview

Role and experience	Gender	Nationality	Age	Auditor/Auditee
Head Internal Audit, >25yrs	Male	Dutch	50-55	Internal Audit
Director Audit, >20yrs	Male	Dutch	50-55	Internal Audit
Director Audit, >20yrs	Male	Dutch	50-55	Internal Audit
Senior audit manager, >15yrs	Male	Dutch	45-50	Internal Audit
Senior audit manager, >15yrs	Female	Dutch	40-45	Internal Audit
Senior audit manager, >20yrs	Male	Dutch	55-60	Internal Audit

Table 4-3. Anonymous Description of Respondents in second Focus Group interview

Role and experience	Gender	Nationality	Age	Auditor/Auditee
Director Audit, >20yrs	Male	Dutch	40-45	Internal Audit
Senior audit manager, >20yrs	Male	Dutch	50-55	Internal Audit
Audit manager, >15yrs	Male	Dutch	40-45	Internal Audit
Audit manager, >10yrs	Female	Dutch	30-35	Internal Audit
Senior auditor, >10yrs	Female	Dutch	35-40	Internal Audit
Senior auditor, >5yrs	Female	Dutch	30-35	Internal Audit

Table 4-4. Anonymous Description of Respondents in third Focus Group interview

Role and experience	Gender	Nationality	Age	Auditor/Auditee
Chief Operating Officer, >25yrs	Male	Dutch	55-60	Auditee
Head of department A, >20yrs	Male	Dutch	45-50	Auditee
Head of department B, >20yrs	Male	Dutch	50-55	Auditee
Head of department C, >15yrs	Male	Dutch	45-50	Auditee
Head of department D, >20yrs	Female	Dutch	40-45	Auditee
Officer department E, >20yrs	Female	Dutch	45-50	Auditee

Table 4-5. Anonymous Description of Respondents in forth Group interview

Role and experience	Gender	Nationality	Age	Auditor/Auditee
Head of department F, >25yrs	Male	Dutch	55-60	Auditee
Head of department G, >20yrs	Female	Dutch	45-50	Auditee
Account manager department H, >10yrs	Male	Dutch	30-35	Auditee
Business manager department I, >20yrs	Male	Dutch	45-50	Auditee
Risk officer department J, >15yrs	Male	Dutch	40-45	Auditee

Table 4-6. Anonymous Description of Respondents in fifth Focus Group interview

Role and experience	Gender	Nationality	Age	Auditor/Auditee
Senior audit manager, >15yrs	Male	Dutch	45-50	Internal Audit
Audit manager, >10yrs	Male	Dutch	35-40	Internal Audit
Senior auditor, >10yrs	Female	Dutch	30-35	Internal Audit
Chief Operating Officer, >25yrs	Male	Dutch	55-60	Auditee
Head of department K, >20yrs	Male	Dutch	45-50	Auditee
Head of department L, >25yrs	Male	Dutch	55-60	Auditee

APPENDIX 3.

Iteratively developed coding schemes and coding categories

Table 4-7. Code categories and definitions

Category Timing factors	Category definition
Alignment	Relation between the timing factors and the alignment between the auditors and the external accountant, or between the auditors and first and second line of defence functions, or the alignment with the audit plan with respect to type of audits to be executed, or the alignment between the audits and the budget needs of the auditees.
Audit issue classification	Relation between the timing factors and the risk classification of audit findings or the severity of the audit issues identified by the auditor.
Audit opinion	Relation between the timing factors and the audit opinion reported by the auditor as a result of the audits.
Audit procedures	Relation between the timing factors and the auditor's procedures related to the planned time schedule during the audit, or to the audit principle of executing the audit activities with due care, or to the audit procedures related to supporting the audit issues by the auditor by sufficient evidence before communicating the audit issue, or to the audit procedures related to the auditor's factual accuracy check during the audit, or to the audit activities of the auditor during the fieldwork phase of the audit, or to communicating the initial observations in the orientation phase of the audit, or to the audit procedures related to the quarterly audit opinion that the auditor reports to the auditees, or to update meetings of the auditor with the auditee throughout the audit.
Auditee's agenda	Relation between the timing factors and the occasions when auditee's staff is absent due to e.g. holiday or any other reason, or the auditee's end of year appraisal cycle, or when management is busy working on their own solutions within the organization or periods when auditee is too busy with various activities.
Change	Relation between the timing factors and changes in applications within the auditee's organization, or changes in laws or regulations, or changes in staff within the auditee's organization, or when the auditee is engaged in process change.
Character	Relation between the timing factors and the personal character of the auditee or the personal character of the auditor.
Content	Relation between the timing factors and the moment when the auditee understands the content of the auditor's message.
Design phase	Relation between the timing factors and the auditor looking at the design phase of a process, control, systems etc. before its implementation.
External factors	Relation between the timing factors and outside market developments.
Focus	Relation between the timing factors and the shift of audit focus related to what topics they find important, or the shift of auditee's focus related to what topics they find important.
Incidents	Relation between the timing factors and incidents or events that trigger alertness by management.
Preference	Relation between the timing factors and the personality trait (unrelated to other situations) of the auditee as to when to communicate audit issues or the personality trait (unrelated to other situations) of the auditor as to when to communicate audit issues.

Table 4-7. Code categories and definitions (*continued*)

Category Timing factors	Category definition
Project	Relation between the timing factors and projects done by auditees.
Regulator	Relation between the timing factors and the regulator's requests and investigations.
Relation Auditor-Auditee	Relation between the timing factors and the relation between the auditor and the auditee.
Strategic events	Relation between the timing factors and the critical management decisions made by the auditee specifically when reference is made to Initial Public Offering (IPO), go-no go decisions, decision to continue or discontinue a business line, strategical issues, or the separation or integration programmes of the auditee.
Type of audits	Relation between the timing factors and various types of audits such as audits abroad, continuous audits, audits on existing process, maintenance audits, audits on management request, mandatory audits, post-mortem audits, soft control audits and theme audits.

Table 4-8. Coding scheme for Alignment

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Alignment external auditor	when a reference is made to alignment of activities between the auditors and the external accountant	external accountant, externe auditor, vierde lijn partijen	external accountant, external auditor, fourth line of defence parties	Auditor: *"The impact of the internal auditor is bigger if he can align with the external auditor. For example the moment when the organization makes a change of the external auditor, that is the moment when the internal auditor can report on relevant topics much earlier than initially planned".* Auditee: *"The timing is not adequate for the auditor when he comes with the same issues one or two weeks after the external auditor or the regulator or the second line have reported on these same issues".*
Alignment 3 Lines of Defence	when a reference is made to the alignment of activities between the auditors and first and second line of defence functions	Eerste lijn, tweede lijn, derde lijn, planning tweede lijn, risk control self-assessment (RCSA)	first line, second line, third line, planning second line, risk control self-assessment (RCSA)	Auditor: *"The alignment among the first second and the third line of defence is very important for the timing: first line identified issues first, thereafter second line does its check and the third line (internal auditor) comes after the first and the second line have done their job. This way, the internal auditor will be able to communicate the right message to Auditee".* Auditee:*" It is nonsense if the internal auditor reports on a certain issue when the second line is not yet ready with its investigation".*
Alignment audit plan with auditee's needs	when a reference is made to the auditee's desire for alignment with the audit plan with respect to type of audits to be executed	audits in continue stroom, audits in golfjes of thema's, gefragmenteerd audit plan	audits in continuous stream, audits in waves or theme's, fragmented audit plan	Auditee: *"Many audit issues communicated by the internal auditor for me as an Auditee are not very much important. Sometimes I get audit recommendations for applications or platforms that will be abandoned within one or two years . So, I do not invest anything there. I find that internal auditors do not sufficiently take into considerations what are my priorities, management agenda and objectives. I do not need audits in an continuous flow but more in wavelet's or themes".*

Table 4-8. Coding scheme for Alignment (*continued*)

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Alignment with auditee's budget needs	when a reference is made to the auditee's need for alignment between the audits and the budget needs of the auditees	extra budget, budgetrondes, geen budget voor	extra budget, budget cycles, lack of budget	Auditor: *"For the timing of the auditor's message it is important whether the timing is aligned with the Auditee's decision making process related to budgets. For example, if they need an extra budget to resolve an issue then the auditor is more effective if he communicates the audit issue before the Auditee's budget rounds".*

Table 4-9. Coding scheme for Audit issue classification

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Risk indication	when a reference is made to risk classification of audit findings	high risk, critical risk, hoog risico, critical finding, high finding	high risk, critical risk, critical finding, high finding	Auditor: *"For critical or high risk findings we have our audit rules to communicate the message directly at the moment we have identified the risk.* *Auditee: I think there is a direct correlation between the height of the risk indication of an audit issue and the timing. The earlier I know of a high risk issue the better. But I have now received a report with two high risk issues in it which I see after two months from the start of the audit. I think, this way I cannot take the auditor seriously".*
Severity of audit issues	when a reference is made to the severity of the audit issues identified by the auditor	ernst van wat je vindt, ernstig, sense of urgency	severity of the findings, serious, sense of urgency	Auditor: *"What I find to be important for the timing is the severity of the audit issues we have identified. For example, recently we found one very severe issue at the very beginning of our audit. Normally we would wait with communication of an audit issue after we have investigated the matter completely, but in this case we started the communication with the Auditee directly. And because the sense of urgency of this issue was very high, the Auditee was ready to listen to our message straightaway".*

Table 4-10. Coding scheme for Audit opinion

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Audit opinion	when a reference is made to the audit opinion reported by the auditor as a result of the audits	weak, adequate, zware rapport	weak, adequate, heavy report	Auditor: *"The acceptance of the auditor's message depends on the context defined by the auditor. And if the auditor has created a context by communicating an audit opinion of the report as 'weak, he can start with communicating this audit opinion early so that the auditee will react on the issues smoothly. If the audit opinion is 'adequate' and this is early communicated then nobody will pay attention to the audit issues.* Auditee: *"The auditor is always too late in communicating the audit opinion. The audit opinion is based upon a situation at an X-point of time and at the time that his message comes to upper management it is too late as they are more up to date and have already resolved the issue".*

Table 4-11. Coding scheme for Audit procedures

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Audit procedures-audit time schedule	when a reference is made to the auditor's procedures related to the planned time schedule during the audit	planning, vertraging, interne deadlines, deadline, audit gedreven door tijdsdruk, auditor's time schedule	planning, delay, internal deadlines, deadline, audit driven by time pressure, auditor's time schedule	Auditee: *"Because the audit department had to finalise all audits of the previous year till January 2016, the internal auditors communicated their risk messages and reports before the deadline in a hurried way instead of having finalised their investigation. So, in this case the internal deadlines determined the timing of the auditor's message".*
Audit procedures-due care	when a reference is made to the audit principle of executing the audit activities with due care	zorgvuldigheid, review niet klaar	due care, not ready	Auditor: *"If you communicate the audit issues too soon without handling the issue with due care by executing all the necessary audit activities, this can result in you doing things twice and then you are not effective anymore".*
Audit procedures-evidence	when a reference is made to the audit procedures related to supporting the audit issues by the auditor by sufficient evidence before communicating the audit issue	goed verhaal hebben, evidencing, evidence, onderbouwing, goed onderzoeken	to have a good story, evidencing, evidence, supporting documentation, properly investigate	Auditor: *"You can be also too early in communicating the audit message. You do not have a good story yet but you want to do something with it. This is in my opinion dangerous".* Auditee: *"There should be an evidence of course, there should be a feeling that something is wrong, but I do not like to wait six months to hear of it. I want the Auditor to walk into my office right away and inform me about the issue".*
Audit procedures-factual accuracy	when a reference is made to the audit procedures related to the auditor's factual accuracy check during the audit	factual accuracy	factual accuracy	Auditor: *"We can communicate our audit issue at once but in our methodology we have to do a factual accuracy check before we communicate our audit issue. So, the communication is done in several steps".* Auditee: *"The moment when the auditor aligns the factual accuracy of the audit issue with the Auditee is of crucial importance for acceptance of the audit recommendations by the Auditee".*

Table 4-11. Coding scheme for Audit procedures (*continued*)

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Audit procedures-fieldwork	when a reference is made to the audit activities of the auditor during the fieldwork phase of the audit	tijdens de veldwerk, audit werkzaamheden	during fieldwork, audit activities	*Auditor: "My experience is that we try shortly after the end of the fieldwork to give a kind of PowerPoint presentation to the Auditee and during this presentation we communicate our message. The audit report comes later, after this presentation and is more a confirmation of what has been said during the presentation".* Auditee: *"The issues should be communicated directly when they are spotted. The audit report at the end of the audit should be formality, the audit report is not the communication of the audit findings but during the fieldwork the issues should be communicated and clarified".*
Audit procedures-orientation phase	when a reference is made to communicating the initial observations in the orientation phase of the audit	tijdens de oriëntatie fase van de audit	during the orientation phase of the audit	Auditor: *"If you want to have an impact on the Auditee during the audit, you should communicate your concerns and observations when you perform the orientation phase of the audit. So, the auditee knows already in early stage about the risks".*
Audit procedures-quarterly reporting	when reference is made to the audit procedures related to the quarterly audit opinion that the auditor reports to the auditees	elke kwartaal een audit opinion, eind van het kwartaal, kwartaalparadigma	quarterly audit opinion, end of the quarter, quarterly paradigm	Auditor: *"The quarterly audit reporting is of static nature and my opinion is that we should not report our audit opinion each quarter but at the moment when the audit issue occurs".* Auditee: *"I find that the auditors live in a quarterly paradigm. And this is because the Audit Committee wants to have a quarterly audit opinion. But this is not my managerial timing paradigm. I can understand that this quarterly report must be produced by Audit due to the Audit Committee, but this does not fit into my timing when I am busy with my managerial challenges".*

Table 4-11. Coding scheme for Audit procedures (*continued*)

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Audit procedures-update meetings	when a reference is made to update meetings of the auditor with the auditee throughout the audit	update meetings, wekelijkse meetings, tweewekelijkse meetings, bila gesprek, periodiek overleg	update meetings, weekly meetings, bi-weekly meetings, bilaterally meeting, periodic meeting	Auditor: *"We introduced weekly update meetings with the Auditee because they requested these meetings from us. The Auditees did not want to be surprised by us if we communicate our issues at the end of the audit. And this has to do with the timing.* Auditee: *"The best practice that I experience is that I agree with the Auditor to have weekly meetings during the audit. Even if we seat half an hour together to discuss about potential audit issues, that helps me in the discussion later on and in taking action for resolving the issues".*

Table 4-12. Coding scheme for Auditee's agenda

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Auditee's agenda-absence staff	when a reference is made to occasions when auditee's staff is absent due to e.g. holiday or any other reason	niet mensen voor de blok zetten voor de vakantie, drie man niet zijn, er niemand is	people to put on pressure before holidays, three people absent, nobody is present	Auditor: *"You should not push people before they go on holiday. If you want to discuss your audit report just before the Auditee leaves on holiday, that is not the right timing for your communication. I know how my agenda looks like one day before my holiday and this is the case with Auditee's agenda as well. So, you need to align the timing of your audit communication with the Auditee's agenda".* Auditee: *"You can influence the timing of the audit. If you do not want to have an audit in a period when there are three key people absent you can ask the auditors to re-plan the audit. It is nonsense to do audit when key staff is absent".*
Auditee's agenda-end of year appraisal	when a reference is made to the auditee's end of year appraisal cycle	beoordelingsscores, eind van het jaar, KPI's, clean sheet, afrekenmethodiek, beoordeling, PPP cyclus	appraisal scores, end of year, KPI's, clean sheet, appraisal method, appraisal, PPP cycle	Auditor: *"As soon as we move towards the end of the year it is more and more difficult to communicate heavy issues or audit reports because these have an impact on Auditee's appraisal scores. This does not say that our issues are incorrect but simply we get more resistance from management because of their appraisals.* Auditee: *"Sometimes I have the impression that by the end of the year we do not want to have any audit issues due to our KPI's etc..".*

Table 4-12. Coding scheme for Auditee's agenda (*continued*)

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Auditee's agenda-themselves busy with solutions	when a reference is made to occasions when management is busy working on their own solutions within the organization	zelf begonnen zijn, zelf aan het bouwen zijn, we zijn er mee bezig, uitgevoerd	started by their own, building up something by their own, we are busy with it by ourselves, implemented	Auditor: *"You are aware that the Auditee knows that many things are not in order and they have many things to do on their own to improve. In these cases you report issues that are already known to Auditee and I ask myself if this is effective regarding timing of our audit communication".* Auditee: *"We have started with improving data quality. We know that we have issues with data quality and we are busy with building it. Then the auditor comes six months later and wants to look at the same issues again. The timing is not convenient, the auditor is too late".*
Auditee's agenda-too busy periods	when a reference is made to periods when auditee is too busy with various activities	twee weken per maand ben je niet welkom, eind van de kwartaal, begin van de kwartaal, drukke tijd, drukke periodes, druk, piekmomenten, druk hebben	two weeks per month not welcome, busy time, busy period, busy, peak times, to be too busy	Auditor:" *I am doing an audit within a department and I know, two weeks in the month you are not welcome as they are doing their reconciliations and closures. In this period the Auditee is not receptive for our message".* Auditee: *"I have experienced very often when we have very busy periods we ask the auditor to come one month later because then we can be able to listen to his message".*

Table 4-13. Coding scheme for Change

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Change in applications	when a reference is made to changes in applications within the auditee's organization	applicaties	applications	Auditor: *"When the Auditee is doing projects or changes in applications, they want to have the auditor's recommendations when they are in phase of the change and not later after the implementation".*
Change in laws and regulations	when a reference is made to changes in laws or regulations	veranderingen in wet-of regelgeving, regulatory, wet niet af, MiFID	changes in laws or regulations, regulatory, law not ready, MiFID	Auditor: *"During changes in laws and regulations, the Auditee can be helped by us if we come early enough with our recommendation so that they have sufficient time to correct things".* Auditee: *"When the laws and regulations have changed but they are not ready yet and we are not ready yet with our organization, this is not a good timing for the auditor to come".*
Change in process	when a reference is made to occasions when the auditee is engaged in process change	proces aan het herzien, verandering, designproces, herontwerp van proces, bouwen, proces, proces in verandering	revising of process, change, process design, redevelopment of process, building up, process, process in change	Auditor: *"In cases when the Auditee is redeveloping a certain process, it is much cheaper and effective if we look at the process change at the moment of the change and give our recommendation during this change instead waiting to do the audit as planned by the end of the year".* Auditee: *"If I have to start with designing an purchase process tomorrow, then I want to have the auditors with their recommendations day before yesterday".*
Change in staff	when a reference is made to changes in staff within the auditee's organization	afdelingshoofd nieuw, minder mensen, reorganisaties, managementwisseling, veranderen van management, nieuw management, manager begint net	new head of a department, less employees, reorganization, change of management, management change, new management, manager just started	Auditor: *"When the department head is newly appointed, he/she is much more open to hear of our recommendations".* Auditee: *"If the manager of a certain department has just started, the auditor is more than welcome to give a kind of 'baseline' recommendation".,*

Table 4-14. Coding scheme for Character

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Character Auditee	when a reference is made to the personal character of the auditee	stug	surly	Auditor: *"There other 'soft' factors that play a role for the auditor to choose how to approach the Auditee and when. Because if you know in advance that the Auditee is a surly person, then you have to think carefully about what would be a handy timing to approach this person".*
Character Auditor	when a reference is made to the personal character of the auditor	psychologie van de auditor, lief, durven niet	psychology of the auditor, too nice, do not dare	Auditor: *"There is something in the character of the auditor that determines the timing of his/her communication. I used to know auditors that can connect with management more easy than others".* Auditee:" *I think that sometimes the auditor are too nice. Or they do not dare to report their issues immediately but wait long and hesitate to communicate their message".*

Table 4-15. Coding scheme for Content

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Auditee's understanding of auditor's message	when a reference is made to the moment when the auditee understands the content of the auditor's message	inhoud, op moment dat mensen begrijpen	content, the moment when people understand	Auditor: *"At the moment when you communicate something to people and they understand what you want to say, they cannot do something else then accept your message. This is the right moment for the auditor to push ahead towards solutions".*

Table 4-16. Coding scheme for Design phase

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Design phase	when a reference is made to the auditor looking at the design phase of a process, control, systems etc. before its implementation	design, design fase van proces, opzet van controls	design, design phase of a process, design of controls	Auditor: *"You can already look at the design of something. And then you are in time because then the Auditees want to have your advices and learn from you".*

Table 4-17. Coding scheme for External factors

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
External factors-market development	when a reference is made to outside market developments	externe factoren, ontwikkelingen in de markt, buitenwereld	external factors, market development, outside world	Auditor: *"I think the timing of the auditor's message should go along with the developments in the outside market".* Auditee: *"If you look what happens with the oil sector at the moment, then this should be trigger for the auditor to look at the impact of these outside developments within the organization at that moment and not wait until 2018 when it could be too late".*

Table 4-18. Coding scheme for Focus

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Audit focus	when a reference is made to the shift of audit focus related to what topics they find important	verandering van focus binnen audit	change of audit focus	Auditee: *"Almost ten years ago when we had the first internet banking attack, internal audit was very much involved in recommending solutions to manage the issue. In 2012 there was another internet banking attack and the internal auditor did not pay much attention to this incident but came half an year later when we were ready with resolving the issue. Due to change in their own audit focus, the timing as to when the auditor will do the audit and communicate results also changed".*
Auditee's focus	when a reference is made to the shift of auditee's focus related to what topics they find important	belangrijk vinden, IPO, actueel	to find important, IPO, topical	Auditor: *"In times when certain topics are very topical to management you do not have to do much as an auditor to have an impact.* Auditee: *"When we have certain topics that are very important, we want the auditor to look at these at a certain moment. My experience is that the auditor is very sensitive in such moments and respond to it accordingly".*

Table 4-19. Coding scheme for Incidents

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Incidents	when a reference is made to incidents or events that trigger alertness by management	cybercrime, alertheid, aangifte krijgen, groot vraagstuk, systems down, fraude, puinhoop, overtreding wet en regelgeving, incidenten, mis gaat	cybercrime, being alert, important question, fraud, mess, breach laws and regulations, incidents, going wrong	Auditor: *"There are several topics, such as cybercrime incidents, where timing does not play any role. In this case you do not need to think about when it would be a good timing to report on this topic but you can do that at any time because the Auditee is alert for this topics".* Auditee: *"Let me tell you an example. When we had a recent cybercrime, the auditor came afterwards when the incident has already happened. It was too late. The calf had been droned already! Where was the auditor one year before this incident happened"?*

Table 4-20. Coding scheme for Preference

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Auditee's preference	when a reference is made to the personality trait (unrelated to other situations) of the auditee as to when to communicate audit issues	zo snel mogelijk, gedurende de audit, meteen rapporteren	as soon as possible, during the audit, report immediately	Auditee: *"I want to be informed by the auditor about the issues as soon as possible and prefer they not to wait till the audit is finalised. Timely interaction with the auditor is for me very important so that I can take timely action. For acceptance of the auditor's issues I find this very important".*
Auditor's preference	when a reference is made to the personality trait (unrelated to other situations) of the auditor as to when to communicate audit issues	rapporteer meteen, de regel hoe eerder hoe beter, zo snel mogelijk	report immediately, the rule the earlier the better, as soon as possible	Auditor: *"My own experience, actual more personal rule, is that the earlier you communicate your message to the Auditee the better. In a later stage you can communicate these issues again but then is much more easier".*

Table 4-21. Coding scheme for Project

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Project	when a reference is made to projects done by auditees	project, audit issue form, veranderingen, projecten	project, audit issue form, changes, projects	Auditor: *"The 'go-no go' decision moment of a project is an important moment to report your issues so that the Auditee can take additional actions for issue resolution.* Auditee:*" If you want to audit a project then give your input during the project or prior to start of the project. But do not come afterwards to give me a kind of a 'report mark' when I have already finalised the project".*

Table 4-22. Coding scheme for Regulator

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Regulator involvement	when a reference is made to regulator's requests and investigations	regulator, ECB	regulator, ECB	Auditor: *"It can be that timing is also determined by the regulators. If we know that the regulator will come in to do a certain research, then we can report our recommendation earlier to the Auditee and they will be more ready to listen to us".* Auditee: *"There are regulatory driven audits resulting from regulator involvement or regulator's letters, and there is little to do as to the timing of these audits. They should be done and we have little to say about it".*

Table 4-23. Coding scheme for Relation Auditor-Auditee

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Relation Auditor-Auditee	when a reference is made to the relation between the auditor and the auditee	kwaliteit van de relatie, intensiever, vertrouwensrelatie, vertrouwd, verhouding	quality of the relation, more intensive, trust, trusted, relation	Auditor: *"If the auditor has a good relation with the Auditee and the auditor is trusted by the Auditee, then the auditor knows that at the moment he communicates his message to the Auditee he will listen to the auditor's message. So, in this case you cannot make much mistakes with the timing of your message".* Auditee: *"In the past, the relation with the auditors was not so good and in these times the auditor's messages were not easy accepted. by us no matter the timing of the message".*

Table 4-24. Coding scheme for Strategic events

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Strategic events-critical management decisions	when reference is made to critical management decisions made by the auditee specifically when reference is made to Initial Public Offering (IPO), go-no go decisions, decision to continue or discontinue a business line, strategical issues	IPO, go-no go decision, besluit wel of niet doorgaan met een businesslijn, strategische issues, beursgang	IPO, go-no go decision, decision to continue or discontinue a business line, strategical issues	Auditor:*" In the times of the IPO, the Auditee was much more ready to listen to our recommendations and came directly into action".* Auditee: *"Prior to the IPO, we had several audit issues that we paid insufficient attention to. At the moment when IPO decision was close, suddenly these audit issues became very important and we had to resolve them as soon as possible".*
Strategic events-separation & integration	when a reference is made to separation or integration programmes of the auditee	separatie-of integratieprogramma	separation or integration programme	Auditor: *"I was involved in a very important separation and integration programme where every hour was of a crucial importance for the Auditee. In this situation, the Auditee wanted to know of my audit concerns within 5 minutes".*

Table 4-25. Coding scheme for Type of audits

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Type audits-audits abroad	when a reference is made to the role of timing factors in audits executed abroad	audit in het buitenland, buitenland audits	audits abroad	Auditor: *"In audits abroad the Auditee wants to know of the audit issues at the moment before you leave. Thus, the closing meeting at the end of your stay is very important because in this meeting you communicate your message to the Auditee".* Auditee: *"In audits abroad everything must happen within two or three weeks. Everybody is focused and communication is smooth".*
Type audits-continuous auditing	when a reference is made to continuous auditing	continuous auditing, continuous communication	continuous auditing, continuous communication	Auditor: *"In continuous auditing we also have to have continuous communication".*
Type audits-existing process	when a reference is made to audits on existing processes	regulier proces, bestaande processen	regular process, existing process	Auditor: *"In the audits of existing process we have a window of opportunity when we identify a serious issue for example related to client files. But in existing processes it is more difficult to the Auditee to implement changes".*
Type audits-maintenance audits	when a reference is made to maintenance audits	onderhoud audit	maintenance audit	Auditor: *"The timing is very important as from the start of each audit in order to come to good results. First you have to see if it is a good moment to do the audit, will it have added value to the Auditee or it is a kind of maintenance audit no one is waiting for".*
Type audits-management requests	when a reference is made to audits on request of management	op aanvraag, klant vraagt, niet planbaar	on request, asked by the client, not plannable	Auditor: *"The timing depends on whether the audits are audits on management request or routine audits". Auditee: The best timing for the auditor is when the Auditee requests the audit. If the Auditee has issues and want the auditor to investigate these, this is a perfect timing for the auditor to do well in the audit".*

Table 4-25. Coding scheme for Type of audits (*continued*)

Code	Code definition	Associated Words / Phrases (Dutch)	Translation	Interview example (translated)
Type audits-mandatory	when a reference is made to mandatory audits	audit aanbeveling verplicht, audits door wet en regelgeving, audits die moeten gebeuren, verplichte audits	mandatory audit recommendation, audits prescribed by law and regulations, audits that must happen, mandatory audits	Auditor: *"If we say to the Auditee that a certain audit must be done tomorrow, than this audit is mandatory audit and the timing is different from the regular planned audits. For it brings sense of urgency on all sides and the communication of the audit issues goes more smooth".* Auditee: *"The mandatory audits has to be simply done no matter of we find it nice or not nice. The timing in these audits has no role as the audit must be done. But for many other types of audits I think that the auditors has to make better link with my management agenda, and in this case the timing is very important to me".*
Type audits-post-mortem audits	when a reference is made to post-mortem audits	post-mortem	post-mortem	Auditor: *"If you do a kind of post-mortem audit just after the placing of the 'monument', this is a right timing, but six months later you are too late".*
Type audits-soft controls	when a reference is made to audits on soft controls related aspects such as culture and behaviour, ton at the top, governance	cultuur, gedrag, tone at the top, governance, cultuur	behaviour, tone at the top, governance, culture	Auditor: *"When you want to include behaviour issues in your message then the right timing to do that is the final closing meeting and not before that. In this meeting the Auditee will show their culture and you can include that in your audit opinion".* Auditee: *"If the auditor has found governance or soft controls related issues, I think he/she should put these issues on the table as soon as possible".*
Type audits-theme audits	when a reference is made to theme audits	thema audits	theme audits	Auditor: *"At the moment you do a theme audit which gets a great attention by the Auditee, I think you do not need to do much in order to have an impact".*

5 Views on the Influence of 'Timing' on the Effectiveness of the Internal Audit Function: A Q-methodological Study

CHAPTER OVERVIEW

The focus of this study is on the understanding of the timing factors that might be of influence on the Internal Audit (IA) effectiveness and the importance thereof for the internal auditors and management (the auditees). Various factors influencing IA effectiveness have been already studied; however, our knowledge of the relevance of timing factors on the IA effectiveness is limited. The aim of this study is to explore views of internal auditors and auditees concerning 'which timing related factors play a role and determine that the time is right (not too early and not too late) for the internal auditor to communicate the risk warnings to the auditee so that the Internal Audit function will be most effective?'. For the purpose of our study we defined IA effectiveness as the extent to which the internal auditor's message recipients (auditees) are willing to listen or not to listen to the internal auditors' risk warning message.

A Q-method approach was adopted that allow us to perform a wide pattern analysis combining qualitative and quantitative exploration of the timing factors. Auditors (N=26) and auditees (N=26) each performed a sorting task in face-to-face interview setting. The respondents were asked to rank 43 statements describing timing factors from 'most important 'to 'least important'. The responses were analyzed using by-person factor analysis. The results revealed five different viewpoints in relation to the importance of the timing factors for the IA effectiveness. These viewpoints are: "Communicate important issues immediately, no matter what", 'Establish good relation first, then communicate issues', 'Communicate when changes are still possible, not afterwards', 'Communicate risk warnings when you have evidence first', 'Communicate immediately, and remain independent'. The early communication of risk

warnings, immediately when issues are observed, is central to all identified viewpoints in our study.

With this study we address an important knowledge gap concerning the IA effectiveness as well as in our understanding of timing i.e. when is the right moment to act.

Keywords: timing factors, internal audit effectiveness, internal audit function, internal auditor, auditee, risk warning messages, Q methodology

5.1 INTRODUCTION

> *"Timing is everything. Act too early or too late, and the results can be disappointing – or even disastrous."* (Albert, 2013, p.1).

If timing is everything in every aspect of business to make a difference between success and disaster, it may also be a relevant factor for the effectiveness of the Internal Audit function (IAF). The internal auditor operates in a dynamic organizational environment that has its own tempo and dynamic. At the same time, audits have their own planning and rhythm that are based on prescribed audit methodology and auditing standards. In certain situations, the internal auditor needs to report his findings and recommendations even though the audit investigation is not yet finalised, simply because the time is right to act and make a difference. In other situations, the time may not yet be right and the auditor may then consider to wait and hold reporting of findings and recommendations.

The IAF can be considered effective when organizations follow their internal auditors' (independent) advice for improvement (Lenz, 2013). Lenz and Sarens (2012) consider the internal audit report as an output that cannot be effective per se. However, it may trigger an intended change, a specific outcome and possibly lasting impact, and this is what matters. If the timing of 'when to act' indeed is everything (Albert and Bell, 2002), we may assume that the timing of the internal auditor's trigger for the intended change matters for the IA effectiveness.

As discussed earlier in Chapter 1 and 2 of this thesis, prior research on factors influencing IA effectiveness has tended to focus predominantly on factors such as the acceptance and implementation of the audit recommendations, the size of the audit department, compliance with the auditing standards, the positioning of the Internal Audit department in the organization and relation with the Audit Committee, and interaction with line managers (Arena and Azzone, 2009), top management support (Cohen and Sayag, 2010; Van Peursem, 2005; Mihret and Yismaw 2007), staff expertise, executing the audit plan, audit communication (Mihret and Yismaw, 2007), organizational support' (Sarens and De Beelde, 2006a; 2006b). In their study Nuijten et al, (2016) tested some causes of deaf effect (the reluctance to hear bad news) on strategic topics such as continuation of an escalating Information Systems project and suggested that deaf effect can be considered as a deficiency in the effectiveness of the IA function. Despite the many studies on the IA effectiveness, our knowledge of the relevance of timing factors remains limited.

Albert and Bell (2002) did an extensive review of the organizational literature on timing and noted that timing questions (point-moment problems) appear mostly focused on sequencing problems (Lieberman and Montgomery, 1988), rate problems (Eisenhardt, 1989; Brown and Eisenhardt, 1998; Gersick, 1989), synchrony problems (Perlow, 1999),

deadlines (Waller et al, 2001), and duration and coordination (Ancona et al, 2001a). In other words, although the importance of timing is acknowledged in the literature (Blount and Janick, 2001, Ancona, et al, 2001b, Lawrence, 1988, Albert and Bell, 2002), we still know little about when is the right point of moment to act. Albert and Bell (2002) posit that when a well-developed and valid theory about when to act is lacking, there is no guidance for the decision makers about when is the right moment to act but they must rely on heuristics like 'the sooner the better'(Albert and Bell, 2002).

Therefore, in this study we aim to obtain a better understanding about the influence of timing factors on the effectiveness of the IA. The research question we address is: What are the views of the auditors and auditees (management) about the influence of timing related factors that determine the time is right (not too early and not too late) for the internal auditor to communicate the risk warnings to the auditee so that the auditee will listen to the internal auditor's message? The IA function is our unit of analysis we study (Blumberg et al, 2014; Sekaran and Bougie, 2013) and we define the IA effectiveness as auditee's willingness to listen or not to listen to the auditor's risk warning message. We consider risk warning messages as part of both planned audit engagements as well as other occasions outside planned engagements, when the auditor has contact with the auditee.

Understanding the views of auditors and auditees about the timing may be relevant from a theoretical as well as practical perspective. By lack of theory in this area, the empirical results of this study can be used for theory development. From a practical perspective it is interesting by itself to gain insight in how internal auditors and the auditees (as important stakeholders of the IAF) perceive the importance of timing for the effectiveness of the IA.

The paper is organised as follows: we start describing our research methodology, thereafter we elaborate on our results. We then follow by a discussion on the implications of our study for research as well as practice.

5.2 RESEARCH METHOD

Q methodology

In this study we applied Q methodology (Watts and Stenner, 2012) to explore the views of auditors and auditees about the influence of timing factors on the effectiveness of the IAF. Q methodology is a form of pattern analysis for the study of subjectivity that combines aspects of qualitative and quantitative methods (Stenner et al, 2000). It was introduced by William Stephenson in the 1930s but it can still be considered as a innovative method in the field of auditing and accounting. In a Q methodological study, respondents are asked to rank a set of statements about a certain topic according to

their opinion, and explain this ranking in a follow-up interview. By-person factor analysis identifies the main patterns in the rankings of statements across respondents, and the statements that illustrate the consensus and difference of opinion between patterns (Watts and Stenner, 2012).

Below we describe the consecutive steps in conducting this study. Because Q methodology may be novel to part of the readership, we describe each step elaborately.

Development of the statement set

The Q methodological study starts with the development of the research instrument. The research instrument is a collection of statements representing the broadest possible variety of perspectives on the topic under investigation. In a Q methodological study the statement set represents the study sample. In line with the Q methodological approach of Watts and Stenner (2012; 2014), we developed the statement set in such a way to fit the demands of the research question we seek to answer in this study and is broadly representative of the population of people from which it is drawn (Watts and Stenner, 2012; 2014).

The statement set for this study was based on previous qualitative research on timing factors (see Chapter 4 of this thesis). Five focus group interviews were conducted with in total 15 auditors and 15 auditees, which resulted in 48 timing factors. For the purpose of this study, we first translated these identified timing factors into 48 statements, based on quotes extracted from the focus group interviews. In an iterative process, we evaluated the usefulness and formulation of the statements in relation to the research question of this study. Next, we conducted a pilot test with these statements with two internal auditors and one auditee to check the intelligibility of individual statements and the comprehensiveness of the statement set. Following this pilot test, a number of statements were removed because participants identified them as ambiguous, double-barrelled and/or overlapping, and several changes were made to the wording of statements. This fine-tuning resulted in a set of 43 statements related to timing factors. This statement set was again pilot tested with three auditors and two auditees to ensure the statements were complete, similarly worded and easy to understand. The pilot test showed no further changes were required.

The full list of the statements in relation to the timing factors identified in the previous study is presented in table 5-4 in Appendix 1.

Selection of participants

For this study, we selected a sample of 26 auditors and 26 auditees for face-to-face interviews. This is well within the common range of 40 to 80 participants in such studies (Watts and Stenner, 2012).

In a Q methodological study, where the aim is to explore the variety of views, participants are sampled purposively (Watts and Stenner, 2012). In line with this approach of Watts and Stenner (2012; 2014) we selected each participant carefully and with consideration because each participant becomes a variable in a Q methodological study (Watts and Stenner, 2012).

The main selection criteria for selecting the participants for this study was that the auditors had to have experience with conducting audit investigations and reporting audit issues to auditees. While the auditees had to have experience with audit engagements and have received audit issues and reports from auditors. The auditors and the auditees were selected from a large Bank in The Netherlands that was willing to cooperate in this study because the organization was in phase of taking strategic decisions (like the initial public offering, change of top management) in which the timing of the auditor's message was a matter of interest. The auditees were recruited from the network of the banking organization.

For the purpose of the study we approached individuals who were likely to hold pertinent viewpoints on the topic under investigation. The inclusion criteria included job function (auditor, auditee), department, age, gender, years of work experience, and education level. Exclusion criteria were not being involved in any kind of internal auditing (as an auditor or as an auditee), not being able to understand English (as our statements and instructions were presented in English), and not having the capacity to understand the sorting task. See table 5-1 for the characteristics of the final sample.

Table 5-1. Participants (n=52)

Characteristic			Value
Age (mean, range)			43.0; 28-60
Gender (%)	-	female	21.2
	-	male	78.8
Years of work experience (mean, range)			18.3; 3-36
Education (%)	-	below university degree	7.7
	-	university degree	57.7
	-	post-university degree	34.6
Department (%)	-	audit	50.0
	-	Auditees from 1st line of defence	23.1
	-	Auditees from 2nd line of defence (operational risk, compliance)	26.9

Data collection

All participants were interviewed individually, face-to-face. At the start of the interview, we explained the aim of the study, the task they were asked to perform, and the use and anonymity of the data they would provide. Then, we asked participants to rank the

statement set using a sorting grid that was placed on a table in front of them (see figure 5-1) and the following instruction:

> *'The willingness of the Auditee to listen to the risk-warning message of the Internal Auditor is an indicator of Internal Audit effectiveness. According to you, WHICH timing factors determine WHEN is the right moment (thus, not too early and not too late) for the Internal Auditor to communicate the risk-warning message that makes the Auditee listen to the Internal Auditor?'*

Participants were given 43 shuffled cards containing the statements and were asked to read them and divide them into three piles: 'important', 'not important' and 'neutral'. Next, they were asked to read through the statements they had placed on the 'important' pile and to rank the two most important statements onto the far right of the grid, (column 9), the next most important three statements into the column 8 etc. Subsequently, they were asked to read the statements they placed in the pile 'not important' and to rank the two least important statements onto the far left of the grid, (column 1), then the next three into column 2 etc. Finally, they were asked to rank the statements from their neutral pile onto the remaining open spots on the grid. Once the sorting task was finished, they had the opportunity to move statements around until they were happy with their ranking of the 43 statements.

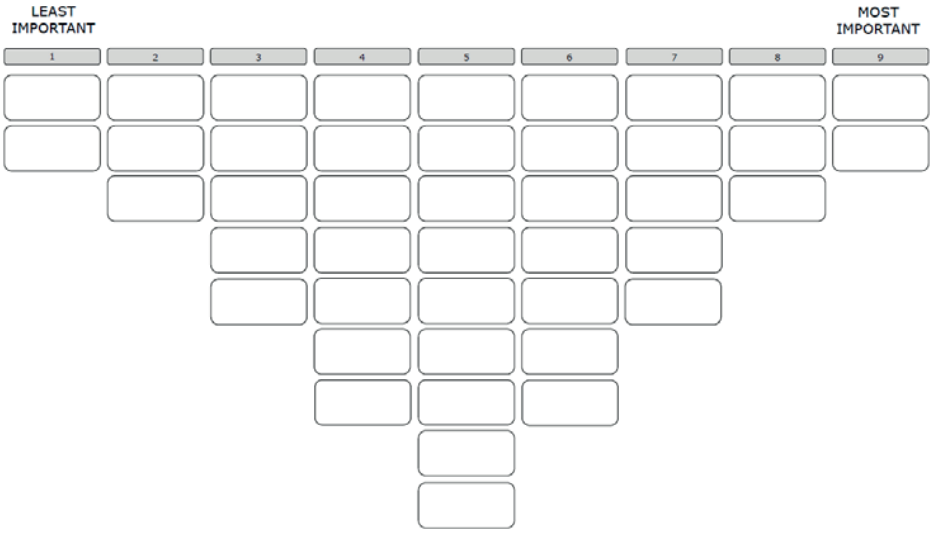

Figure 5-1. Sorting grid of timing statements

In the second part of the interview, participants were asked a number of follow-up questions. First, they were asked for the reasoning behind the ranking of the two 'least important' and 'most important' statements (columns 1 and 9). Then they were asked for any other comments about statements or their ranking. This part of the interview was tape recorded by the researcher after consent by the participant.

Analysis

The 52 rankings of 43 statements were subject to by-person factor analysis (centroid extraction, varimax rotation) using the dedicated software package PQ method (version 2.35; Schmolck, 2014). The assumption behind this analysis is that participants' rankings of the statements reflect their viewpoint about the timing factors we study, and when the rankings of two participants are highly correlated, they have the same view. Factor analysis helps to identify the main groups of participants with correlated rankings of statements, and thereby identify the main views about the influence of the timing factors on the IA effectiveness.

For each resulting factor from our factor analysis (i.e. identified 'viewpoint'), an idealized ranking of the statements was calculated. This idealized ranking is a weighted average ranking of the statements based on the rankings of the respondents associated with that factor (hereafter, 'viewpoint'), with their correlation coefficient with the viewpoint as weight. In fact, this idealized ranking represents how a respondent with a 100% correlation with that viewpoint would have ranked the 43 statements, and provides the statistical basis for interpretation and description of the viewpoint.

We drafted a first interpretation of the viewpoints about the timing factors using the idealized ranking of statements of each viewpoint. Then, the communalities and differences between viewpoints were highlighted using the consensus statements, whose rankings did not differ significantly between any pair of viewpoints, and the distinguishing statements, whose rankings in a viewpoint differed statistically significantly from the ranking in all other. The interpretation was finalized using the qualitative materials from the follow-up interviews. In addition, citations from participants associated with the viewpoints were extracted for purpose of illustration of the views. By following these steps, we aimed for the viewpoints to reflect, as closely as possible, how participants perceived the importance of the timing factors for the IA effectiveness.

5.3 RESULTS

Analysis of the 52 rankings of the 43 statements revealed five distinct viewpoints among auditors and auditees. All five viewpoints had an eigenvalue > 1 and at least two defining variables, i.e. statistically significant and uniquely associated participant rankings (Watts

and Stenner, 2012). Extraction of more than 5 viewpoints would results into statistically insignificant viewpoints (eigenvalue < 1 or less than two defining variables). Each viewpoint offered a clear, distinct, and coherent explanation of the auditors and the auditees all together about the importance of timing factors for IA effectiveness, i.e. 'when is the right moment' (thus, not too early and not too late) for the internal auditor to communicate the risk-warning message so that the auditee will listen to the internal auditor. The five viewpoints had between five and nine defining variables each and together explained 52% of the variance in the data (see table 5-2). The correlations between the factors ranged between .33 and .57, indicating that there is quite some consensus between each pair of views and that there are no very distinct or opposing views. Correlations with Viewpoint 2 seem generally lower. Table 5-5 in Appendix 2 shows the viewpoints loadings table.

Table 5-2. Viewpoint characteristics

Characteristic		**Viewpoint**				
		1	2	3	4	5
Number of defining variables (n)		9	5	8	6	5
Explained variance (%)		14	6	12	11	9
Cumulative explained variance (%)			20	32	43	52
Correlations between viewpoints	2	.47				
	3	.53	.33			
	4	.54	.40	.51		
	5	.57	.33	.51	.55	

Table 5-3 presents the idealised sorts of the five viewpoints and thus shows the ranking of statements that is characteristic for each viewpoint. A "+4" indicates that the statement is positioned at the far right of the distribution in that viewpoint ("most important"; column 9 in Figure 5-1); a "-4" that it is positioned at the far left ("least important"; column 1 in Figure 5-1). An * next to the score of the statement indicates that the statement is distinguishing for that viewpoint, i.e. has a statistically significantly different score ($p<.01$) relative to the other viewpoints.

We present the five viewpoints. The numbers in brackets represent the rankings of statements in the idealized ranking underlying that viewpoint. For example (2: -4) indicates that statement 2 was ranked in the -4 ('least important') position in viewpoint 1. Verbatim comments from participants associated with the viewpoint are shown in italics and are followed by the identification number of the participant in parentheses (with AUD=auditor and AEE=auditee). Although the identification codes of the participant distinguish auditors from auditees, in our analysis of the viewpoints we chose not to make this difference as assumed the right timing should be determined in dialogue between the auditors and the auditees. Hence, each viewpoint identified in our study is a viewpoint of the auditors and auditees all together.

Table 5-3. Complete list of statements and composite factor analysis scores for the five viewpoints

Statement		Viewpoint				
		1	2	3	4	5
1	The auditor communicates the risk-warning message when the organization makes a change of external auditor.	-3	-2	-2	-1	0*
2	Communication of the risk-warning message by the auditor is aligned with the timing of activities of the external auditor.	-4*	-2	-2	-1	0*
3	The auditor communicates the risk-warning message when the first and second line have finished their investigation.	-1	-3	-2	-3	-3
4	Communication of the risk-warning message by the auditor is aligned with the priorities and objectives of the auditee.	-2	+3	0*	+2	-1
5	The auditor communicates the risk-warning message before the auditee makes decisions about budgets.	-1	0	+1	-1	+1
6	Critical or high-risk findings are communicated directly at the moment the auditor has identified the risk.	+4*	+2	+2	+4	+4
7	Serious issues with high sense of urgency are communicated by the auditor directly, irrespective of the stage of the audit investigation.	+4	+4	+3	+4	+4
8	When the audit opinion is 'weak', the communication of the risk-warning message by the auditor starts in the early stage of the audit.	+3	-1*	+1	+2	+3
9	The risk-warning message is communicated by the auditor before the deadline for realisation of the Year Audit Plan at year end.	-3	-4*	-3	-2	-2
10	The auditor communicates the risk-warning message only after executing all the necessary audit activities with due care.	0	0	-2*	+1	0
11	The auditor communicates the risk-warning message only when there is sufficient evidence supporting the message.	0	+2	-1*	+3	+2
12	The auditor communicates the risk-warning message only when the factual accuracy checks have been performed.	+1	+1	-1*	+3*	0
13	The auditor communicates the risk-warning message at the end of the fieldwork, in the closing meeting.	-1	-1	0	0	-2
14	The auditor communicates the risk-warning message in early stage, during the orientation phase of the audit.	+1	-3*	0	-1	-1
15	Communication of the risk-warning message by the auditor is on a quarterly basis as part of the quarterly audit opinion reporting.	-2	-4*	0	-1	+1*
16	The auditor communicates with the auditee in frequent update meetings throughout the audit to discuss potential issues arising.	+2	+3	+1*	+3	+3
17	The auditor takes into consideration holiday periods and absence of key staff of the auditee in the communication of risk-warning messages.	-1	0*	-4*	-2	-1
18	The auditor takes the appraisal cycle of the auditee by year-end into consideration in the communication of risk-warning messages.	-4	-3	-4	-2	-4
19	The auditor takes into consideration that the auditee sometimes is already working on improvements.	+1	+3	+2	+2	-1*
20	The auditor takes into consideration that the auditee sometimes is too busy to listen to a risk-warning message.	-2	+1*	-3	-3	-3
21	Communication of the risk-warning message by the auditor comes during the phase of change of applications or processes, not after implementation of the change.	0	+1	+3*	0	+1

Statement		Viewpoint				
		1	2	3	4	5
22	When laws and regulations change, the auditor communicates the risk-warning message early enough for the auditee to have sufficient time to correct things.	+2	+1	+3	+1	+1
23	The auditor communicates the risk-warning message when the auditee has appointed new management within the department.	-1	0	0	0	-2
24	The auditor takes soft factors like the character of the auditee into consideration to decide on when to communicate of the risk-warning message.	0	+1	0	-3*	+1
25	The auditor is straight and bold enough to communicate the risk-warning message directly.	+3*	0	-1*	+2	+1
26	The auditor communicates the risk-warning message when the auditee understands the content of the issue.	+2	+2	-2*	0	0
27	Communication of the risk-warning message starts during the design phase, not after implementation of the project.	+1	0	+4*	0	+2
28	Communication of the risk-warning message by the auditor is aligned with market developments.	0	0	+2*	0	-4*
29	Communication of the risk-warning message is aligned with topics the auditor finds important at that particular moment.	0	+2*	-1	-1	-3*
30	The auditor communicates the risk-warning message directly when an incident is observed.	+3*	-2*	+1	+1	0
31	The auditor takes the personal preferences of the auditee about communication of risk-warning messages into consideration.	+1	+1	0	-4	-2
32	The moment of communicating the risk-warning message to the auditee is a personal choice by the auditor.	0	-2	-3	-4	-1
33	The auditor communicates the risk-warning message before the 'go-no go' decision of a project.	+2	-1	+2	0	+3
34	Communication of the risk-warning message by the auditor is aligned with the timing of requests for investigation by the bank's regulator/supervisor.	-3*	-1	-1	+1	0
35	The auditor takes into consideration the quality of the relation with the auditee (trust).	-1	+4	-1	-2	+1*
36	The auditor communicates the risk-warning message in strategic events when management makes critical decisions.	0*	+1	+4*	+2	+2
37	In audits abroad the auditee wants to know of the audit issues before the auditors leave.	+2	0	-1*	0	+2
38	In continuous auditing the auditor communicates the risk-warning messages continuously.	+1	0	+1	+1	-2*
39	The auditor communicates the risk-warning messages in audit that has an added value for the auditee.	+1	+2	+1	0	-1
40	The auditor communicates the risk-warning messages when the audit is requested by management.	-2	-1	0	+1	-1
41	Communication of the risk-warning message comes right after the post-mortem (of projects, products), not long after it.	-2	-2	0	-1	0
42	The risk-warning message concerns governance or soft controls related issues.	0	-1	+2	-2	+2
43	The risk-warning messages are communicated by the auditor in theme audits that receive great attention from management.	-1	-1	+1	+1	0

Viewpoint 1.

In viewpoint 1, communicating critical, high-risk or urgent findings immediately, irrespective of the stage of the audit investigation, is considered most important (6: +4*; 7: +4; 30: +3*; 16: +2). An auditor explained: "*Important issues should be communicated smoothly and fast, the internal auditor should not wait till all audit activities are finalised but communicate the issue as soon as it is observed. If you identify important issue you need to communicate it directly and not wait to finalise the audit*" (6: +4; AUD08). Another auditor: "*These two statements (6 and 7) indicate that these issues should be communicated directly. You can do extra investigation later on but you need to communicate these issues immediately and then you are in time to see what additional work you need to do*" (7: +4; AUD11). And an auditee stated: "*At the moment the auditor identifies serious issue he should not wait but directly communicate the risk to me. It is about the moment the auditor has identified an issue and at that moment the auditor should report the issue and not wait*" (6: +4; AEE26). For this purpose, it is important that the auditor is straight and bold enough to communicate the risk-warning message directly (25: +3*). In this respect one of the auditors noted: "*The auditor has to communicate his message at all times no matter of the timing. You should not be afraid of various formalities*" (25; AUD13). While one of the auditees said: "*The auditor should be bold and direct. The auditor should communicate the risk directly, to initiate discussion and dialog with the auditee so that the auditee is able to take action. If the auditor is too late with his risk message, this is not a preferred situation for the auditee*" (25; AEE14). Overall, early communication of issues arising throughout the audit is central to this viewpoint because it gives the auditee more time to intervene, for example when the audit opinion is 'weak'(8: +3), when laws and regulations change (22: +2) or before the 'go-no go' decision of a project (33: +2). For example, one of the auditees said: "*It is important to me to know of the issue very early so that I can do something about it*" (33; AEE08). Thus the auditor should not hesitate to address important issues 'when the iron is hot'.

In line with this strong focus on early and straight communication, which is distinguishing for this view, statements that mentioned fixed timings like the year-end (18: -4; 9: -3), alignment with the timing of activities of the external auditor (2: -4*) or the timing of requests for investigation by the bank's regulator/supervisor (34: -3*), or just when requested by management (40: -2) were considered least important. One of the auditees associated with this viewpoint stated: "*The appraisal cycle of management is not important for the moment of the communication of the risk message by the auditor. The auditor can communicate the message anyway and not take into consideration this factor*" (18: -4; AEE09). And one of the auditors explained: "*The internal auditor's activities are independent of the various events such as e.g. the involvement of the external auditor or budget decisions. These are no reasons not to communicate the message*" (2: -4; AUD07). Another auditor confirmed this view by saying: "*The internal auditor should not wait for*

the external auditor's or supervisor's alignment; the internal auditor should be able to report risks independently. Otherwise the internal auditor is too late with the communication of the risks. I expect that in these situations the internal auditor is even more early that the external auditor or supervisor in reporting the issues" (34: -3: AUD08).

Considering the above, we call this viewpoint '*Communicate important issues immediately, no matter what*'. This viewpoint can be expected among both auditors and auditees as it was defined by five auditors (AUD07, AUD08, AUD11, AUD13 and AUD18) and four auditees (AEE08, AEE09, AEE14, AEE26) (see Appendix 2).

Viewpoint 2.

The auditors and auditees in viewpoint 2 believe more than their peers in the other viewpoints that the most important factor for the timing of the communication of the risk warning message by the auditor is the quality of the relation with the auditee (trust) (35: +4*). With respect to the quality of the relation, one of the auditors said: "*We have to investigate the issues, but we need to have a good communication with the auditee. We need to address issues in our regular meetings with management. This is important for the relation with the auditee.*" (35: +4; AUD12). Therefore this group found aspects such as communicating risk warning messages in frequent update meetings throughout the audit (16: +3), aligning the timing with the priorities and objectives of the auditee' (4: +3), taking the improvements of auditees into consideration (19: +3) also important as it contributes positively to the relation with the auditee and facilitates the effective communication of the risk warning messages by the auditor. One of the auditee stated: "*This statement relates to the moment when the auditor can place himself in the shoes of the auditees and this is for me most important timing factor*" (19: +3; AEE21).

That the relation with the auditee is important in this viewpoint, can be also seen in aspects this group found more important than other groups, like 'alignment with topics the auditor finds important at that particular moment' (29: +2*), 'taking into consideration busy periods of the auditee' (20: +1*) and 'the personal preferences of the auditee about the moment of communication of risk-warning messages' (31: +1*). Although the relation with the auditee takes the central place in this viewpoint, still having sufficient evidence supporting the message (11: +2) and understanding the content of the message by the auditee (26: +2) are seen by this group as important prerequisites to 'communicate serious issues with high sense of urgency immediately, irrespective of the stage of the audit investigation' (7: +4) and 'communicate critical or high-risk findings directly at the moment the auditor has identified the risk' (6: +2). For example one of the auditor said: "*It starts when the Auditee understands what the issue is about otherwise we cannot convince him that there is a risk*" (26; AUD10). This may be the reason why this group found aspects such as 'when the audit opinion is 'weak', the communication of the risk-warning message by the auditor starts in the early stage of the audit' (8: -1*), 'the

auditor communicates the risk-warning message directly when an incident is observed' (30: -2*) more unimportant compared to their peers in the other viewpoints.

For the auditors and auditees in this viewpoint more unimportant timing factors compared to their peers in the other four viewpoints are fixed timings related to the communication of the risk-warning message by the auditor is on a quarterly basis (15: -4*), the deadline for realisation of the Year Audit Plan at year end (9: -4*). They found that other fixed moments like the orientation phase of the audit (14: -3*), when the first and second line have finished their investigation' (3: -3), the appraisal cycle of the auditee by year-end (18: -3), or post-mortem (of projects, products) moments, also as not important. For this group the timing is not a personal choice by the auditor (32: -2) and it should not depend on the moment when the organization makes a change of external auditor (1: -2). The following statement of one of the auditees is informative in this respect: "*The statement about realisation of the Year Audit Plan is related to internal processes of the auditors and for me this is not important timing factor*" (9; AEE21). One of the auditors confirmed this by stating: "*The auditee is not interested in our deadlines related to audit plan*" (9; AUD10).

In this viewpoint establishing a good relation and trust between the auditors and auditees before communicating the risk warning message takes central place in determining the right timing for the auditor to act. We call this viewpoint 'Establish good relation first, then communicate issues'. Viewpoint 2 can be found among auditors and auditees as it was defined by four auditors (AUD01, AUD05, AUD10, AUD12) and one auditee (AEE21) (see Appendix 2).

Viewpoint 3.

In viewpoint 3 communicating risk-warning messages by the auditors in moments when the auditee listens the most, like in strategic events when management makes critical decisions (36: +4*), and during change, not after implementation of the change (27: +4*; 21: +3*) are much more emphasised compared to the other four viewpoints. In this respect, one of the auditees stated: "*The auditor should communicate the risk message at the moment when everyone listens. Strategic events are for me most important because at the moment of such events the auditee listens much more to the auditor's message*" (36; AEE06). One of the auditors explained: "*The auditor should perform audits more on changes/design. During change the auditor should communicate risks more often*" (27; AUD26). For this purpose, it is important to this group that the auditor communicates serious and high risk issues with high sense of urgency directly, at the moment the auditor has identified the risk irrespective of the stage of the audit investigation (7: +3; 6: +2), before the 'go-no go decisions but aligned with market developments and early enough for the auditee to have sufficient time to correct things (22: +3; 33: +2; 28: +2*), by communicating these issues in frequent update meetings throughout the audit to discuss

potential issues arising (16: +1*). One of the auditors illustrated this by saying: "*For senior management the internal auditor is effective when he/she is sensitive for risks entailed by market developments and in a phase of design/change*" (28; AUD26). And one of the auditees noted: "*The auditor should communicate the issues early, continuously, regularly and think together with the auditee about the issues and resolutions*" (16; AEE04). Another auditee said: "*Urgent issues should be communicated directly*" (7; AEE05) and confirmed by another auditee who said: "*Important issues should be directly communicated by the auditor. The auditor should not wait with it till he/she has finalised certain phases of the audit*" (7; AEE17).

In this viewpoint it is therefore more unimportant than in the other viewpoints that the auditor communicates the risk-warning message only after executing all the necessary audit activities with due care, when the there is sufficient evidence and all factual checks supporting the message are done. (10: -2*; 11: -1*; 12: -1*). And for this group the auditor should communicate the risk warnings early, not at the end of the audit (37:-1), independently of being straight or bold enough (25: -1) or whether the auditee understands the content of the issue (26; -2*). In this respect one of the auditors said: "*Bold and straight are not relevant for the timing, you need to be more politic sensitive to be able to convince the auditee of the audit issues*" (25; AUD22). One of the auditees said: "*The auditor should not align the moment of communication of the risks with the external auditor. The work of the auditor is independent of the work of the external auditor*" (26; AEE18).

The focus on early communication of risk warning, before making strategic decisions and change implementations by management is emphasised in this viewpoint by considering subjective timing moments related to the appraisal cycle of the auditee by year-end (18: -4), holiday periods and absence of key staff or too busy periods of the auditee (17: -4*; 20: -3) in the communication of risk-warning messages, deadlines for realisation of the Year Audit Plan at year end (9: -3), personal choices by the auditor' (32: -3), and the moment of changing the external auditor' (1: -2) as unimportant. One of the auditors stated: "*The appraisal cycle has no role in the timing of the communication of the risks by the auditor*" (18; AUD26). While one of the auditees said: "*Holidays are nonsense. The auditor should not wait till the auditee is back from holidays or absence to communicate his risk message*" (17; AEE17).

Given the strong focus on early communication during strategic decisions and change and not after their implementation, we call this viewpoint '*Communicate when changes are still possible, not afterwards*'. Viewpoint 3 was defined by two auditors (AUD22, AUD26) and six auditee (AEE04, AEE05, AEE06, AEE17, AEE18, AEE23) (see Appendix 2).

Viewpoint 4.

In viewpoint 4 having collected sufficient evidence (11: +3) and especially having facts checked first (12: +3*) before immediately communicating serious issues to manage-

ment (6: +4; 7: +4; 36: +2; 16: +3), takes central place in determining the right timing for the auditor to act. This view is illustrated by one of the auditees who indicated: "*High and critical issues should be directly communicated by the auditor* (6; AEE07) who also noted: "*The auditor should not wait with the communication of issues that have a high sense of urgency. These issues should be communicated directly no matter in which phase is the audit investigation. With such issues the auditor should not wait till he finalises the audit but communicate these issues in an early stage*" (7; AEE07). However, one of the auditors stated: "*You need to make sure there is sufficient audit evidence that will support the communication of the findings. We need to check and double check and confirm before we communicate the issues.*" (11; AUD04). One of the auditees illustrated this by saying: "*Factual accuracy of the issues that the auditor communicates to the auditee is very important. Only correct issues, confirmed for factual accuracy can be effectively communicated by the auditor as he/she can convince the auditee this way much better*" (12; AEE12). This was confirmed by another auditee who said in his concluding remarks: *"Issues should be early communicated but always be backed with good evidence"* (AEE20).

In this viewpoint aspects related to considering the character of the auditee to decide on when to communicate of the risk-warning message is seen as more unimportant compared to the peers in the other four viewpoints (24: -3*). For this group, the moment of communicating the risk-warning message to the auditee is not a personal choice by the auditor or the auditee (32: -4; 31: -4). To illustrate this, one of the auditors noted: "*The communication of the issues should not be a personal choice of the auditor. There should be some kind of guidance but personal choice is not important*" (32; AUD04). This was noted by one of the auditees saying: "*If the timing is personal choice by the auditor, he/she is not client focussed*" (32; AEE26) and another auditee: "*The personal preferences of the auditee are also not important for the timing. I cannot imagine this to be important timing factor*" (31; AEE07). Also in this viewpoint, the timing should not depend on aspects like holiday periods and absence of key staff, too busy periods, or the moment when others have finished their investigation (17: -2; 20 -3; 3: -3).

Communicating serious and high risk issues based on evidence and facts is central to this viewpoint and therefore we call this viewpoint '*Communicate risk warnings when you have evidence first*'. Viewpoint 4 was defined by only one auditor (AUD04) and five auditees (AEE03, AEE07, AEE12, AEE20, AEE25) (see Appendix 2).

Viewpoint 5.

Early and frequent communication of serious, high risk, critical risk warnings is central to viewpoint 5 (6: +4; 7: +4; 16: +3; 15: +1*) because this way the auditee will have the chance to intervene directly and timely, for example when the audit opinion is 'weak'(8: +3), before 'go-no go' decision of a project'(33: +3), in strategic events when management makes critical decisions' (36: +2) or when there are issues related to governance

and soft controls (42: +2). To illustrate this, one of the auditors stated: "*In case of high sense of urgency you need to communicate directly and if we do not report these directly it will be too late and we have no added value and the relevance is gone*" (7; AUD03). One of the auditees said: "*Serious issues should be directly communicated to the auditee so that auditee can implement solutions directly*" (7; AEE02).

Although the early communication is central in this viewpoint, the group considers that the right timing for communication of the risk warning messages by the internal auditor is not determined by personal choices of auditors and auditees. This is reflected by statements that relate to what the auditors find important at that particular moment (29: -3*), preferences like the year-end appraisals (18: -4), personal preferences of the auditee (31: -2), too busy to listen to a risk-warning message (20: -3), when the first and second line have finished their investigation' (3: -3), which we found by this group as unimportant for the timing. That this group considers the auditor should remain independent of what others prefer when deciding about the timing, is illustrated by one of the auditees noting: "*The auditor should not wait the first or the second line of defence to finish their investigations but report the risks independently*". (3; AEE13). This is confirmed by one of the auditors who noted: "*We are independent and objective and this is outside of the appraisal cycles of auditees. This is the least relevant of all statements here*" (18; AUD03). One of the auditees stated the following: "*The appraisal cycle is not important for the timing. It is my opinion that if the auditee does not want to listen to the auditor's message due to the appraisal cycle, he does not take the auditor seriously*" (18; AEE22). With respect to auditee being too busy to listen to the auditor's risk warning message, one of the auditors noted: "*This is not a reason not to communicate the risk and we cannot wait until for the auditee it is a good moment*" (20; AUD03). In addition, this group found aspects like continue communication (38: -2*), market developments, inside ongoing improvements (28: -4*; 19: -1*) much more unimportant compared to their peers. For example one of the auditees said: "*Timing should not depend on developments in outside market but the auditor should take into consideration what is important for the organzsation*" (28; AEE03).

Communicating serious risk warnings immediately in early stage, no matter of preferences of others is central to this viewpoint. We call this viewpoint *'Communicate immediately, and remain independent'*. Viewpoint 5 was defined by two auditors (AUD03, AUD17) and three auditees (AEE02, AEE13, AEE22) (see Appendix 2).

5.4 DISCUSSION

In this section we will be discussing the main findings and conclusions, the implications of our study for research and practice, as well as the limitations.

Main findings

Our study aimed at obtaining the views of the internal auditors and the auditees (management) on the influence of timing factors on the IA effectiveness. The research question we addressed in this study was: "What are the views of the auditors and auditees (management) about the influence of timing related factors that determine the time is right (not too early and not too late) for the internal auditor to communicate the risk warnings to the auditee so that the auditee will listen to the internal auditor's message?"

This Q-methodological study gives insights into the heterogeneity and the subjectivities in views about the timing factors relevant to the effectiveness of the IAF. Our study revealed five distinct views of auditors and auditees about the factors that determine the right moment (i.e. not too early, not too late) for the auditor to communicate the risk warning message to the auditee. We summarize these viewpoints below:

- Viewpoint 1 'Communicate important issues immediately, no matter what' can be found among both the auditors and the auditees. In this Viewpoint it was emphasised that important issues should be communicated immediately to auditees, no matter of other conditions such as e.g. the stage of the audit investigation and having collected sufficient fact evidence.
- In Viewpoint 2 'Establish good relation first, then communicate issues', both the auditors and the auditees shared the view that the quality of the relation the auditor has with the auditee is prevailing factor for the timing. This view is less expected to be found among the auditors given the independent role of the auditor and we feel there is in a way some tension between the independent role of the internal auditor in the organization and their emphasize on having a good relation with management. This could be presumably clarified by studies showing that the internal auditor is more effective as a Partner to management than as a Policeman (Nuijten et al, 2016); however it needs further investigation.
- Viewpoint 3 'Communicate when changes are still possible, not afterwards' can be also found among auditees and has a strong focus on hearing about the risks during decision making processes (e.g. strategic events, projects) when taking corrective actions are still possible and changes are made on time.
- Viewpoint 4 'Communicate risk warnings when you have evidence' is also a view that can be found among the auditors and the auditees. It emphasizes having sufficient fact evidence as a precondition for the timing of the communication of the risk warning message by the auditor. We would expect having sufficient evidence and checked facts would be more auditor's view given these aspects are part of their standard audit procedures. Apparently the auditees demand hearing about issues immediately but still these issues need to be correct and supported with sufficient evidence.

- Similarly to Viewpoint 1, Viewpoint 5 "Communicate immediately, and remain independent" is shared view among auditors and auditees. In this Viewpoint the timing is not determined by what others prefer as timings related to subjective aspects like for instance personal choices of auditors and auditees, year-end appraisals, end of year deadlines, absence of staff, holidays, having too busy periods, were considered more unimportant compared to the other four Viewpoints identified in this study. In this viewpoint the immediate communication of serious issues is important but the emphasize is on the independence of the auditor when choosing the right timing for the communication of the risk warning message.

The early communication of risk warnings, immediately when the issue is observed, is central to all identified viewpoints in our study. However, our study does not intend to give recommendation to the internal auditors to always communicate the risk warning messages to the auditees immediately. Each viewpoint in our study outlines different conditions which determine the right timing. All five viewpoints are shared among the auditors and auditees and we cannot link any of the viewpoints specifically to group of auditors or group of auditees.

Implications for theory and practice

The knowledge about the views of auditors and auditees of the timing factors in relation to the effectiveness of IAF is important for several reasons.

- There is no only one view that can be distinguished about the important of the timing for the IAF effectiveness but more views exist and these are to be found among auditors and auditees.
- The identified views in this study are not very different or opposing among the auditors and the auditees. There is a quite some consensus between each pair of viewpoints as they were moderately correlated with each other.
- Based on the identified viewpoints in our study, we cannot build only one 'objective' view about which timing factors are the most important and which are the least important for the IA effectiveness. Although, in our opinion, identifying five viewpoints on timing is quite extensive, our results do not provide one common policy guidance with regard to 'when is the right moment for the auditor to communicate the risk warning message'. There are more views, the views are subjective as one timing factor is most important in one viewpoint but less important in another viewpoint. Being aware of these views, the auditors and auditees can start discussion with each other to align views and expectations with respect to the right moment of communication of the risk warnings.
- The results of our study show that both subjective and objective timing factors play role in all five identified Viewpoints and choosing the right timing is an interchange between subjective and objectives timing factors. While the auditors and the au-

ditees worry about having facts first, there is a tension between having sufficient evidence and early communicating the risk. The auditors and auditees want to establish a good relation with each other before the auditor communicates the bad news but when choosing 'the right moment' for communication of the risk message, the auditor needs to remain independent of the personal preferences of others.

- Finally, the knowledge about the existence of different views regarding the importance of timing for the IA effectiveness can be used further within the audit organization to decide whether a formal policy for timing is necessary or is it perhaps to leave the choice to each auditor individually to decide on the right timing to communicate the risk warning message. The former could potentially have implications for the continuity of the audits in case one auditor would be replaced with another who has a different timing approach in a particular audit.

Our study has also important theoretical implications. One of the important implications of our study for the theory is that it addresses an important knowledge gap in the research area of IA effectiveness as well as broader, in the organizational literature with respect to timing. Academic studies that have (qualitatively as well as quantitatively) examined the role of the timing factors in the effectiveness of IA are, to our knowledge, not available. This study is perhaps a first attempt in examining the timing factors that may be of influence to the effectiveness of IA function.

Lenz and Hahn (2015) performed a comprehensive review of the literature on effectiveness of IAF and distinguished two different streams in the literature, the 'supply-side' perspective, i.e. empirical studies based on self-assessments of the Auditors, and the 'demand-side' perspective, i.e. empirical studies based on other stakeholders' perspectives. Prior research on effectiveness of the IAF was mainly focussed on the 'supply-side' perspective of the Auditors (e.g. the role of the CAE and the skills and competencies of auditors, organizational specifics, its politics and culture, support from senior management and the impact of the board, directly or through the audit committee (AC)) and the 'demand-side' perspective of other stakeholders (e.g. whether management will or will not implement recommendations made by the Auditor). In their comprehensive literature review of the empirical literature in the area of effectiveness of the IA, Lenz and Hahn (2015) stated that the 'demand- side' of the effectiveness of the IA is still underexamined area. With our study we contributed by adding the timing as a new dimension to the 'demand-side' perspective of the IA effectiveness.

While other studies explore the IA effectiveness only from a 'supply-side' perspective or only from a 'demand-side' perspective, our study is presumably the first study that addresses both perspectives simultaneously. Each identified viewpoint in this study is a viewpoint of both the auditors ('supply-side') and auditees ('demand-side'), which may be an indication that the determination of the right timing for communicating risk warnings by the auditors ideally should be done in an interaction between both

groups, the auditors and the auditees in the same time as this in fact happens in the audit investigations in practice.

In addition to the above, it is worth mentioning that during the study, the participants shared with the researcher they found the Q-sort procedure very useful and an eye-opener helping them to understand the impact timing may have on effectiveness of the IA. Some of the auditors shared with the researcher they do not think of the 'right timing' when they communicate the risk warning to the auditees and this study increased their awareness of the importance of the timing for the effectiveness of the IA.

Limitations and suggestions for further research

As with other studies, our study also has some limitations. This form of generalization in our study is driven by semantics rather than statistics (Watts and Stenner, 2012). The viewpoints presented in this study are representative only of those that can be observed among auditors in the selected Dutch banking organization and related auditees. Our Q-methodological study can say little about the prevalence of these five views among auditors and auditees, in this or other similar banking institutions in The Netherlands. However, we do not expect to identify different views in comparable larger banks in The Netherlands as these, similarly to our selected financial institution, at the time of our study, were subject to important strategic developments resulting in increased attention to the timing issues. Still, we recommend further study with respondents from other large banks in the Netherlands but also abroad to confirm this expectation.

During our study some of the respondents made some general comments about the timing that could be interesting for interpretation of the study results. When giving the rationale for their ranking choices they made on the Q sorting grid, the auditors and the auditees shared interesting views about how the timing factors may be categorised in order these to be more easy identified and managed:

- One of the auditees (AEE16) suggested dividing the timing factors in two groups, subjective and objective saying: "*On the right side I put the factors that have to do with concrete hard requirements on when I (as an auditee) wish the auditor to communicate the risk messages. On the left side I put statements that have to do with early warnings. I do not like early warnings, the auditor should come to me with hard evidence. Soft factors are not important to me but hard evidence. Thus divided the timing factors in two groups: objective and subjective*".
- One of the auditors (AUD05) looked at the timing from a perspective of serious urgent issues and less important issues and said: "*The logic how I divided the statements was on basis of two groups: events that are damageable for the business and events that are not damageable for the business. If something will damage the business that the auditor should communicate the risk warnings as soon as possible*". In a similar direction, one of the auditees said (AEE11): "*On the right side I put timing factors that have*

to do with risks that have an immediate impact for management. On the left side I put timing factors that have to do more with regulations, internal matters of the auditor and auditees which are not so important for the timing".

- AUD24 identified three categories of timing factors and said: "*Overall I identified three theme's: first, timing factors related to factual accuracy and having evidence in order to be sure of the audit issues, second, fast communication of issues with no conditions and third, soft aspect*".
- Finally one auditee (AEE22) referred to three categories of timing factors and said: "*In general, the selected statements on the right side of the scheme have to do with direct communication of the risks by the auditor thereby remaining independent of other factors. In the middle I put the statements for which the auditor has to take care of (various factors related to audit procedures) and on the left side are the statements where the auditor takes into account circumstances of the auditee*".

From the additional feedback we obtained during the face-to-face interviews we see the potential of deriving various categories of timing factors which we recommend to be studied in further research as we believe investigating this more in depth could give an important contribution for further understanding of timing and its relation to the IA effectiveness. From a practical perspective, if there is a more clear categorisation of the various types timing factors, the auditors and auditees can define approaches how to deploy these more effectively in the communication and acceptance of the risk warnings.

In our study we focus on communication of 'bad news' messages i.e. unwelcome messages about risks that threaten the organization. We assume there are different timing factors for communicating of 'good news' i.e. messages about positive observations identified by the auditors. These kind of messages were not part of our study as we considered the positive messages do not impair the IA effectiveness. Which timing factors play a role for communicating good news and their influence on the IA effectiveness could potentially be an interesting future research.

Our final remark about the limitations of our study is that in our study we focused on the timing at inter-personal level: with the auditor as communicator of the risk warning message and the auditee (a representative of management) as a recipient of the risk warning message. Studying the views of the timing factors between auditors and auditees in the context of a specific audit investigation, could be an interesting future research to obtain more understanding on the role of specific timing aspects and views thereof. For example we suggest to focus on a specific Viewpoint during a specific audit and investigate further how the timing factors in this specific Viewpoint are viewed by these groups, what is the dynamic and interaction of these groups with regard to the timing in general and analyse differences among specific groups.

In conclusion of this paper our study resulted in five viewpoints about the timing, each of which outlines different circumstances which determine the right moment for the auditor to act. Our study revealed that the early communication of risk warnings, immediately when the issue is observed, is central to all identified viewpoints in our study. However, based on this study, a general recommendation to the internal auditors to always communicate the risk warning messages to the auditees immediately cannot be given. All five viewpoints are shared among the auditors and auditees and each identified viewpoint emphasises different aspects of the timing.

We encourage others to use our study as an input to auditors and auditees during a mutual discussion about their expectation with regard to the right timing for communication of the risk warning messages by the auditor.

We believe our study opens up promising avenues for future research and we encourage also others to advance our understanding of the timing factors in the context of the IA effectiveness.

APPENDIX 1.

Table 5-4. Theoretical structure for selection of statements

Category*	Timing factors*	Statements
Alignment	**Alignment external auditor**	1. The auditor communicates the risk-warning message when the organization makes a change of external auditor. 2. Communication of the risk-warning message by the auditor is aligned with the timing of activities of the external auditor.
	Alignment three lines of defence	3. The auditor communicates the risk-warning message when the first and second line have finished their investigation.
	Alignment audit plan with auditee's needs	4. Communication of the risk-warning message by the auditor is aligned with the priorities and objectives of the auditee.
	Alignment with auditee's budget needs	5. The auditor communicates the risk-warning message before the auditee makes decisions about budgets.
Audit issue classification	**Risk indication**	6. Critical or high-risk findings are communicated directly at the moment the auditor has identified the risk.
	Severity of audit issues	7. Serious issues with high sense of urgency are communicated by the auditor directly, irrespective of the stage of the audit investigation.
Audit opinion	**Audit opinion**	8. When the audit opinion is 'weak', the communication of the risk-warning message by the auditor starts in the early stage of the audit.
Audit procedures	**Audit procedures-audit time schedule**	9. The risk-warning message is communicated by the auditor before the deadline for realisation of the Year Audit Plan at year end.
	Audit procedures-due care	10. The auditor communicates the risk-warning message only after executing all the necessary audit activities with due care.
	Audit procedures-evidence	11. The auditor communicates the risk-warning message only when there is sufficient evidence supporting the message.
	Audit procedures-factual accuracy	12. The auditor communicates the risk-warning message only when the factual accuracy checks have been performed.
	Audit procedures-fieldwork	13. The auditor communicates the risk-warning message at the end of the fieldwork, in the closing meeting.
	Audit procedures-orientation phase	14. The auditor communicates the risk-warning message in early stage, during the orientation phase of the audit.
	Audit procedures-quarterly reporting	15. Communication of the risk-warning message by the auditor is on a quarterly basis as part of the quarterly audit opinion reporting.
	Audit procedures-update meetings	16. The auditor communicates with the auditee in frequent update meetings throughout the audit to discuss potential issues arising.
Auditee's agenda	**Auditee's agenda-absence staff**	17. The auditor takes into consideration holiday periods and absence of key staff of the auditee in the communication of risk-warning messages.
	Auditee's agenda-end of year appraisal	18. The auditor takes the appraisal cycle of the auditee by year-end into consideration in the communication of risk-warning messages.
	Auditee's agenda-themselves busy with solutions	19. The auditor takes into consideration that the auditee sometimes is already working on improvements.
	Auditee's agenda-too busy periods	20. The auditor takes into consideration that the auditee sometimes is too busy to listen to a risk-warning message.

Category*	Timing factors*	Statements
Change	**Change in applications**	21. Communication of the risk-warning message by the auditor comes during the phase of change of applications or processes, not after implementation of the change.
	Change in laws and regulations	22. When laws and regulations change, the auditor communicates the risk-warning message early enough for the auditee to have sufficient time to correct things.
	Change in process	Covered with statement 21
	Change in staff	23. The auditor communicates the risk-warning message when the auditee has appointed new management within the department.
Character	**Character auditee**	24. The auditor takes soft factors like the character of the auditee into consideration to decide on when to communicate of the risk-warning message.
	Character auditor	25. The auditor is straight and bold enough to communicate the risk-warning message directly.
Content	**Auditee's understanding of auditor's message**	26. The auditor communicates the risk-warning message when the auditee understands the content of the issue.
Design phase	**Design phase**	27. Communication of the risk-warning message starts during the design phase, not after implementation of the project.
External factors	**External factors-market development**	28. Communication of the risk-warning message by the auditor is aligned with market developments.
Focus	**Audit focus**	29. Communication of the risk-warning message is aligned with topics the auditor finds important at that particular moment.
	Auditee's focus	Covered with statement 4
Incidents	**Incidents**	30. The auditor communicates the risk-warning message directly when an incident is observed.
Preference	**Auditee's preference**	31. The auditor takes the personal preferences of the auditee about communication of risk-warning messages into consideration.
	Auditor's preference	32. The moment of communicating the risk-warning message to the auditee is a personal choice by the auditor.
Project	**Project**	33. The auditor communicates the risk-warning message before the 'go-no go' decision of a project.
Regulator	**Regulator involvement**	34. Communication of the risk-warning message by the auditor is aligned with the timing of requests for investigation by the bank's regulator/supervisor.
Relation auditor-auditee	**Relation auditor-auditee**	35. The auditor takes into consideration the quality of the relation with the auditee (trust).
Strategic events	**Strategic events-critical management decisions**	36. The auditor communicates the risk-warning message in strategic events when management makes critical decisions.
	Strategic events-separation & integration	Covered with statement 36

Category*	Timing factors*	Statements
Type of audits	**Type audits-audits abroad**	37. In audits abroad the auditee wants to know of the audit issues before the auditors leave.
	Type audits-continuous auditing	38. In continuous auditing the auditor communicates the risk-warning messages continuously.
	Type audits-existing process	Covered with statement 21
	Type audits-maintenance audits	39. The auditor communicates the risk-warning messages in audit that has an added value for the auditee.
	Type audits-management requests	40. The auditor communicates the risk-warning messages when the audit is requested by management.
	Type audits-mandatory	Covered with statement 34
	Type audits-post-mortem audits	41. Communication of the risk-warning message comes right after the post-mortem (of projects, products), not long after it.
	Type audits-soft controls	42. The risk-warning message concerns governance or soft controls related issues.
	Type audits-theme audits	43. The risk-warning messages are communicated by the auditor in theme audits that receive great attention from management.

*Category and Timing factors as per Focus Groups study (Chapter 4: table 4-1 and table 4-8 throughout 4-25 in Appendix 3)

APPENDIX 2.

Table 5-5. Factor loadings table, with * indicating statistically significant and unique loadings

Respondent	Viewpoint				
	1	2	3	4	5
1 AUD01	0.2993	0.4526*	-0.0142	0.2377	0.1275
2 AUD02	0.5470	0.3038	0.3348	0.3235	0.2809
3 AUD03	0.2152	-0.0344	0.2664	0.2079	0.6125*
4 AUD04	0.2544	0.1912	-0.0398	0.5559*	0.1027
5 AUD05	0.2043	0.4412*	0.1894	0.1221	-0.0978
6 AUD06	0.3591	0.0862	0.3894	0.0012	0.4416
7 AUD07	0.5405*	0.2410	0.0999	0.0832	0.0739
8 AUD08	0.6216*	0.1294	0.2903	-0.1042	0.2268
9 AUD09	0.4421	0.0099	0.3471	0.1184	0.5535
10 AUD10	-0.1125	0.5903*	0.2972	0.0960	0.2252
11 AUD11	0.5628*	0.2700	0.2991	0.3324	0.1353
12 AUD12	0.1962	0.5826*	0.0464	0.2276	0.3070
13 AUD13	0.4736*	0.2029	0.2568	0.1335	0.1856
14 AUD14	0.2388	0.1742	0.3367	0.5581	0.4420
15 AUD15	0.4887	0.1167	0.3275	0.5606	0.1375
16 AUD16	0.4973	0.2995	0.3756	0.3594	0.1697
17 AUD17	0.1981	-0.0847	0.1009	0.1736	0.5610*
18 AUD18	0.6107*	-0.0103	0.0392	0.4133	0.1108
19 AUD19	0.5837	0.0426	0.1333	0.3767	0.4479
20 AUD20	0.2064	0.2845	-0.3177	0.4194	0.3781
21 AUD21	0.1185	0.2971	0.0825	0.3890	0.2115
22 AUD22	0.1246	0.0294	0.4959*	0.2131	-0.1587
23 AUD23	0.4330	-0.1620	0.2456	0.5298	0.2759
24 AUD24	0.5432	0.3415	0.0812	0.3815	0.4756
25 AUD25	0.2987	0.3665	0.4480	0.1061	0.2518
26 AUD26	0.2001	0.1045	0.7916*	0.2288	0.1593
27 AEE01	0.4521	0.0612	0.4232	0.4427	0.1995
28 AEE02	0.1142	0.2088	0.1132	0.3032	0.5451*
29 AEE03	-0.0150	0.1678	0.0930	0.4708*	0.3747
30 AEE04	0.1729	0.0388	0.4536*	0.0714	0.3575
31 AEE05	0.1045	0.1453	0.6129*	0.3538	0.2256
32 AEE06	0.1417	0.0480	0.5325*	0.2948	0.1807
33 AEE07	0.3477	-0.0029	0.1830	0.5804*	0.2741
34 AEE08	0.4990*	0.0993	0.2519	0.1215	0.1954
35 AEE09	0.7021*	0.2966	0.0315	0.1207	0.1669
36 AEE10	0.1819	0.3036	0.3706	0.4034	-0.0426

Respondent	Viewpoint				
	1	2	3	4	5
37 AEE11	0.5193	0.0007	0.3001	0.5256	0.1759
38 AEE12	0.2930	0.2972	0.2063	0.5069*	0.0042
39 AEE13	0.1553	0.3303	0.0482	0.1395	0.6091*
40 AEE14	0.4394*	-0.1970	-0.2451	0.1053	0.1998
41 AEE15	0.4615	0.2806	0.3227	0.0842	0.2732
42 AEE16	-0.0343	0.2863	0.2728	0.2863	-0.2156
43 AEE17	0.4047	-0.0181	0.5493*	0.1625	0.3189
44 AEE18	0.2839	0.2064	0.6533*	0.0152	0.1230
45 AEE19	0.4134	0.0790	0.3488	0.4448	0.4771
46 AEE20	0.1692	-0.0211	0.3189	0.5681*	0.3320
47 AEE21	0.1537	0.7135*	-0.0012	0.0083	-0.0498
48 AEE22	0.4122	0.0408	0.1910	0.1716	0.5868*
49 AEE23	0.0614	0.0562	0.7261*	0.0897	0.2726
50 AEE24	0.4829	0.1913	0.4712	0.0504	0.0694
51 AEE25	-0.0746	0.1500	0.1897	0.4876*	0.1211
52 AEE26	0.6953*	0.0403	0.3420	0.3006	0.1530

6 Conclusions

In this final chapter of this thesis we conclude with a discussion on our main findings, the theoretical implications of our study as well as the implications for internal auditors and management. We furthermore discuss the limitations of our study and give recommendations for further research. This chapter ends with a brief reflection by the author of this thesis about the research as a whole.

6.1 DISCUSSION OF THE MAIN FINDINGS

In chapter 2 throughout 5 of this thesis we studied different factors influencing deaf effect for risk warning as indicator for IA effectiveness. We answered the research questions of each individual study thereby providing important findings. In this Chapter we discuss these findings in relation to the objective of this study being as follows.

1. Identifying and recommending additional approaches and factors from the 'demand-side' perspective of IA effectiveness for reducing deaf effect and hence improving IA effectiveness;
2. Examining the main causal effects including additional contingency factors such as organization power of the internal auditor operationalized through top management support, nudging concepts including descriptive social norms and their interaction effects from the collaborative partner vs. opponent perspective. Additionally, we examined what constitutes the right 'timing' for communicating the risk warning message by the internal auditor and its main causal effects on IA effectiveness;

3. Combining both the 'supply' and the 'demand' side perspective of the IA effectiveness for finding better ways for meeting customer expectations.

In Chapter 2 and 3 a manager acts in the role of project owner who is not willing to listen to the risk warning message that continuation of an information systems project is not reasonable and the project should be redirected or discontinued. In Chapter 4 and 5 a manager acts in the role of an auditee (management) who is not willing to listen to the risk warning message related to risks involved in management's decision making in the organization in general. The messenger providing the risk warnings in our study is the internal auditor who is a credible source that makes true assertions based on thorough investigation in conformity with the internal auditing standards and requirements.

In Chapter 2 we demonstrated our 2x2 laboratory study on how organization power through top management support of internal audit influences deaf effect on escalating information systems project as an indicator of IA effectiveness. In the following 2x2 laboratory study described in Chapter 3 we included nudging concepts through descriptive social norm and investigated how this could be of influence on the IA effectiveness. In both studies we included the collaborative partner vs opponent relationship between the internal auditor (the messenger of risk warnings (bad news)) and the project owner (management – decision maker). In Chapter 4 we described our exploratory study that examined what determines the right timing for communicating of the risk warning message by the internal auditor. Chapter 5 describes the follow up of the previous study by applying a Q methodology (a mix of qualitative and quantitative approach) investigating what are the views of internal auditor and the auditees about the importance of timing to the IA effectiveness. Most prior academic research on IA effectiveness investigated factors influencing IA effectiveness from the 'supply-side' perspective. The 'demand-side' perspective is less examined. The contribution of our studies to existing academic research is that we centred our studies around the 'demand-side' perspective of IA effectiveness. Furthermore, by using (to our knowledge) different approaches to address IA effectiveness, we contributed to existing research by identifying additional factors of IA effectiveness, linking the 'supply-side' and 'demand-side with each other.

Combining the findings of our studies we draw the following conclusions:

Conclusion 1: Being a collaborative partner and highly supported by top management is not always an advantage for the internal auditor

Chapter 2 studied the effect of organization power through top management support on the deaf effect for risk warnings (as an indicator for IA effectiveness) by the internal auditor in escalating information systems-projects. In an experiment setting we examined the main effects of the partnership relation of the auditor with management and the organization power variables on the deaf effect for risk warnings. We also manipulated

organization power of the internal auditor through top management support as a moderator variable to examine whether this influence of the partnership relation on the deaf effect is made stronger of weaker by either a high or a low organization power through top management support. Although one may think the hypotheses in our experiment were not difficult to predict, yet our results were surprising and brought originality in this area of academic research. More specifically, our results showed that top management support does not necessarily have a positive influence on the deaf effect (and hence IA effectiveness) as there were no significant main effects of organization power on the deaf effect. While it may seem to be logical that in the high organization power conditions decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent, our findings suggested this can even be contra-productive when the internal auditor is seen as a collaborative partner. However, our study provides evidence that high organization power through top management support is helpful and even necessary for reducing the deaf effect on risk warnings when the internal auditor is seen as an opponent.

Conclusion 2: Nudging can be a new way to increase IA effectiveness especially when the internal auditor is a collaborative partner to management

The internal auditors focus more on enforced adherence by management to pre-defined rules and regulations rather than using non-forced compliance ways to influence decision makers. Previous studies have shown that that small changes in the way how information about choices is presented (commonly referred to as "choice architecture") can alter people's behaviour in a predictable way while preserving freedom of choice. Drawing on research from behavioural economics, in Chapter 3 we examine the concept of nudging with descriptive social norms as a technique that internal auditors could use to help overcome deaf effect on risk warnings. As such, this study extends existing research on deaf effect and IA effectiveness by being presumably a first attempt to apply nudging concepts in relation to IA effectiveness. We conducted an experiment to investigate the main effects of descriptive social norms on deaf effect and the interaction of messenger-recipient relationship (collaborative partner vs opponent) and descriptive social norms. We furthermore provided more evidence for the main effect of the messenger-recipient relationship on the deaf effect. The findings of this empirical study indicate that nudging through descriptive social norm can be used by the internal auditor to increase IA effectiveness by overcoming the deaf effect response to their risk warnings to management. Including a descriptive social norm as part of the risk warning message of the internal auditor in our experiment appeared to be useful as it significantly reduced the deaf effect response by the message recipient. Descriptive social norm can be even more useful when the messenger is seen as a collaborative partner. When the internal auditor is seen as an opponent, nudging with a descriptive

social norm is ineffective, so there is no guarantee that providing a descriptive social norm will work as intended. To conclude on this section, nudging with social descriptive norms can be used by the internal auditors to improve effectiveness.

Conclusion 3: The timing of the communication of the risk warning message by the internal auditor influences IA effectiveness

Chapter 4 extends existing research on timing. To our knowledge timing has not been addressed as a factor influencing IA effectiveness in academic research. In our study we hypothesized that the right timing of the communication of the risk warning message by the internal auditor (not too early, not too late) could be of influence on the willingness of the auditees to listen or not to listen to the auditors message (deaf effect) and hence on the IA effectiveness. Our study was exploratory in its nature, which involved focus groups interviews aiming at firstly identifying the factors that determine the right timing. Based on analysis of the focus groups interviews, our results revealed multiple and diverse factors that determine the right timing for communicating the risk warning message by the internal auditor, dependable whether these were indicated by the auditees or the internal auditors. Based on the results, in our study we proposed grouping of the identified timing factors in three groups:

1. Standard timing factors emerging from regular 'business as usual' situations. Examples are timing factors related to alignment, audit procedures, auditee's agenda;
2. Mandatory timing factors emerging from regulator's requests that are unavoidable and cannot be postponed;
3. Special timing factors emerging from exceptional (more complex) situations that require special attention by the auditees and auditors. Examples are timing factors related to incidents, audit issue risk classification, change, strategic events, projects, audits abroad, soft controls audits.

Although it will require further research, we assume these various timing factors could have an important impact on the future internal auditor's skills required for most effectively execution of the audit assignments. We suggest that higher professional skills would be required from an internal auditor performing special, more complex assignments related to unanticipated events, compared to standard, more predictable assignments whereby 'ticking the box' may be done by less skilled internal auditors.

Interestingly, that the timing can be an important factor for IA effectiveness was unknown issue till we addressed it in our interviews (the participants experienced our interviews as an 'eye opener' as they acknowledged to have not thought of the timing factors in relation with IA effectiveness before). The information we identified in our study could be of use to the internal auditors and the auditees to enter into a discussion with each other and align their understanding as to when is the right timing for communicating risk warning message by the internal auditor so that the auditees will

be willing to listen more to this risk warning message. Hence, this will have a favourable effect on IA effectiveness.

Conclusion 4: There is no recipe for the right timing for communication of the risk warning by the internal auditor

Chapter 5 extends on the results of Chapter 4 by ranking the identified timing factors in the previous study from important to unimportant. In this sturdy we applied a Q-methodology as we aimed at providing insights into the heterogeneity and the subjectivities in views of internal auditors and auditees about the timing factors relevant to the IA effectiveness. Our study identified five distinct views of auditors and auditees about the importance of the factors that determine the right moment (i.e. not too early, not too late) for the internal auditor to communicate the risk warning message to the auditee. While in the first viewpoint the auditors and auditees consider that important issues should be communicated immediately to auditees, no matter of other conditions such as e.g. the stage of the audit investigation and having collected sufficient factual evidence, in the second viewpoint the most important precondition for the right timing is to establish good relation with the auditees first. The former was less expected to be found among the internal auditors given the independent role of the internal auditor. In this respect, we feel there is in a way some tension between the independent role of the internal auditor in the organization and their emphasize on having a good relation with management. The third viewpoint clearly states that the right timing for communication of the risk warning messages in project/change situations is during the project/change and not afterwards when taking corrective actions are not possible or will cost more money. The fourth viewpoint was about having sufficient evidence by the internal auditor before the risk warning message is communicated to the auditees, which is in line with the internal auditor's standards and audit procedures. Finally, the fifth viewpoint emphasizes the importance of communicating the risk warnings immediately, but still independently of preferences of others. This viewpoint emphasized that the internal auditor should be and remain independent when choosing the right timing for the communication of the risk warning message.

We cannot link any of these five viewpoints specifically to the group of internal auditors or the group of auditees as they were all shared among the internal auditors and the auditees. Based on the results of this study, we can point out that the early communication of risk warnings, immediately when the issue is observed stands central to all identified viewpoints shared between the internal auditors and the auditees. As each viewpoint in our study outlines different conditions which determine the right timing, our study cannot neither give recommendation to the internal auditors to always communicate the risk warning messages to the auditees immediately nor recipe for determining when is the time right to communicate the risk warning to the auditee. However,

the five viewpoints resulting from our study are now available and can be used by both the internal auditors and auditees to determine the right timing of the risk warnings messages communication and hence contribute to increase of IA effectiveness.

6.2 IMPLICATIONS FOR INTERNAL AUDIT

Our studies have implications for the effectiveness of internal audit from the perspective of communication of the risk warnings. It is not our aim to issue a recipe to the internal auditor on how to maximize IA effectiveness, but we give some recommendations to internal audit that could positively contribute to the IA effectiveness.

Recommendation 1: Build a collaborative partnership relation with management

Our empirical studies described in Chapter 2 and 3 provided supporting evidence to previous research that an internal auditor who has a history of being a collaborative partner to management can increase IA effectiveness by reducing the deaf effect of the risk warnings communicated by the internal auditor. The results of our studies show that organization power through top management support and nudging have greater effect on reducing deafness to risk warnings and hence increasing IA effectiveness when the internal auditor has a collaborative partnership relation with management. Besides, our studies described in Chapter 4 and 5 showed that the right timing for communication of the internal auditor's risk warning message can be best determined in dialogue with management, which enhances the collaborative partnership relation between the internal auditors and their auditees. Next to the results of our studies, the importance of this collaborative partnership relation with management can also be illustrated with one example from practice. One senior audit manager from a large bank in The Netherlands had an interesting idea for an audit approach that fosters the collaborative partnership principles on the basis of nudging. Namely, senior management of the audited department was invited in a closing meeting session that was set up as a 'story walk' fashion. In this session, the internal auditors presented their risk warning messages i.e., the audit findings and identified risks. Looking for new ways to show the collaborative partnership, the senior audit manager decided to organize the closing meeting in an unconventional way i.e., not in an office at a table where management sits at one side and internal auditors at the opposite side, but a session in which audit findings (risk warning messages) were illustrated on posters hanging on the wall. In this session, management was taken through each poster by the audit team members discussing the audit issues. Thereafter, management was asked to define actions and put these on a post it, while the audit team was walking around to take up any additional questions or concerns of

participating management. Actions were defined and agreed with management at the spot and management showed strong commitment to resolve the issues. At the end of this session we received a very positive feedback from the auditee about the way how this closing meeting was set up and how the internal auditors guided them throughout the process. Our example illustrates how the deaf effect for the risk warnings can be reduced or eliminated in a creative way. We therefore encourage the internal auditors to invest in advancement of the collaborative partnership relation with management as this relation is important for the IA effectiveness.

Recommendation 2: Make use of top management support

While our study did not provide strong empirical evidence that the organization power of Internal Audit through top management support has a significant positive influence on the deaf effect (and hence IA effectiveness), still there are important practical implications for the internal auditors, especially in conditions when the internal auditor is seen as an opponent by management. In this condition, top management support is helpful and even necessary for reducing the deaf effect on risk warnings. Our findings suggest that top management support can even be contra-productive when the internal auditor is seen as a collaborative partner resulting in increase of the deaf effect for risk warnings. With this study we aim to increase awareness of the internal auditors that when their organization power through top management support is strong, it does not always mean that management is more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent. By increasing awareness of internal auditors about the effects on top management support on deaf effect and hence IA effectiveness, we aim to help internal auditors to identify and avoid situations where well intended actions could have adverse effects on IA effectiveness.

Recommendation 3: You can use contingency approach on collaborative partnership vs opponent roles

Another suggestion for increasing IA effectiveness provided by our study relates to the contingency approach with regard to the collaborative partner vs opponent roles, that the internal auditor can use in different circumstances. As elaborated earlier in this thesis, great top management support is most helpful when the internal auditor is seen as an opponent. When the internal auditor is seen as a collaborative partner by management, the deafness for the internal auditor's risk warning will be reduced; however this is not always a guarantee that management will listen to the risk warning of the internal auditor. As our study showed, the combination of a great top management support and being a collaborative partner to management does not make management to listen more to the risk warnings by the internal auditor, but this combination can even backfire and bring opposite effect than desired. Although we have not investigated how much

top management support is enough for a collaborative partner to be most effective, we assume that these undesired effects will occur when top management support appears to be too much in combination with the collaborative partnership of the internal auditor. We assume this could also potentially have implications for the internal auditor who is seen as a collaborative partner and as such uses nudging by including descriptive social norm in the communication of the risk warnings. Although we need to further investigate, this could imply that in circumstances of combination of having too much top management support and use of nudging with social descriptive norm by the internal auditor who is seen as a collaborative partner, the great top management support may also have adverse effects on the nudging as it will presumably not work as intended.

With our study we aim to increase awareness of internal auditors that being a collaborative partner in combination with other factors will not always increase IA effectiveness and that there is a contingency approach regarding their roles in the organization (collaborative partner vs opponent). That the contingency approach is needed for effective corporate governance in organizations is also recognized and recommended by Davis et al, (1997) who suggest the Agency and Stewardship approaches to be complementary and Sundaramurthy and Lewis (2003) claim that these two theories need each other. Knowing this and based on the results of our studies, we recommend internal auditors to look for possibilities to use these two roles effectively (e.g. switch from one to another role or combine both roles) in different circumstances (e.g. high versus low top management support with or without nudging) to decrease deafness for the risk warnings of the internal auditor.

Recommendation 4: Make use of nudging

One recommendation for increasing management's willingness to listen more to the risk warning message of the internal auditor is related to the nudging concepts. Our study showed the internal auditors can nudge auditees through inclusion of a descriptive social norm as part of their risk warning message. Nudging in a positive way by including a descriptive social norm in the risk warning message is useful as it could prevent management continuing course of action in spite of risks. It is important internal auditors to be aware that nudging can be used in the communication of their risk warnings to management and that nudging in combination with collaborative partnership by the internal auditor reduces deaf effect and thus has positive effects on IA effectiveness. We encourage internal auditors to start experimenting with nudging not only by including descriptive social norms in their communication but also try out other nudging ways to influence management to listen more to their risk warnings in risky situations. We suggest nudging is something that needs more attention in the professional practices of internal auditors as it could have a lot of untapped potential for increasing impact.

Recommendation 5: Discuss 'the right timing' with Auditees with help of the identified five viewpoints

Our study introduced 'timing' as a factor that influences IA effectiveness. We first identified what factors determine the 'right timing'(thus, not too early, not too late) for the internal auditor to communicate the risk warning message so that management (auditees) will be most willing to listen to this risk warning message. Based on ranking of these timing factors from important to unimportant we identified five different subjective viewpoints supported by both the internal auditors and the auditees as to what timing factors they find important and unimportant with respect to the right timing for the communication of the risk warning message by the internal auditor. In all viewpoints the early communication of risk warnings, no matter of other conditions (e.g. sufficient audit evidence, finalised phases in the audit, personal preferences of others etc.) takes central place in all identified viewpoints by both parties. The results of our study indicate that different conditions determine the right timing for communicating the risk warning by the internal auditor. Additionally, we noticed a certain tension between what auditees consider to be important with regard to timing and the auditing standards and procedures (objectivity, quality) that the internal auditor is required to comply to. Our study cannot provide a straightforward recipe to the internal auditors for finding the right timing of communication of the risk warning, but we recommend internal auditors to use our five viewpoints in their dialogue with the auditees in determining this right timing and by doing so making a bridge and better alignment between the 'supply'-side and 'demand'-side of the IA effectiveness. Our study did not investigate this, but perhaps developing an audit approach for conducting a timing analysis comparable to the risk analysis the internal auditors must do as part of their audit procedures could be of benefit to determine the right timing and hence increase IA effectiveness.

Recommendation 6: Adapt the IA organization to fit the 'demand-side' of IA effectiveness

The results of our study may have an impact on the current IA organizations and can be used as a stepping stone for the IA organizations of the future. Our studies described in Chapter 2 and 3 indicated that combining the collaborative partnership vs opponent roles of the internal auditor could have the most positive effect on the IA effectiveness. This will potentially have consequences for the auditor's communication skills in such a way that the internal auditor should be capable of switching these roles when necessary to be most effective. Furthermore, applying of nudging concepts as described in Chapter 3 of this thesis may imply different skills from the internal auditor (in terms of communication and behavioural skills) than the standard auditing skills, which will potentially lead to different audit approach. The timing factors identified in our studies described in Chapter 4 and 5 may also impact the internal auditor's skills as well as the type of engagements

that will be executed. More precisely, our study suggests that there are standard timing factors related to standard, procedural, or repetitive events in the organization for which auditors could be employed that have less demanding skills compared to other timing factors arising from more complex strategic decisions and changes in the organization for which other, more demanding internal auditor's skills would be more appropriate. Our findings related to the favourable effect of top management support on the IA effectiveness as well as the views of the internal auditors and the auditees about what constitutes the right timing for communicating the risk warnings by the internal auditor, indicate that the relation between the internal auditor and the auditee is important for the IA effectiveness. As the IA organizations are becoming smaller in terms of resources, but larger in terms of demand by management and other parties, we recommend internal auditors to consider the findings of our studies and start looking outside the box (i.e. outside the existing internal auditing standards) to find other (more) effective ways of auditing. This way, the IA organization of the future will be capable of meeting the increasing demand from management and other stakeholders ('demand'-side perspective of IA effectiveness).

6.3 IMPLICATIONS FOR MANAGEMENT

We summarize below the most important recommendations to management about how they could use the results of our study to positively contribute to the IA effectiveness.

Recommendation 1: Give support to internal audit - but do not overdo

Our results showed that top management support helps management to listen more to the internal auditor's risk warnings leading to improvements in the organization. So, top management support is not only useful for the IA effectiveness but top management in organizations benefits as well as risks are being eliminated or mitigated as a result of the greater impact of the internal auditor. Therefore, we stimulate top management in organizations to give support to IA, but would like to draw the attention that too much top management support combined with the collaborative partnership of the internal auditor will presumably not make management to listen more to the risk warnings of the internal auditor. Although we do not know yet what constitutes too much top management support, our study indicates there may be a turning point when top management support will even increase deafness.

Recommendation 2: Address the expectations with regard to timing to the internal auditor to manage expectations

As discussed earlier in this study, the timing of the risk warning message of the internal auditor was recognized by both the internal auditors and the auditees as an important

factor for IA effectiveness. From our interviews we learned that timing of the risk warning message is not something that is determined by the internal auditor alone, but it is also influenced by the organization dynamics and its management. Also we noted that till we did not address timing in our interviews, it was recognized by both the internal auditors and auditees they have not thought of it before as an important matter for IA effectiveness. We think that addressing timing in discussion between internal auditors and auditees to share views about the importance of timing, can help manage expectations with regard to when the is right moment to hear about the risks identified by the internal auditors. By doing so, management will be able to take corrective measures timely and consequently IA will be more effective.

Recommendation 3: Embrace the new ways of communication of the risk warnings by the internal auditors

The results of our studies revealed additional factors that may be of positive influence to the extent the auditees listen to the risk warning messages of the internal auditor. When deployed adequately top management support, nudging and timing can be of a great help to the internal auditors to decrease deafness to their risk warning messages by the auditees and hence increase IA effectiveness. While we recommend internal auditors to start experimenting with new audit approaches 'outside the box' that include these additional factors investigated in our study, we also like to raise awareness of the auditees about the application of these new approaches by the internal auditors in near future. We invite auditees to embrace these new ways of communication of the risk warnings by the internal auditors for the benefit of both parties. With these new approaches management may be able to better listen to the internal auditors' risk warnings and take timely the necessary corrective measures. Hence this will help to increase IA effectiveness.

Recommendation 4: Use descriptive social norms to your own benefit

As our study showed, descriptive social norms in organizations, used as nudges by the internal auditors in their risk warning messages, can be useful as these increase the willingness of management to listen more to these risk warnings and thus influence their decision making towards the desired behaviour. We want to raise awareness of management that there are various descriptive social norms in the organization that can be positively deployed to influence their management decision making. When they are already present, management can use them to make right management decisions, and presumably by doing so, management can take corrective measures ahead of the internal auditor's risk warnings.

6.4 IMPLICATIONS FOR THEORY

Our studies described in this thesis not only further validated some existing but also developed some additional measurement instruments that can be of use for future experiments in the area of IA effectiveness and broader. We demonstrated that even a previously known and studied factors of IA effectiveness (such as top management support) can have different way of influencing deafness to the risk warnings by the internal auditor.

In our experiments we examined the main causal effects of additional contingency factors such as organization power of the internal auditor operationalized in top management support and nudging concepts including descriptive social norms and their interaction effects from the collaborative partner vs. opponent perspective. Additionally, we examined what constitutes the right 'timing' for communicating the risk warnings by the internal auditor as a new contingency factor for IA effectiveness.

Below we elaborate on the theoretical implications of our study.

The 'demand-side' perspective of IA effectiveness and its link with the 'supply-side' need attention in IA effectiveness research

As mentioned earlier in this thesis, earlier research on factors influencing IA effectiveness has tended to focus predominantly on factors such as the acceptance and implementation of the audit recommendations, the size of the audit department, compliance with the auditing standards, the positioning of the Internal Audit department in the organization and relation with the Audit Committee, and interaction with line managers (Arena and Azzone, 2009), top management support (Cohen and Sayag, 2010; Van Peursem, 2005; Mihret and Yismaw, 2007), staff expertise, executing the audit plan, audit communication (Mihret and Yismaw, 2007), organizational support' (Sarens and De Beelde, 2006a; 2006b). When providing a review of the existing empirical literature on IA effectiveness, Lenz and Hahn (2015) distinguished two different streams, the 'supply-side' perspective, i.e. empirical studies based on self-assessments of internal auditors, and the 'demand-side' perspective, i.e., empirical studies based on other stakeholders' perspectives. In this thesis, we identified causal factors of IA effectiveness (such as nudging and timing), which, to our knowledge have received no attention in the field of deaf effect and IA effectiveness literature. In academic research, in the area of IA effectiveness, most academic studies focused on the 'supply-side' perspective of the IA effectiveness. The stakeholders ('demand-side') perspective is under examined area, which was already reported by Lens and Hahn (2015). By focusing on the 'demand-side' factors of IA effectiveness our study contributes to the literature of IA effectiveness by providing more knowledge to better understand these factors and their influence on IA effectiveness. On the top of that, our study identified some additional factors that may influence IA effectiveness (such as nudging and timing).

To our knowledge, our study is the first that connects the 'supply-side' and 'demand-side' perspective of IA effectiveness with each other by identifying the shared views of the internal auditors and management about the importance of timing for IA effectiveness.

Our examined causal factors of IA effectiveness enrich the interpersonal relations dimension of IA effectiveness

In Chapter 1 of this thesis we referred to Lenz et al, (2014) who based on a literature review, derived four key dimensions or categorical blocks of effectiveness of the IA function: organizational factors, IA personality factors, IA processes and IA interpersonal relationships. Lenz et al, (2014) regarded the interpersonal factors (such as the relationship between IA and senior management and the board/Audit Committee and other third parties) as being critical in determining IA effectiveness and consider these to represent a new important research field. Based on the results of our study we assume that top management support, nudging and timing as causal factors of IA effectiveness reside within the IA interpersonal relations dimension, reflecting the 'demand-side' perspective (expectations from stakeholders) as well as the linkage between the 'supply- side' (Internal Audit) and 'demand-side' perspective of the IA effectiveness. Our contribution to the interpersonal relations dimension of the existing model of building blocks of IA is shown in Figure 6-1 below.

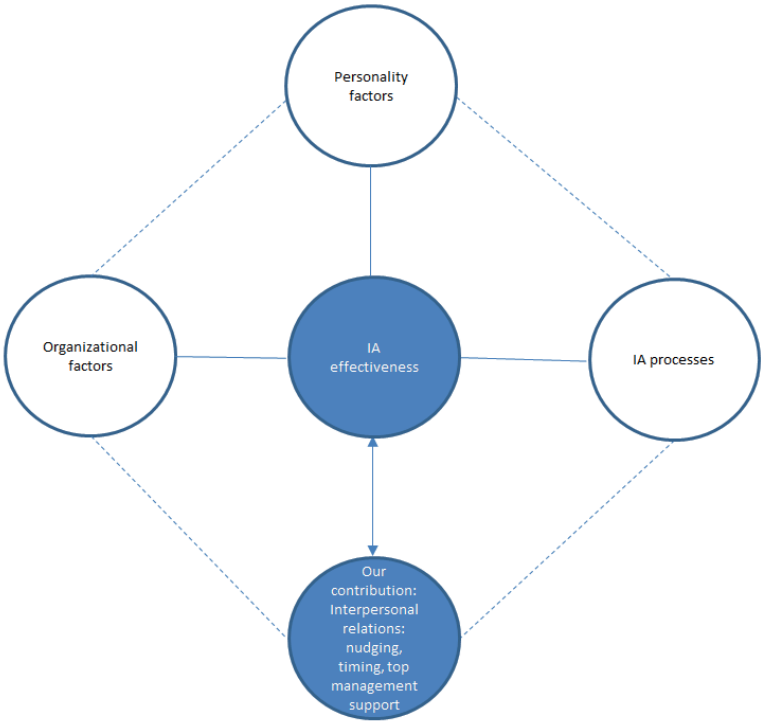

Figure 6-1. Contribution to existing model of building blocks of IA characteristics

Agency Theory and Stewardship Theory principles strengthen each other in favour of IA effectiveness

Our study further examined the choice between Agency and Stewardship relationships by including interaction effects between the relationship and other organizational or psychological factors such as top management support, nudging and timing. By investigating how other factors influence IA effectiveness in combination with the collaborative partnership vs opponent roles of the internal auditor, our study indicates that the collaborative partnership and opponent roles could be combined by IA organizations to become more effective. This is supported by our two experiments described in Chapter 2 and 3 of this thesis that use the principles of Agency and the Stewardship Theory, focussing on the deaf effect as a measurable exhibition of IA effectiveness. Previous research empirical research provided evidence that managers (project owners) are more likely to listen to the risk warnings from an internal auditor who is seen as a collaborative partner but they are less motivated intrinsically to listen to the risk warning, when the messenger is seen as an opponent. Our study described in Chapter 2 demonstrated that when the internal auditor is seen as a collaborative partner by management in combination with (too)high organization power through top management support, this is not always a guarantee that deafness to the risk warnings of the internal auditor will be reduced, but in contrary, it can have adverse effect on deafness and hence on the IA effectiveness. In this case, our study showed the it would be most useful the internal auditor to have the opponent role. Although it needs further investigation, the results of our study described in Chapter 2 in combination with the results of the study described in Chapter 3, presumably indicate that in circumstances when the internal auditor obtains great top management support, the nudging through descriptive social norm by the internal auditor who is seen as a collaborative partner will also be ineffective because of this great top management support. So, our studies indicated that the collaborative partnership and opponent roles should be considered as complementary to each other and be combined by the internal auditor in favour of the IA effectiveness. From a theoretical perspective, this confirms that the Agency and Stewardship Theory are complementary and need each other for building effective organizations, which supports the theory assumptions of Davis et al, (1997) and Sundaramurthy and Lewis (2003).

Next, the results of our the study on timing factors described in Chapter 4 and 5 support the concepts of the Stewardship Theory. As discussed earlier in this thesis, instead of rules and control mechanisms applied in the Agency Theory, Stewardship Theory is based upon collaboration and trust among actors in organizations, clarity of the organizational strategy and intrinsic motivation, which in turn, results in actors acting in service to the organization (Hernandez, 2008). Resulting in several viewpoints about the importance of timing for IA effectiveness that were supported by both internal auditors and the auditees, our study indicates that the internal auditor should look for collabora-

tion and congruencies with the auditees with respect to the timing when a risk warning should be communicated (risks must be shared with and not thrown to the auditees over the fence). This foresters the interpersonal relations of the internal auditor with management, which ultimately will lead to increased IA effectiveness.

Behavioural aspects can influence IA effectiveness

Further, our study delivers important contribution to the literature of IA effectiveness from the perspective of the communication of the risk warning messages by internal auditors. Prior research on factors influencing IA effectiveness has tended to focus predominantly on factors such as 'organizational support' (Sarens and De Beelde, 2006a; 2006b); the acceptance and implementation of the audit recommendations, the size of the audit department the positioning of the IA department in the organization and relation with the Audit Committee (Arena and Azzone, 2009), top management support (Cohen and Sayag, 2010; Van Peursem, 2005; Mihret and Yismaw, 2007). Research on other additional factors from a human behaviour perspective influencing effectiveness of IA is limited. In our experiment described in Chapter 3 we included nudging with descriptive social norm in the risk warning message of the internal auditor to influence the project owner in taking the decision to continue or redirect an IT-project. With this, we contributed to the literature of IA effectiveness by providing some evidence that human behavioural aspects could be of benefit to Internal Audit and its effectiveness.

Timing is a causal factor of IA effectiveness and should be further explored

Finally, our studies described in Chapter 4 and 5 are to our knowledge, the first that explored what factors constitute the right timing for the internal auditor to decrease deafness by management on the risk warnings and hence increase IA effectiveness and how is the importance of these factors viewed by both the internal auditors and auditees. If timing is not properly managed this could result in deaf effect for the risk warning messages of the internal auditor. We assume our study on timing provided important material that could be potentially used in further research of timing issues based on the concepts of Music Theory, similar to the study of Albert and Bell (2002). Next, our study on timing could open up interesting research questions for further empirical studies on the skills and competencies of the internal auditor related to specific types of timing factors that are required within the IA function to manage expectations with management and meet the required level of IA effectiveness. Also the question 'what constitutes right timing for communicating risk warnings by the internal auditor' could be explored in different settings, such as other financial or non-financial organizations, other countries and cultures.

Summary of our theoretical contribution

Figure 6-2 depicts an overview the theoretical contribution of our study.

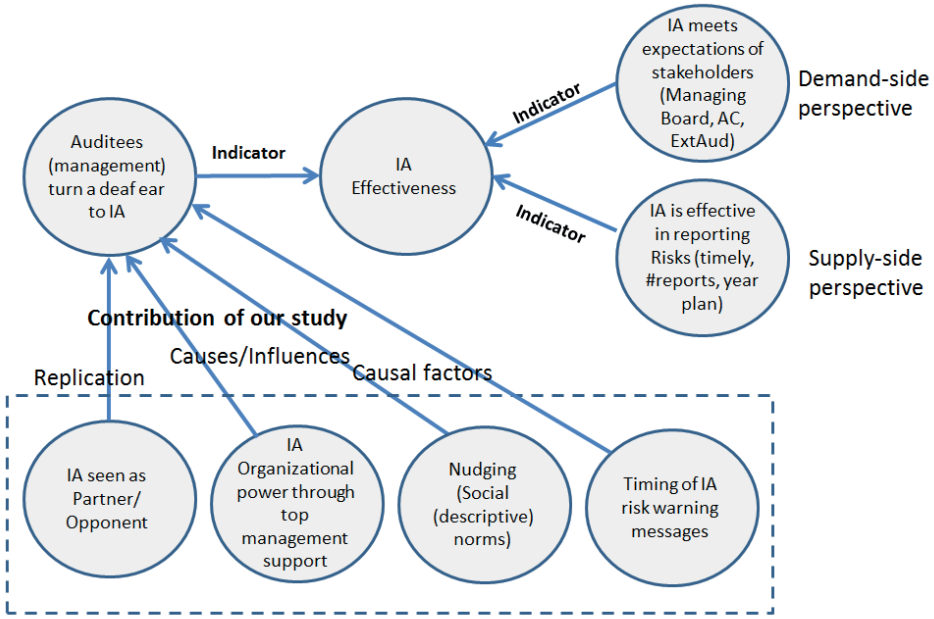

Figure 6-2. Overview the theoretical contribution of our study

In table 6-1 below we show a refined description the contribution of our study to existing literature.

Table 6-1. Contribution of this study

Contribution	Replication	Extension	Innovation
Theory	Stewardship Theory (C2, C3)	-	-
Methodology	Deaf effect (C2, C3)	Nudging (C3)	Timing (C4)
Application	Collab Partner/ Opponent relation (C2, C3) Deaf effect (C2, C3)	Top management support (C2) Nudging (C3)	Timing (C4)

6.5 LIMITATIONS & FURTHER RESEARCH

Our study has several limitations and therefore any generalization of the findings of this study to other settings should be treated with caution. In the separate Chapters of this thesis we described the limitations comprehensively. In this paragraph we elaborate the most important limitations applying to our study and give several recommendations for further research.

One limitation refers to the choice for a laboratory experiment in the studies described in Chapter 2 and 3 of this thesis. Conducting a laboratory experiment allowed us to test causal relationships and achieve high internal validity, but at some cost for the external validity. To achieve a high level of internal validity and high degree of control, our studies took a necessarily narrow focus and involved a small number of variables. Hence, in our experimental approach we were unable to include all the complexities of real work situations and the effects observed in the laboratory settings may not occur in real live situations. This trade-off of higher internal validity for lower external validity is common in laboratory experiments and should not be considered to be a flaw. At the same time, any generalization of the findings of this study to other settings should be done with caution.

We compensated for the above limitation by using a multi-method approach in our study, consisting of a combination of quantitative and qualitative research. We studied the IA effectiveness phenomenon from various perspectives and hence used a convergent research methodology, called triangulation (Webb et al, 1966). Jick (1979) promotes the idea that quantitative and qualitative research could be complementary. He also suggested that triangulation, in addition to bringing validation and reliability, also enables researchers to capture a more complete, holistic, and contextual portrayal of the units under study. To achieve triangulation in research methods we combined two laboratory experiments, exploratory study by Focus Groups and a Q methodological study (combination of qualitative and quantitative method) in order to obtain insight into how the deaf effect for risk warnings could be influenced. The two laboratory experiments provided us with methodological strength with regard to the precision of measurement and deduction by testing a set of theoretically determined hypotheses (Nuijten, 2012). The qualitative study with Focus Groups provided more insight into the factors influencing deafness. The Q methodological study provided further insight from the interviews, delivering interesting viewpoints about the importance of timing for the IA effectiveness that could be interesting for further research.

Another limitation relates to the use of student participants in these two studies that could also limit the external validity of our results. Although students often serve as valid surrogates for managers in this type of research, we conducted further research to determine if these findings can be replicated with more experienced participants.

To replicate our nudging experiment with practitioners described in Chapter 3 of this thesis, we first conducted a pilot with managers from real organizations through Qualtrics. In our pilot we tested with 44 managers. We defined selection criteria and filtered the results on these criteria (native English speaker, country of origin United States, role manager, limitation of time for completing the questions, attention filter, control questions). Prior to launching the pilot with the requested 44 participants, we tested with 15 participants in order to check the set-up of the experiment and take out any mistakes. As we concluded that 15 participants did not provide for sufficient information to be able to decide to conduct the real experiment or not, we proceeded with the execution of the pilot with 44 participants. Despite the filters and several testing attempts with Qualtrics, the quality of data was poor leading us to the decision not to proceed with the experiment. This decision was also supported by the results of the moderation analysis we performed in SPSS showing that the interaction effect between SocNorm and Continue was not only inconsistent with our expectations but also not logical (e.g. the deaf effect was significantly increased when the message including descriptive social norm was communicated by an internal auditor who is seen as a collaborative partner but when the message including descriptive social norm was communicated by internal auditor who is seen as an opponent, the deaf effect was significantly reduced).

Based on our experience with this pilot, we think online providers could not be appropriate for laboratory experiments with practitioners due to the risk of poor data quality, the required level of control and the required internal and external validity. Therefore we recommend in further research to replicate our experiments on the organization power and nudging part in different experimental conditions with more experienced participants, although it may be difficult to have large number of practitioners in a lab at one time and one place.

The next limitation refers to our measures of the OrgPower and SocNorm constructs in the studies described in respectively Chapter 2 and 3 of this thesis in the context of internal auditor – project owner relationship. These constructs were self-developed given our particular level (inter personal) and context. Although they were derived from literature, tested and improved in the preparations of this study and shared with experts, refinement and testing is recommended in further research.

As elaborated earlier in this thesis, our study on organization power of the internal auditor through top management support suggested that there is turning point when top management support can have undesired effects and even increase deafness to the risk warnings of the internal auditor. In future research it would be interesting to confirm these findings by replicating the experiment with practitioners from the field. Also in future research it would be interesting to investigate what constitutes high top management support and at what turning point top management support will be contra effective. Further, in future research it could be interesting to investigate the long

run effects of top management support on the relation between the internal auditor and management and hence on the effectiveness of IA. As discussed earlier in Chapter 2 of this thesis, our study investigated how the opponent and collaborative partner role interact with organization power of the internal auditor. Knowing the effects thereof on deaf effect, the internal auditor could consider the possibilities for switching between these two roles to achieve less deaf effect on the risk warnings and hence increase internal audit effectiveness. We assume, the results of our study could help internal auditors to upgrade the internal audit profession by improving their skills and expertise to be able to deploy the collaborative partnership versus opponent roles in communication of the risk warnings more effectively. We encourage other researches to further explore this challenging area of internal audit effectiveness.

Further, in our study we used top management support to internal auditors in the organization as an operational measure of organization power of the internal auditor. Next to the support from superiors, Near and Miceli (1995) measure the whistle-blower's power variable by other several operational measures such as position in hierarchy, pay grade, value congruence power, professional status, education level, tenure, minority influence, lack of retaliation, and individual power membership in majority group. In future research it could be investigated how these operational measures of organization power can influence deaf effect on risk warnings as an indicator of IA effectiveness.

As to the study described in Chapter 3, we limited our experiment to using a social descriptive norm as a nudge included in the risk warning message of the internal auditor. From literature we know that other forms of nudging could be deployed to change human behavior (Thaler and Sunstein, 2009). In future research, in an experimental design, it could be investigated for example, how nudging with implementation plans or how sequence of the auditor's recommendations or timing factors influence deafness of management to risk warnings of the internal auditor. In addition, based on the EAST (Easy, Attractive, Social and Timely) assumptions for influencing human behaviour, we assume timing may also be effectively deployed to nudge auditees into the right direction (i.e. to better listen to the internal auditor's risk warnings) and we encourage future research of this topic as well. Similarly to our study in Chapter 2, in future research it could be interesting to investigate whether the effects of nudging management by the internal auditor on long run would be still effective and favourable for the relation between the internal auditor and management and hence for the effectiveness of IA.

There are also limitations related to our exploratory studies described in Chapter 4 and 5 of this thesis. The interviews conducted as part of these studies were held with participants with Dutch nationality working within one large bank in The Netherlands. This choice is defendable given the focus of these two studies. We did not expect to identify different results in comparable larger banks in The Netherlands as these, similarly to our selected bank, at the time of our study, were subject to important strategic

developments resulting in increased attention to the timing issues. Still, we recommend further study with respondents from other large banks in The Netherlands, but also abroad to confirm this expectation. The results could be different in other settings and generalization of our findings to other companies and countries should be done with care. Other factors may also affect the effectiveness of the internal auditor's communication of the risk warning message, like for instance cultural aspects, type of audits, type of company etc. and we recommend further research taking into account these aspects.

Our studies on the timing factors described in Chapter 4 and 5 revealed that the timing factors determining the right moment for communicating the risk warning message by the internal auditor may also impact the internal auditor's skills and competencies. Identifying the right timing for communicating the risk warning message to management in complex and unanticipated events (e.g. strategic changes) would presumably require other skills and competencies from the internal auditor compared to other less complex situations (e.g. mandatory or repetitive events). Therefore, an interesting future research in this respect could be to investigate what specific skills and competencies are required from the internal auditor so that he will be able to identify the right timing for communicating the risk warning message.

Our studies will potentially have consequences for the auditor's communication skills in such a way that the internal auditor should be capable of switching the collaborative parner vs opponent roles when necessary to be most effective. Furthermore, applying of nudging concepts as described in Chapter 3 of this thesis may imply different skills from the internal auditor (in terms of communication and behavioural skills) than the standard auditing skills, which will potentially lead to different audit approach. In this respect, it could be interesting for others to investigate further what will be the required skills set of the internal auditor to achieve greater IA effectiveness.

In our study we focus on communication of 'bad news' messages i.e. messages about risks that threaten the organization. Communication of positive messages by the internal auditor were not part of our study as we considered these kind of messages do not impair the effectiveness of the IA. We assume there are different timing factors for communicating of 'good news' that could potentially be an interesting future research.

As mentioned before in this thesis, our study focussed on the 'demand-side' perspective of IA effectiveness. Our study is perhaps a first study in the area of IA effectiveness that connected the 'supply-side' with the 'demand-side' perspective of the IA effectiveness by asking auditors and auditees to discuss timing in order to arrive together at shared views on the importance of timing for IA effectiveness. We believe this topic has a lot of potential for future research and we support researches in investigating more factors of IA effectiveness from both the 'supply-side' and demand-side' perspective and all together.

As mentioned in Chapter 1 of this thesis, we situated our studies within the interpersonal relations dimension of the IA effectiveness (Lenz et al, 2014). The findings of our studies enrich this dimension with additional factors influencing the IA effectiveness, which could potentially have important influence on the other three dimensions of the IA effectiveness (IA organization, IA personality factors (resources), and the IA processes). In this thesis we made several assumptions about what these influences could be and we consider this as an important research field for future researchers.

In our study we focused on the decision making processes at inter-personal (individual) level: with the internal auditor as provider of the risk warning message and with the decision taker's view on the messenger (as a collaborative partner or an opponent). We did not study the possible effects of decision making at a department-level or at an organizational level. To obtain more insight into the dynamic processes of group decision making and consequences thereof, we would recommend further research based not only on behavioural theories but also making use of Sociological theories.

One final remark we want to make here with respect to research implications of our study, is that from our literature review we noticed that Agency Theory is a dominant paradigm used in academic research of IA effectiveness and therefore we encourage further academic research of IA effectiveness from a Stewardship Theory perspective. Additionally, the findings of our study showed that Agency and the Stewardship principles cannot be always used isolated of each other and a combination of both could be necessary to achieve greater IA effectiveness. We encourage others to further investigate whether this combination is possible, what are the consequences of this combination for the IA effectiveness and the IA organization in general and the way of auditing in particular.

6.5 EPILOG

By studying IA effectiveness through deaf effect our study aimed at not only identifying additional causal factors influencing IA effectiveness, but also finding out whether deaf effect for risk warning messages of the internal auditor can be studied by applying different approaches. Studies on IA effectiveness have focused mostly on the 'supply-side' perspective (the internal auditors) of IA effectiveness and the 'demand-side' perspective (stakeholders expectations) is not very much examined area. While most of the studies in the area of IA effectiveness have focussed on factors influencing IA effectiveness such as e.g. realization of the audit plan, number of issued reports, implemented recommendations and the like, our study made a first step towards investigating how other, more behavioural related factors may be of benefit to the IA effectiveness. Our study found evidence that such factors like organization power of the internal auditor through

top management support, nudging and timing can be important for IA effectiveness and that internal auditors should look outside the box (i.e. outside the 'dominant logic' based on the auditing standards) to find other ways to increase effectiveness. While top management support has been addressed by few researches in the field of IA effectiveness, we think our study provided interesting and surprising results from the interaction effects, indicating that top management support is not always a guarantee for reducing deafness on risk warnings of the internal auditor. From our studies it appeared that there is a contingency approach with regard to the collaborative partner vs opponent role of the internal auditor and the internal auditor should be smart in combining these roles in achieving greater effectiveness. Further, based on literature review we think our study is the first attempt to link nudging to deaf effect and hence IA effectiveness. Our study provided evidence that internal auditors can include nudging with descriptive social norms in their risk warning message communication to management and this can be helpful to reduce deaf effect. We encourage academic researchers as well as internal auditors to investigate how other ways of nudging affects the willingness of management to listen or not to listen to the risk warnings of the internal auditor. Furthermore, to our knowledge, our study is a first study within the IA effectiveness research that investigated timing in relation to IA effectiveness, thereby linking the 'supply-side' and the 'demand-side' perspective of the IA effectiveness with each other. We are happy to see timing is recognized by both internal auditors and management as an important factor for IA effectiveness. Although the effects of timing needs further research, we encourage internal auditors to use the five viewpoints we made available through this study, to find out the right timing to communicate the risk warning messages. A lot of work has been invested in our studies aiming at providing reliable and hopefully, interesting results that can be used by academics and practitioners. We believe that the studies in this thesis open up challenging venues for further research and provide a valuable input to both internal auditors and management to help achieve the best of IA.

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SUMMARY

The effectiveness of Internal Audit obtains growing importance in both practice and academic research. The tension between the value that IA believes to provide and the value perceived by some of its customers is increasing. In many occasions audit issues addressed by the internal auditor are not always accepted by management and even though audit issues are accepted by management and corrective actions have been agreed, management turns a deaf ear to the internal auditor's risk warning and is continuing the 'wrongdoing'. As an illustration, we often hear about organizations experiencing large projects that are not successful but not stopped by management despite the risk warnings reported by the internal auditor. While the question arises whether IA acts effectively in deaf effect situations, in circumstances of disastrous business failures, this could go even worse, followed by the inevitable question 'where was the auditor again?'. This could raise the question if the IA is effective and its services are beneficial to management.

In this thesis, several factors influencing deaf effect as indicator for IA effectiveness are studied which were (mostly) unexplored in the academic literature. In an experiment (Chapter 2) it was tested what are the main causal effects of additional contingency factors - the organization power of the internal auditor translated in top management support and the interaction effects from the collaborative partner vs. opponent perspective. In another experiment (Chapter 3) we included nudging with descriptive social norm to test the main causal effects and interaction effects from the collaborative partner vs opponent perspective. The results of these experiments were surprising and brought originality in this area of academic research. Our study provided interesting and surprising results from the interaction effects, indicating that top management support is not always a guarantee for reducing deafness on risk warnings of the internal auditor. While it may seem to be logical that in the high organization power conditions, decision makers are more likely to follow any advice, regardless whether the message comes from a collaborative partner or an opponent, our findings suggested that great top management support can even be contra-productive when the internal auditor is seen as a collaborative partner. Based on our study results, top management support appeared to be most useful for IA effectiveness when the internal auditor is seen as an opponent. The findings of the second experiment indicate that nudging through descriptive social norm can be used by the internal auditor to increase IA effectiveness by overcoming the deaf effect response to their risk warnings to management. Including a descriptive social norm as part of the risk warning message of the internal auditor in our experiment appeared to be useful as it significantly reduced the deaf effect response by the message recipient. Descriptive social norm can be even more useful when the messenger is seen as a collaborative partner. When the internal auditor is seen as an opponent, nudging

with a descriptive social norm is ineffective, so there is no guarantee that providing a descriptive social norm will work as intended. To our knowledge, our study is a first study within the IA effectiveness research that investigated timing in relation to IA effectiveness, thereby linking the 'supply-side' and the 'demand-side' perspective of the IA effectiveness with each other (Chapter 4 and Chapter 5). By applying Focus Groups interviews (Chapter 4) and Q methodological approach (Chapter 5), we identified what determines the right moment for the internal auditor to communicate the risk warning messages to management. The results of these studies showed that timing is recognized by both internal auditors and management as an important factor for IA effectiveness. From these studies five 'viewpoints' were derived that may help internal auditors to find out the right timing to communicate the risk warning messages and hence increase IA effectiveness.

By studying IA effectiveness through deaf effect our study aimed at not only identifying additional causal factors influencing IA effectiveness, but also finding out whether deaf effect for risk warning messages of the internal auditor can be studied by applying different approaches. While most of the studies in the area of IA effectiveness have focussed on factors influencing IA effectiveness such as e.g. realisation of the audit plan, number of issued reports, implemented recommendations and the like, our study made a first step towards investigating how other, more behavioural related factors may be of benefit to the IA effectiveness. The studies in this thesis demonstrate that such factors like top management support, nudging and timing can be important for IA effectiveness and that internal auditors should look 'out of the box' to look for other, innovative ways to increase effectiveness.

NEDERLANDSE SAMENVATTING (SUMMARY IN DUTCH)

Effectiviteit van Internal Audit (IA) wordt steeds belangrijker voor organisaties. De waarde van de Internal Audit functies binnen organisaties wordt steeds meer uitgedaagd door het management. In de praktijk komt het vaak voor dat de audit issues, gerapporteerd door de internal auditor, niet worden geaccepteerd door het management. Het komt ook voor dat het management de audit issues weliswaar accepteert, maar niet luistert naar de risico waarschuwing van de internal auditor en doorgaat met 'wrongdoing'. Dit soort gedrag komt bijvoorbeeld vaak voor bij grote projecten binnen organisaties die niet succesvol zijn en de projecten gaan door ondanks de risico waarschuwingen van de internal auditor. De vraag ontstaat of de internal auditors effectief zijn in deze omstandigheden. Vooral in situaties waarbij grote projecten zijn mislukt kan er nog een vervolgvraag gesteld worden: 'waar was de auditor weer?' Dit soort situaties zorgt ervoor dat de effectiviteit van Internal Audit in twijfel wordt getrokken en de toegevoegde waarde van Internal Audit functie voor het management ter discuss wordt gesteld.

Dit proefschrift richt zich op een aantal factoren die van invloed kunnen zijn op het 'deaf effect' als een indicator voor de IA effectiviteit die tot dusver niet of nauwelijks onderzocht is in de academische literatuur. In het eerste experiment (Hoofdstuk 2) worden de main causal effecten van factoren zoals organization power van de internal auditor vertaald in top management support van de internal auditor en de interactie effecten collaborative partner vs. opponent perspectief onderzocht. In het tweede experiment (Hoofdstuk 3) wordt nudging met descriptive social norm getest voor de main causal effects and interaction effects vanuit de collaborative partner vs opponent perspectief. Deze twee experimenten hebben verrassende en originele resultaten voortgebracht. De uitkomsten geven aan dat organization power van de internal auditor via top management support niet per se een garantie is voor vermindering van het deaf effect op de risico waarschuwingen van de internal auditor, en dat top management support niet altijd een positief effect op het deaf effect (en daardoor op IA effectiviteit) kan hebben. Het zou logisch zijn dat in 'high organization power 'condities, management meer de neiging zou hebben om elk advies van de internal auditor op te volgen ongeacht of de risico boodschap vanuit een collaborative partner of een opponent komt. Echter, de bevindingen van onze studie geven aan dat dit tegenovergestelde effecten kan hebben wanner de risico boodschap vanuit een internal auditor als een collaborative partner komt. De resultaten van het tweede experiment geven aan dat nudging met descriptive social norms kan gebruikt worden door de internal auditor als onderdeel van de risico boodschap om het deaf effect te verminderen en zo de IA effectiviteit te vergroten. In ons experiment bleek het toevoegen van een descriptive social norm in de risico boodschap van de internal auditor te helpen om het deaf effect van de boodschap ontvanger te verminderen. De studie duidt aan dat descriptive social norm kan

nog meer bijdragen om het deaf effect te verminderen als de risico boodschap van een internal auditor die gezien wordt als collaborative partner komt. De resultaten geven aan dat wanneer de internal auditor gezien wordt als een opponent, de nudging met descriptive social norm niet effectief is. Verder, is voor zover wij weten, deze studie de eerste binnen het academisch onderzoek van IA effectiviteit die timing in relatie tot het deaf effect en IA effectiviteit onderzoekt. Daarbij worden de 'supply kant' en de 'demand kant' perspectieven van IA effectiviteit met elkaar verbonden (Hoofdstuk 4 en Hoofdstuk 5). De resultaten van de derde en de vierde studie laten zien dat timing belangrijk wordt gevonden door de internal auditors en management als een belangrijke factor voor de IA effectiviteit. Deze studies resulteerden in vijf 'viewpoints' die de internal auditors samen met management kunnen gebruiken om de juiste timing te vinden voor het communiceren van de risico boodschap zodat management meer luistert naar deze boodschap. Hierdoor wordt de IA effectiviteit vergroot.

De studies in dit proefschrift laten zien dat ook andere, meer gedragsgerelateerde factoren wel degelijk de IA effectiviteit kunnen vergroten. Zelfs factoren die niets met internal auditing te maken hebben, lijken in staat om het deaf effect op risico waarschuwingen van de internal auditor te beïnvloeden. Dit onderstreept het belang voor de internal auditors om buiten de box te gaan denken om te zoeken naar andere, innovatieve manieren voor het vergoten van de IA effectiviteit.

ABOUT THE AUTHOR

Violeta Verbraak-Kolevska was born on February 13, 1967 in Skopje, Macedonia. She moved to The Netherlands in February 1997 to continue with her private and professional life. She graduated cum laude at the University of Skopje 'Kiril and Methodij' for her university degree in Economics & Banking & Accounting in 1991. In 2005 she continued her education and became a Certified Internal Auditor at the Institute of Internal Auditors. In 2012 she graduated at the Erasmus School of Accounting & Auditing for her degree Executive Master of IT Auditing. Thereafter in 2013 she obtained her degree Executive Master of Internal Auditing. Her interest in (research on) effectiveness of internal audit was formed during the finalization of her post master education at the ESAA. After defending her thesis related to monitoring of IT projects for the purpose of finalization of her Executive Master of IT Auditing, mentored by Dr. Arno Nuijten, she got the opportunity to proceed with further research as part of her PhD. This PhD research was under supervision of Dr. Arno Nuijten who became the co-promotor for this thesis.

In 2014, after presenting her research idea at the 11the European Academic Conference on Internal Audit and Corporate Governance in Oslo, Violeta started her PhD research at the Erasmus University Rotterdam as a part-time PhD student being full time employed as an internal auditor at ABN AMRO Bank in Amsterdam. During her PhD research, she attended and presented her work at several conferences such as the European Conference on Internal Audit and Corporate Governance in 2013 throughout 2017 and the SABE/IAREP conference in 2016. In 2014 she obtained the 'best paper award' for her first paper at the European Conference on Internal Audit and Corporate Governance in Italy. Violeta is currently part of the E-Bridges research team at the Erasmus School of Accounting & Assurance (ESAA).

Violeta is married to Guido and together they have a son Victor who is 15 years old. In her free time she likes shopping and as soon as she can, she visits her family in Macedonia.

PORTFOLIO

Publications

Articles under review:
Verbraak, V, Nuijten, A.L.P., Keil M. Nudging with Descriptive Social Norms to Overcome the Deaf Effect for IT Project Risk Warnings, under review at EJIS.

Articles in progress:
Verbraak, V, Nuijten, A.L.P Does the Organization Power through Top Management Support help Internal Auditors to Reduce the Deaf Effect for Risk Warnings?, in preparation to be resubmitted in AJTP.

Verbraak, V, Nuijten, A.L.P., van Exel J. Q Method study: The influence of timing on IA effectiveness, in preparation to be submitted in AJTP.

Ph.D. Studies, Workshops and Courses:

Self-studies and Training on the Job
Self-study on Experimental and Quasi-Experimental Design (September 2013 throughout March 2014 and September 2014 throughout March 2015).

Self-study on Focus Groups methodology (October 2015 throughout March 2016).

Self-study over Q Methodological research (June – September 2016) for the purpose for the purpose of the Q Method study on Timing factors conducted starting September 2016 throughout April 2017.

Training on the job: academic writing by prof Mark Keil (Georgia State University), May 2016.

Training on the job: Q-method by prof Job van Exel (ESE), October-December 2016.

Workshops
Workshop Moderation Analysis by Professor Mark Keil from Gorgia State University (May 20, 2015).

Workshop PhD research approach by Professor Mark Keil from Gorgia State University (May 18, 2016).

Workshop writing a paper for a journal by Professor Mark Keil from Gorgia State University (May 19, 2016).

Courses
Limperg course on Experimental Research in Accounting in Tilburg by Professor Kristy Towry from Goizueta Business School, Emory University (April 22, 2014 – April 23, 2014 and May 19 – May 23, 2014).

SPSS course by dr. Arno Nuijten (December 19, 2014 and December 23, 2014).

PLS course by dr. Arno Nuijten (March 6, 2015).

Altas.ti course by dr. Nick Benschop (March 4, 2016 and March 21, 2016).

Specific Integrity training:
Scientific Professionalism and Integrity session by prof. dr. Marius van Dijke (RSM) and prof. dr. Patrick Groenen (ESE): Registered for February 23, 2017.

Conference paper presented at:
11th European Academic Conference on Internal Audit and Corporate Governance in Oslo (by Norwegian Business School), April 24, 2013 – April 26, 2013.

12th European Academic Conference on Internal Audit and Corporate Governance in Millan (by Politechnico di Milano University), April 9, 2014 – April 11, 2014.

13th European Academic Conference on Internal Audit and Corporate Governance in London (CASS Business School), April 9, 2015 – April 11, 2015.

14th European Academic Conference on Internal Audit and Corporate Governance in Rotterdam (by the ESAA), April 6, 2016 – April 8, 2016.

15th European Academic Conference on Internal Audit and Corporate Governance in Athens, April 19, 2016 – April 21, 2017.

"Behavioural Insights in research and Policy Making" SABE/IAREB Conference in Wageningen, July 8, 2016 – July 10, 2016.

IIA Congress 'Where on Earth Are We?, IJmuiden, June 23, 2014 – June 24, 2014.