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Corporate Governance, Firm Risk and Shareholder Value of Dutch Firms



CORPORATE GOVERNANCE,
FIRM RISK AND SHAREHOLDER VALUE
OF DUTCH FIRMS

Corporate Governance,
Firm Risk and Shareholder Value

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Preface

Why would someone who is happily married, with two beautiful growing teenage daughters, with a demanding work life on top of that be engaged in academic research? Why would he invest significant amounts of time in gathering and analyzing data, and subsequently formulating his thoughts meticulously in academic papers? The answer is 'curiosity'. And while writing this preface I am thinking back at how this all started.....

In my work life, I became more and more aware of the effects of human behavior on corporate finance decision making. I observed that the CEO's that I worked with were relying on their experience and gut feel often more than on a rational decision making process. I noticed that in decision making many unwritten rules of thumb were being applied. I experienced the value of informal contacts and the power of being part of a network. I could feel the intrinsic board room tension between members of a Supervisory Board and members of the Executive Board, at times vehemently arguing and challenging each other's views. With human behavior playing such an important role in a firm's corporate governance and decision making, what would be the implications for that firm and its value? Out of curiosity I picked up the phone and contacted my Alma Mater: the Rotterdam School of Management at the Erasmus University in Rotterdam. A friendly and knowledgeable PhD (Reggy Hooghiemstra, now at the Faculty of Economics and Business, University of Groningen) warmly welcomed my curiosity and invited me to come speak with him. He introduced me to Abe de Jong, who later became my promoting Professor. This is how it all started.

In 2006, with full support from my wife and after the necessary preparations, training and extensive catch up reading, I decided to embark on this research journey. The aim was to investigate the relation between several aspects of corporate governance and finance. Abe and I considered that it would be good to do a series of projects so as to grow my research skills gradually with increasing research complexity.

The first project was a governance/M&A event study (chapter 4), which was published as a co-authored paper in 2007. Marieke van der Poel and Abe de Jong co-authored this paper and introduced me to the world of empirical research, gathering and analyzing data, ultimately leading to a publishable paper. Marieke very often was my

sounding board and my initial daily mentor. She truly is a very thorough researcher, with a keen eye for detail, and has been a much appreciated guidance in this project. Needless to say that Abe played an important oversight role and kept helicopter view throughout the entire project. His guidance in bringing this project to publication was very valuable.

The second project (chapter 3) involved a study on thirty years Philips CEO communication to the financial markets, which I conducted together with my promoter, with help from Marieke. My starting point was a carton box with dust all over it, from an archive, that contained 30 years hardcopy annual reports of Philips. Coming home with this box, I was greeted with laughter. This box, plus all the subsequent research, turned out to be an enormous well of information on Philips' past financial market communication. Good, bad and ugly... This project has taken some time frame to come to fruition, but the results are striking. The aim is to get this paper published in a history journal.

The third and last study (chapter 2), I conducted solo, under supervision of Abe. It investigates the relationship between connectivity of a firm's supervisory board directors and certain of that firm's risk characteristics. The authorities' concern about overly busy directors has found its way to regulations that limit the number of connections for Supervisory Board members. I was wondering to which extent this assumed positive relationship between board members' connections and firm risk would be supported by empirical research. I spent a good part of a year, including the full Summer holiday, manually gathering and categorizing relevant data. As a next step I ran regressions with Stata software. The outcome is quite astonishing. In none of the 36 tested relations did I find any of the assumed positive relation. I found that, if anything, the opposite is true and board connections reduce firm risk. I aim to publish this article in a governance journal.

It is now seven years since I have started my research. In this period I have combined my academic efforts with a family life and a career in business. This has been quite busy at times and I do owe a lot to those that have supported me though this period. I realize that I have taken away much time from my family. I have not always been there for them, and that does not feel good. But the joy, inspiration and energy that this research has given me is immeasurable. And more than once during all these years, I have

pondered whether the journey itself would be more fulfilling than reaching the goal (my PhD graduation).

I am deeply indebted to my wife Carla and our two great daughters Simone and Christina. They have always supported me, as they seemed to understand that this quest had to be fulfilled. I am grateful for their understanding and patience with me. I dedicate this book to them and hope that someday I can repay them for the time that I have not been able to spend with them.

A special thank you is for Abe, my promoting professor. Abe combines deep insights in business relations with high research standards and a vast amount of academic experience. I had the luck to be able to tap his talents as often as I needed to. At times, when I was questioning the purpose of my mission or felt that I was drowning, Abe stood right behind me and motivated me to go on.

At this place I would like to thank my colleagues from the Finance and Investments team at the RSM, and in particular Marieke, Flora, Dimitrios, and Reggy. Always there to lend a helping hand. What great colleagues to have !

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Chapter 1:

Introduction

1.1 Introduction

This chapter is an introduction to the three studies in this book. All three studies are about the implications of corporate governance to firms and their shareholders. And all three studies have been conducted in the Dutch setting. Much extant research is based on US data. One reason that US data are often used is the readily availability of these data through large international databases. Another reason for using US data is that this usually facilitates a much desired publication in international journals. We have chosen to base our research on the Dutch setting. The Dutch corporate setting is the environment where we have gained our experience in, and where we can authoritatively argue possible business implications of our findings. This choice, however, has had major implications for our research. Much of our data had to be collected manually. This is a laborious process. And of course, we do realize possible restrictions in publishing our results in international journals. Some of the findings are specific for the Dutch setting and might capture limited international attention. However, our hand built datasets are unique and have provided us insights that otherwise we would not have been able to achieve.

1.2 What is corporate governance?

Corporate governance deals with the way how firms are managed and controlled and how accountability is assured. Well directed and controlled firms are important for a good functioning and competitive economy. The income of millions of citizens and the value

of their pensions and savings depends directly on the performance of firms and the way how they are managed and controlled (report Monitoring Committee 2005, page 4).

1.3 Trends in corporate governance

At the beginning of the millennium, a series of governance failures at US firms such as Enron and WorldCom, and European firms such as Ahold and Parmalat, caused a wave of regulatory initiatives aimed at improving corporate governance. The debate on corporate governance has continued to thrive since. Most recently, the OECD reported that “The financial crisis can to an important extent be attributed to failures and weaknesses in corporate governance” (OECD, 2009, page 1).

F. Martens states (2005 CGA Accounting Research Centre conference) that “Internationally, trends in corporate governance can be viewed from the perspective of board stewardship, operations, independence, and disclosure. The rules and guidance relating to these board activities illustrate a number of interesting trends. First of all, there continues to be a move from guidance to regulation. In the US this trend is being reflected primarily in the areas of codes of ethics, audit committee structure, and the separation of CEO and chairman of the board”. The Netherlands still operates more from a principle based background and uses the “comply or explain” principle that allows firms to either comply with the Corporate Governance Code or explain why it deviates from the Code.

Developments in firms’ governance are also visible in the board’s skills. Initial initiatives were aimed at improving a firm’s governance structure. But in recent developments, greater attention is given to skills and ethics. This reflects back on the efforts of board members. The overall effort required from board members continues to increase due to the increasing number of boards meetings and the increasing number of subcommittee meetings they are supposed to attend. The enhancement to the roles and responsibilities of corporate boards has tended to heighten the natural tension between the dual roles required of these boards. They must be advisors to senior management, and, as well, carry a fiduciary responsibility to shareholders (Martens, 2005).

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Another trend is that the boards' responsibilities are expanding. So far, a firm's supervisory board monitored the firm's responsiveness to risk reporting. Following the now widely accepted "Enterprise Risk Management Framework" as developed by COSO (Committed of the Sponsoring Organizations of the Treadway Commission), supervisory boards are more and more monitoring the effectiveness of management's response to risk that might prohibit a firm from reaching its goals. As a result, supervisory boards are playing an essential role in the firm's compliance and ethics issues.

1.4 Governance and firm value

A common view is that there is a positive relationship between a firm's corporate governance and that firms' performance. However, the direction of the causality is controversial (Hermalin, 2008). Is a firm with strong governance better positioned to perform well or do firms that perform well have to most to lose with weak governance? Empirical studies measuring the overall relationship between governance and performance measure firm performance using profits, firm value and/or Tobin's Q and develop an index to measure a firms' overall governance. Such an index is a composite index measuring a series of governance items from categories like disclosure, board composition and functioning, ownership and control structure, and shareholder rights. Our research consists of three studies. Each study focuses on specific aspects of a firm, certain of its governance aspects and the implications on shareholder wealth.

1.5 Do board interlocks reduce firm risk? Evidence from the Netherlands.

In 1997 the first report on corporate Governance in The Netherlands was issued by the so-called "Committee Peters". This report contained recommendations for good corporate governance. With respect to the number of supervisory board memberships any one member of the supervisory board could hold the reports states (section 2.10 of the report):

"The Committee advocates that the number of Supervisory Board memberships which one person can hold in (listed) companies should be limited so as to guarantee a proper performance of duties. In particular, the workload also that resulting from posts held in

Chapter 1

non-listed companies and other institutions, is a point that needs to explicitly taken into consideration. The number of Supervisory Board memberships should be determined by the time available for a proper performance of duties.”

Since Dutch firms were not very forthcoming in implementing these recommendations, a new committee was asked to draft a Corporate Governance Code. The Committee Tabaksblat presented the Corporate Governance Code 2003, to be effective January 1, 2004. From January 1, 2005 onwards, every Dutch quoted firm has to clarify the implementation of the Code in its annual report in accordance with the ‘comply or explain’ principle. With respect to the number of Supervisory Board memberships any one member of the Supervisory Board could hold the best practice provision of the Code states (III.3.4):

“The number of supervisory boards of Dutch listed companies of which an individual may be a member shall be limited to such an extent that the proper performance of his duties is assured; the maximum number is five, for which purpose the chairmanship of a supervisory board counts double.”

The limitation of the number of supervisory Board memberships any one individual can hold is primarily driven by fear for ‘busyness’. An added factor limiting the number of board memberships is the wish to assure the supervisory board members’ independence. The Code Tabaksblat limits the number of supervisory board memberships to five, with a presidency counting double. In practice, this has led to widening of the circle of potential board members. From January 2013 onwards the limitation of the number of supervisory board memberships any one person may hold is incorporated in Dutch civil law (articles 2:197a and 2:197b BW). This states that a membership of a supervisory board may be combined with a maximum of 4 other memberships with other large firms. An appointment in violation with this provision will be void. The motivation for this civil law amendment is to assure the quality of management and supervision, prevent conflicts of interest and to contribute to breaking through the ‘old boys

Introduction

network'(Explanation of the Irrgang Amendment, from House of Representative Consultation of legislation June 25, 2012¹).

In our study we investigate the relation between board interlocks and firm risk in Dutch firms, more in particular the effect of supervisory directors' connectivity on firm risk. We find that supervisory board interlocks reduce the firm's systematic risk and that bankers on the board increase the firm's ability to mitigate downside risk. Both effects are empirical support for the view that interlocks are a node through which information on business practices flows and network resources are engaged. Our findings are a yet unknown aspect of connectivity and based on our findings one could question the validity of the motivation behind the most recent civil law amendments.

1.6 Punished by discontented financial markets; investor relations of Royal Philips NV 1971-2001

Our second study goes back to the 1990s. During the second half of the 1990s, Western economies experienced one of the longest economic expansions in history. The characteristics of this period, when the general perception was that the world was moving towards a "New Economy", were high growth rates in productivity, output, employment, wages and investments, and booming financing coupled with soaring stock markets. We investigate how firms have adapted their communication to these changing market demands. Philips Electronics NV is selected for a case study. Philips is a well-known household name in the Netherlands, with a two-sided reputation. It has a strong reputation for its technology and innovations, but is also known for its weak marketing. The latter resulted in its technologically outstanding products not always making it in the market place. This has led to costly and high profile product failures such as Video2000, CD-I, DCC and HDTV. We investigate Philips investor communication efforts in the exogenously changing financial markets in the 1990s.

¹Report of the consultation on legislation by the House of Representatives, held on June 25, 2012, regarding the change of Book 2, Civil Code (Burgerlijk Wetboek), explaining the articles 297a en 297b.

Chapter 1

Firms generally are concerned about shareholder wealth maximization, a process of making a firm's share as desirable as possible. The investor relations function plays a pivotal role between the firm and the financial markets. We have investigated the importance of investor relations in communicating Philips' strategic intentions, and found a remarkable parallel. Both in developing products and in developing financial reporting, Philips has been technologically strong and innovative. But, in the 1990s Philips' weakness in marketing communication is mirrored by its weakness in communicating its strategy to the market. Philips' communication obviously was not able to satisfy the demands of the changing financial markets and as a consequence its shareholders have suffered wealth losses of billions of euros.

1.7 Corporate governance and acquisitions

Our third study investigates another aspect of governance. We examine the effect of manager's degrees of freedom offered by takeover defenses on shareholder wealth. Dutch firms are known for the frequent use of takeover defenses. Such defenses protect managers and give them a relatively strong position towards shareholders. With less shareholder constraints managers might be tempted to pursue acquisitions that do not add value for the shareholders. We investigate 865 acquisitions and several takeover defenses commonly used in the Netherlands and find positive abnormal returns around the announcement date. This indicates that in the Netherlands, with relatively concentrated ownership, shareholders have other means to control management.

Chapter 2:

Do board interlocks reduce firm risk?

Evidence from the Netherlands

2.1 Introduction

The effect of non-executive directors' interlocks on firms is controversial. Generally, non-executive board members are appointed based on their experience. Some of them may be active in demanding full time positions; others may be sought after for similar non-executive roles. A concern often heard is that busy directors are unable to spend sufficient time on each board position. But the opposite view is that these so-called busy directors are in fact appointed because their possible lack of time is offset by other aspects beneficial to the firm. Researchers are attempting to empirically test these two effects separately, but have not reached a consistent conclusion yet (Adams, Hermalin and Weisbach, 2008).

A vast amount of busy board research points in the same direction. Fich and Shivdasani (2006) find that multiple directorships place an excessive burden on directors and that firms with busy directors have a lower market to book ratio. Busy boards are associated with weaker corporate governance. And firms with weaker governance and poor monitoring generally have a higher risk (Brick and Chidambaran, 2008) and have riskier investments (King and Wen, 2011). Following this so-called 'busy board' strand of research, interlocks might be expected to increase firm risk. This has found its way into regulations. Virtually all corporate governance codes of best practices highlight the importance of the monitoring function.

This chapter investigates the effect of board interlocks on firm risk in the Netherlands. Dutch firms have a two tier board structure, with an executive board, responsible for daily management, and a supervisory board, responsible for monitoring the firm's managers, for ratifying relevant decisions and for setting the firm's strategic

Chapter 2

guidelines. This separation between operational management and monitoring allows us to measure the effect of supervisory board interlocks on risk. Our aim is to test whether interlocks can reduce firm risk. Regarding interlocks, the Dutch Corporate Governance code (Corporate Governance Committee, 2003), hereafter called “Code Tabaksblat”, provides detailed rules limiting the number of board seats that any one board member may have. The purpose is to strengthen the supervisory board’s monitoring role. The underlying assumptions are that multiple directorships place a burden on supervisory board directors, and busy boards lead to weaker corporate governance and monitoring (Committee on Corporate Governance, 1997, hereafter called “Committee Peters”).

An aspect that has received no attention is the possibility that board interlocks may reduce risk. Board interlocks may serve as a node through which information and experience are shared and network resources can be engaged. We perceive two routes for interlocked directors to obtain information. The first route is passively, when information flows through the network and is disseminated in every meeting. The second route is more actively, when resources within the network are mobilized and actively contacted for specific needs (Heemskerk, 2007). Fracassi (2012) finds that corporate practices are spread through interlocks and that social peers have a significant influence on corporate finance decision making. Ghita, Cuyvers and Deloof (2012) conduct a longitudinal study. They find that since the 1950s financial connections do not seem to have a relation with firm risk anymore. The negative and positive relationship found for earlier periods (WW1 and the Great Depression respectively) seems to have loosened in later periods. Arguably, this is caused by loosening of intercorporate ties and internationalization leading to a decreasing importance of financial connections. Such findings might be an indication that interlocks may reduce risk.

Bank interlocks may serve different purposes. Some research in this area focuses on the expertise provided by bankers, for instance on corporate investment policy (Güner et al, 2006) or corporate capital structures (Byrd and Mizruchi, 2005). Other research assumes that bankers on the board merely serve to monitor the bank’s interest when the bank is also a lender to the firm (Kroszner and Strahan, 2001). Whether they provide additional expertise to the firm or whether they perform an additional monitoring role, bankers on a firm’s board might be expected to lead to lower firm risk.

Do board interlocks reduce firm risk?

Our dataset covers 140 non-financial firms quoted on the Amsterdam Stock Exchange in the period 1998-2009. We use three variables to measure firm risk and twelve variables to measure connectivity of the supervisory board. We find that board interlocks reduce the firm's systematic risk and that bankers on the board increase the firm's ability to mitigate downside risk. We also find that interlocks of the chairman of the board reduce the firm's ability to avoid downside risk.

An explanation for this effect could be busyness, arguing that the chairman's interlocks reduce his monitoring role. Another explanation is that the chairman actively uses information and network resources obtained through his interlocks to steer the firm's decision making towards higher risk decisions.

The contribution of our research is to add a yet unknown aspect on corporate governance. We empirically test the relationship between board connectivity and firm risk. To the best of our knowledge this has not been tested before, and our results provide an empirical contribution to the existing body of research. Board composition and board interlocks are an important aspect of a firm's governance. Careful composition of a board's interlocking directorates, with other firms and with banks, can reduce a firm's risk. Corporate Governance Code policy makers should provide more detailed rules than a mere limitation of the number of board seats that any one board member may have.

This chapter is organized as follows. First, in section 2.2 we provide a selection of relevant literature, we formulate our hypotheses and explain the Netherlands setting. In section 2.3, we give a description of our dataset, our connectivity variables, our risk variables, and control variables and the method that we use to examine the effect of board interlocking on firm risk. The results of applying this method to our dataset are described in section 2.4. Section 2.5 discusses possible explanations for the negative effect of supervisory board interlocking on firm risk, and the positive effect of the chairman's interlocks on firm risk. In Section 2.6 we elaborate on sources of endogeneity and robustness checks. Last, section 2.7 summarizes our findings.

2.2 Literature and hypotheses

2.2.1 Networks

Research on interlocks has grown, with early research in the 1970s and 1980s to more extensive research in the 1990s and beyond. All this research, however, has not been able to formulate one consistent view of the effect of interlocks on firms (see Mizruchi (1996) for a comprehensive review). The most relevant views for our research are as follows. Early research developed the view that cooptation and monitoring are an important motive for establishing interlocks when firms attempt to co-opt sources of environmental uncertainty (Dooley, 1969).

Research on board interlocks has not reached unambiguous conclusions. Much of the research focuses on the importance of the board's monitoring role, and point at a lack of time for busy directors to perform this role diligently. In short : when directors are too busy, too old or part of a board that is too large, boards become less effective monitors of management decision making. Fich and Shivdasani (2006) find that multiple directorships place an excessive burden on directors. They also find that busy boards are associated with weak corporate governance, lower market-to-book-ratios and weaker operating performance. Since control and governance are important instruments in managing firm risk, a board's independence and monitoring are negatively related to firm risk (Brick and Chidambaran, 2008).

An opposite view is that interlocks are a network node through which information on business practices flows. The majority of research indicates a positive relationship between social networks and investment returns. Valuable experience may be gained and insights can be shared with other firms dealing with similar issues. Corporate practices are spread through board interlocks, social peers have a significant influence on corporate finance decision making and firms with more social connections have more similar investment levels (Fracassi, 2012). Board interlocks affect the decision to acquire takeover targets (Haunschild, 1993). Cai and Sevilir (2009) find that acquirers pay significantly lower takeover premiums in connected transactions. They suggest that interlocks help avoid overpaying for target firms. Firms with better networked boards engage in better transactions, and well-connected firms have a better post-merger

Do board interlocks reduce firm risk?

performance (Schonlau and Singh, 2009). Fund managers invest more in, and perform much better on, shareholdings of companies with board members they went to school with (Cohen, Frazelli and Malloy, 2008). However, also some evidence is found from a negative effect of social ties on investment returns. Powerful CEOs hire directors that are more socially connected with them, leading to weaker monitoring and more value destroying mergers (Fracassi and Tate, 2008). Social ties at director level between acquirer and target have a negative acquirer announcement effect, hinting at poorer decision making (Ishii and Xuan, 2009).

Many firms have bankers on their boards. Bankers may be appointed to corporate boards for the financial expertise they can provide or because they can perform a monitoring role for the firm's lender. If a banker is appointed for his or her financial expertise, a parallel can be drawn with non-banker non-executive board members. Booth and Deli (1999) find that commercial bankers are appointed on a firm's board to provide expertise on the market for bank debt. Güner, Malmendier, and Tate (2005) find that commercial and investment bankers on a firm's board provide improved access to external finance.

Banks may have a manager appointed on a client's supervisory board with the aim to seek protection for the bank's interest and credit (Mizruchi, 1996). The board position then provides an extra mechanism for the bank to facilitate information transfer and control managerial decision-making. This degree of control may enhance the benefits of the relationship by, for example, strengthening a bank's commitment to be accommodative during difficult financial times (Ongena and Smith, 1998). Both Booth and Deli (1996) and Byrd and Mizruchi (2005) consider the extent to which bankers play a monitoring role. Both confirm that a firm's overall debt ratio is lower when a director is affiliated with the firm's lender. This is in line with a view that banker-director can protect the bank's interest by discouraging the firm from engaging in a relationship or taking loans with banks, which might increase the lender's risk. For Germany, Dittmann, Maug and Schneider (2010) find no evidence for a bank monitoring explanation or that bankers support the interlocked firms with capital market expertise or help firms overcome financial constraints. They confirm that bank interlocks primarily serve the banks' interest in selling banking services and their lending to firms in the same industry.

Chapter 2

2.2.2 Risk

Research is ambiguous as to its prediction of the overall effect of busy directors on firm risk. The value of financial assets, like a firm's securities, depends on its return and on its risk. Return is what an investor expects to receive and risk is as how that return differs from the investors' expectations. Thus is it important to measure risk, since, if we cannot measure risk then we cannot measure value. Measurement of risk has been subject of a large body of research in finance and accounting. Generally, risk is measured using probability distributions. For discrete variables, for instance whether a firm goes bankrupt, risk is measured as the relative frequency reflecting with firms have gone bankrupt in the past under similar circumstances. For continuous variables, such as share returns, risk can be measured as the variance and standard deviation of the distribution of the returns. But even though such a probabilistic measurement seems logical, we have to apply it with caution. In principle, all numbers are meaningless without proper understanding of the underlying theory of probability. Probability distributions all work the same mathematically but may represent different meanings depending on the probability theory used. In this research our starting point to approach risk is the CAPM (Sharpe, 1964 ; Lintner, 1965) as it is a widely accepted model.

The CAPM is a portfolio approach that decomposes total risk into systematic risk and specific risk. Systematic risk, or non-diversifiable risk, is the risk due to market wide economic circumstances. As the market moves, each individual asset is more or less affected. To the extent that any asset participates in such general market moves, that asset incurs systematic risk. For a well-diversified investor systematic risk is the only risk that matters.

Firm specific risk, or diversifiable risk, is the risk that is unique to an individual firm. It represents the component of a firm's return which is uncorrelated with general market moves. According to the CAPM, the marketplace compensates investors for taking systematic risk but not for taking firm specific risk. This is because firm specific risk can be diversified away. When an investor holds the market portfolio, each individual asset in that portfolio entails specific risk, but through diversification, the investor's net exposure is just the systematic risk of the market portfolio.

Do board interlocks reduce firm risk?

Systematic risk, or market risk, can be measured using beta. According to the CAPM, the expected return of a share equals the risk-free rate plus the portfolio's beta multiplied by the expected excess return of the market portfolio. Specifically, if Z_s and Z_m are random variables for the simple returns of the share and the market over some specified period, and Z_f is the known risk-free rate, expressed as a simple return, and β is the share's beta, then equation (1) applies:

$$E(Z_s) = z_f + \beta[E(Z_m) - z_f] \quad (1)$$

In equation (1) E refers to an expectation. The equation states that the share's expected excess return over the risk-free rate equals its beta times the market's expected excess return over the risk free rate. This is the essence of the CAPM: a share's expected excess return depends on its beta and not on its volatility. Formulated differently, excess return depends upon systematic risk and not on total risk.

In measuring risk, the probability distribution of future returns is an important aspect, for which variability measures are used as risk proxies. The CAPM assumes a normal (symmetrical) distribution of returns. Behavioral decision theory, however, finds that such a proxy for risk does not reflect decision maker's conceptualization of risk (Kahneman and Tversky, 1982). Managers and investors are proposed to be averse to downside risk, defined as below target performance. Downside risk is also being referred to as 'loss aversion' (Kahneman and Tversky, 1982) or 'regret aversion' (Bell, 1983). In order to capture a decision maker's preference for aversion of below target performance, alternative measures had to be made, reflecting the fact that the probability of future returns may not be normally distributed.

Early research by Markowitz (1959) provided two suggestions for measuring downside risk: a semi-variance computed from the mean return or below mean semi-variance and a semi-variance computed from a target return or below-target semi variance. The two measures compute a variance using only the returns below the mean return or below a target return. Since only a subset of the return distribution is used, Markowitz called these measures partial or semi-variances. Unlike central moments, partial moments focus on a subset of the distribution rather than on the entire distribution. If the subset corresponds to the lower part of the distribution, and the upper bound of the

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subset coincides with the target return, then we have the Lower Partial Moment (LPM). Hence, a downside risk measure captures the relative underperformance of the firm reflecting risk averse behavior (Fishburn, 1977).

2.2.3 Hypotheses

This chapter investigates the effect of board interlocks on firm risk. We combine insights from agency theory and management research with insights from social network studies and research on firm risk. Boards are part of a firms' corporate governance. Since Jensen and Meckling (1976) many scholars have investigated various aspects of corporate governance and risk.

A first strand of literature on focuses on shareholder portfolio diversification and firm risk. A central theme is that if shareholder wealth is largely concentrated in the firms they own, risk-averse owners will seek to avoid risk more than they would if they would hold a diversified portfolio. In these studies ownership concentration is often used as a proxy for shareholder portfolio diversification. Anderson and Reeb (2003) find that the presence of block positions held by founder families, whom they assume to be undiversified investors, is surprisingly associated with higher operating risk. Faccio, Marchina and Mura (2010) show that there are many cases in which large shareholders hold well diversified portfolios. They also show that while the large shareholders who hold smaller equity stakes tend to hold more diversified portfolios, this correlation is relatively low.

We take a different approach, following the concept that risk averse shareholders influence the firm's decision making through the selection and appointment of well-connected directors. In general, the firm's management is appointed by the shareholders, with large shareholders playing an important role in the selection and approval process. In concentrated equity markets large shareholders may even be directly represented on the firm's board. With or without direct shareholder representation, board interlocks can therefore be used by shareholders to facilitate the flow of information on business practices and to effectively exert influence on the firms decision making. Risk averse shareholders will seek to mitigate their equity risk through influence on the firms'

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decision making. Our Hypothesis 1 therefore is that board interlocks have a negative effect on systematic risk.

A second strand of literature focuses on the effect of managers' employment aspects on firm risk. Since the manager's income from employment in general comprises a major portion of his total income, and his employment income is closely related to the firm's performance, the risk associated with managers' income is closely related to the firm's risk (Amihud and Lev, 1981). Such employment risk cannot be effectively diversified by managers in their personal portfolios, since unlike many other sources of income such as shares, human capital cannot be traded in competitive markets. Risk-averse managers can therefore be expected to diversify this employment risk by other means, such as engaging their firms in conglomerate mergers, which generally stabilize the firm's income stream and may even be used to avoid the disastrous effects bankruptcy has on managers. Thus, conglomerate mergers, while not of obvious benefit to investors, may benefit managers by reducing their employment risk, which is largely un-diversifiable in capital or other markets.

Furthermore, managers receiving part of their compensation in equity display risk averse behavior. Low (2006) studies the effect of equity-based compensation on managers' risk-taking behavior and finds that managerial risk aversion is a serious agency issue, which leads managers to reduce firm risk. In a changing legal regime, leading to greater takeover protection, managers respond by decreasing firm risk. Consequently, based on these considerations, we expect that risk averse managers use board interlocks to increase the firm's ability to mitigate downside risk (Hypothesis 2)².

²For the sake of completeness we note that a third strand of literature focuses on the effect of managerial entrenchment on risk. Lane, Canella and Lubatkin (1998) study the strategies and performance of firms whose managers were neither under siege nor confronted with issues clearly conflicting with shareholders' interests. They find no support for the agency theory prediction that management-controlled firms are associated with strategically inferior levels of diversification and acquisition types, lower levels of risk, and lower levels of returns than are firms with large block shareholders and/or firms with vigilant boards. Their findings are opposite to those predicted by agency theory, e.g. as reported by Amihud and Lev, and cited by many subsequent researchers. Amihud and Lev (1981) conjecture that risk-averse managers might be expected to diversify their employment risk by other means, such as engaging their firms in conglomerate mergers. A comparison between the Amihud and Lev (1981) and Lane, Canella and Lubatkin (1998)

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Brick and Chidambaran (2005) find that board independence and monitoring is negatively related to firm risk. Boards with greater proportion of outsiders reduce variability of corporate decisions and hence reduce riskiness of investments. The consequential value loss to shareholders is driven by the value gain to debt holders, and that this effect is most visible in highly levered firms (Upadhyay, 2008). The empirical findings of Cheng (2008) suggest that larger boards lower the firm risk but the insiders on board have incentives to increase volatility (Coles et al., 2006). Bankers are outsiders on a firm's board. Bankers on the board provide an extra mechanism for the bank to facilitate information transfer and control managerial decision making. Borrowing across all sources of funding may even be reduced if borrowing from the bank represented on the board displaces borrowing from other sources (Danisevska, De Jong and Verbeek, 2006). We expect that bank interlocks will increase board independence and monitoring, reduce the variability of the firm's decisions and riskiness of its investments. Hence, we expect that bank interlocks have a negative effect on systematic risk (Hypothesis 3), and that bank interlocks mitigate downside risk (Hypothesis 4).

2.2.4 The Dutch setting

Our hypotheses are generally formulated to apply to firms with a one tier board and to firms with a two tier board structure. The institutional setting in The Netherlands allows us to test the hypotheses specifically since a two tier board structure is embedded in corporate law. In 1971, the statutory two-tier regime was incorporated into the Civil Code as part of the mandatory rules of Dutch corporate law for large firms. This means that in such a firm the centre of power (control) is vested in the supervisory board (Groenewald, 2005). This control is effected (i) by granting important powers to the supervisory board

shows that the discrepancy can be explained by a different use of measures of diversification and by a different use of merger definitions. In general, the insights provided by Lane, Canella and Lubatkin (1998) touch upon the boundaries of the application of agency theory to the governance of public companies. Governance of a public company is a complex phenomenon and there is growing evidence that agency theory by itself is too simplistic to adequately capture its subtleties. Behavioral and management theory, with their assumptions that managers are complex, multi-dimensional actors, may be more able to offer useful insights.

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(such as the power to approve key decisions of the managing board, to appoint and dismiss the members of the managing board and to adopt the annual accounts) and (ii) by the procedure for the appointment of new members of the supervisory board. The Two-tier Structure Reform Act of 2004 further enlarged shareholder power by giving shareholders more influence on the supervisory board and the firm's strategic decisions³. These changes, applicable as from September, 2004, are relevant for our research since they strengthen the accountability of the members of the supervisory board, and more in particular the chairman of the supervisory board, towards the shareholders.

Well after the introduction of codes of best practices in the United Kingdom and France (the Cadbury and Viénot Committees respectively), the Netherlands took the initiative to institute a 'code of best practice' in the field of corporate governance, only at the end of the 1990s. In 1997, the Committee Peters reported on 'Corporate Governance in the Netherlands', a report with forty recommendations. In December 2002, the Committee Peters reported further to reflect on the follow up and implementation of these recommendations in the five years since their initial report. In their 2002 report, the Committee Peters advised to form a new committee with the task to not only formulate best practice guidelines, but also to examine actively its adoption and implementation and to monitor compliance. At the presentation of the 2002 report, the Minister of Finance threatened with legislation if the planned code of conduct would not make sufficient

³The Two-tier Structure Reform Act of 2004 requires that members of the supervisory board are appointed by the annual general meeting of shareholders. The annual general meeting of shareholders may (i) reject a nomination for the appointment of a member of the supervisory board or (ii) dismiss the entire supervisory board. Prior shareholder approval is required for decisions to (i) transfer of a firm's business to a third party, (ii) enter or terminate a long term cooperation, such as a joint venture, with another party if that cooperation is of fundamental importance to the firm, and (iii) an acquisition or disposal of an interest in the shares of a firm when the value represents more than least one-third of the value of the firm's own assets. The remuneration policy of both the executive board and the supervisory board and any option and share plans for the executive board must be approved at the annual general meeting of shareholders. The firm's annual accounts must be approved by the annual general meeting of shareholders. At least once a year, the executive board elaborates in writing for the supervisory board, in writing, on the key aspects of the firm's strategy.

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progress towards implementing adequate corporate governance in listed firms. Subsequently, Morris Tabaksblat (former CEO of Unilever) was mandated jointly by the Minister of Finance and representatives from publicly firms listed at Euronext Amsterdam to draft a new code of best practice for corporate governance of listed firms in the Netherlands (the so-called Code Tabaksblat).

The Code Tabaksblat is in effect as of 2005 and contains twenty one principles, based on generally accepted modern concepts of good corporate governance, and one hundred and twenty one best practice provisions for the firm's stakeholders (members of the executive board and supervisory board, investors etc.). These best practice provisions create a set of standards governing the conduct of members of the executive board and supervisory board, the relation to the firm's external auditor and shareholders. Listed firms may depart from the best practice provisions: if the general meeting approves the corporate governance structure and authorizes the non-application of certain provisions, the relevant firm is deemed to be in compliance with the Code.

The Code contains provisions pertaining to the executive board's employment (appointment, term, remuneration, and severance) but also states that members of the executive board can be members of the supervisory board – not chairmen of a supervisory board – of a maximum of two other listed firms. Similarly, the Code contains provisions on the functioning of the supervisory board (qualifications, independence, conflicts of interest, education and training) and additionally states that no one may be a member of the supervisory board of more than five listed firms – a presidency role counts as two seats.

The Dutch setting consists of a legally embedded separation between the executive board with daily operational responsibilities and the supervisory board, plus best practice recommendations on corporate governance, vested in the Code Tabaksblat. Within this framework, the supervisory board does not have operational responsibility but is responsible for monitoring for key investment/divestment decisions and oversight of the firm's strategy as mandated by the shareholders. This separation allows us to analyze board interlocks at the supervisory board level separately and its effects on firm risk. From 2005 onwards, the Code provides that a member of the supervisory board can have a maximum four interlocks, with a presidency role counting as two seats. This provision

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is relevant for our research as it is aimed at strengthening the monitoring function of the supervisory board. This provision seemingly assumes a negative relationship between supervisory board interlocks and monitoring, while at the same time it assumes a positive relation between supervisory board interlocks and firm risk. The purpose of this research is to test the latter relationship.

2.3 Methodology and data

2.3.1 Data sources and methodology

Our sample consists of 140 industrial firms quoted on Euronext Amsterdam. We have comprised the dataset using all publicly quoted firms in the sample period and we have taken out financial institutions and investment funds due to the specific nature of their activities. Our sample period is 1997-2009. All connectivity data are gathered from REACH database. We manually count the number of connections per individual board member, distinguishing between executive board and supervisory board, and analyze lock-in connection within the sample of firms. Next, we aggregate connections for each firm. Accounting data and market data are obtained from COMPUSTAT, outliers (values more than three standard deviations from the mean) are removed and the set is subsequently matched with the connectivity data. In total, our dataset counts 1946 firm years of which 1707 firm years are used for our primary model.

We conduct cross-sectional linear panel regression analyses. To investigate the effect of each connectivity (interlock) variable on firm risk we construct the following models:

$$\begin{aligned} \text{TotalRisk}_t = & \beta_0 + \beta_1 \text{Connectivity}_{t-1} + \beta_2 \text{ReturnOnAssets}_{t-1} + \beta_3 \text{Leverage}_{t-1} + \\ & \beta_4 \text{Maturity}_{t-1} + \beta_5 \text{Size}_{t-1} + \beta_6 \text{RelativeMembers}_{t-1} + \beta_7 \text{CurrentRatio}_{t-1} + \\ & \beta_8 \text{RelativeR\&D}_{t-1} + \beta_9 \text{ShareReturn}_{t-1} + \varepsilon_i \end{aligned} \quad (2)$$

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$$\begin{aligned} \text{DownsideRisk}_t = & \beta_0 + \beta_1 \text{Connectivity}_{t-1} + \beta_2 \text{ReturnOnAssets}_{t-1} + \beta_3 \text{Leverage}_{t-1} + \\ & \beta_4 \text{Maturity}_{t-1} + \beta_5 \text{Size}_{t-1} + \beta_6 \text{RelativeMembers}_{t-1} + \beta_7 \text{CurrentRatio}_{t-1} + \\ & \beta_8 \text{RelativeR\&D}_{t-1} + \beta_9 \text{ShareReturn}_{t-1} + \varepsilon_i \end{aligned} \quad (3)$$

$$\begin{aligned} \text{Beta}_t = & \beta_0 + \beta_1 \text{Connectivity}_{t-1} + \beta_2 \text{ReturnOnAssets}_{t-1} + \beta_3 \text{Leverage}_{t-1} + \beta_4 \text{Maturity}_{t-1} + \\ & \beta_5 \text{Size}_{t-1} + \beta_6 \text{RelativeMembers}_{t-1} + \beta_7 \text{CurrentRatio}_{t-1} + \beta_8 \text{RelativeR\&D}_{t-1} + \\ & \beta_9 \text{ShareReturn}_{t-1} + \varepsilon_i \end{aligned} \quad (4)^4$$

2.3.2 Risk variables

Risk is a characteristic of organizations experiencing volatile income streams. We use the following dependent variables, based on the market return of the firm's securities, to measure income stream volatility:

TotalRisk is share price volatility for any given year based on weekly returns, defined as $\sqrt{\sum (\bar{R} - R_i)^2}$ (5), where R represents share return defined as $(\text{Ln}(t+1) - \text{Ln}(t))$.

DownsideRisk is the downside risk on return, calculated as $\sqrt{\sum_{R < \pi}^{\pi} (\pi_{i,t} - R_{i,q})^2}$ (6), where π equals a target return. We use the lower partial moment, as developed by

⁴ The focus on systematic risk is based on the assumption that shareholders are alike and can hold a combination of the market portfolio and a risk free asset, and therefore can diversify away idiosyncratic risk. Under these CAPM conditions, idiosyncratic risk doesn't matter. However, asset pricing literature finds that idiosyncratic risk may also affect returns, for instance when shareholders do not hold a diversified portfolio. Therefore, we performed OLS tests with idiosyncratic risk similar to the tests performed for systematic risk. These measures generated insignificant results. Results are available from the author.

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Fishburn (1977), and especially the root lower partial moment. Downside risk is measured as the second order root lower partial moment. This downside risk measure captures the relative underperformance of the firm, and a high measure implies that the firm has a poor ability to avoid downside risk. Employing a second order coefficient enforces the effect of below target performance reflecting a risk adverse behavior (Fishburn, 1977; Miller and Reuer, 1996). This downside risk measure has shown to be robust for different threshold levels (Reuer and Leiblein, 2000) and therefore, we did not consider alternative measures in this study. Since we measure ‘loss aversion’ we set π at zero.

Beta is one year Beta calculated based on weekly returns. We compare the firm’s performance to the AEX index. This most important index on the Amsterdam Euronext Exchange is a market-value weighted index, representing the performance of the 25 most traded Dutch shares on the Amsterdam Exchange.

2.3.3 Connectivity variables

We limit our research to current board interlocks. Past board interlocks and social ties (school, education or otherwise) are not taken into account. The concept of connectivity comes from social network theory. Social network theory analyzes people, actors and/or groups from a network perspective (Wasserman and Faust, 1999 page 9). The concept of a network emphasizes the fact that each actor or group has ties, each of whom in turn is tied to others. A social network thus refers to the set of actors and the ties among them. In social network theory the concept of connectivity often refers to ‘the minimum number of actors whose removal would not allow the group to remain connected or would reduce the group to but a single member’ (White and Harary, 2001 page 306). In our research we define interlocks as ‘the aggregate number of relevant board links from one member of the network of public companies in the Netherlands to another member’.

We expect that the dataset may be characterized as there is a relatively large amount of extreme interlock observations. This is because our dataset contains a mixture of larger and smaller firms, and larger firms tend to have large boards with sometimes many interlocks. Therefore, in prevailing cases ‘scale’ variables are logscaled.

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In developing connectivity variables we focus on the monitoring role as vested in the supervisory board and develop various variables measuring supervisory board connections with other publicly quoted firms. We furthermore focus on supervisory board banking connections to test our hypotheses. We use the following lagged independent variables:

ConnectedMembers is the number of connected members of the supervisory board, i.e. serving as a member of the supervisory board in a firm within the network of publicly quoted firms. *Connections* is the cumulative number of connections of the supervisory board with firms within the network of publicly quoted firms. *LogConnections* is $\log(\text{Connections}+1)$. *Chairman* is the cumulative number of connections of the Chairman of the supervisory board to firms within the network of publicly quoted firms. *LogChairman* is $\log(\text{Chairman}+1)$. *Bank* is the cumulative number of connections of the supervisory board to Netherlands banks. *LogBank* is $\log(\text{Bank}+1)$. *Active* is the number of members of the supervisory board actively serving as a member of the executive board in a firm within the network of publicly quoted firms. *LogActive* is $\log(\text{Active}+1)$. *PercentageConnectedMembers* is the percentage of supervisory board members connected (is *ConnectedMembers* divided by the number of members in the supervisory board). *AverageBoardConnection* is the average number of connections of the supervisory board (equaling *Connections* divided by the number of members in the supervisory board). *AverageMemberConnection* is the average number of connections per connected member of the supervisory board (equaling *Connections* divided by *ConnectedMembers*).

2.3.4 Control variables

For each risk variable we perform a series of regressions testing the effect of each connectivity variable separately, controlling for a number of financial variables. Such financial variables are set up to include at least one performance related variable, at least one leverage related variable, at least one size related variable, at least one investment related variable, a liquidity (of assets) variable and a market return related variable. The

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total set of control variables is constructed so as to minimize correlation among the control variables, whilst at the same time assuring the best statistical model fit ⁵.

We initially consider a selection from the following independent control variables to build our control model:

ReturnOnAssets is operating income divided by book value of total assets. *ReturnOnEquity* is net profit divided by book value of equity. *FreeCashFlow* is calculated as in Lehn and Poulsen (1989) and is (net profit plus depreciation minus investments in fixed assets) divided by book value of total assets. *Leverage* is total debt divided by book value of total assets. *Maturity* is long term debt divided by (long term debt plus short term debt). *Members* is the number of members of the supervisory board. *Size* is calculated as log(sales). *CapitalIntensity* is book value of fixed assets divided by book value of total assets. *RelativeR&D* is R&D expenditure divided by book value of total assets. In case no R&D expense is reported we assume R&D expenditure equals nil. *CurrentRatio* is current assets divided by book value of total assets. *ShareReturn* is average share return measured on an annual basis.

To build the control model we investigate all correlations between the potential dependent variables and the explanatory power of the various possible control model variables. We find generally acceptably low correlations with the exception of a high correlation between *Members* and *Size*. Therefore, we decide to replace *Members* with *RelativeMembers*. Rather than an absolute indicator of size of the supervisory board, the new variable *RelativeMember* equates the relative size of the supervisory board related to the combined size of the supervisory board and the executive board together. We select *ReturnOnAssets* (rather than *ReturnOnEquity* or *FreeCashFlow*) as performance variable in the control model based on model fit. We exclude *CapitalIntensity* as investment variable from the control model as this variable has by definition perfect correlation with *CurrentRatio*.

Our final control model consists of the variables *ReturnOnAssets*, *Leverage*, *Maturity*, *Size*, *RelativeMembers*, *RelativeR&D*, *CurrentRatio* and *ShareReturn*.

⁵ Using R^2 , $AdjR^2$, F -value, B -coefficient, VIF scores and T -values .

2.4 Results

In Table 2.1, Panel A the connectivity variables are displayed. We notice a large variability of most of the connectivity variables. This is caused by the fact that our dataset has connectivity data covering a period of 12 years (1997-2008). In a historical perspective the number of board interlocks with firms as well as the number of board interlocks with banks is decreasing over time (Heemskerk, 2008) and this effect is further strengthened by corporate governance reforms starting with the recommendations of the Committee Peters (1997) and the subsequent introduction of the Code Tabaksblat (2005). For each risk variable we perform panel regressions to test the effect of each connectivity variable separately while controlling for a number of financial variables (control variables).

Panel A: Connectivity Variables					
	N	min.	max.	mean	st. dev.
Members	1707	0.000	14.000	4.712	2.026
RelativeMembers	1707	0.000	1.000	0.618	0.139
ConnectedMembers	1707	0.000	8.000	1.696	1.550
Connections	1707	0.000	24.000	3.136	3.525
LogConnections	1707	0.000	1.398	0.470	0.362
Chairman	1707	0.000	6.000	0.962	1.317
LogChairman	1707	0.000	0.845	0.214	0.250
Bank	1707	0.000	6.000	0.473	0.870
Logank	1707	0.000	0.845	0.118	0.190
Active	1707	0.000	4.000	0.241	0.526
LogActive	1707	0.000	0.699	0.067	0.139
PercentageConnectedMembe	1707	0.000	1.000	0.331	0.272
AverageBoardConnection	1707	0.000	3.429	0.593	0.578
AverageMemberConnection	1707	0.000	7.000	1.290	1.062

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Panel B: Financial Variables					
	N	min.	max.	mean	st. dev.
TotalRisk	1710	0.100	4.347	0.410	0.270
Beta	1501	-7.017	15.987	0.437	1.141
DownsideRisk	1709	0.000	1.336	0.259	0.173
StockReturn	1673	-0.137	1.557	0.015	0.083
ReturnOnAssets	1613	-1.246	3.000	0.032	0.155
ReturnOnEquity	1617	-9.491	5.665	0.066	0.675
Maturity	1456	0.000	1.000	0.558	0.313
CurrentRatio	1594	0.000	1.000	0.571	0.209
Size	1594	0.602	7.941	5.460	0.953
RelativeR&D	1594	0.000	0.449	0.012	0.039
CapitalIntensity	1594	0.000	1.000	0.429	0.209
FreeCashFlow	1587	-4.605	7.600	0.071	0.298
Leverage	1584	0.000	1.263	0.240	0.175

Table 2.1: Summary Statistics

This table presents the summary statistics of the connectivity variables and the financial variables. Connectivity variables are averaged over the years 1997-2008, and financial variables are averaged over the years 1996-2009.

Table 2.2 displays the results of the effect of the various connectivity variables with TotalRisk. The model fit is relatively strong with F-values around 21, R-squared around 25% and adj R-squared at 24%. We notice strong correlation ($r=-0.560$) with high significance ($p<1\%$) between performance (control) variable *ReturnOnAssets* and *TotalRisk*. This is in line with research indicating a negative relation between firm performance and share price volatility. Simply put, share prices of well managed firms with better performance are likely to be more stable and to fluctuate less (Huan et al, 2011). With regards to the relation between the various connectivity variables and TotalRisk generally we notice that correlation is low and statistically insignificant.

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TotalRisk						
Model ()	(1)	(2)	(3)	(4)	(5)	(6)
ReturnOnAssets	-0.561*** (0.160)	-0.560*** (0.160)	-0.561*** (0.161)	-0.560*** (0.159)	-0.560*** (0.158)	-0.560*** (0.159)
Leverage	-0.0684 (0.101)	-0.0708 (0.101)	-0.0710 (0.101)	-0.0687 (0.101)	-0.0698 (0.102)	-0.0669 (0.101)
Size	0.00264 (0.0381)	0.00391 (0.0378)	0.00593 (0.0386)	0.000834 (0.0360)	0.00121 (0.0360)	0.00105 (0.0364)
Maturity	0.00411 (0.0300)	0.00359 (0.0301)	0.00516 (0.0299)	0.00321 (0.0301)	0.00278 (0.0299)	0.00303 (0.0302)
RelativeMembers	0.0817 (0.0751)	0.0823 (0.0758)	0.0909 (0.0739)	0.0751 (0.0763)	0.0743 (0.0759)	0.0769 (0.0768)
RelativeR&D	-1.185 (0.852)	-1.178 (0.851)	-1.167 (0.856)	-1.201 (0.851)	-1.204 (0.850)	-1.195 (0.853)
CurrentRatio	0.00234 (0.0995)	0.00151 (0.0997)	0.00265 (0.0998)	0.00313 (0.0990)	0.00331 (0.0989)	0.000324 (0.0994)
StockReturn	-0.146 (0.0974)	-0.144 (0.0974)	-0.138 (0.0930)	-0.148 (0.0975)	-0.149 (0.0957)	-0.147 (0.0992)
ConnectedMembers	-0.00441 (0.00983)					
Connections		-0.00321 (0.00402)				
LogConnections			-0.0522 (0.0603)			
Chairman				0.00179 (0.00842)		
LogChairman					0.0173 (0.0536)	
Bank						-0.00650 (0.00803)
R-squared	0.253	0.253	0.254	0.253	0.253	0.253
Adj-R2	0.240	0.240	0.241	0.239	0.240	0.240
F-stat	21.19	21.18	20.73	21.73	21.67	21.27
Observations	1,154	1,154	1,154	1,154	1,154	1,154
Number of id	182	182	182	182	182	182

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TotalRisk (continued)						
Model ()	(7)	(8)	(9)	(10)	(11)	(12)
ReturnOnAssets	-0.560*** (0.159)	-0.559*** (0.159)	-0.559*** (0.159)	-0.559*** (0.157)	-0.560*** (0.159)	-0.559*** (0.160)
Leverage	-0.0655 (0.100)	-0.0643 (0.102)	-0.0651 (0.102)	-0.0673 (0.100)	-0.0679 (0.101)	-0.0739 (0.100)
Size	0.00182 (0.0363)	0.00117 (0.0368)	0.000976 (0.0368)	-0.00134 (0.0374)	0.000339 (0.0371)	0.00430 (0.0374)
Maturity	0.00293 (0.0301)	0.00262 (0.0303)	0.00272 (0.0304)	0.00217 (0.0297)	0.00334 (0.0301)	0.00439 (0.0301)
RelativeMembers	0.0796 (0.0769)	0.0716 (0.0779)	0.0722 (0.0780)	0.0747 (0.0767)	0.0751 (0.0764)	0.0816 (0.0746)
RelativeR&D	-1.189 (0.854)	-1.203 (0.848)	-1.202 (0.849)	-1.208 (0.850)	-1.198 (0.851)	-1.185 (0.851)
CurrentRatio	-0.000579 (0.0989)	0.00458 (0.0995)	0.00408 (0.0995)	0.00231 (0.0984)	0.00275 (0.0991)	0.00501 (0.0994)
StockReturn	-0.147 (0.0996)	-0.153 (0.104)	-0.152 (0.104)	-0.150 (0.0973)	-0.147 (0.0971)	-0.139 (0.0945)
LogBank	-0.0546 (0.0342)					
Active		0.0124 (0.0154)				
LogActive			0.0364 (0.0569)			
PercentageConnectedMembers				0.0262 (0.0471)		
AverageBoardConnection					0.000293 (0.0218)	
AverageMemberConnection						-0.0144 (0.0133)
R-squared	0.254	0.253	0.253	0.253	0.253	0.254
Adj-R2	0.240	0.240	0.240	0.240	0.239	0.241
F-stat	21.13	21.07	21.19	21.74	21.18	20.98
Observations	1,154	1,154	1,154	1,154	1,154	1,154
Number of id	182	182	182	182	182	182

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.2: Total Risk

This table presents the results of the Ordinary Least Squares regression that explain the relation between each connectivity variable on Total Risk. Variables are explained in section 2.4.1 to 2.4.3. The regression includes year effects and firm fixed effects. A lagged model is used to confirm direction of causality. A robustness test is performed with contemporaneous models. P-values are in parentheses and based on Huber/White's heteroskedasticity corrected standard errors. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

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Table 2.3 displays the results of the effect of the various connectivity variables with Beta. Model fit is relatively low with F-stat around 4, R-squared around 7.5% and adj. R-squared around 5.5%. We notice strong correlation (around $r=0.690$) with some statistical significance ($p<10\%$) between performance (control) variable *ReturnOnAssets* and *Beta*. The relationship between performance and *Beta* has been subject of some controversy since Fama and French (1992) study on the validity of the CAPM. For the US Fama and French (1992) find that beta does not seem to help explain the cross/section of average share returns. Strong and Xu (1997) report similar insignificant relations for the UK. For other European countries Heston et al (1999) finds a significant positive relationship, however with the risk premium on beta concentrated in January. Different approaches have been developed by Pettengill (1995) confirmed by Fletcher (2000), arguing a conditional relationship between beta and return. Both studies find that in periods with a positive excess market return, there is a positive beta/return relationship, whereas in periods with negative excess market return, the relationship is negative. Our study, however, is set up differently and therefore we cannot confirm support for the Pettengill/Fletcher findings.

With regards to the relation between the various connectivity variables and Beta we notice that one correlation between LogConnections and Beta is negative and moderately strong ($r=-0.410$) and significant at the 10% level. With regards to the relation between the various other connectivity variables and *Beta* generally we notice that correlation is statistically insignificant.

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Beta	Model ()	(1)	(2)	(3)	(4)	(5)	(6)
ReturnOnAssets		0.709*	0.717*	0.714*	0.693*	0.689*	0.691*
		(0.375)	(0.373)	(0.370)	(0.376)	(0.377)	(0.378)
Leverage		0.462	0.440	0.447	0.486	0.486	0.504
		(0.662)	(0.667)	(0.658)	(0.665)	(0.666)	(0.666)
Size		-0.350	-0.346	-0.345	-0.369	-0.365	-0.363
		(0.232)	(0.237)	(0.231)	(0.233)	(0.234)	(0.233)
Maturity		0.194	0.181	0.190	0.183	0.181	0.177
		(0.123)	(0.120)	(0.120)	(0.121)	(0.121)	(0.121)
RelativeMembers		-0.168	-0.198	-0.138	-0.270	-0.271	-0.258
		(0.292)	(0.279)	(0.297)	(0.263)	(0.264)	(0.263)
RelativeR&D		-2.333	-2.369	-2.336	-2.528	-2.562	-2.534
		(1.751)	(1.740)	(1.739)	(1.750)	(1.756)	(1.734)
CurrentRatio		-0.565	-0.555	-0.550	-0.552	-0.544	-0.552
		(0.453)	(0.455)	(0.449)	(0.459)	(0.460)	(0.457)
StockReturn		-0.231	-0.204	-0.179	-0.222	-0.232	-0.259
		(0.519)	(0.526)	(0.520)	(0.528)	(0.525)	(0.536)
ConnectedMembers		-0.0700					
		(0.0471)					
Connections			-0.0333				
			(0.0205)				
LogConnections				-0.410*			
				(0.218)			
Chairman					-0.0132		
					(0.0325)		
LogChairman						0.0235	
						(0.174)	
Bank							-0.0917
							(0.0625)
R-squared		0.075	0.075	0.078	0.070	0.070	0.074
Adj-R2		0.057	0.057	0.060	0.052	0.052	0.056
F-stat		3.634	3.972	3.942	3.785	3.593	3.581
Observations		1,046	1,046	1,046	1,046	1,046	1,046
Number of id		176	176	176	176	176	176

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Beta (continued)						
Model ()	(7)	(8)	(9)	(10)	(11)	(12)
ReturnOnAssets	0.692* (0.378)	0.693* (0.379)	0.692* (0.378)	0.697* (0.370)	0.706* (0.371)	0.697* (0.372)
Leverage	0.510 (0.665)	0.517 (0.663)	0.507 (0.665)	0.460 (0.656)	0.451 (0.661)	0.457 (0.666)
Size	-0.361 (0.232)	-0.362 (0.234)	-0.364 (0.233)	-0.361 (0.229)	-0.362 (0.233)	-0.354 (0.235)
Maturity	0.179 (0.121)	0.181 (0.123)	0.181 (0.123)	0.197 (0.124)	0.185 (0.121)	0.182 (0.120)
RelativeMembers	-0.248 (0.265)	-0.286 (0.266)	-0.281 (0.265)	-0.262 (0.266)	-0.274 (0.264)	-0.237 (0.273)
RelativeR&D	-2.505 (1.743)	-2.610 (1.771)	-2.591 (1.766)	-2.420 (1.749)	-2.456 (1.742)	-2.523 (1.747)
CurrentRatio	-0.545 (0.456)	-0.540 (0.459)	-0.543 (0.459)	-0.559 (0.451)	-0.552 (0.454)	-0.536 (0.456)
StockReturn	-0.264 (0.535)	-0.264 (0.527)	-0.256 (0.527)	-0.215 (0.521)	-0.206 (0.526)	-0.187 (0.532)
LogBank	-0.384 (0.265)					
Active		0.0825 (0.104)				
LogActive			0.207 (0.318)			
PercentageConnectedMembers				-0.314 (0.207)		
AverageBoardConnection					-0.141 (0.106)	
AverageMemberConnection						-0.0578 (0.0609)
R-squared	0.073	0.072	0.071	0.074	0.073	0.072
Adj-R2	0.055	0.054	0.053	0.056	0.056	0.054
F-stat	3.589	3.641	3.594	3.737	3.848	3.704
Observations	1,046	1,046	1,046	1,046	1,046	1,046
Number of id	176	176	176	176	176	176

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.3: Beta

This table presents the results of the Ordinary Least Squares regression that explain the relation between each connectivity variable on Beta. Variables are explained in section 2.4.1 to 2.4.3. The regression includes year effects and firm fixed effects. A lagged model is used to confirm direction of causality. A robustness test is performed with contemporaneous models. P-values are in parentheses and based on Huber/White's heteroskedasticity corrected standard errors. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

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Table 2.4 displays the results of the effect of the various connectivity variables with *DownsideRisk*. Model fit is relatively strong with F-values around 25, R-squared around 32% and adj R-squared at 31%. We notice weak negative correlation ($r=-0.211$) with high significance ($p<1\%$) between performance (control) variable *ReturnOnAssets* and *DownsideRisk*. With regards to the correlation between the various connectivity variables and *DownsideRisk* we notice a very weak positive correlation ($r=0.0380$) between *LogChairman* and *DownsideRisk* significant at the 10% level, a very weak negative correlation between *Bank* and *DownsideRisk* ($r=-0.0115$) and *LogBank* and *DownsideRisk* ($r=-0.0674$) both significant at the 10% level. With regards to the relation between the various other connectivity variables and *DownsideRisk* generally we notice that correlation is statistically insignificant.

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DownsideRisk						
Model ()	(1)	(2)	(3)	(4)	(5)	(6)
ReturnOnAssets	-0.211*** (0.0743)	-0.211*** (0.0748)	-0.211*** (0.0748)	-0.212*** (0.0743)	-0.213*** (0.0740)	-0.211*** (0.0745)
Leverage	-0.00895 (0.0532)	-0.0101 (0.0532)	-0.00936 (0.0531)	-0.0111 (0.0532)	-0.0136 (0.0531)	-0.00697 (0.0529)
Size	0.0384 (0.0283)	0.0403 (0.0283)	0.0400 (0.0285)	0.0398 (0.0280)	0.0403 (0.0279)	0.0395 (0.0277)
Maturity	-0.00487 (0.0222)	-0.00459 (0.0221)	-0.00438 (0.0221)	-0.00498 (0.0222)	-0.00580 (0.0222)	-0.00530 (0.0222)
RelativeMembers	-0.0578 (0.0528)	-0.0533 (0.0518)	-0.0534 (0.0520)	-0.0562 (0.0516)	-0.0577 (0.0515)	-0.0535 (0.0520)
RelativeR&D	-0.317 (0.296)	-0.306 (0.297)	-0.309 (0.298)	-0.324 (0.296)	-0.331 (0.296)	-0.312 (0.295)
CurrentRatio	-0.0319 (0.0576)	-0.0331 (0.0578)	-0.0323 (0.0577)	-0.0312 (0.0576)	-0.0309 (0.0575)	-0.0369 (0.0578)
StockReturn	-0.125*** (0.0463)	-0.124*** (0.0459)	-0.123*** (0.0462)	-0.126*** (0.0463)	-0.129*** (0.0467)	-0.125*** (0.0451)
ConnectedMembers	0.000921 (0.00500)					
Connections		-0.00151 (0.00238)				
LogConnections			-0.0107 (0.0232)			
Chairman				0.00460 (0.00360)		
LogChairman					0.0380* (0.0210)	
Bank						-0.0115* (0.00669)
R-squared	0.321	0.321	0.321	0.321	0.323	0.323
Adj-R2	0.308	0.309	0.309	0.309	0.310	0.310
F-stat	24.29	24.61	24.82	24.67	24.47	24.35
Observations	1,131	1,131	1,131	1,131	1,131	1,131
Number of id	181	181	181	181	181	181

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

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DownsideRisk (Continued)						
Model ()	(7)	(8)	(9)	(10)	(11)	(12)
ReturnOnAssets	-0.211*** (0.0745)	-0.211*** (0.0746)	-0.211*** (0.0745)	-0.212*** (0.0741)	-0.211*** (0.0746)	-0.210*** (0.0745)
Leverage	-0.00596 (0.0526)	-0.00679 (0.0532)	-0.00755 (0.0533)	-0.00903 (0.0534)	-0.00943 (0.0532)	-0.0109 (0.0533)
Size	0.0399 (0.0275)	0.0394 (0.0283)	0.0392 (0.0282)	0.0377 (0.0282)	0.0392 (0.0282)	0.0403 (0.0283)
Maturity	-0.00520 (0.0220)	-0.00520 (0.0222)	-0.00506 (0.0222)	-0.00548 (0.0222)	-0.00454 (0.0221)	-0.00444 (0.0221)
RelativeMembers	-0.0513 (0.0520)	-0.0581 (0.0521)	-0.0576 (0.0521)	-0.0563 (0.0518)	-0.0568 (0.0519)	-0.0543 (0.0516)
RelativeR&D	-0.306 (0.296)	-0.317 (0.294)	-0.316 (0.294)	-0.322 (0.296)	-0.311 (0.297)	-0.311 (0.295)
CurrentRatio	-0.0369 (0.0574)	-0.0310 (0.0579)	-0.0314 (0.0579)	-0.0321 (0.0574)	-0.0324 (0.0577)	-0.0311 (0.0576)
StockReturn	-0.126*** (0.0443)	-0.128*** (0.0471)	-0.127*** (0.0471)	-0.127*** (0.0471)	-0.124*** (0.0464)	-0.122*** (0.0466)
LogBank	-0.0674** (0.0285)					
Active		0.00701 (0.0103)				
LogActive			0.0169 (0.0340)			
PercentageConnectec				0.0189 (0.0226)		
AverageBoardConnection					-0.00463 (0.0125)	
AverageMemberConnection						-0.00522 (0.00570)
R-squared	0.324	0.321	0.321	0.321	0.321	0.321
Adj-R2	0.312	0.309	0.309	0.309	0.308	0.309
F-stat	24.23	25.60	25.90	24.41	24.47	26.16
Observations	1,131	1,131	1,131	1,131	1,131	1,131
Number of id	181	181	181	181	181	181

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4: Downside Risk

This table presents the results of the Ordinary Least Squares regression that explain the relation between each connectivity variable on Downside Risk. Variables are explained in section 2.4.1 to 2.4.3. The regression includes year effects and firm fixed effects. A lagged model is used to confirm direction of causality. A robustness test is performed with contemporaneous models. P-values are in parentheses and based on Huber/White's heteroskedasticity corrected standard errors. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

2.5 Discussion

We have performed panel regressions testing the correlation between twelve connectivity variables on three risk variables separately. After controlling for year effects and firm fixed effects we find four statistically significant relations. Three relations are at the 10% level and one is at the 5% level. At first sight there does not seem to be an overwhelming amount of support for a statistical correlation between board connectivity and firm risk. However, it is worthwhile to take a deeper dive into the statistically significant relations.

A first finding is that there is no statistically significant correlation between a firm's total risk and any of the connectivity variables. Consequently, a firm's general share price volatility cannot be explained by board connectivity. That means we have to dive deeper. We find a relatively strong and negative correlation between a firm's beta and its cumulative number of supervisory board connections. With regards to interlocks with other firms, we expect that such interlocks provide superior information at low or no cost. Board networks have been shown to be an important source of inter-organizational information about corporate practices, strategies, contacts, new business opportunities, and general business information (Davis, 1991; Mizruchi, 1996). Recent research confirms that such information flow for instance includes inside information on corporate best practices and finance policies (Fracassi, 2012), or investment and acquisition opportunities (Ishii and Xuan, 2009). Superior information leads to better informed decision making. We conjecture that board interlocks serve as a node through which information flows and experience is shared. Passively, information flows through the network, and actively resources within the network can be mobilized and actively contacted for specific needs (Heemskerk, 2007). This enables firms to make better informed decisions leading to a lower firm Beta. This is confirmed with the negative relation between the firm's beta and the number of its supervisory board connection.

Interlocks with banks differ from interlocks with firms. Banks have one of their managers on the supervisory board of a client, with the aim to seek protection for the bank's interest and credit (Mizruchi, 1996). Interlocks provide an extra mechanism for the bank to facilitate information transfer and control managerial decision-making. This degree of control may enhance the benefits of the relationship by, for example,

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strengthening a bank's commitment to be accommodative during difficult financial times (Ongena and Smith, 1998). We conjecture that through board interlocks banks control the firms' decision making processes and provide financial commitment as a consequence of which firms with bank interlocks experience lower sensitivity to risk. This conjecture is confirmed with a (weak) negative relation between the firms' downside risk and the number of bankers on its board. Bankers on a firm's board increase the firm's ability to avoid downside risk. According to the CAPM, lower systematic risk will be compensated with lower equity returns. The board interlocks of the lending bank, therefore, enable the bank to achieve its goal - protection of their credit – at the expense of the equity investors.

Interlocks through the chairman of the supervisory board can be explained as follows. An obvious explanation for the positive relation between the firm's downside risk and the number of interlocks from its chairman is busyness. Our finding could provide support for the busy board literature. When the chairman of the supervisory board is too busy, the supervisory board becomes less effective in monitoring management's decision making. Since control and governance are important instruments in managing firm risk, a board's monitoring is negatively related to firm risk (Brick and Chidambaran, 2008). A suggestion for further research is to investigate the nature of the board connectivity of the various members of the supervisory board. More in particular, the nature of a chairman's connections may be different from those of the other members of the supervisory board. This might be the underlying reason for the statistically significant positive relation between the chairman's connectivity and the firm's downside risk versus no statistically significant relation between any of the other connectivity variables and the firms downside risk.

An alternative for busyness to explain the positive relationship between the firm's downside risk and the number of connections of its chairman is as follows. Similarly as other members of the supervisory board, the chairman may benefit from interlocks with other firms by having superior information and the opportunity to actively engage network resources. To the extent that members of the supervisory board influence the firm's daily policies, this will be done in the context of a dialogue between the executive board and the supervisory board. This normally only concerns long term policies and the

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most important decisions. Since such decisions are taken by the executive board, the role of the supervisory board is limited to advice rather than decision making. Decisions, for which the supervisory board has a veto right, will be marginally tested by the supervisory board. This means that such a decision will be tested to the articles of association, to the firm's policy and to the adequacy of the decision making process. Decisions which are considered 'difficult' are usually pre-discussed with the chairman of the supervisory board (van der Knoop, 1991). This informal mechanism makes that the role of the chairman is decisive in all major decisions.

With regards to external representation, The Dutch corporate governance code defines the task of the chairman of the supervisory board as follows: "The chairman of the supervisory board shall ensure the proper functioning of the supervisory board and its committees, and shall act on behalf of the supervisory board as the main contact for the management board and for shareholders regarding the functioning of the management and supervisory board members. In his capacity of chairman, he shall ensure the orderly and efficient conduct of the general meeting (Monitoring Commission, 2008)." Treadwell (2006) posits that the "chairman is the primary interface with the institutions along with the CEO and the finance director".

In his research over the period 1997-2007 Bezemer finds that chairmen of the supervisory board perceive an increasing influence of activist shareholders and implementation of shareholder value orientation. In addition, chairmen experience a role change in that their role becomes more visible to the outside world, such as institutional investors, with a higher profile (Bezemer, 2012). The combination of increasing shareholder activism and increasing shareholder value orientation, plus a much higher level of external visibility of the role of the chairman pushes the chairman to use the information obtained through his network to steer the firm's decisions towards higher risk decisions. This is confirmed through a positive relation between the firm's downside risk and the number of connections of the chairman.

Back to our hypotheses. We do not find evidence of a statistically significant relationship between a firm's share price volatility and its board interlocks. Therefore, correlation between a firm's share price and its board interlocks has to be explained through firm risk. Although we have some evidence, we do not have a large amount of

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statistically significant evidence that corroborates Hypothesis 1 (board interlocks have a negative effect on systematic risk). We find only one moderately strong negative relation (significant at the 10% level) between beta and the number of supervisory board interlocks. All other eleven tested relations between beta and board interlocks are not statistically significant.

Our expectation that risk averse managers use board interlocks to increase the firm's ability to avoid downside risk (hypothesis 2) is rejected. We only find a rather weak positive relation (significant at the 10% level) between the number of interlocks of the chairman of the supervisory board and firm's downside risk. This weak positive relationship confirms that interlocks of the chairman of the supervisory board decrease the firm's ability to avoid downside risk. All other tested relations between the firm's downside risk and board interlocks are not statistically significant. We find no evidence that bank interlocks have a negative effect on systematic risk (hypothesis 3). All tested relations between beta and the number of bank interlocks are not statistically significant. We do find evidence that bank interlocks mitigate downside risk. The negative relation between a firm's downside risk and its bank interlocks is statistically significant (at the 10% and 5% level) and corroborate our hypothesis 4.

2.6 Robustness, endogeneity and causality

We study the effects of board interlocks on firm risk in the period 1998-2009. For our model we use connectivity data for the period 1997-2008, and accounting and market data for the period 1997-2009. For our control model we use connectivity data for the period 1997-2008 and accounting and marketing data for the period 1996-2007. Our sample consists of 140 publicly quoted firms on the Euronext Amsterdam. This set of firms is relatively consistent over time. In prevailing cases, when firms are acquired and subsequently delisted, they are no longer part of the dataset. New firms entering the Euronext in any year become part of the dataset. Therefore, since our dataset covers the period 1997-2008, firms will appear more than once. Since such observations cannot be considered to be random observations, we control for these firm fixed effects.

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In our panel dataset, we also need to consider the year effect. This refers to the aggregate effect of unobserved factors that affect firm risk of all firms equally in any given year. This could be a change in legislation of government regulation affecting all firms for instance. Such effects are not included in our panel dataset. If we do not take this into consideration, we may mistakenly attribute such year effects to connectivity. This would lead to inflated or deflated images of the effects of connectivity on firm risk. We therefore incorporate year dummy variables into our model and perform robustness checks for the same models without taking year dummy variables into account. The results of the model without year dummies confirm the findings from the model with the year dummies. The relations are similar and have similar signs of the coefficients. In addition, the model without the year dummies finds several more statistically significant relations. Since we use the model with year dummy as our principal model, we will not further explore any additional relations brought forward by the model without year dummies⁶.

When performing an OLS regression, a major assumption is that the independent variable x_i is uncorrelated with the error term ε_i . When variable x_i is endogenous, this means that x_i is correlated with the structural error term. In that case x_i is determined within the model and factors that affect x_i will also affect independent variable y_i . Our OLS may then produce biased and inconsistent parameter estimates. As a consequence, our hypotheses tests can be seriously misleading. We know that the potential for endogeneity exists in virtually all studies involving accounting, finance and economic variables (Chenhall and Moers, 2007). Generally, there may be various sources of endogeneity, the most common of which is the omitted variable bias. This is the case when there is another variable which is correlated with both x_i and y_i so that after fitting the model there still is a relationship with this other variable and the error term. In our research we will not further elaborate on this particular source of endogeneity. We have reviewed literature and have carefully designed a set of relevant control variables.

Another source of endogeneity, called reverse causality, is more important for our research. A major challenge in our study is to identify the direction of causality. To truly

⁶ Results available from the author

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be able to make a causal claim, we need a truly exogenous variable - that is, a variable which is not related to any of the other variables in the system, unobserved and observed.

The problem with observational data generally is that there are an infinite number of unobserved variables which could render the observed relationship endogenous. A common test to deal with this problem is to lag the variable of interest. In our model we have lagged the connectivity variables. Robustness tests with modeling the same variables contemporaneously produce comparable yet somewhat different results. The contemporaneous models show some different statistically significant correlations but with the signs of the coefficients similar to those in the lagged model⁷.

However, in our setup the use of a lagged test to deal with reverse causality may be weak because our inter firm connectivity variables of supervisory board members do not display many changes. And even though our lagged test results are different from the contemporaneous test results, we cannot exclude that our models contains a certain degree of endogeneity⁸.

⁷ Results available from the author

⁸ A possible statistical approach to the estimation of causal relations in observed data could be the method of instrumental variables (IVs). This method can be used when standard regression estimates of the relation of interest are biased because of reverse causality (but also when there is selection bias, measurement error, or presumed unmeasured confounding effects). In this approach, a third, 'instrumental' variable is used to extract variation in the (IV) variable of interest that is unrelated to these problems, and to use this variation to estimate its causal effect on an outcome measure. However, this method is "widely used in econometrics and rarely used elsewhere, is conceptually difficult and easily misused." (Cameron and Trivedi, p.95). The reason is that it may be difficult to find variables that can serve as valid instruments. Many variables that have an effect on the included endogenous variables also have a direct effect on the dependent variable. Another concern is that IV estimators are innately biased, and their finite-sample properties are often problematic. Consequently, most of the justification for the use of IV is asymptotic. Performance in small samples may be poor and moreover, the precision of IV estimates is lower than that of OLS estimates. In the presence of weak instruments (excluded instruments only weakly correlated with included endogenous regressors) the loss of precision will be severe, and IV estimates may be no improvement over OLS. In

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We also perform an additional test to control for endogeneity caused by correlation between control variables and connectivity variables. For this test we use the following model to predict the effect of control variables on each connectivity variable:

$$\text{Connectivity}_{t-1} = \beta_0 + \beta_1 \text{ReturnOnAssets}_{t-2} + \beta_2 \text{Leverage}_{t-2} + \beta_3 \text{Maturity}_{t-2} + \beta_4 \text{Size}_{t-2} + \beta_5 \text{RelativeMembers}_{t-2} + \beta_6 \text{CurrentRatio}_{t-2} + \beta_7 \text{RelativeR\&D}_{t-2} + \beta_8 \text{ShareReturn}_{t-2} + \varepsilon_i \quad (7)$$

Endogeneity might occur if there is significant correlation between the control variables and any of the connectivity variables. Table 5 displays this correlation. In our analysis we limit our investigation to correlation between the control variables and *LogConnections*, *LogChairman*, *Bank* and *LogBank* respectively since these connectivity variables correlate with *Beta* and *DownsideRisk* (we refer to tables 2.3 and 2.4). We find very weak correlation between *RelativeMembers* and *LogConnections* ($r=0.249$ with $p<0.05$) and between *ShareReturn* and *LogConnections* ($r=0.211$ with $p<1\%$). Our robustness checks do not indicate that endogeneity influences the outcome of our analysis with regards to the correlation between *LogConnections* and *Beta*. We find very weak correlation between *Size* and *LogChairman* ($r=-0.0968$ with $p<0.01$) and between *ShareReturn* and *LogChairman* ($r=0.227$ with $p<0.01$). Our robustness checks do not indicate that endogeneity influences the outcome of our analysis with regards to the correlation between *LogConnections* and *DownsideRisk*. Of course this evidence cannot prove the absence of any endogeneity.

With regards to *Bank* we find weak correlation with control variable *ReturnOnEquity* ($r=0.00562$ with $p<0.1$), weak correlation with control variable *Leverage* ($r=0.321$ with $p<0.1$), strong correlation with control variable *RelativeMembers* ($r=0.473$ with $p<0.05$), very strong correlation with control variable *RelativeR&D* ($r=-1.300$ with $p<0.1$) and

addition, the instruments may be weak: satisfactorily exogenous, but only weakly correlated with the endogenous regressors. As Bound, Jaeger, Baker (1995) argue “the cure can be worse than the disease”. For these reasons, we are not performing the method of Instrumental Variables in this research.

Do board interlocks reduce firm risk?

very strong correlation with control variable *ShareReturn* ($r=0.855$ with $p<0.05$). Our conclusions on the correlation between *Bank* and *DownsideRisk* have to be drawn carefully, since endogeneity may influence our analysis. A similar pattern applies for correlation between *LogBank* and various control variables. Also, any conclusion on the correlation between *LogBank* and *DownsideRisk* has to be drawn carefully. In general, a limitation in our research is the use of publicly available data as reported. This implies that conclusions on the correlation of any connectivity variable and *DownsideRisk* may have to be drawn carefully. Accounting misstatements, or purposely used income smoothing and reporting techniques may weaken a possible positive correlation between *DownsideRisk* and any connectivity variable.

By controlling for firm fixed effects, plus taking into account year effects and by using a control model we have - to the best of our knowledge - done everything we could have to avoid finding significant results attributable to factors other than the investigated relation between interlocks and firm risk. On the subject of endogeneity and causality we conclude that our approach, using lagged connectivity variables, has taken away some concern about the direction of the causality. However, given the static nature of the inter firm connectivity variables and their propensity to remain relatively stable over time, the lagged variable approach has not taken away all of our concern about the direction of causality. Some concern and doubt remain, therefore. Furthermore, the static nature of the inter firm connectivity variables reduces the power of the firm fixed effects estimation.

Control Model							
	ConnectedMembers	Connections	LogConnections	Chairman	LogChairman	Bank	LogBank
ReturnOnEquity	-0.00490 (0.00535)	0.00469 (0.00888)	0.000265 (0.000914)	-0.00661 (0.00476)	-0.000216 (0.000893)	0.00562* (0.00329)	0.00133* (0.000804)
Leverage	0.0631 (0.265)	0.832 (0.654)	0.103 (0.0647)	0.102 (0.326)	0.0698 (0.0587)	0.321* (0.165)	0.0966*** (0.0359)
Size	0.198 (0.188)	-0.389 (0.425)	-0.0407 (0.0394)	-0.274 (0.169)	-0.0968*** (0.0337)	-0.159 (0.121)	-0.0228 (0.0267)
RelativeMembers	0.764** (0.346)	2.098** (0.882)	0.249** (0.102)	-0.0632 (0.309)	0.0505 (0.0700)	0.473** (0.207)	0.121** (0.0501)
RelativeR&D	2.027 (1.373)	0.578 (2.402)	0.112 (0.257)	1.365 (1.300)	0.125 (0.265)	-1.300* (0.722)	-0.298* (0.177)
CurrentRatio	-0.178 (0.279)	0.810 (0.693)	0.0777 (0.0655)	0.0693 (0.350)	0.0683 (0.0630)	0.0440 (0.200)	0.0269 (0.0481)
StockReturn	-0.272 (0.320)	2.983*** (1.135)	0.211*** (0.0794)	0.615 (0.566)	0.227*** (0.0727)	0.855** (0.348)	0.154** (0.0640)
Constant	0.763 (1.114)	3.232 (2.580)	0.470** (0.237)	2.755*** (0.967)	0.654*** (0.198)	0.934 (0.742)	0.128 (0.166)
R-squared	0.144	0.035	0.032	0.116	0.038	0.030	0.027
Adj-R2	0.132	0.029	0.026	0.104	0.032	0.024	0.021
F-stat	6.462	2.797	2.896	3.637	4.491	2.694	3.052
Observations	1,192	1,192	1,192	1,192	1,192	1,192	1,192
Number of id	187	187	187	187	187	187	187

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.5: Control Model

This table presents the results of the Ordinary Least Squares regression that explain the relation between control variables and connectivity variables. Variables are explained in section 2.4.1 to 2.4.3 and 2.7. A lagged model is used to confirm direction of causality. P-values are in parentheses and based on Huber/White's heteroskedasticity corrected standard errors.

2.7 Conclusion

In this study we explore the effect of board interlocks on firm risk for the period 1998-2009 in the Netherlands. The Dutch two tier board structure allows separating out supervisory board interlocks and their effects on the firm's firm risk. We find three effects. The first effect confirms a negative relation between the number of supervisory board interlocks and firm risk (Beta). The second effect confirms a negative relation between supervisory board bank interlocks and the firm's ability to mitigate downside risk. Both effects are empirical support for the view that interlocks are a node through which information on business practices flows and network resources are engaged. The third effect confirms a positive relation between the number of interlocks of the chairman of the supervisory board and the firm's ability to mitigate downside risk. An explanation for this effect could be busyness, arguing that more seats in other companies' boards would reduce the chairman's monitoring effectiveness in any one firm. An alternative explanation is that – in the spotlight of shareholder activism - the chairman actively uses network information and resources to push the firms decision making to higher risk decisions. Further research into the difference between interlocks of the chairman versus those of the other members of the supervisory board is required to provide an unambiguous explanation.

Chapter 3:

Punished by discontented financial markets

Investor relations of Royal Philips NV 1971-2001

3.1 Introduction

In the 20th century, stock markets have become an important institution in economies. Especially in the period 1970-2000 capital markets have become increasingly larger when compared to countries' gross domestic product. In the Netherlands stock market capitalization as percentage of gross domestic product grew from 0.42 to 2.03 in this period (Rajan and Zingales, 2003). Similar trends, albeit occasionally less distinct, are visible in most other Western European economies and the US. With the increasing importance of equity markets, more regulations and laws have been introduced to protect investors. The aim of such laws and regulations is to have publicly traded firms act more transparently (La Porta et al., 1999). At the same time, investors became more demanding in terms transparency and communication. Firms responded to this trend with the inception of the investor relations function. This was first seen in the US in the late 1960s, when brokers initiated commercial sessions for analysts and investors. The booming capital markets in the period 1970-2000 provided fertile soil for further growth of the investor relations function (Silver, 2004, p.70). With mounting demand and supply in the market for financial market communication, the effects of a mismatch may be costly.

Corporate restructuring implies change. Successful communication of change depends on proper management of uncertainty associated with these changes (DiFonze and Bordia, 1998). Corporate restructuring announcements therefore provide an ideal set of events to measure the successfulness of the communication, or mismatches between demand and supply. In this study, the Dutch multinational Royal Philips NV (Philips) is

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investigated over the period 1971-2001. We investigate how Philips has communicated corporate restructuring to the market and how it has dealt with changing financial market requirements.

Within the thirty-year time frame the 1990s decade is the most interesting from the perspective of the exceptional growth of the financial markets and their demands to the firm's communication requirements. The 1990s are also characterized by growing media influence, creating the conditions for an increasingly strong herding instinct among financial market participants (Hirschleifer and Teoh, 2003). The 1970s and 1980s will serve as a benchmark to evaluate the changes.

The investor relations function evolved with the evolution of the capital market. After its inception in the 1960s the importance of the investor relations function significantly increased in the 1980s, as the active takeover market demanded that corporate managements be concerned about their share prices and communicate to the investing public the credibility of their vision and strategy. The threat of gambling shareholder loyalty in a takeover contest was looming (Brennan and Tamarowski, 2000).

In the 1990s, booming capital markets, deregulation and increasing shareholder activism further boosted the importance of the investor relations function (Marston and Straker, 2001). Around the same time, in the 1990s, business media expanded rapidly causing changes in the way investors behaved. Both the density and the frequency of business news increased significantly (Schuster, 2005). Global information channels aroused the attention of many people, who became active in the markets in ever growing numbers. Business news channels, such as CNBC in the US, initiated regular broadcasted interviews with corporate executives. These interviews were generally considered non-events, since no real news was published that would not have been known to the markets before. Meschke (2002) found that, although no news was generated, these non-events did not remain without consequences: attention generated in business news television programs resulted in short-term price increases and sharply increasing trading activity of the shares concerned. Marcus and Wallace (1997) confirmed that corporate disclosure and communication to the financial markets are important to assure that firms are fairly valued.

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In the period 1971-2001 Philips transitions fundamentally. After being family run since its inception in 1891, Philips attracts outside professional managers for the first time in the 1970s. In the same period the firm suffered from fierce international competition. Philips is headquartered in the Netherlands, but has historically had a strong international orientation, which is also reflected in a widely dispersed ownership. European firms have weaker investor protection than US firms and the European capital markets are less developed than the US (LaPorta et al. 1998). In line with the development of the capital market, the European investor relations practice developed behind that in the US. Even though Philips is a Dutch firm, its' shareholders expected Philips to meet more developed communication demands in line with international developments.

We analyze Philips' disclosure, investor relations and shareholder wealth effects around the announcement of restructuring decisions. Major restructuring announcements and the reactions of financial market participants are analyzed. We find wealth destruction particularly in the second half of the 1900s, periods generally characterized by increasing influence from US shareholders. Next Philips' investor relations and financial disclosure are analyzed. Philips' deployed innovative annual reporting models and used various accounting techniques for income smoothing purposes. We document a discrepancy between the financial information provided by the firm and the financial markets' expectations.

We conclude that Philips has not met the changing communication demands of the financial market and has not been able to convincingly communicate its strategic intentions to financial market participants. Particularly towards the end of the 20th century this has harmed Philips' valuation. Our findings are relevant for many firms, because financial markets have the power to punish inadequate disclosure and inadequate communication with low valuation. These findings have important implications for instance for a firms' securities issues, for a firm's reputation aspects and for valuation driven incentives. Markets have evolved and trading behavior is fuelled with mass communication through expanded business media. Adequate disclosure and investor communication have become of paramount importance to be well understood by the

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financial markets. Failure to adequately communicate a firm's strategic intentions leads to significant shareholder wealth destruction.

The remainder of this chapter is organized as follows. In section 3.2 we provide background on the development of the investor relations function and review relevant literature on corporate restructuring and the development of financial markets. In sections 3.3 up to and including 3.8 we describe our case study analysis of Philips. Finally, in sections 3.9 and 3.10 we provide a synthesis of the effects of communication in changing financial markets and conclude.

3.2 Background

3.2.1 Introduction

In this section we sketch the background of our study, as we describe the role of investor relations and the effects of informative disclosure (3.2.2), corporate restructuring and the development of financial markets (3.2.3) and the role of CEOs in the decision making process (3.2.4).

3.2.2 The role of investor relations and informative disclosure

The efficient functioning of financial markets in general and stock markets in particular, to a large extent depends on timely and accurate firm disclosure. Publicly listed firms provide mandatory disclosure, such as periodical financial reports – including explanatory notes, press releases with price sensitive information and other filings required by the financial market regulators. In addition, firms provide voluntary disclosure, such as analyst briefings and calls, corporate websites and public communication. The extent to which voluntary disclosure mitigates resource misallocation in the capital market depends on the degree of credibility of information that is not available from other sources (Healy and Palepu, 2001). Higher voluntary disclosure may result in lower cost of equity (Botosan, 1997), more analysts following, with lower forecast dispersion and less volatility in forecast revisions (Lang and

Lundholm, 1996). The level of disclosure may increase through cross-listings, but the information effects may be limited (Lang, Lins and Miller, 2002).

The information effect of disclosure is also reflected in trading volumes. Share trading volumes are evidence of investor activity. A continuous and positive relationship between share trading volume and the magnitude of earnings surprises has empirically been confirmed. The greater the absolute value of the earnings surprise, the greater the volume of trading around the announcement date (Bamber, 1986).

Investor relations is charged with communicating information to the market. NIRI, the leading US Investor Relations association defines investor relations as “a strategic management responsibility that integrates finance, communication, marketing and securities law compliance to enable the most effective two-way communication between a firm, the financial community, and other constituencies, which ultimately contributes to a firm’s securities achieving fair valuation” (NIRI, 2003). In the 1970s and 1980s the importance of the investor relations function grew in concert with the growth of the financial markets, albeit that the investor relations function in the US developed ahead of that in the Netherlands (Figure 3.1). Marcus and Wallace (1997) argue that the nature of the investor relations function emerged in three phases. First, investor relations were aimed at communicating the firm’s actions, later it increased its focus on the firm’s financial performance. In the subsequent phase, investor relations actively marketed the firm’s securities to encourage investors to buy or hold the firms securities. In this phase investor relations ensures that the firm and its securities are fairly valued. Investor relations, therefore, are charged with managing analyst expectations. By providing information to analysts and influencing their valuation of the firm, investor relations can market the firm to potential investors (Rao and Sivakumar, 1999), help overcome low visibility and attract new analysts and new investors (Bushee and Miller, 2005).

The relation between what and how a firm communicates and the price of its securities is multifaceted. In an efficient financial market, the price of a firm’s securities is a proper reflection of all available information, and, apart from maintaining the appropriate investment and financial policies, there is little that a firm can do about the price of its securities. The validity of this efficient market hypothesis is that information is free and available to every investor at the same time, and can easily be understood by

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all investors alike. Empirical research confirms that firm disclosure is instrumental in that it reduces information asymmetry, and increases liquidity and the share price (Merton, 1987), whereas uninformed investors ‘price protect’ against adverse selection (Welker, 1995). This is confirmed by Brennan and Tamarowski (2000), who provide evidence for the relation between a firm’s investor relations policy and its share price. They demonstrate a positive relation between a firm’s disclosure policy and the number of analysts. The number of analysts that follow a security affects its liquidity, and Brennan and Tamarowski (2000) show that an increase in liquidity reduces the firm’s cost of capital and thereby increases the share price. However, in addition to disclosure, also investor recognition is a determinant in the price of a firm’s security. Changes in investor recognition are more important than news about fundamentals in explaining contemporaneous returns (Lahavy, 2005). This reveals why earlier research has found that news about fundamentals explains a relatively small proportion of the variation in returns (e.g., Roll, 1988; Lev, 1989).

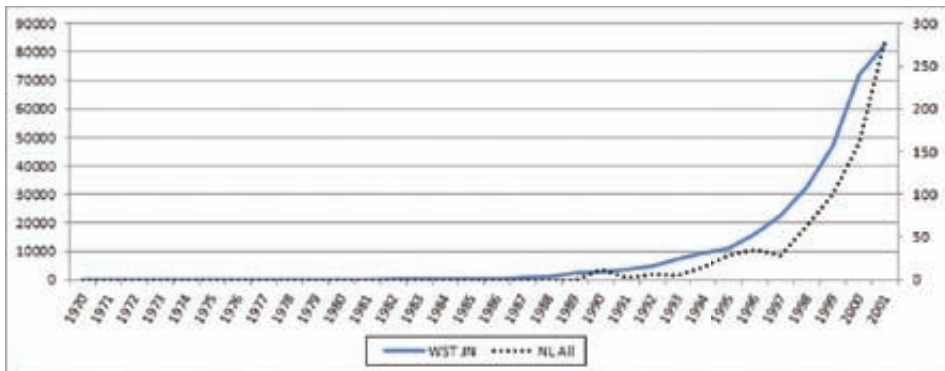


Figure 3.1: Development of investor relations

This figure presents the development of the investor relations function in the Netherlands and in the US. To visualize this development for the US we counted the number of occasions that the words “investor relations” appeared per year in the Wall Street Journal. WSTJN represents the word count per year on the left vertical axis. For the Netherlands we counted the number of occasions that the words “investor relations” appeared per year in all Dutch papers. NL ALL represents the word count per year on the right vertical axis.

3.2.3 Restructuring and the development of financial markets

Firms are continuously restructuring through tactical and strategic decisions. Restructuring strategies can be classified in divestment decisions and investment decisions. Divestments include asset sales, management buy outs, spin-offs, and lay-offs (Lai and Sudarsanam, 1997). And the most prominent investment decisions are capital expenditures and acquisitions. Mergers and acquisitions are an essential vehicle for a firm's evolution and as such a phenomenon of all times. Merger and acquisition activity is propelled by a number of strategic factors, such as technological innovation, competition globalization and business rationalization. Throughout the 1970s and 1980s the number of US M&A transactions remained relatively stable, although the combined value of the transactions rose in the second half of the 1980s. And even though the 1980s are considered to be an active period for mergers and acquisitions period, the 1990s were by far the most active decade in U.S. history. Starting in the early 1990s, the increasing availability of capital market financing has fuelled restructuring activities worldwide (Boutchkova and Megginson, 2000). Total M&A value for the 1990s exceeded \$5 trillion. The European M & A market developed similarly. Coming from less than \$50 billion per annum at the end of the 1980s, the total value of acquisitions with a European target increased ten-fold to over \$592 billion in 1998, and then again doubled to \$1.2 trillion in 1999.

Moeller, Schlingemann and Stulz (2005) analyzed mergers and acquisitions for U.S. domestic acquisitions by U.S. acquirers in the period 1980–2001. They found that a relatively small number of acquisitions accounts for significant losses in value due to extremely high valuations. If the explanation for this effect is the markets' doubt to the firm's ability to maintain a 'growth through acquisition' strategy, then these firms have failed in their communication with the market.

3.2.4 The roles of CEOs in strategic decisions

Management research has traditionally had a strong focus on top echelons and their impact on organizations. A basic premise in strategic management research is that top

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executives play a dominant role in formulating corporate strategy (Westphal, 2001). Various studies show that experience, such as prior positions in other firms, influence strategic decisions in the executive's own firm. For instance, Westphal (2001) finds that the event of CEO succession provides an important opportunity for change. In line with earlier empirical studies, he finds that newly appointed CEOs often take office just prior to major corporate-level strategic change initiatives (Kessner and Sebor, 1994). Having experience with the current strategy, inside successors are more likely than outsiders to maintain the existing strategy (Tushman, 1985). However, the departure of a CEO may leave a vacuum that enables the selection of new outside CEOs, who have experience with the favored strategic change (Westphal, 2001).

Traditionally the search for a new CEO takes place in a unique market: a market characterized by a combination of a small number of buyers and sellers, high risk to its participants and concerns about its legitimacy (Khurana, 2002, p. 27). Often an external search is initiated with extra ordinary emphasis on hiring a candidate with demonstrable "leadership" and "charismatic" qualities. Much less emphasis is placed on the firm's strategic situation and how appropriate the candidate's background is in the light of this. The entire search process is orchestrated to produce a corporate 'savior', a new CEO whom investors and the business media regard as star (Khurana, 2002, p. 20). These findings emphasize the premise that new outside CEOs, will direct strategic change. Based on a comprehensive dataset, Bertrand and Schoar (2003) empirically demonstrate that manager fixed effects are important determinants in a wide range of corporate variables. They conclude that managers have their own style, and that especially in acquisition and diversification decisions manager fixed effects play an important role.

3.3 The case of Royal Philips NV, 1971-2001

3.3.1 Introduction

Philips Electronics NV provides the opportunity to investigate all aspects relevant for our research. Philips started as a family owned firm in 1891 and went public in 1912. A recognition of the importance of the capital markets is the cross-listing at the New York

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Stock Exchange in 1987. Equity based incentives, granted to senior management from 1986 onwards underscore the significance of a fair valuation of the firm's shares to management. Philips shares have a widely dispersed international share ownership, reflecting a historically international orientation of the firm and its investors. Family managers were succeeded by professional managers, starting with Nico Rodenburg in 1977. From the 1970s Asian competition, with more efficient production, entered Philips' markets. This forced Philips to restructure its operations. At the same time, Philips wanted to maintain its strong reputation for product development and innovation. In the subsequent years, Philips experimented with corporate restructuring to deal with its growing problems. Restructuring programs initiated under various CEO's included scaling down or selling certain production plants to create larger more efficient units. Acquisitions and joint ventures were sought to concentrate the firm's resources in the most effective way. Throughout this process the firm strategy developed continuously.

Our longitudinal approach allows investigation of how Philips under various CEO's has communicated strategic announcements to the exogenously changing markets and to measure the markets' reaction.

We formulate our research question as follows:

“How do firms adapt their communication about their strategy to changing demands of the financial markets?” This question will be investigated using Philips as a case study.

In order to answer this question we first describe our sources (3.3.2), the firm history up to 1971 (3.3.3), Philips' governance structure (3.4), strategy, financial market communication and shareholder wealth effects per CEO (3.5), and Philips financial reporting and annual report disclosure (3.6). Next we discuss the financial markets' appreciation of Philips' investor relations (3.7) and financial market reactions in terms of analyst following, their forecasts and Philips' trading volumes (3.8). We finalize with discussing our results (3.9) and conclude (3.10).

3.3.2 *Analyses and sources*

Since the seminal paper by Fama et al. (1970), finance researchers use the event study method to measure the value effects of announced strategic decisions (MacKinlay, 1997). Event studies measure the change in the share price immediately following the arrival of new information in financial markets, controlling for share price effects in absence of new information. As such, event studies are testing a dual hypothesis of market efficiency and the value effects of a particular decision.

The event study method has also been applied in case studies. Baker (1992) studies Beatrice, a U.S. creamery that grew to be a conglomerate firm. They use the announcements of 26 acquisitions and divestitures to evaluate the performance of three CEOs. They conclude that firm governance is an important determinant of both value creation and destruction. De Jong *et al.* (2007) study the announcement effects of Dutch retailer Ahold (a large Dutch retail firm). They study Ahold's performance, its investor relations, strategy, accounting transparency and corporate governance. The case of Ahold shows remarkable insights on the influence of investor beliefs by investor relations, on the inefficiency of corporate governance self-regulation through accounting disclosure and on the role governance played in maintaining conflicting images provided by investor relations versus management's control of the firm.

To get a first impression of the evolution of the investor relations profession in the US and The Netherlands, we manually count the number of appearances of the words "Investor Relations" in both the Wall Street Journal and in Dutch business news media for 1970-2001. We build our event dataset on Philips' announcements with regards to asset restructurings and alliances over the period 1971-2001. We define asset restructuring to include asset sales (divestments, management buy outs, spin offs) and investments (full acquisitions, partial acquisitions, joint-ventures and alliances). We exclude announcements with regards to capital expenditures, reorganizations and lay-offs.

We look up announcements in the Dutch financial daily, Het Financieele Dagblad. The electronic version is available starting 1985; we retrieve all newspaper articles with the firm name in the title or in the body of the text and we manually identify articles with the relevant events. For the period 1971-1985 we analyze Philips annual reports to

identify relevant events and subsequently verify announcement dates with the paper version of *Het Financieele Dagblad*. In total, we include 451 announcements in the period 1971-2001.

We measure the acquirer's cumulative abnormal returns (CAR) around announcements using abnormal returns generated by a market model (MacKinley, 1997). Our estimation window runs from day -120 to day -20. We aggregate the abnormal returns over a period of seven days, starting three days prior to the event announcement date until three days after the event announcement date. Apart from the percentage returns, we also calculate the euro wealth effects by multiplying the seven days CAR by the beginning of the year's market value of the acquirer's equity.

We collect financial data and corporate governance characteristics from several sources. We obtain share returns and index returns from Datastream (1973-2001) and the *Officiële Prijscourant* (1970-1973). We obtain firm financial and non-financial information from its annual reports. We take board and ownership data from the *Handboek Nederlandse Beursfondsen*, *Jaarboek Nederlandse Ondernemingen* and yearly overviews of legally obliged minimum share-ownership ('WMZ') notifications in *Het Financieele Dagblad*. We adjust for inflation⁹.

Information with regards to communication of firm strategy is based on interviews given by the CEO within the first 18 months in office¹⁰, which we derive from *Het Financieele Dagblad* and other international business magazines. A second source of information with regards to firm strategy is provided by financial and firm analyses in *Het Financieele Dagblad* and other international business magazines in the same period.

A disclosure index is constructed based on Botosan (1997). The index of Botosan (1997) is based on recommendations provided in the American Institute of Certified Public Accountants (1994) study of business reporting (i.e., the Jenkins Committee report), the SRI International (1987) survey of investor information needs, and the Canadian Institute of Chartered Accountants (1991) study of the annual report. This index is adjusted to reflect voluntary disclosure by excluding the legally-required items.

⁹ Inflation adjustments are based on CPI data on www.iisg.nl to 2001 Euro amounts.

¹⁰ The sixth CEO (Boonstra) postponed communication with regards to strategy and made several public statements to this effect. We therefore analyze interviews of the first 36 months in which he is in office.

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In our index four more items are included based on Aksu and Kosedag (2006), called ‘description of share classes’, ‘description of voting rights’, ‘segment analysis’ and ‘discussion of corporate strategy’. The items now included in DSCORE reflect information identified by investors and financial analysts as useful in investment decision making, including background information, summary of historical results, key non-financial statistics, projected information and voluntary information provided by management. Philips annual reports 1971-2001 are examined and DSCORE is calculated for each year counting for each annual report the index items with equal weight.

With respect to the investor relations aspects of Philips’ communication strategy information is obtained from Rematch (Netherlands, Hong Kong) www.rematch.nl¹¹. Rematch analyses perceptions of target audiences. As from 1990 Rematch conducts an annual investor relations survey among four constituencies: financial analysts, press, portfolio managers and retail investors. Based on the feedback of these target audiences the investor relations activities are evaluated and rated. The rating is averaged for each firm per constituent audience. Each corporate issuer subsequently receives an overall score, which is a weighted average (0.4 portfolio managers, 0.35 sell- and buy-side analysts, 0.15 financial press, and 0.1 retail investors) over all constituent groups. The relative weight per constituent group represents the relative importance from an Investor Relations perspective. This has been determined by Rematch and is being used consistently for all companies.

The rating of Philips is benchmarked with the average rating of all major companies in the Amsterdam exchange index. Companies that have not been in the index for the entire period are excluded. The reason for this exclusion is that companies that are about to leave the index generally will be rated lower. Hence inclusion of the ratings for these companies would have a mitigating effect on the index average rating.

For the investors’ relations, the CEO rating, and general disclosure ratings categories, Rematch data are a proxy for disclosure. Since the annual report is usually

¹¹ Rematch was an independent capital market consultancy agency, advising corporate issuers in the area of strategic financial objectives and its resulting relation management between the firm and the financial markets, with an emphasis on investor relations and corporate governance.

released during the following year this disclosure category describes the lagged score on the annual report ratings of the annual report of the preceding year.

Analyst data from the IBES database are used to analyze the number of analysts issuing earnings forecasts (NAL). This measure is computed by counting the number of analysts providing an annual earnings forecast. Annual assessment at calendar year end are used to identify the number of analysts following since there is not any one particular moment during the year when a specific disclosure could be assumed to have a significant effect on analysts. Even though the annual report is formally issued at a specific moment in time, it is difficult to assess when the information contained therein reaches the market. In any event, the annual report information will influence analyst forecast accuracy for the entire year (Lang and Lundholm, 1996).

Share price and share volume information are retrieved from Datastream. We follow existing research (Beaver, 1968, Bamber 1986) by applying a volume-liquidity metric defined as the percentage of shares traded on day t divided by the shares outstanding on that day. The liquidity-volume metric is calculated on a daily basis and averaged per calendar year.

Our empirical analysis is presented in Tables 3.1 to 3.7 and Figures 3.1 to 3.3. Table 3.1 shows the shareholder distribution for Dutch listed firms. Table 3.2 contains firm characteristics over the period 1971-2001 in variables reflecting firm strategy and performance. In panel A size related variables are presented. Panel B presents variables on strategy and investments. Panel C presents performance related variables. Table 3.3 shows the shareholder wealth effects around restructuring announcements per CEO, both expressed in percentages and euro returns. Table 3.4 contains the largest transactions based on shareholder wealth effects. Table 3.5 shows Philips' annual report voluntary disclosure and size in number of pages. In Table 3.6 we apply Rematch investor relations scores to proxy for investor appreciation. Table 3.7, panel A shows the trading volumes in Philips shares, analysts following and their EPS forecast accuracy. Table 3.7, panel B depicts the development of EPS forecasts per month. Figure 3.1, depicts the rise of the Investor relations profession. Figure 3.2 describes the number of asset restructuring transactions per year, where we distinguish between positive and negative announcement

effects. Figure 3.3 depicts the Philips share price and abnormal returns in a historical perspective and highlights the period Boonstra.

3.3.3 The history of Philips prior to 1971

Philips was founded by Gerard Philips and his father in 1892. Soon Gerard's brother Anton joined the venture as a salesman. By the turn of the century, Philips was the number three light bulb production firm in Europe (Sluyterman, 2003). Initially, Philips focused on the production of light bulbs. Because of this single product focus, Philips was able to invest heavily on a continuous basis in modern production assets and facilities. Philips also invested significantly in research. As a result, Philips created technological advances, which enabled the firm to generate a healthy financial fundament (Bartlett, 2001). From 1900 onwards Philips penetrated foreign markets initially through export sales. Later on (from 1912) this was replaced with local sales organizations. All non-sales functions remained at the corporate headquarters in Eindhoven.

From its initial single product focus on electrical light bulbs, Philips diversified into radio equipment (1925) with a 20% market share around 1935. In the 1930s Philips further diversified with the production of X-ray tubes. At the same time, the general economic conditions lead to many macroeconomic protection measures forcing Philips to build local production facilities to protect its market share. Anticipating the break-out of World War II, Philips took several far reaching measures: it transferred its foreign operations into two trusts – North American Philips Corporation and British Philips, all top management was moved to the US, and a substantial part of the research laboratory were moved to the UK (Sluyterman, 2003).

During the war the national organizations increased their independence from Firm Headquarters and developed strong local market knowledge. With the loss of production capabilities in the war, Philips regarded the National Organizations as an important building block in the post war development of the firm. By letting the National Organizations develop their business in the way they see fit for local market, Philips developed prosperously (Metze, 1991). The National Organizations had the freedom to cater for many local differences, such as technological standards and consumer preferences. By doing so, they were able to build a strong local business resulting in

decentralized product development within Philips. Production typically took place in local (or at best regional) production facilities and factories.

The organization model that emerged is the typical Philips matrix structure, where product divisions (lead from Firm Headquarters in Eindhoven) were formally responsible for the development, the production, and the distribution. The National Organizations owned the production assets, customers, and the sales channels (Bartlett, 2001). Upon the introduction of the EEC (European Economic Community) in the 1960s, the role of the National Organizations had to change. New product requirements demanded more production intensity. For economic reasons many of Philips competitors shifted production to low cost regions (Asia). Starting in the late 1960s, Philips' ability to turn technological superiority into commercial success began to diminish. Asian competitors began to penetrate the markets that traditionally had been dominated by Philips. In the 1970s, Philips management realized that the Philips organization needed to adapt to the changing circumstances (Metze, 1991)

3.4 Philips' governance structure, 1971-2001

Koninklijke Philips Electronics N.V., a Dutch limited liability company, is the holding company of the Philips Group. The firm has been incorporated in 1891 as a limited partnership (a so-called 'commanditaire vennootschap' under Dutch law) called Philips & Co, was changed into a N.V. called N.V. Philips' Gloeilampenfabrieken, in 1912. In 1994, the name was changed into Philips Electronics N.V. which became Koninklijke (Dutch for 'Royal') Philips Electronics N.V. in 1998. As from 1913 Philips' shares are quoted at Euronext Amsterdam, and traded in the US as from 1962. Since 1987 the shares are also quoted at the New York Stock Exchange.

From its inception in 1892 until the early 1970s Philips was very successful. Even through periods of economic downturn, such as the war periods, the firm prospered and showed continuous growth (Heerding, 1980). However, since the 1970s Philips' dominance in the traditional markets was diminishing. Eroding margins furthermore emphasized the need for change. The successful decentralized organization needed to be

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replaced with a more centrally-managed organization in order to streamline production and provide a more competitive cost structure (Metze, 1991). At the same time, the new era increasingly demanded serious efforts in research and product development initiatives in order to keep up with the pace of technological developments (Manders and Brenner, 1995).

The change of business model was effected within the framework of the existing governance structure. For listed firms, Dutch corporate law requires a two tier structure, with a management board and a supervisory board. Shareholders have the right to elect the members of both the management board and the supervisory board, to approve the annual accounts, and to formally approve the firm's dividend policy. However, shareholder rights can be restricted in several ways. De Jong *et al.* (2007) describe how a Dutch firm can mitigate shareholder influence in four different ways. First, through the incorporation of a trust office that holds the firm's shares and issues nonvoting share certificates to the investors. Secondly, through issuing non-fully paid up, but full voting preference shares to friendly shareholders. Thirdly, to issue priority shares with special rights. Special rights attached to priority shares can be the nomination of board members, merger approval, new public offerings, and charter amendments. Lastly, firms exceeding a certain size (in terms of book value of shareholders' equity or employees within the Netherlands) are required to adopt the structured regime. These firms are obliged to set up a supervisory board that takes over several powers from shareholders, including the authority over major decisions, the election of the management and supervisory board and the establishment and approval of annual accounts. Limited shareholder power leaves much room for managers to exercise discretion in their acquisition decisions.

Historically, the above described mechanisms have been widely used by Dutch corporations as means to restrict shareholder power in general and particularly as takeover defense. Starting as of 1989, the provisions of Euronext Amsterdam only allow the use of a maximum of two out of the three types described above. Empirical research shows that the use of takeover defenses has implications for firm value. In line with earlier studies, De Jong *et al.* (2005) find that takeover defenses as used by Dutch firms are negatively related to firm performance, as measured by Tobin's *q*. Subsequent research by De Jong *et al.* (2007) shows that an adequate corporate governance structure

has a minor influence on acquisition announcements. In explaining acquirer returns, the only governance factor that provides significant results is adoption the structured regime which resulted in lower acquirer returns.

Historically, the Philips family held priority shares with special rights. The special rights allotted to the priority shares pertained to the binding nomination of the members of both the management board and the supervisory board. Through this mechanism the Philips family could exert influence for a long time. In this respect it is worthwhile noting that in the period 1991-2001 all CEOs were recruited internally, with the exception of the sixth CEO (Boonstra), who became CEO after only two years in the management board. Over time the Philips family has diminished their influence through a gradual transfer of the priority shares to the Dr. A.F. Philips Stichting. By 2002 all 10 priority shares had been transferred from the Philips family to the Dr. A.F. Philips Stichting. In 2005 the priority shares have been cancelled by shareholders resolution. Exactly 75 years after its first introduction to the (Dutch) stockmarket in 1912, Philips was listed at the New York Stock Exchange in 1987.

Since 1989, Philips' articles of association allow the issuance of preferred share to a trust office (the 'Stichting Preferente Aandelen Philips') as a takeover defense mechanism. Until 1991, N.V. Gemeenschappelijke Bezit van Aandelen Philips' Gloeilampenfabrieken is the holding firm whose sole purpose is to hold all Philips electronics shares. Since 1991 the holding company is transformed into a holding- and management company from which the Philips group of companies is managed.

Generally, the profile of the shareholders constituency in the 25 biggest Dutch quoted firms has internationalized dramatically since the middle of the 1990s (table 3.1). In 1995, 'only' 37% of the shares were held internationally, whereas this percentage more than doubled in the subsequent 10 years. A possible explanation for this effect is that the historically already very open Dutch capital market has benefited from a liberal political climate allowing easy inflow of foreign capital. Another explanation may be that since the mid-1990s cross listings became increasingly popular with large Dutch listed firms (such as ABNAMRO, Aegon, AKO Nobel, ASML, Corporate Express, ING, KPN, Philips, Unilever, ASMI and VanderMoolen). The fact that these large Dutch firms generate the largest part of their turnover outside the Netherlands further amplifies the

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desirability of the international character of their shareholder constituency (Handboek Corporate Governance 2008, p. 207). In addition, Philips' shares are held widely with a high free float percentage. Under the Dutch financial market regulations, investors have to report an investment when it exceeds 5% of the issued share capital (and then subsequently when the shareholding exceeds higher thresholds). Since 1998 Janus Investments US (a US quoted investment company) with a shareholding of 5.41% is the only registered holder exceeding the lowest (5%) threshold.

Stock distribution of Dutch listed firms (percentages)		
	1995	2005
Non Dutch investors	37	75
Dutch institutinal investors	24	10
Dutch non-financial firms	19	2
Dutch retail investors	19	5
Dutch government investors	0	1
Unknown	1	7

Table 3.1: Distribution of shares in Dutch listed firms (in percentages)

This table, based on Committee on Corporate Governance (1997) and Abma (2006) presents the distribution of shares of firms listed in the Netherlands. A distinction is made between Dutch and foreign shareholders and Dutch shareholders are separated in institutional, no-financial, retail and government shareholders.

In summary, Philips' governance is characterized by (a) the fact that for a long period it has restricted shareholder rights in favor of the Philips family, (b) the absence of significant 'block' shareholders as a counter-balancing force, and (c) a general shift towards a more international shareholder constituency.

3.5 Strategy, financial market communication, shareholder wealth effects per CEO

This section provides an impression of the development of Philips under management of the various CEO's. We also describe the CEO backgrounds, their strategy and communication to the financial markets.

3.5.1 Van Riemdijk (1971-1977)

In the period 1971-1977 the firm was relatively stable. The workforce was around 370,000 to 380,000 employees, while the book value of total assets (taking into account inflation) decreased with 10.5%. Sales increased from € 8.2 billion to € 14.1 billion, which was primarily caused by inflation (table 3.2, panel A). Average investments in capital expenditure were 0.03 per year. Average investments in research and development were 0.063 per year (table 3.2, panel B)¹². After adjusting for inflation, sales per fte was stable at approx. € 73,000 and EBITDA per fte was stable at around € 9,000 to € 10,000. Net accounting return was on average 0.061 per year and ranged from 0.017 to 0.095. Total shareholder return for this period was negative, with -0.036 on average per year, ranging from 0.475 to 0.425. However, abnormal returns for this period were even more negative, with -0.042 on average per year, ranging from -0.113 to 0.055 (table 3.2, panel C).

¹²For the first four years in this period R&D data were not available

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Panel a: Size					
Year	Total Assets (unadjusted in € mln.)	Total Assets (inflation adjusted in € mln.)	Total Sales (in € mln.)	Market Value Equity (in € mln.)	Employees
1971	9,661	31,301	8,222	1,957	367,000
1972	10,043	30,181	9,041	3,134	371,000
1973	10,976	30,542	10,239	3,062	400,000
1974	12,837	32,593	11,313	2,124	397,000
1975	13,632	31,407	12,304	1,967	397,000
1976	13,656	28,918	13,811	2,317	391,000
1977	14,116	28,016	14,142	2,132	383,900
1978	13,939	26,574	14,160	2,002	380,400
1979	15,950	29,183	15,083	1,831	378,600
1980	17,991	30,908	16,579	1,391	372,600
1981	19,390	31,220	19,245	1,603	348,100
1982	19,646	29,842	19,508	1,923	336,200
1983	21,672	32,022	20,957	3,526	343,000
1984	24,747	35,398	24,415	4,561	344,000
1985	23,997	33,554	27,247	5,296	345,600
1986	22,975	32,060	24,975	5,626	344,200
1987	22,661	31,781	23,921	4,838	336,700
1988	23,982	33,399	25,448	3,244	310,300
1989	24,948	34,368	25,967	4,933	304,800
1990	23,413	31,466	25,305	3,944	272,800
1991	21,628	27,975	25,859	4,118	240,000
1992	22,165	27,648	24,846	4,014	235,100
1993	21,003	25,659	26,694	4,391	238,500
1994	21,836	25,976	27,670	7,833	241,400
1995	23,706	27,648	29,252	9,751	253,600
1996	24,991	28,546	27,094	9,537	250,400
1997	26,973	30,147	29,658	19,248	252,000
1998	28,153	30,849	30,459	23,742	234,500
1999	29,496	31,625	31,459	31,249	227,500
2000	38,541	40,275	37,862	61,896	219,500
2001	38,454	38,454	32,339	41,699	189,500

Table 3.2: Strategy and performance, Panel A Size

This table presents financial and non-financial information relevant to Philips' strategy and performance for the period 1971-2001. Financial information is recalculated in euro and inflation adjusted to 2001. Panel A presents size related variables. Total Assets (measured as book value at year end), is both in nominal terms and inflation adjusted terms. Total Sales is measured cumulative total revenue reported for the respective financial year. Market Value of Equity is as the number of shares outstanding times share price, both at year end. The number of employees is measured at year end.

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Panel b: Strategy and investments						
Year	Total Assets growth	Cap. Exp. to Total Assets	R&D Exp. to Total Assets	ACQ.	JV/ALL	DIV.
1971	0.115	0.084	NA	0	3	1
1972	0.039	0.013	NA	2	4	1
1973	0.093	0.032	NA	3	6	1
1974	0.170	0.038	NA	2	3	0
1975	0.062	0.035	NA	1	0	1
1976	0.002	-0.004	0.061	0	0	0
1977	0.034	0.013	0.066	1	1	2
1978	-0.013	-0.004	0.073	2	2	0
1979	0.144	0.034	0.069	1	1	2
1980	0.128	0.050	0.069	3	2	3
1981	0.078	0.031	0.068	1	0	1
1982	0.013	0.034	0.073	3	4	0
1983	0.103	0.001	0.069	2	3	0
1984	0.142	0.037	0.066	1	1	0
1985	-0.030	-0.009	0.076	2	10	4
1986	-0.043	0.001	0.083	3	9	3
1987	-0.014	0.005	0.087	4	11	2
1988	0.058	0.001	0.087	2	7	3
1989	0.040	0.001	0.083	2	5	10
1990	-0.062	-0.037	0.085	3	14	13
1991	-0.076	-0.052	0.081	8	7	19
1992	0.025	0.006	0.075	7	9	10
1993	-0.052	-0.032	0.073	2	9	17
1994	0.040	-0.001	0.077	5	9	13
1995	0.086	0.022	0.074	10	9	11
1996	0.054	0.027	0.074	12	8	12
1997	0.079	0.008	0.068	0	6	27
1998	0.044	-0.026	0.073	4	4	20
1999	0.048	0.026	0.077	6	5	6
2000	0.307	0.044	0.072	8	2	12
2001	-0.002	-0.034	0.086	0	1	2

Table 3.2: Strategy and performance, Panel B Strategy and investments

This table presents financial and non-financial information relevant to Philips' strategy and performance for the period 1971-2001. Panel B presents information related to Philips' strategy and investments. Total Asset Growth is measured as growth of total assets in nominal terms at year end compared to prior year end, in percentages to picture total growth. Net Capital Expenditure over Total Assets at year end, in percentages, are a proxy for organic investments (with Net Capital Expenditure being the difference in fixed assets reported at year end compared fixed assets at prior year end). Annual Research and Development Expenditure over Total Assets at year end, in percentages, are a second proxy for organic investments. The number of acquisitions (ACQ.), joint venture and alliances (JV/ALL) and the number of divestments (DIV.) depicts non-organic growth.

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Panel c: Performance							
Year	EBITDA/BVTA	Sales per fte	EBITDA per fte	NI/BV equity	TSR in %	AR in %	Div yield in %
1971	0.101	73	9	0.053	-0.261	0.006	0.046
1972	0.130	73	11	0.090	0.425	-0.113	0.033
1973	0.146	71	11	0.095	-0.177	-0.088	0.044
1974	0.118	72	10	0.070	-0.475	0.055	0.065
1975	0.083	71	7	0.017	0.294	-0.100	0.055
1976	0.118	75	9	0.050	-0.082	-0.034	0.053
1977	0.115	73	8	0.054	0.023	-0.018	0.062
1978	0.114	71	8	0.058	-0.099	0.115	0.070
1979	0.094	73	7	0.046	-0.141	0.014	0.076
1980	0.081	76	7	0.024	-0.350	-0.084	0.101
1981	0.091	89	8	0.025	0.306	-0.129	0.087
1982	0.093	88	8	0.029	0.311	0.088	0.077
1983	0.102	90	10	0.040	0.482	0.056	0.044
1984	0.114	102	12	0.067	0.309	-0.041	0.042
1985	0.124	110	12	0.057	0.120	0.090	0.039
1986	0.125	101	12	0.065	-0.345	0.125	0.037
1987	0.113	100	11	0.051	-0.498	-0.270	0.048
1988	0.109	114	12	0.063	0.245	-0.275	0.072
1989	0.104	117	12	0.098	0.370	0.213	0.051
1990	0.029	125	3	-0.402	-0.850	0.000	0.000
1991	0.129	139	15	0.118	0.364	-0.058	0.000
1992	0.098	132	11	-0.088	-0.399	-0.059	0.000
1993	0.120	137	13	0.160	0.714	-0.078	0.017
1994	0.139	136	15	0.153	0.251	0.111	0.024
1995	0.131	135	14	0.173	0.121	-0.023	0.025
1996	0.093	124	11	-0.034	0.188	-0.217	0.026
1997	0.141	132	17	0.219	0.552	0.206	0.017
1998	0.082	142	11	0.413	0.035	-0.281	0.015
1999	0.121	148	17	0.099	0.827	-0.070	0.013
2000	0.157	180	29	0.478	0.115	0.177	0.007
2001	0.016	171	3	-0.282	-0.156	0.027	0.011

Table 3.2: Strategy and performance, Panel C Performance

This table presents financial and non-financial information relevant to Philips' strategy and performance for the period 1971-2001. Financial information is recalculated in euro and inflation adjusted to 2001. Panel C presents information related to Philips' accounting performance and stock market performance. Accounting performance measures are EBITDA/BVTA (Earnings before interest, taxes, depreciation and amortization over book value of total assets) to reflect accounting return, inflation adjusted sales per full time equivalent employee measured at year end and inflation adjusted EBITDA per full time equivalent employee measured at year end to reflect productivity. Net accounting return is measured as Net Income over Book Value of Total Equity. Stock market performance is measured using Total Shareholder Return (the difference between natural logarithm of the return index at year end compared to the natural logarithm of

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the return index at prior year end), annual Abnormal Return (calculated as the cumulated daily abnormal returns) and Dividend Yield (calculated as dividend paid over total market value of equity at year end).

Although Philips was technologically superior, the 1970s were a difficult time, as competition from Asia entered Philips' markets. Many of Philips' smaller, less-profitable factories were closed when larger to create more efficient units. Philips also continued its innovative efforts in recording, transmitting, and reproducing television pictures. Competition from Japanese firms with more efficient production intensified. Philips' restructuring could be characterized as rationalization without forced layoffs. In its communications to the market, Philips did not mention M&A explicitly as part of its strategy.

When Van Riemsdijk became CEO, Philips did not have a track record of deploying acquisitions or alliances to achieve its strategic goals. The number of events is limited, and there is no mentioning of the role of corporate restructuring in achieving Philips strategic goals. We find 29 qualifying announcements, 8 of which related to acquisitions, 5 related to divestitures and 16 are related to alliances and joint ventures. The average CAR generated in this period was -0.07, which results in a total shareholder wealth loss of € 386 million for this period. Acquisitions accounted for an average CAR of -0.016, or a wealth loss of € 244 million. Joint ventures and alliances accounted for an average CAR of -0.006, or a wealth loss of € 208 million. Divestitures and sell-offs accounted for an average CAR of +0.006, or a wealth gain of € 66 million.

3.5.2 Rodenburg (1977-1981)

In the period 1977-1981 the book value of total assets decreased with 11.4%, and the workforce was reduced with almost 36,000 employees (or 9.3%). The market value of equity decreased with € 529 million (or 24.8%). And, although the inflation adjusted Sales per fte increased from € 73,000 to € 89,000 per fte, inflation adjusted EBITDA was stable at € 8,000 per fte. The relative investment in capital expenditure for the period is 0.025 on average per year. During Rodenburg's tenure, the relative investments in research and development were on average 0.069 per year.

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Net accounting return decreased to an average of 0.041 per year, ranging from 0.024 to 0.058. Total shareholder return for this period was negative, with -0.052 on average per year, ranging from -0.35 to +0.305. Abnormal Returns for this period were -0.020 on average per year, ranging from -0.129 to +0.115.

Rodenburg's communication with the financial markets focused on Philips' need to reorganize and streamline its operations in the light of the intense Japanese competition. In doing so, he defined a key role for technology for Philips to achieve its financial goals. Philips strategy was aimed at gaining traction in the area of professional products, e.g. computers, defense-systems, and telecommunication. As Japanese companies, with their large, automated plants, flooded the market with inexpensive consumer electronics, Philips, with factories scattered throughout Europe and rising labor costs, saw its market share continue to decline. In 1980, Consumer Electronics was largely restructured. This is generally regarded as Philips' first reorganization, including lay-offs. In market analyses, it was recognized that Philips actively deployed acquisitions and divestments in order to strengthen certain business lines and eliminate others.

As before, the period of Rodenburg only has a limited number of events. We find a total of 21 qualifying announcements, 8 of which related to acquisitions, 7 related to divestitures and sell offs and 6 related to alliances and joint ventures. The average CAR generated in this period was -0.007, corresponding with a shareholder wealth loss of € 182 million. Acquisitions accounted for an average CAR of -0.004, or a wealth loss of € 67 million. Joint ventures and alliances accounted for an average CAR of -0.011 or a wealth loss of € 63 million. Divestitures and sell offs accounted for an average CAR of -0.007, or a wealth loss of € 52 million.

3.5.3 Dekker (1982-1986)

In the period 1982-1986 the book value of total assets increased with 7.4%, and the workforce increased with 8,000 fte's (or 2.4%). The market value of equity significantly increased with € 3.7 billion (or almost 200%). Sales per fte (after adjusting for inflation) increased from € 88,000 to € 101,000 per fte, and inflation adjusted EBITDA shows strong increase from € 8,000 to € 12,000 per fte. The relative investment in capital

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expenditure for the period was 0.013 on average per year. During his tenure, the relative investments were on average 0.073 per year.

Net accounting return in this period more than doubles and increased to an average of 0.052 per year, ranging from 0.029 to 0.065. Total shareholder return for this period was 0.176 on average per year, ranging from -0.345 to +0.482. Abnormal returns for this period were 0.064 on average per year, ranging from -0.041 to +0.125.

Contrary to his predecessors, Dekker had a commercial background with a more than solid international track record. Before Dekker became CEO, Philips traditionally insisted on technological autarky. This strategy supported growth into a multibillion electronics firm, among the biggest in the world. However, this strategy also required heavy spending in R&D (Philips had the world third largest R&D budget only after IBM and AT&T). Using many of his business relations with Asian, US and European partners, Dekker deployed a strategy of concluding joint ventures to share R&D efforts so as to reduce Philips' own R&D spending. This change in strategy took place in 1984, when Dekker was 2 years in office.

Wisse Dekker was very active in public relations and was also known as 'the great communicator'. He frequently communicated about this change in strategy to the financial markets in interviews, in analyst and shareholder meetings and through publications, such as the annual report. The importance of Philips share value for management increased with the issuance of bonus shares (1982) and share options (1986) to Philips' management. Dekker saw acquisitions and joint ventures as a means to concentrate the firm's resources on its most profitable and fastest growing product lines. Frequent communication with press, analysts and shareholders on M&A became an integral part of Philips' communication strategy.

Although we only registered a limited number of events (33 in total), the rise of the number of alliances and joint ventures (21) is remarkable compared to the number of acquisitions (8) and divestitures and sell offs (4). The average CAR around the transactions was -0.008, corresponds with a shareholder wealth loss of € 1,399 million. Acquisitions accounted for an average CAR of 0.003, or a wealth gain of € 37 million. Joint ventures and alliances accounted for an average CAR of -0.011, or a wealth loss of

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€ 1,209 million. Divestitures and sell offs accounted for an average CAR of -0.013, or a wealth loss of € 227 million.

3.5.4 Van Der Klugt (1986-1990)

In the period 1986-1990 the book value of total assets initially increased, but started to decrease from its high of € 34 billion in 1989 to € 31.5 billion in 1990. The workforce decreased with more than 71,000 employees (or 20.7%). The market value of equity decreased with € 1.7 billion (or almost 30%). Sales per fte (after adjusting for inflation) increased from € 101,000 to € 125,000 per fte, but inflation adjusted EBITDA plummeted particularly in 1990 to € 3,000 per fte. Relative investments in capital expenditure amounted 0.006 on average per year. In the period Van Der Klugt, the relative investments in research and development amounted to 0.085 on average per year.

Net accounting return in this period declined to -0.025 on average per year, ranging from -0.402 to 0.098. Total shareholder return for this period was -21.5% on average per year, ranging from -85.0% to +37.0%. Abnormal Returns for this period were -4.2% on average per year, ranging from -27.5% to +21.3%.

When Van Der Klugt became president, he publicly stated to continue his predecessors focus on returns and to improve efficiency and to continue his predecessors' policy of concluding alliances (to improve Philips' position in various markets or to share development efforts). Van Der Klugt continued to seek acquisitions and joint ventures to improve the firm's market position. He sold many units and divisions in an attempt to restore Philips' results and to compensate earnings suffering from strong price decline caused by devaluation of the dollar and the yen. In addition to the listing at the Amsterdam Stock Exchange, a second listing at the New York Stock exchange is obtained in 1987, while in the same year a seasoned equity offering (€ 440 million) is placed.

The importance of Philips share value for management further increases with the incorporation of an annual share options program (1986, 1989 and further) to Philips' management. Towards the end of 1989 and the beginning of 1990, earnings were falling dramatically. Effects from cost reduction measures did not materialize, as operational results were suffering badly from a weakening dollar and weak operational performance

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in almost all the Philips divisions. However, towards external stakeholders and towards shareholders Van Der Klugt continued to paint a rosy picture claiming that the firm was still on track. With the release of the plummeting 1989 results in May 1990, he lost his credibility and was forced to step down by Dekker. With the growing importance of the capital market for Philips, frequent communication towards press, analysts and shareholders on M&A became an integral part of Philips' communication strategy.

We see a strong increase of qualifying events (to 74 in total) with a further growth of the number of alliances and divestitures (38) compared to the number of acquisitions (13) and divestitures and sell offs (23). The average CAR generated was negligible (0.000, corresponding with a shareholder wealth loss of € 70 million). Acquisitions accounted for an average CAR of 0.028, or a wealth gain of € 1.587 million. Joint ventures and alliances accounted for an average CAR of 0.010, or a wealth gain of € 1.525 million. Divestitures and sell-offs accounted for an average CAR of 0.001, or a wealth loss of € 26 million.

3.5.5 Timmer (1990-1996)

In the period 1990-1996 the book value of total assets initially declined from € 31.5 billion in 1990 to € 25.6 billion in 1993. From its low in 1993, asset book value increases to € 28.5 billion in 1996. The workforce is reduced with some 22,000 employees (or 8.2%). The market value of equity strongly increased with € 5.6 billion (or almost 142%) from € 3.9 billion in 1990 to € 9.5 billion in 1996. Sales per fte (after adjusting for inflation) over the period increased to € 132,000 per fte on average, and inflation adjusted EBITDA per fte returned to earlier levels of € 11,000-14,000 per fte. Relative investments in capital expenditure (measured in relation to total assets) for this period amounts -0.010 on average per year. The investments in research and development (measured in relation to total assets) amount to 0.077 on average per year.

Net accounting return improved to 0.08 on average per year, ranging from -0.088 to 0.173. Total shareholder return for this period was 0.206 on average per year, ranging from -0.399 to +0.714. Abnormal Returns for this period were -0.54 on average per year, ranging from -0.217 to +0.111.

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Within Philips, Timmer had gained a strong reputation of restoring profitability in distressed business lines. He was appointed almost 18 months ahead of plan, due to the early resignation of Van Der Klugt. The day after which he was formally appointed CEO, he immediately launched his famous reorganization plan, which made him very popular with the press and the financial markets. During his tenure more than 50.000 people were laid off. Restructuring of this magnitude was until then unknown in the Netherlands and because of this he was given many nick-names such as ‘the butcher’, ‘the killer’ and ‘the hurricane’. Nonetheless, he personally did not feel bad about it. His restructuring, also known as ‘operation centurion’, was successful and changed the mindset of Philips employees for the better. Timmer communicated openly about the state the firm was in, therewith creating a platform for the actions that he deemed necessary. He announced his plans to cut in certain R&D (semi-conductor and computers). He initiated R&D projects to develop high-value, software-rich products and services, and concluded R&D contracts with universities and institutions. He launched new alliances (with Nintendo to develop CD-based video games, with Motorola to produce video circuits) and he sold most of Philips' computer business, Magnavox, and the stake in Whirlpool and Matsushita. The increased emphasis on R&D hardly paid off, with high profile failures CD-i, DCC, HDTV.

Timmer frequently communicated with analysts and other financial market intermediaries about his strategic intentions. In the first three years of his CEO tenure, Timmer made another unprecedented move: he withheld all dividend payments. Timmer recognized the need to professionalize the Investor Relations function. In 1994, the Philips annual report for the first time refers to the existence of a separate Investor Relations Department.

The number of qualifying events more than doubled compared to the previous period, to 181 announcements. The effect of a higher number of events can partly be attributed to the length of Timmer’s tenure of more than 6 years. In total, 44 announcements are related to acquisitions, 84 to divestitures and sell offs and 53 are related to alliances and joint ventures. The average CAR generated in this period was 0.002, which adds up to a shareholder wealth gain of € 1.299 million. Acquisitions accounted for an average CAR of 0.003, or a wealth gain of € 881 million. Joint ventures

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and alliances accounted for an average CAR of 0.001, or a wealth gain of € 61 million. Divestitures and sell offs accounted for an average CAR of 0.003, or a wealth gain of € 357 million.

3.5.6 Boonstra (1996-2001)

In the period 1996-2001 the book value of total assets increased steeply with € 9.9 billion (or 34.7%), from € 28.5 billion to € 38.4 billion. The workforce is reduced with some 60,900 employees (or 24.3%). The market value of equity increased very strongly. It initially increased with more than € 52 billion from € 9.5 to € 61.9 billion. However, in the subsequent year 2001 the market value of equity declined with more than € 20 billion (or 33%). Sales per fte (after adjusting for inflation) increased from € 124,000 to € 174,000 per fte, and inflation adjusted EBITDA per fte for the period increased slightly to € 15,000 per fte on average. Relative investments in capital expenditure amounts to 0.004 on average per year. Investments in research and development amounted to 0.075 on average per year.

Net accounting return strongly improved to 0.149 on average per year, ranging from -0.282 to 0.478. Total shareholder return for this period was 0.26 on average per year, ranging from -0.156 to +0.827. Abnormal Returns for this period were -0.026 on average per year, ranging from -0.281% to +0.206%.

When Boonstra became CEO, the financial markets were very positive about his assignment. His tough Anglo Saxon management style, his focus on shareholder value and his open contest of the Philips culture caused that analysts and other financial markets intermediaries reported positively. He clearly set the firm priority on profitability, announcing that only after restoring profitability, other strategic matters would be dealt with. He also almost immediately announced to cut activities with no or little chance to profitability – therewith indirectly unwinding some of the initiatives of Timmer. With his main focus to improve profitability, cost reductions were an important theme. He paid attention to the firm's culture, attempting to improve its aggressiveness and responsiveness, while reducing bureaucracy and improving accountability. Strategically, Boonstra focused on limitation of activities and technologies in which he wanted Philips to be leading. He aimed at mass products for the consumer electronics

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market. The divestiture of the largest music company in the world, Polygram, is a consequence of this strategy.

When communicating to shareholders and analysts, Boonstra categorically declined talking about his strategic intentions. Initially, he postponed his financial market communication on the firm's strategy for several times. Ultimately, when a strategy update became unavoidable, he claimed that the strategy had formed itself in practise. With the press corps and business media, he was heavily criticized for his lack of strategic vision and his unwillingness to communicate about matters pertaining to strategy. The market openly credited him for his cost reduction and rationalization efforts, but after two years at the helm of the company the market questioned his skills to create value with Philips.

The number of qualifying events was significantly lower than in the prior period, with 113 announcements. In total, 19 announcements were related to acquisitions, 73 to divestitures and sell-offs and 21 were related to alliances and joint ventures. The average CAR generated in this period was 0.005, or a shareholder wealth loss of € 14.8 billion. Acquisitions accounted for an average CAR of 0.011%, or a wealth gain of € 5.4 billion. Joint ventures and alliances accounted for an average CAR of -0.003, or a wealth loss of € 558 million. Divestitures and sell offs accounted for an average CAR of 0.010, or a staggering wealth loss of € 19.6 billion.

3.5.7 Overview

With the exception of Timmer, all CEO's have generated shareholder wealth losses around their strategic restructuring announcements (Table 3.2, Panel B). Measured in euro terms, Boonstra accounted for the highest shareholder wealth loss, generating a total loss of Euro 19.6 billion upon divestiture and sell off announcements. Remarkably, he also accounted for the largest wealth gain of Euro 5.4 billion on acquisition announcements (Table 3.3 and figure 3.2). In summary, restructuring announcements with the highest shareholder wealth effects have incurred in the second half of the 1990s.

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Panel A: Averages				
	Average CAR [-3,3] per CEO			
	ACQ. (N)	JV/ALL (N)	DIV. (N)	Totaal per CEO (N)
van Riemsdijk	-0.016 (8)	-0.006 (16)	0.006 (5)	-0.007 (29)
Rodenburg	-0.004 (8)	-0.011 (6)	-0.007 (7)	-0.007 (21)
Dekker	0.003 (8)	-0.011 (21)	-0.013 (4)	-0.008 (33)
van der Klugt	-0.028 (13)	0.010 (38)	0.001 (23)	0.000 (74)
Timmer	0.003 (44)	0.001 (53)	0.003 (84)	0.002 (181)
Boonstra	0.011 (19)	-0.003 (21)	-0.010 (73)	-0.005 (113)
Total	(100)	(155)	(196)	(451)

Panel B: Totals				
	Total CAR [-3,3] per CEO			
	ACQ. (N)	JV/ALL (N)	DIV. (N)	Totaal per CEO (N)
van Riemsdijk	-0.130 (8)	-0.100 (16)	0.032 (5)	-0.198 (29)
Rodenburg	-0.031 (8)	-0.068 (6)	-0.048 (7)	-0.147 (21)
Dekker	0.025 (8)	-0.227 (21)	-0.050 (4)	-0.252 (33)
van der Klugt	-0.365 (13)	0.369 (38)	0.020 (23)	0.024 (74)
Timmer	0.121 (44)	0.035 (53)	0.281 (84)	0.438 (181)
Boonstra	0.209 (19)	-0.059 (21)	-0.738 (73)	-0.588 (113)
Total	(100)	(155)	(196)	(451)

	Total CAR [-3,3] in Euro mln. per CEO			
	ACQ. (N)	JV/ALL (N)	DIV. (N)	Totaal per CEO (N)
van Riemsdijk	-244 (8)	-208 (16)	66 (5)	-386 (29)
Rodenburg	-67 (8)	-63 (6)	-52 (7)	-182 (21)
Dekker	37 (8)	-1,209 (21)	-227 (4)	-1,399 (33)
van der Klugt	-1,570 (13)	1,525 (38)	-26 (23)	-70 (74)
Timmer	881 (44)	61 (53)	357 (84)	1,299 (181)
Boonstra	5,377 (19)	-558 (21)	-19,611 (73)	-14,792 (113)
Total	4,415 (100)	-452 (155)	-19,493 (196)	-15,530 (451)

Table 3.3: Shareholder wealth effects around restructuring announcements

This table presents shareholder wealth effects around restructuring announcements per CEO. Shareholder wealth effects are calculated as cumulative abnormal return (CAR) around the announcement date. Panel A presents the average CAR per announcement type for each CEO. Panel B presents total CAR per announcement type for each CEO both in percentages and in Euro terms.

Panel A			
Events with largest positive shareholder wealth effects (either in euro terms or in % in chronological order)			
Event Date	CEO	Announcement	CAR in % CAR in € mln.
11/17/1990	Timmer	intention to sell all Dutch Installation and Services activities to Stork	0.15 377
11/20/1990	Timmer	alliance with Japanese company Ricoh for the production of fax machines	0.13 354
11/11/1992	Timmer	joint venture for production of NiCad batteries with Japanese competitor Matsushita	0.14 370
01-15-1993	Timmer	sale of 35% interest in the Joint venture MEC with Matsushita	0.12 438
4/22/1998	Boonstra	sale of Optoelectronics which concerned about 300 employees	0.25 7,347
12/4/1998	Boonstra	sale of PCB factory in Best which concerned about 200 employees	0.12 2,387
5/11/1999	Boonstra	cash bid of Euro 54 million for US company VCS Voice Systems	0.12 3,687
1/13/2000	Boonstra	launch of first large scale E-commerce alliance with RABO Bank	0.13 6,480
2/22/2000	Boonstra	completion of sale of worldwide project management activities generating about eur 300 million of annual revenue	0.13 8,349
6/22/2000	Boonstra	acquisition of US chips production facility with about 950 employees for the Semiconductors business line	0.04 2,555
8/23/2000	Boonstra	acquisition of US company Optiva (domestic appliances) with about 600 employees	0.05 3,701
8/29/2000	Boonstra	acquisition of IT firm Origen in the Netherlands	0.09 6,153
12/5/2000	Boonstra	sale of worldwide media activities with about 1050 employees	0.14 7,987

Panel B			
Events with largest negative shareholder wealth effects (either in euro terms or in % in chronological order)			
Event Date	CEO	Announcement	CAR in % CAR in € mln.
5/3/1990	van der Klugt	acquisition 25% interest in Bang&Olufsson (Denmark) for euro 45 million	-0.16 -692
7/7/1990	Timmer	acquisition of controlling interest in BTS (Germany)	-0.10 -363
2/24/1993	Timmer	increasing cooperation with Grundig (Germany) as a result of which the Grundig losses will be consolidated for 100%	-0.13 -415
11/13/1997	Boonstra	announcement of alliance with Japanese competitor NEC for the Semiconductors business line	-0.12 -2,634
9/15/1998	Boonstra	worldwide large scale sale of component factories which concerned about 4000 employees	-0.14 -2,526
4/1/2000	Boonstra	announcement of the intention to sell the remaining 24% stake in ASML (the Netherlands)	-0.11 -6,582
5/4/2000	Boonstra	worldwide sale of component factories which concerned about 3200 employees	-0.06 -4,122
5/5/2000	Boonstra	partial sale (in fact an equity carve out) of the components producer EMT in the Netherlands which concerned about 1000 employees	-0.06 -4,165
6/8/2000	Boonstra	final announcement of closing the sale of 16% in ASML for an amount of euro 3 billion	-0.07 -4,914
6/30/2000	Boonstra	acquisition of a 60% stake in Medquist (US) for an amount of euro 1,1 billion	-0.08 -5,761
10/6/2000	Boonstra	sale of (mass) production facilities located in the Netherlands which concerned about 550 employees	-0.11 -6,411
12/22/2000	Boonstra	acquisition of a 16% stake in South Korean company LG Electronics for euro 505 million	-0.07 -3,474
3/28/2001	Boonstra	alliance with Tooltex (in the Netherlands) for joint development of DVD/CD production facilities	-0.12 -4,893
3/30/2001	Boonstra	intention to sell all worldwide activities of the mobile telecom division (considered non core)	-0.08 -3,410

Table 3.4: Restructuring announcements with the largest shareholder wealth effects

Table 3.4 presents the restructuring announcements with the largest shareholder wealth effects measured in percentages and in Euro terms. Panel A presents the restructuring announcements with the largest positive shareholder wealth effects. Panel B presents the restructuring announcements with the largest negative shareholder wealth effects.

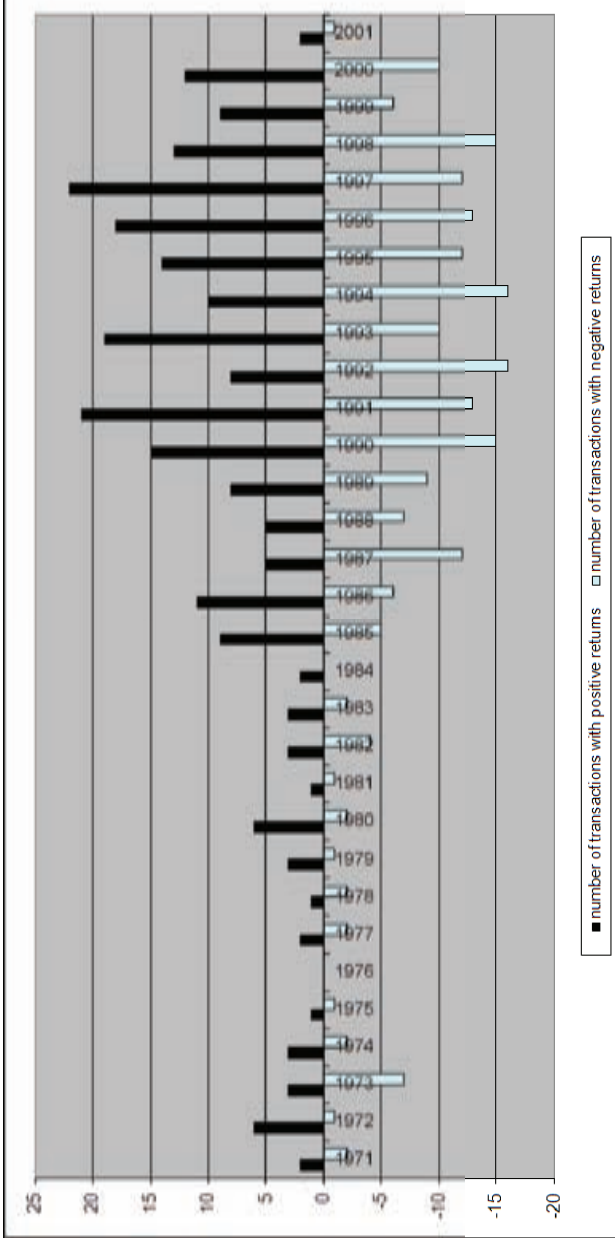


Figure 3.2: Number of transactions with positive and negative shareholder wealth effects

Figure 3.2 shows the number of transactions with positive shareholder wealth effects and the number of transactions with negative shareholder wealth effects per year. Transactions include acquisitions, joint-ventures, alliances, divestments, management buy outs and spin offs. Shareholder wealth effects are measured using cumulative abnormal returns in a seven day window around the announcement date, based on the market model as in MacKinley (1997).

3.6 Philips' financial reporting and annual report disclosure

The combination of increasingly fierce Japanese competition, decentralized (and hence expensive) local production, strong reduction in product life cycles and volatile foreign currency movements put a heavy strain on firm profitability. Under these circumstances, so as not to lose confidence from the investor community, Philips management was in constant search for accounting policies that would show the highest profit in the particular situation (Brink, 1992).

In the period 1971-2001, three main changes of Philips financial reporting can be distinguished (Volmer, 2007). First, under Van Riemsdijk and Rodenburg, Philips charges reduction in share values resulting from technological progress to the revaluation account in the balance sheet rather than to the profit and loss account. Deferred taxation relating to revaluations is treated similarly. Second, under Rodenburg, Dekker and Van Der Klugt, Philips' uses a variety of accounting techniques such as crediting a gearing adjustment¹³ to income, creating a tax expense for deferred tax on realized revaluations, charging exchange gains and losses to equity rather than the profit and loss account, calculating fixed provisions for risks of obsolescence and bad debt at the level of risk estimated at year end¹⁴, adjusting goodwill directly to equity, calculating pension plan costs based on future wage trends and expected rate of returns of pension assets. Finally, under Timmer and Boonstra, Philips abolishes current value accounting¹⁵. This accounting change is barely motivated in Philips annual report which merely states that "one of the reasons to return to historical cost valuation is to improve the communication with shareholders" (Philips annual report, 1992, p.26). Dutch financial press reacts lukewarm, stating "In an accounting technical sense, all this can be regarded as a step backwards. But when it all becomes so complex that only a specialist can understand it, then it can be said that they have missed their objective. And the less perfect but more understandable method used now should be preferred primarily because it increases

¹³ realized revaluation surplus on assets financed by non-equity

¹⁴ the silent reserve is abolished

¹⁵ in line with a move to US GAAP

comparability with other companies'. (Het Financieele Dagblad, 1992, p.3, from Schattke and Vergoossen, 1996).

Philips' accounting was renowned for its technical sophistication, and its annual report won the Dutch Sijthoff price for the best annual report frequently (1954, 1959, 1971, 1986, 1998 and 2005. This is more than any other firm and is an impressive sequence, given that a winner is excluded for the next five years.). However, many changes in Philips' accounting principles were driven by the wish to skim profits in periods of prosperity and enhance it in periods of decline. Consequently, there is no statistical correlation between Philips' reported net income and operating cash flow (Volmer, 2007). Analysts had difficulty interpreting the effects of the accounting changes and the arbitrary use of restructuring charges (Schattke and Vergoossen, 1996). Schattke and Vergoossen (1996) conclude that Philips' financial reporting blurred the potentially adverse effect of the firms' economic conditions.

To examine Philips' voluntary disclosure in annual reports we construct an index based on Botosan (1997). We describe a disclosure index (DSCORE) based on the information Philips provide in its annual reports to the shareholders. Although the annual report is only one means of corporate reporting, it should serve as a good proxy for the level of voluntary disclosure provided by Philips across all means of disclosure. This is because annual report disclosure levels are positively correlated with the amount of disclosure provided via other media (Lang and Lundholm, 1993).

When we compare 30 years of firm disclosure in the Annual Reports, the disclosure score (DSCORE) of the Philips Annual Reports show a remarkable pattern (table 3.5). From the early seventies to the mid-1980s we see a continuous increase in disclosure. From the mid-1980s to the early 1990s we see a strong decline. From the early 1990s till 2000, with the exception of the year 1995, the disclosure level remains lower than that in the early 1980s. DSCORE visualizes that Philips' level of voluntary disclosure was relatively high in the 1980s but has deteriorated in the second half of the 1990s. This is not in line with what we expected to find, taking into account that while capital markets were booming to unprecedented highs in the 1990s, the importance of a firm's financial reputation was widely recognized (Dolphin, 2004). Earlier research found that firms coordinate their disclosure policies across different media. Lang and Lundholm (1993)

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document a significant correlation between annual report and investor relations disclosure rankings. This suggests that a measure of disclosure level produced by examining one aspect of corporate reporting could proxy for the general level of disclosure provided by a firm.

Year	DSCORE	annual report number of pages	Year	DSCORE	annual report number of pages
1971	0.40	48	1987	0.50	101
1972	0.40	48	1988	0.47	98
1973	0.37	48	1989	0.50	99
1974	0.37	48	1990	0.53	72
1975	0.37	48	1991	0.60	81
1976	0.43	56	1992	0.57	76
1977	0.47	60	1993	0.40	76
1978	0.53	64	1994	0.47	84
1979	0.57	64	1995	0.67	88
1980	0.57	60	1996	0.47	96
1981	0.60	68	1997	0.50	120
1982	0.60	88	1998	0.37	144
1983	0.70	88	1999	0.50	172
1984	0.60	108	2000	0.43	171
1985	0.57	100	2001	0.53	186
1986	0.47	100			

Table 3.5: DSCORE Rating (Botosan 1997) and annual report

This table presents Philips’ DSCORE rating, based on the index developed by Botosan (1997) measuring Philips disclosure in its annual report per year. The original items by Botosan (1997) are adjusted to measure voluntary disclosure by leaving out the legally required financial analysis items since these do not contribute to a measure of voluntary disclose. The items “8 quarters financial information” are excluded and replaced with “10 years historical financial information”. The reason for this change is to allow more insight into the long-term cyclical nature of Philips business and to take out the short term quarterly focus, which seems less relevant in our research covering thirty years. Four additional items based on Aksu and Kosedag (2006) are included, called “description of share classes”, “description of voting rights”, “segment analysis”, and “discussion of corporate strategy”.

In summary, Philips’ communication with the financial markets used accounting techniques and other financial information to explain its performance retroactively. The complexity of the techniques used, and the frequent changes in accounting methods applied, caused that Philips accounting and financial information in its annual reports fell short of revealing the true state the company was in. The level of voluntary disclosure in

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the annual reports declines from the mid-1980s and further deteriorates in the second half of the 1990s.

Next, Philips' investor relations efforts and its appreciation by the financial market participants are examined to investigate patterns over time.

3.7 Financial markets' appreciation of Philips' Investor Relations

Analyzing the shareholder value effects of major restructuring announcements, a remarkable pattern emerges. The transactions with the biggest value implications for the Philips shareholders have been conducted in the last decade of our period of research (Table 3.3 and figure 3.2). More in particular in the second half of the 1990s.

A closer look is taken at the appreciation of Philips' investor relations activities. The weighted average of IR ratings for Philips is significantly below the rating for the main companies in the Amsterdam index, for the years 1996, 1997, 1998 and 1999 (Table 3.6). For the years 1994, 1995, 2000 and 2001 the weighted average of IR ratings for Philips is equal to or higher than the rating for the main companies in the Amsterdam index.

Year	Philips breakdown in types of respondents				Philips weighted average	Major companies weighted average
	public	analysts	press	portfolio managers		
1994	6.86	6.96	6.39	7.20	6.96	6.96
1995	7.71	7.49	7.07	7.02	7.26	6.98
1996	6.21	6.20	6.18	6.00	6.12	6.91
1997	7.00	7.08	6.63	7.00	6.97	6.98
1998	6.81	6.94	6.43	6.70	6.75	6.92
1999	6.60	6.68	5.99	6.46	6.48	6.79
2000	7.20	7.34	6.78	7.33	7.24	6.84
2001	6.27	6.88	6.81	6.62	6.70	6.69

Table 3.6: Investor Relations Rating (Rematch)

Table 3.6 presents the appreciation of Philips' investor relations by financial market participant group. A comparison is made with the weighted average for all major companies. The relative weights are from Rematch and reflect investor relations users (40% for portfolio managers, 35% for analysts, 15% for press and 10% for public). Major companies are all major companies that were part of the AEX index throughout

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the entire period 1994-2001, and are ABNAMRO, AEGON, Ahold, AkoNobel, DSM, ReedElsevier, Heineken, ING, KoninklijkeOlie, Philips, Unilever, Versatel, VNU and WoltersKluwer.

Financial market appreciation of Philips' investor relations activities over the years is highly volatile and diminishes in our reference period. In 1995 Philips investor relations efforts are rated positively, Philips is mentioned among the companies positively distinguishing themselves with respect to investor relations criteria credibility, clarity, disclosure and timeliness and Philips even wins the Investor Relations Award. As from 1996 appreciation of investor relations activities diminishes. In 1997 the lack of clarity on the new strategic direction is reflected in diminishing investor appreciation of the investor relation activities as Rematch reports "that the quest for a new company strategy is mirrored in negative connotations for clarity and openness". Appreciation for Philips' annual report diminishes and is even said to distinguish itself negatively from the other Dutch publicly quoted companies. In 1997 Rematch reports that over time Philips is the company with the highest IR-volatility. In 1998 Rematch reports 'disturbing signals': the company is mentioned both positively and negatively with respect to the different investor relations criteria. Initial appreciation for Boonstra when he became CEO diminishes in the subsequent years. In 2001, Boonstra was heavily criticized as a bad performer in terms of making a positive contribution to the firm's image, for which he receives a 'red' card.

In addition to Philips' investor relations rating, Philips' annual report ratings are relevant. In the period 1970-2001 Rematch has rated the appreciation of Philips annual report twice, in 1996 and in 2001. In 1996, the Philips annual report (with 6.9) was rated well below the rating for the main companies (7.24). In 2001, the Philips annual report (with 7.35) was rated significantly better than the rating for the main companies.

In summary, as voluntary disclosure diminishes in the second half of the 1990s, the financial market's appreciation of Philips' investor relations is volatile and strongly decreases towards the end of the 1990s. Next, the financial markets' perception of Philips' disclosure and share trading volumes in this period is investigated.

3.8 Financial markets perception and trading volumes

For 1990-2001, the number of analysts following Philips are analyzed and the dispersion and variability of their forecasts. This is a proxy for the financial markets perception of Philips' disclosure practice. There is a positive causal relationship between a firm's disclosure practices and the number of analysts following and their forecast accuracy. (Lang and Lundholm, 1996). There is also positive causal relationship between a firms' investor relation activity, the number of analysts following, and the firm's book-to-price ratio (Bushee and Miller, 2005). Firms can attract analysts, improve the accuracy of their forecasts, reduce information asymmetries and limit market surprises by adopting more helpful disclosure practices. Our finding of diminishing financial market appreciation of Philips' investor relations activities and diminishing Philips' disclosure practices, suggests that we should find a decreasing number of analysts following Philips and an increasing variability and dispersion of their forecasts. We would expect to find these effects in the second half of the 1990s.

In the firm's analyst following pattern we note that after an initial increase the number of analysts following Philips remains stable for a number of years. We note a sharp decrease in 1998 (Table 3.7, panel A). This period coincides with the third year in office of Cor Boonstra , and hints at decreasing investor relations activity (Bushee and Miller, 2005). This period coincides with the period in which Boonstra persists in his reluctance to reveal a new corporate strategic direction and consciously avoids communicating about it.

Analyst forecast variability and dispersion serve as a proxy for information asymmetry. We measure the average EPS forecasts, deflated by share price (Bamber, 1986), per year to allow longitudinal comparison. We calculate the annual standard deviation to identify changes over time. Due to the deflation effect with a very significant increase in share-price this comparison only provides very low average standard deviations per year, from which we draw no conclusions (Table 3.7, panel A). Next, we investigate the development of the standard deviation of EPS forecasts (undeflated) per month for the period 1990-2001 (Table 3.7, panel B). We exclude 1990 where in particular in the second half year large accounting measures made forecasting

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by analysts exceptionally challenging. The analysis reveals an upward trend in average monthly standard deviation in the period 1995-2001 and a sharp increase in 2000 and 2001. Both are a reflection increasing information asymmetry.

Share trading volumes (Table 3.7, panel A) have a significant positive correlation with the absolute value of unexpected earnings (Bamber, 1986). The development of the liquidity of Philips share shows that liquidity increases dramatically in the period 1995-2000. The standard deviation for Philips for this period is 0.02-0.03. The increase of the Philips' liquidity metric over the years confirms that the financial markets reacting to Philips' unexpected dissemination of information in the period 1995-2000. This result is in line with Bamber (1986).

In summary, in the 1990s a decreasing number of analysts follow Philips, and the forecast variability and dispersion increases. Share trading volumes increase too. In this period the appreciation of the financial markets of Philips' investor relations declines strongly.

Panel A Trading Volumes, EPS (deflated) forecast and analyst following

Year	Trading volumes			EPS forecast			NAL
	mean	median	deviation	mean	median	deviation	
1990	1.17%	1.01%	0.79%	0.11	0.11	0.04	19
1991	1.26%	1.02%	0.84%	0.07	0.07	0.02	31
1992	1.51%	1.13%	1.77%	0.09	0.10	0.04	37
1993	1.69%	1.43%	1.12%	0.13	0.13	0.01	37
1994	1.86%	1.44%	1.45%	0.16	0.16	0.01	37
1995	3.31%	2.59%	3.24%	0.12	0.11	0.01	36
1996	2.75%	2.75%	2.18%	0.11	0.11	0.01	38
1997	2.99%	2.61%	1.88%	0.09	0.09	0.01	37
1998	2.96%	2.70%	1.62%	0.07	0.07	0.01	32
1999	3.16%	3.05%	1.40%	0.06	0.06	0.00	41
2000	2.30%	1.37%	2.08%	0.01	0.01	0.01	35
2001	1.38%	1.30%	0.74%	0.01	0.01	0.01	29

Table 3.7: Panel A, Philips share trading volumes, number of analysts following and their EPS forecast

Panel A presents Philips' share trading volumes applying a volume liquidity metric as in Bamber (1986) defined as percentage of shares traded per day over number of shares outstanding that day. The liquidity metric is calculated on a daily basis and averaged per year. NAL counts the number of analysts providing an annual earnings forecast for Philips. The annual earnings per share (EPS) forecast is measured at year end following Lang and Lundholm (1996), deflated and averaged over the number of analysts (NAL).

Panel B Development of st. deviation of EPS (undeflated) forecast per month

Year	March	April	May	June	July	August	Augst.t.	Oct.	Nov.	Dec.	Jan.	Feb.	Average
1990	0.25	0.24	0.27	0.35	1.35	1.46 #	1.21	1.04	0.90	0.67	0.60	0.81	0.81
1991	0.35	0.34	0.32	0.27	0.25	0.18 #	0.16	0.17	0.17	0.17	0.17	0.17	0.22
1992	0.15	0.13	0.13	0.09	0.20	0.17 #	0.11	0.17	0.22	0.21	0.20	0.16	0.16
1993	0.22	0.27	0.27	0.28	0.31	0.25 #	0.11	0.12	0.10	0.10	0.10	0.10	0.20
1994	0.19	0.18	0.15	0.17	0.16	0.14 #	0.11	0.13	0.11	0.10	0.10	0.10	0.14
1995	0.12	0.12	0.15	0.16	0.16	0.15 #	0.12	0.11	0.10	0.08	0.08	0.12	0.12
1996	0.13	0.11	0.19	0.16	0.16	0.15 #	0.15	0.16	0.27	0.18	0.18	0.17	0.17
1997	0.30	0.31	0.28	0.20	0.19	0.18 #	0.19	0.17	0.14	0.11	0.10	0.20	0.20
1998	0.25	0.28	0.21	0.18	0.20	0.19 #	0.14	0.41	0.37	0.36	0.17	0.24	0.24
1999	0.13	0.10	0.12	0.17	0.18	0.17 #	0.14	0.17	0.14	0.12	0.10	0.14	0.14
2000	0.22	0.24	0.21	0.34	0.36	0.39 #	0.38	0.28	0.26	0.21	0.19	0.29	0.29
2001	0.36	0.39	0.51	0.76	0.72	0.33 #	0.33	0.49	0.52	0.51	0.49	0.48	0.48

Table 3.7: Panel B, Development of the standard deviation of earnings per share forecast over the months

Panel B presents the development of the standard deviation of the analysts' earnings per share (EPS) forecast per month and the average standard deviation for the year.

3.9 Discussion

We formulated our research question as “How do firms adapt their communication about their strategy to changing demands of the financial markets?” In answering this question we investigated Philips in the period 1971-2001.

In our study, the 1990s are interesting from the perspective of the exogenously changing financial markets, and their demands to the firm’s communication requirements. The 1990s are characterized by growing media influence, evidenced by rapidly expanding business media. Both the frequency of news reports and the depth of business news showed important growth in the 1990s. This fuelled an increasingly strong herd instinct among financial market participants. The importance of the investor relations function rose to unprecedented highs, as a direct consequence of the growth of the financial markets and the increased importance for firms to communicate through the business media.

In this period Philips had two CEO’s, Timmer (first half of the 1990s) and Boonstra (second half of the 1990s) each with their own style of communication with the financial markets. Timmer was famous for tough reorganizations, which made him very popular with the press and the financial markets. Timmer communicated openly about his views on the firm, therewith creating a platform for the actions that he deemed necessary. He frequently communicated with analysts and other financial market intermediaries about his strategic intentions and professionalized the Investor Relations function in Philips. With only two years in Philips, CEO Boonstra initially was warmly welcomed by the media for his tough Anglo Saxon management style and his perceived focus on shareholder value. He mainly focused on restoring Philips’ earnings through cost reductions and change of culture. Boonstra narrowed Philips’ strategy aiming at mass products for the consumer electronics market. His divestitures were a consequence of this strategy. However, Boonstra categorically declined talking about his strategic intentions. He first postponed his strategy update to the financial markets. Later on, when a strategy update became unavoidable, he claimed that the strategy had formed itself in practice. Press and business media, heavily criticized Boonstra for his lack of strategic vision and his unwillingness to communicate about strategy. The market openly credited him for his

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cost reduction and rationalization efforts, but the market questioned his skills to create value with Philips.

The financial market appreciation of Philips communication changes in the 1990s. Early 1990s Philips investor relations efforts are rated positively, and Philips is mentioned among the companies positively distinguishing themselves with respect to investor relations criteria credibility, clarity, disclosure and timeliness. Philips even wins the Investor Relations Award. In the second half of the 1990s, the appreciation of Philips Investor Relations activities declines and the lack of clarity on the new strategic direction is reflected in lower appreciation of the investor relation activities. Rematch reports “that the quest for a new company strategy is mirrored in negative connotations for clarity and openness”. Although Philips is known for innovative financial reporting techniques, these techniques are too complex for the market to understand the underlying fundamentals. The appreciation for Philips’ annual report declines and is even said to distinguish itself negatively from the other Dutch publicly quoted companies. In his last year in office, Boonstra is heavily criticized as a bad performer in terms of making a positive contribution to the company’s image, for which he receives a ‘red’ card.

The number of analysts that follow Philips changes during the 1990s. After an initial increase in the 1990s this number remains stable, before it sharply declines in the third year in office of Boonstra. The sharp decline hints at decreasing investor relations activity. In this period Boonstra persists in his reluctance to reveal a new corporate strategic direction and consciously declines communicating about it.

The standard deviation of the monthly analysts EPS forecast shows an upward trend in the 1990s and a particularly sharp increase in 2000 and 2001. Such an increase reflects increasing information asymmetry. Share trading volumes indicate that the liquidity of Philips shares increases dramatically in the second half of the 1990s. This is the reaction of the financial markets to a growing level of unexpected information.

With corporate restructuring in the presidency of Timmer, a shareholder wealth gain was generated, divided over acquisitions, joint ventures and alliances and divestitures. With corporate restructuring in the presidency of Boonstra a huge shareholder wealth loss was generated, particularly attributable to divestitures.

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The answer to our research question is that firms need to adapt their communication to the changing demands of the financial markets to assure that its securities are fairly valued. Shareholder wealth losses around restructuring announcements indicate that Philips was unable to adapt its communication to the exogenously changing demands of the financial markets and was unable to convincingly communicate its strategy in the second half of the 1990s. Increased liquidity, declining investor relations appreciation, decreasing number of analysts following Philips and the increase of the standard deviation of their EPS forecasts provide support to this negative answer to our research question.

3.10 Conclusions

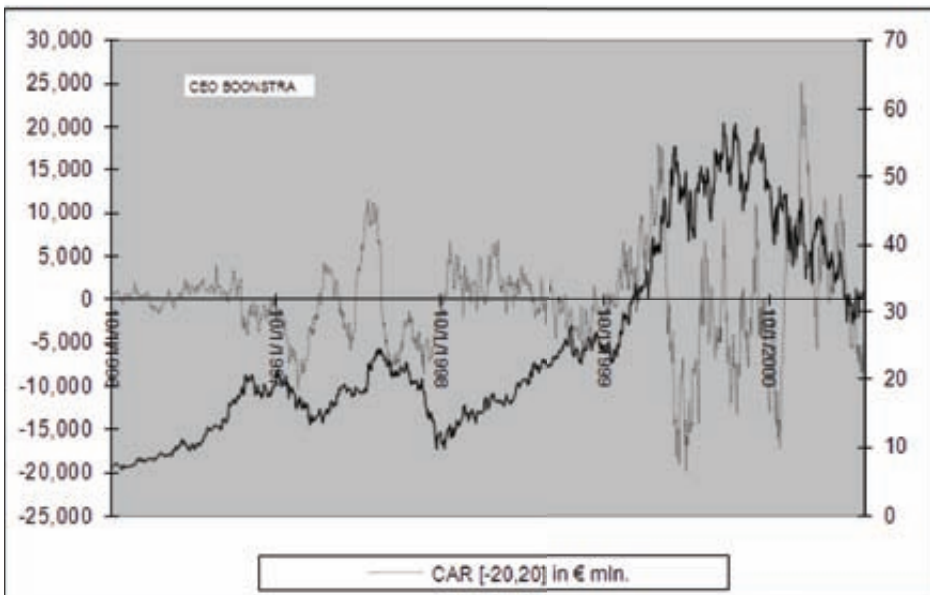
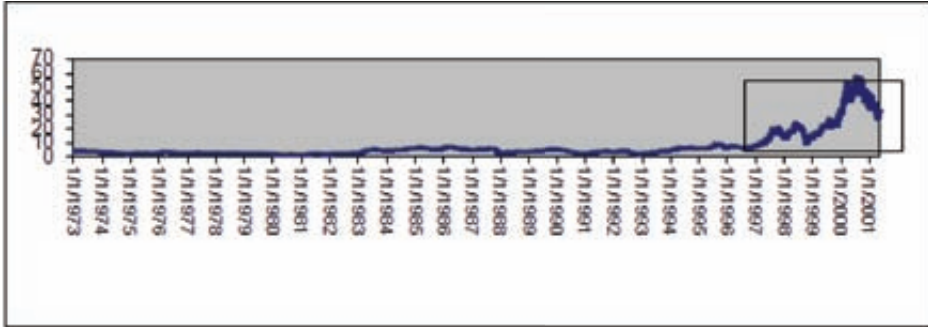
Our aim with this case study is to investigate the relation between communication of a firm's strategy and shareholder wealth creation. We provide insights that empirical studies have not addressed: the value aspects of investor communication around major restructuring announcements. The case of Philips illustrates that financial markets have become increasingly demanding with respect to adequate communication skills and efforts. Especially in the period under Boonstra, Philips has not been able to convincingly communicate its strategic intentions to the market. At the time Boonstra took the helm, financial markets were booming and developing rapidly. In the same period, mass communication through a growing number of business news media fuelled investor appetite for investment information. With his Anglo Saxon background and reputation, the markets expected Boonstra to change Philips' strategy and were eager to learn more about it. But Boonstra failed to convincingly communicate his strategic intentions. In the second half of the 1990s Philips' financial market communication was clearly insufficient to meet the financial market's demand for information. In the absence of a strategic perspective, financial markets could not assess the value of restructuring announcements, and punished the lack of information. Their reaction to such announcements has led to massive shareholder wealth losses in the second half of the 1990s. We conclude that a

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high level of consistent voluntary disclosure and adequate investor relations are key in assuring that the firm and its securities are fairly valued.

Figure 3.3: Development of Philips share price and abnormal returns

Figure 3.2 presents the development of Philips share price cumulative abnormal returns (CAR). The first graph shows the share price development, and the second graph highlights the share price development and development of CAR in the period in which Boonstra was CEO ((1996-2001).



Chapter 4:

Corporate governance and acquisitions

Acquirer Wealth Effects in the Netherlands

4.1 Introduction

This chapter examines acquirer wealth effects around acquisition announcements by Dutch firms. In the Netherlands the market for corporate control is virtually absent. Dutch firms can use several types of defense mechanisms as a protection against hostile takeovers and as a restriction of shareholders' influence. As a result, shielded by defense mechanisms, Dutch managers can exercise more discretion in their corporate investment decisions than their counterparts in Anglo-Saxon countries.

Several studies examine acquirer wealth effects of US firms during the days around their acquisition announcements. The evidence of these studies is mixed. Some studies find zero or positive shareholder returns around acquisition announcements (e.g., Morck, Shleifer and Vishny, 1990; Lang, Stulz and Walkling, 1991; Moeller, Schlingemann and Stulz 2004, 2005; Masulis, Wang and Xie, 2006), whereas other studies find negative returns (e.g., Franks, Harris and Titman, 1991; Mulherin and Boone, 2000; Andrade, Mitchell and Stafford, 2001). When taking the change in dollar value into account, the results of Moeller, Schlingemann and Stulz (2004, 2005) suggest that overall shareholders lose money. In the 1980s shareholders lost a total of \$7 billion, while in the period 1991-2001 the loss amounts to \$216 billion. Strikingly, in 1998-2001 period dollar returns add up to a loss of \$240 billion, which is mainly the result of a small number of large losses by firms with high market valuations. The acquisition literature knows a few studies on shareholder wealth effects of European acquiring firms. The studies on European acquisitions find on average positive shareholder returns for acquiring firms (Goergen and Renneboog, 2004; Martynova and Renneboog, 2006).

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Even though several studies find on average positive returns around acquisition announcements, the percentage of shareholders experiencing negative returns is still high. A widely proposed explanation for the negative shareholder returns is agency problems as a result of the separation between ownership and control (Berle and Means, 1932; Jensen and Meckling, 1976). Managers rather make non-value maximizing acquisitions to build their empire than pay out excess cash to shareholders (Jensen, 1986). In other words, by pursuing their own objectives and thereby increasing their own utility rather than maximizing shareholders' wealth, managers invest beyond the optimal size. A possible consequence of this overinvestment problem is that managers overpay for targets that provide private benefits (Morck, Shleifer and Vishny, 1990), such as entrenchment benefits (Shleifer and Vishny, 1989), which result in negative returns for the acquiring firm's shareholders. In a recent contribution to the agency literature Jensen (2005) argues that managers may be motivated to acquire by high share prices. Agency costs of overvalued equity arise in case managers make poor acquisitions in order to aim to fulfill unrealistic expectations of the stock market.

Adequate corporate governance should diminish agency problems in acquisition decisions. One of the forces that discourage managers from empire building is the market for corporate control in the sense that firms making value-decreasing acquisitions are more likely to be acquired later (Mitchell and Lehn, 1990). However, takeover defenses decrease the probability of being taken over, which could lead to an insulation of managers from the discipline of the market for corporate control (Bebchuk, Coates and Subramanian, 2002; Field and Karpoff, 2002). Previous studies find takeover defenses to negatively influence firm value and long-run share performance (Gompers, Ishii and Metrick, 2003; Bebchuk, Cohen and Ferrell, 2005). Specifically, Gompers, Ishii and Metrick (2003) construct a governance index, which is a score for the number of takeover defenses and other anti-shareholder provisions out of a set of 24 provisions. The authors find firms with weaker shareholder rights have a lower firm value, make more acquisitions, are less profitable and have lower sales growth. Bebchuk, Cohen and Ferrell (2005) refine this study by investigating which provisions from the governance index are the main drivers that negatively influence firm value. Their study suggests that just six out of the 24 provisions play a key role in explaining firm value. The six provisions consist of four provisions that limit shareholder voting power – i.e. staggered boards, limits to shareholder amendments of the bylaws, supermajority requirements for mergers and supermajority requirements for charter

amendments – and two provisions that prevent hostile takeovers – i.e. poison pills and golden parachute arrangements. Although these studies contribute the negative relation to agency problems, they do not specify the reasons behind the negative impact. Masulis, Wang and Xie (2006) go one step further and examine the impact of takeover defenses of US firms on shareholder returns around acquisition announcements. They find that firms with more anti-takeover defenses exhibit lower shareholder returns around acquisition announcements relative to firms with less defenses. These findings suggest that managers, who are insulated from the market for corporate control by incorporating takeover defenses, are more likely to make non-value maximizing acquisition decisions.

In this chapter, we describe the acquisition activity of Dutch industrial firms and the related wealth effects of the acquiring firms' shareholders for the period from 1993 until 2004. We are especially interested in the impact of corporate governance on shareholders' wealth changes following acquisition announcements by Dutch firms. As Dutch firms deploy several types of defense mechanisms (Kabir, Cantrijn and Jeunink, 1997; De Jong, Kabir, Marra and Röell, 2001; De Jong, DeJong, Mertens and Wasley, 2005; Renneboog and Szilagyi, 2006), managers can exercise more discretion with their acquisition decisions. In particular, firms that reach a certain size are required to adopt the *structured regime*, as a result of which qualifying firms are obliged to set up a supervisory board. This supervisory board inherits many powers, which are otherwise held by shareholders. Apart from the structured regime, Dutch firms can introduce three types of securities that restrict shareholders' influence on company decisions and act as defense mechanism against hostile takeovers. First, *certificates* through which holders have the same rights as holders of common shares with the exception of voting rights. Second, Dutch firms can install the option to sell *preferenceshares* to friendly shareholders during takeover threats, which is equivalent to US firms using poison pills as a takeover defense. Third, through *priority shares*, firms can provide friendly shareholders with special rights such as merger approval, new public offerings, nomination of board members, charter amendments and company liquidation. Corhay and Tourani Rad (2000) also examine abnormal returns of acquisition announcements disclosed by Dutch firms, however, focus exclusively on cross-border acquisitions. Besides, the authors do not relate corporate governance characteristics to acquirer's returns. On the contrary, our study relates specific details of the corporate governance mechanisms of acquiring firms with shareholders' wealth of these firms. We expect firms that are

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well governed to make value enhancing acquisition decisions. We also distinguish between deals in which shareholders experience large losses and deals without such large losses. Moeller, Schlingemann and Stulz (2005) suggest that wealth destructing deals are more likely to take place when managerial discretion plays a larger role. The authors find firms with high valuations to be more likely to make losses of more than one billion dollar when announcing an acquisition. However, they do not provide direct evidence of the impact of corporate governance on the likelihood of these deals. We investigate whether good corporate governance mechanisms prevent firms from performing wealth-destructing acquisitions.

Our findings suggest a minor influence of corporate governance on acquisition announcements in the Netherlands. On average, acquirer returns are 1.1% and the average increase in shareholders' wealth is €18 million. In explaining acquirer returns, we find just one governance variable to be statistically significant, i.e. the structured regime dummy. The regression coefficient suggests 1.0% lower acquirer returns following acquisition announcements of firms that operate under the structured regime as compared to firms that do not operate under such a regime. This is in line with the notion that shareholders have limited power over firm's decisions when these firms adopt a structured regime. We find the same striking result as Moeller, Schlingemann and Stulz(2005) that during 2001 and 2002 average acquirer percentage returns are positive, whereas the total euro wealth effect for shareholders is negative. Consequently, we investigate which firms are more likely to make wealth destructing deals. A binary logit analysis suggests that managers of firms that provide room for exercising discretion in their acquisition decisions are more likely to make deals in which shareholders lose more than €150 million. Specifically, a firm's Tobin's q , leverage and firm size increase the probability of making large losses during acquisition announcements. A higher likelihood of making value-destructing acquisitions of firms with more leverage may seem counterintuitive; however, managers of Dutch firms avoid the disciplining role of debt, especially when they overinvest (De Jong, 2002). Therefore, shareholders of firms with high leverage can perceive acquisition announcements as highly risky, which may bring about a stronger negative response resulting in large loss deals. In line with our expectations, a smaller relative size of the executive board and firms that have priority shares are more likely to make value-destructing acquisitions. However, preference shares decreases the likelihood of value-destructing acquisitions.

The structure of this chapter is as follows. Section 4.2 describes the Dutch situation and previous findings of factors that influence shareholders' wealth effects. Subsequently, Section 4.3 discusses the research design. Section 4.4 describes the empirical results and we end the chapter by providing a conclusion in Section 4.5.

4.2 Literature review

This section first provides a description of the Dutch setting. Subsequently, we briefly discuss previous studies on the factors that influence shareholder returns around acquisition announcements.

4.2.1 The Dutch situation

The basis of Dutch corporate law is the shareholder-controlled firm with a management board and supervisory board. Shareholders' rights consist of electing members of the management board and supervisory board, formally approving dividend policy and the annual accounts. Shareholders are also allowed to vote on major decisions, such as mergers and acquisitions. However, firms that are incorporated within the Netherlands are able to severely restrict the power of shareholders in four ways.¹⁶

Firms with a book value of shareholders' equity of at least €11.4 million, with more than 100 persons employed within the Netherlands and the legal obligation to set up a works council are required to adopt the structured regime. These firms are obliged to set up a supervisory board that takes over several powers from shareholders, including the authority over major decisions, the election of the management and supervisory board and the establishment and approval of annual accounts. It is important to note that shareholders retain their right to vote on mergers and acquisitions. Multinationals with more than half of its employees abroad are exempted from the

¹⁶De Jong, Kabir, Marra and Röell (2001) provide an extensive description about the ownership and control of listed firms in the Netherlands.

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requirement of adopting a structured regime. However, they can operate under this regime on a voluntary basis which is applied by most multinationals.

Apart from the structured regime, firms can implement three types of securities that restrict shareholders' influence on company decisions and act as takeover defenses. First, Dutch firms can set up a trust office that holds the firm's shares and issues certificates to the investors. Although certificate holders retain their dividend rights, they can freely trade their certificates and attend the General Meeting of Shareholders. However, they cannot vote. The trust office takes over all voting rights and is normally friendly to the incumbent managers. In practice, certificates enable managers to pursue their own objectives and provide a defense against firms that are willing to acquire the firm. Second, when firms experience a takeover threat, they can sell preference shares to friendly shareholders or a trust office. The main purpose of preference shares is to change the balance of power between shareholders as preference shares carry full voting rights, even though they may not be fully paid-up. The shareholders have to pay 25% of the nominal value upfront and the maximum amount of preference shares that can be issued is 50% or 100% of the current outstanding nominal capital. To be able to issue preference shares without shareholders' consent, firms set up a trust office with an option on these shares. Third, Dutch firms may have priority shares that carry special rights, such as merger approval, new public offerings, nomination of board members, charter amendments and company liquidation, to friendly shareholders as takeover defense. As shareholders' power with firms are severely restricted and Dutch firms widely implement these takeover defenses, the provisions of Euronext Amsterdam since 1989 allow firms to only use two types out of the latter three takeover defenses.

The use of these takeover defenses has implications for firm value. Consistent with previous research on takeover defenses, De Jong, DeJong, Mertens and Wasley (2005) find all four takeover defense mechanisms to be negatively related to firm performance, measured by Tobin's q . A possible reason for the lower Tobin's q is the minor influence shareholders can exert on firms' decisions. De Jong, Mertens and Roosenboom (2004) provide evidence that the use of certificates, priority shares and the adoption of a structured regime decreases the probability that shareholders vote against proposals during General Meetings of Shareholders. On the other hand, their results show a positive relation between the use of preference shares and the probability of votes against proposals. Renneboog and Szilagyi (2006) also show that

shareholders of Dutch firms have a weak position, as they find that firms adopting the structured regime and firms that use preference shares relax their dividend policy.

Other noticeable governance characteristics of Dutch firms include ownership structure, cross-listings in the US and UK and the low disciplining impact of leverage. First, the ownership structure of Dutch firms is relatively concentrated (Kabir, Cantrijn and Jeunink, 1997; De Jong, Kabir, Marra and Röell, 2001), while the voting rights in Dutch firms are more concentrated than ownership rights. This unequal distribution is due to the takeover mechanisms in which blocks of shares are controlled by trust offices (De Jong, Kabir, Marra and Röell, 2001). Furthermore, Dutch firms with a less concentrated ownership structure are more likely to adopt takeover defenses (Kabir, Cantrijn and Jeunink, 1997). Many Dutch firms have a cross-listing in the US, the UK or in both countries. In our sample, this holds for 32% of the firms. By means of a cross-listing in one of these two countries, firms can bond themselves in terms of legal liability exposure and reputation (Coffee Jr, 1999, 2002). In other words, a cross-listing in the US or UK leaves less room for discretionary behavior (De Jong, Mertens and Van der Poel, 2006). Leverage is another device to discipline managers to make value-maximizing decisions (Jensen, 1986). However, De Jong (2002) finds that this does not apply for managers of Dutch firms. The author provides evidence that in case managers are most likely to overinvest, they avoid the disciplining role of debt.

4.2.2 Acquirer wealth effects around acquisition announcements

As previously mentioned, studies on the shareholder wealth effects of acquiring firms directly around acquisition announcements provide mixed results. These wealth effects depend on firm and deal specific characteristics.

According to Jensen (1986), managers rather make nonvalue-maximizing acquisitions than pay out excess cash to shareholders. In line with this overinvestment hypothesis, Lang, Stulz and Walkling (1989) and Servaes (1991) show that acquisitions by firms with a low Tobin's q negatively influence shareholders' wealth. Besides, as firms with a low Tobin's q are not likely to have positive net present value projects, the probability that managers of these firms make nonvalue-maximizing acquisitions increases when having enough free cash flow (Jensen, 1986). Lang, Stulz and Walkling (1991) provide empirical evidence that is consistent with this theory.

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Bidders with a high Tobin's q increase shareholders' wealth when acquiring low q targets (Lang, Stulz and Walkling, 1989; Servaes, 1991). These studies interpret high q firms as well managed firms that acquire poorly managed firms (i.e. low q firms).

A recent theory by Jensen (2005) is based on observed acquisition behavior of highly valued firms (i.e. high q firms). In these firms agency problems due to overvalued equity bring about more managerial discretion, increasing the probability of bad acquisitions when firms have run out of good ones. Jensen's argument is that in case the stock market attaches unrealistic high share prices to firms, managers will under normal business practice not be able to deliver the performance implied by the pricing. This leads to 'managerial heroin', i.e. using the overvalued equity to make long run value-destroying acquisitions.

According to financial economic theory, the disciplining role of leverage has a positive impact on the acquirer returns (Maloney, McCormick and Mitchell, 1993). Debt serves as a monitoring device, providing less leeway for managers in making acquisition decisions (Jensen, 1986). Hence, leverage increases the probability of value enhancing acquisitions. Moeller, Schlingemann and Stulz (2004) find that firm size is negatively associated with shareholder returns of acquisition announcements. The authors relate the size effect with the difference of deal (e.g. equity/cash payment, private/public target) and firm characteristics (e.g. Tobin's q and leverage) between small and large firms.

In terms of deal characteristics, previous studies find that US firms that fully finance their acquisitions with cash experience higher abnormal returns than equity financed deals (e.g., Servaes, 1991; Franks, Harris and Titman, 1991; Moeller, Schlingemann and Stulz, 2004). Acquiring firms finance with equity to force target shareholders in sharing the risk that the price for the target was too high (Hansen, 1987). An alternative explanation is that the acquiring firms are overvalued and aim to decrease their overvaluation by acquiring less overvalued targets with cheap equity (Shleifer and Vishny, 2003). However, Goergen and Renneboog (2004) show opposite results for European firms. Acquirer returns of European firms that pay with equity are higher than that of European firms that pay with cash. The returns for both payment methods are significantly positive. A possible explanation for this opposite result is that European firms acquire private firms more often, which is in line with US evidence that equity payments with the acquisition of private firms yield positive abnormal returns, whereas equity payments with the

acquisition of public firms yield negative abnormal returns (Chang, 1998; Moeller, Schlingemann and Stulz, 2004). Overall, firms experience a positive shareholders' reaction in case they announce an acquisition of a private firm and a negative shareholders' reaction in case of a public firm in both the US and in Europe (Moeller, Schlingemann and Stulz, 2004; Martynova and Renneboog, 2006).

More diversified firms trade at a discount, due to amongst others inefficient investment and cross-subsidization (Berger and Ofek, 1995; Rajan, Servaes and Zingales, 2000; Scharfstein and Stein, 2000). As a result, diversifying acquisitions negatively contribute to shareholders' wealth. This negative impact applies to US firms (Morck, Shleifer and Vishny, 1990), European firms (Martynova and Renneboog, 2006) and, more specifically, to Dutch firms (Corhay and Tourani Rad, 2000). Global diversification seems to have a similar impact on acquisitions as industrial diversification. In particular, the excess value of more globally diversified firms is smaller than less globally diversified firms (Denis, Denis and Yost, 2002). Besides, cross-border acquisitions provides lower abnormal returns than domestic acquisitions in the US (Moeller and Schlingemann, 2005). The impact of cross-border deals by European firms provides mixed results. Consistent with results for US firms, Martynova and Renneboog (2006) find larger acquirer returns for domestic acquisition announcements relative to cross-border announcements for a sample of 2,419 European acquisitions. However, Goergen and Renneboog (2004) examine the returns of 228 acquisitions with a value of at least 100 million dollars and find the opposite result. The latter results are mainly driven by UK acquirers. In contrast to Continental Europe, the UK knows a highly active market for corporate control and has a high degree of shareholder protection (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998). Corhay and Tourani Rad (2000) examine cross-border acquisitions by Dutch firms and find small average positive abnormal returns for acquisitions in Western Europe (1.44% for 11 days around the announcement) and the US (0.25% for 5 days after the announcement and 4.83% for 91 days around the announcement), but no significant abnormal returns for acquisitions in Eastern Europe.

4.3 Research design

This section first discusses the data selection procedure, followed by a description of variables that we use for the analysis. Finally, we will describe our empirical models.

4.3.1 Dataset

Our data collection starts with all Dutch exchange-listed firms over the period 1993-2004. We focus on industrial firms, i.e. we exclude financial and service companies. In total, we study the acquisition announcements of 90 firms. For each firm we search the electronic version of the Dutch financial daily, *Het Financieele Dagblad*. We retrieve all newspaper articles with the company names in the title or the body of the text and manually identify articles with the initial announcements of acquisitions. In total, we include 865 acquisition announcements by 64 firms.

For the 64 firms (in 312 firm years) we collect financial and corporate governance characteristics from several sources. We obtain share and index returns from Datastream. Financial data is obtained from the REACH database (Review and Analysis of Companies in Holland by Bureau Van Dijk) and *Handboek Nederlandse Beursfondsen*. Board and ownership data is taken from the *Handboek Nederlandse Beursfondsen*, *Jaarboek Nederlandse Ondernemingen* and yearly overviews of WMZ notifications in *Het Financieele Dagblad*.¹⁷ Takeover defenses and cross-listings are taken from the *Effectengids*, a yearly guide with all exchange-listed securities in Amsterdam. The information on the application of the structured regime is obtained from the Monitoring Report 1997 and firm's annual reports. In order for a firm-year to be included we require that data is available for all items.

¹⁷The 1996 Act on Disclosure of Holdings in Listed Companies, provides that any person, who directly or indirectly, acquires or disposes of an interest in the capital and/or the voting right of public limited liability company incorporated under Dutch law with an official listing on a stock exchange, must give a written notice of such acquisition or disposal, if as a result of such acquisition or disposal the percentage of capital interest or voting rights held by such person falls within another percentage range held by such person prior to the acquisition or disposal. The relevant percentage ranges referred to in the Disclosure of Holdings Act are 0% to 5%; 5% to 10%; 10% to 25%; 25% to 50%; 50% to 66%; and over 66%.

4.3.2 Variables definition

This section defines the firm and deal variables that we use in our empirical analysis. The Tobin's q is the market value of the firm divided by the replacement value of the assets as calculated in De Jong, DeJong, Mertens and Wasley (2005). In the Netherlands, firms base the value of their assets either on its replacement value or on its historical costs. In case of the replacement value, no change was necessary. In case of historical costs, we adjust this value towards its replacement value. We measure free cash flow similar to Lehn and Poulsen (1989), i.e. operating income before depreciation minus total income taxes plus deferred taxes from the previous year to the current year minus gross interest expense on debt minus dividends paid divided by book value of total assets. The return on assets is calculated as the firm's operating profits standardized by the book value of total assets. Leverage is total debt divided by the book value of total assets and firm size is the natural log of a firm's book value of total assets. The relative size of the board is the number of executive board members divided by the total number of board members (i.e. both executive and supervisory board members). The percentage of block shareholdings is the percentage of shares held in a block outside the firm. A blockholding is defined as a stake of at least 5%. Insider ownership is the percentage blockholdings by insiders, supervisory and executive board members. We define a dummy that takes on the value of one for firms with a cross-listing in the US or the UK, and zero otherwise. To control for takeover defenses, we define four dummy variables that take on the value of one if the firm has preference shares, if the firm has priority shares, if the firm has certificates and if the firm operates under the restricted regime. To examine the overall impact of takeover defenses, we also define a takeover defense index, which aggregates all four takeover defense dummies.

In terms of the deal characteristics, we construct a dummy for deals in which firms use equity in their payments. Note that mixed payments (i.e. both cash and equity) are also included in this dummy. Furthermore, we define a dummy for observations in which we know that the target is listed. Acquisitions are classified as diversifying and focus shifting, based on the description of the announcement in the newspaper. The relative size of the acquisition is calculated twofold. If firms disclose the transaction value, we calculate the relative size as the transaction value divided by the market capitalization of the acquirer. However, if the transaction value is not available, the relative size is the ratio of target sales to acquirer sales.

4.3.3 Market reaction model

We measure the acquirer's cumulative abnormal returns (CAR) around acquisition announcements using the abnormal returns generated by a market model as described by MacKinlay (1997). Our estimation window runs from day -120 to day -20. We aggregate the abnormal returns over a period of five days, starting two days prior to the acquisition announcement until two days after the acquisition announcement. Apart from the percentage returns, we also calculate the euro wealth effects by multiplying the five days CAR by the beginning of the year's market value of the acquirer's equity.

Next, we investigate the determinants of the aggregated acquirer returns by means of an ordinary least squares (OLS) regression in which we explain the five days CAR by the acquirer Tobin's q , free cash flows, return on assets, leverage, $\ln(\text{size})$, a dummy for equity payment, a dummy for listed target, a dummy for diversifying acquisition, a dummy for domestic target, a dummy for European target, a dummy for US target, relative size of the acquisition, relative size of the executive board, block shareholders, insider ownership, a dummy for cross-listing US/UK, a dummy for priority shares, a dummy for preference shares, a dummy for certificates and a dummy for restricted regime. The model incorporates year fixed effects and industry fixed effects, based on five major industry groups according to two-digit SIC industry codes. All regression p-values are based on White's heteroskedasticity corrected standard errors.

4.3.4 Wealth destructing deals model

We classify acquisitions as wealth destructing if shareholders lose more than 150 million Euros during the acquisition announcement. To investigate what type of firms make wealth destructing acquisition announcements, we estimate the following binary logit regression, in which we explain whether the deal is wealth destructing by the acquirer Tobin's q , free cash flows, return on assets, leverage, $\ln(\text{size})$, a dummy for equity payment, a dummy for listed target, a dummy for diversifying acquisition, a dummy for domestic target, a dummy for European target, a dummy for US target, relative size of the acquisition, relative size of the executive board, block shareholders, insider ownership, a dummy for cross-listing US/UK, a dummy for priority shares, a dummy for preference shares, a dummy for certificates and a dummy for restricted regime. The

model incorporates year fixed effects and industry fixed effects, based on five major industry groups according to two-digit SIC industry codes. All regression p -values are based on Huber/White's heteroskedasticity corrected standard errors.

4.4 Results

This section first provides a description of the sample. Statistics of firm and deal variables and the features of shareholders' wealth change around acquisition announcements will be discussed. Subsequently, we examine the factors that influence shareholders' wealth change and conclude with an analysis of deals with which shareholders lose more than €150 million.

4.4.1 *Sample description*

As previously mentioned, our dataset consists of 312 firm years in which 64 firms announce 865 acquisitions. Table 4.1 panel A shows more detailed information about the characteristics of these firm years.

Our sample represents the larger industrial firms within the Netherlands, with an average market capitalization of 3.08 billion euros. They show good performance, as the average return on assets is 33.6% and the average Tobin's q is 1.548. However, the return on assets exhibits a large variation across the sample as its standard deviation is relatively high. The mean free cash flow is positive, indicating that firms are able to spend internal funds on additional investments. With an average of 27.9%, the leverage of Dutch firms is low as compared to US firms. In terms of corporate governance, the board consists for 63.8% of executives. Specifically, the median number of executive board members is six, whereas the median number of supervisory board members is just three. The data on blockholders confirm the concentrated ownership structure within the Netherlands. The largest outside blockholder owns on average 17% of the firm. Taking into account all blockholders, the average ownership is 29.1%. Although the median percentage insider ownership is zero, the average is 5.8%. Furthermore, 31.7% of the sample firms have a cross-listing in the US and or in the UK, suggesting that managers of these firms exercise less discretion in their decisions (De Jong, Mertens and Van der Poel, 2006).

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Takeover defense mechanisms in the Netherlands severely restrict shareholders' power within the firm. Consistent with previous studies about the Dutch governance situation, the results indicate that Dutch firms widely implement takeover defenses in terms of priority shares (43.3%), preferred shares (67.3%), certificates (37.2%) and the adoption of the structured regime (67.9%). Aggregating all takeover defenses within a firm, the median Dutch firm adopts two out of the four mechanisms.

Panel B of Table 4.1 provides the deal characteristics of our sample. Firms release the transaction value of their deals only 152 out of the 865 times. These 152 deals show an average transaction value of 521 million euros. The median is only one sixth of the average value, which implies that the dataset includes some very large deals. Besides, the transaction value varies considerably as the standard deviation is relatively high. This also applies for the transaction value relative to the acquiring firm's market capitalization and the ratio of target to acquirer sales. The results also show that Dutch firms acquire public firms in 7.2% of all acquisitions. Compared to the sample of European firms in Martynova and Renneboog (2006), in which 36.8% of all acquisitions concern listed targets, this percentage is rather low. Furthermore, firms announce a diversifying deal in 20.5% of the sample and a shift in focus in 4.9% of the sample. The high percentage of diversifying acquisition announcements is remarkable, as previous studies find diversifying acquisitions to be value-decreasing (Morck, Shleifer and Vishny, 1990; Corhay and Tourani Rad, 2000; Martynova and Renneboog, 2006). Firms finance their target with a combination of cash and equity in 3.6% of our sample. In 5.9% of the acquisitions, firms announce to pay with equity. Note that this percentage also includes the mixed payments. The low percentage may be caused by the low amount of listed target firms. In 19.1% of the acquisitions, firms announce to finance their deal with cash. In all other cases, firms do not disclose how they finance their target. In line with Corhay and Tourani Rad (2000), Dutch firms know a strong international orientation. They make domestic acquisitions only in 24% of all sample deals, whereas in 44.5% of the deals the target comes from another European country and in 19.2% of the deals the target is located in the US.¹⁸

¹⁸ Most of the takeover activity is concentrated in Europe and the US. For example, only 4.1% of the deals concern Asian targets, 1.2% are acquisitions of African firms and 2.7% concern non-US companies from the American continents.

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Panel A: Acquirer characteristics at a firm year level				
	all deals			N
	Mean	Median	St.dev.	
<i>Financial characteristics</i>				
Market capitalization (€ thousands)	3,081,620	593,857	7,776,843	312
Return on assets	0.336	0.108	3.737	312
Tobin's q	1.548	1.344	0.769	312
Free cash flow/total assets	0.032	0.034	0.035	312
Leverage	0.279	0.245	0.188	312
<i>Governance characteristics</i>				
Number of supervisory board members	3.510	3.000	1.645	312
Number of executive board members	6.048	6.000	2.205	312
Relative size of executive board	0.638	0.636	0.108	312
Percentage largest outside blockholder	0.170	0.090	0.182	312
Total percentage outside blockholders	0.291	0.225	0.237	312
Total percentage inside blockholders	0.058	0.000	0.141	312
Dummy cross listing US and/or UK	0.317	0.000	0.466	312
Takeover defense index	2.157	2.000	1.007	312
Dummy priority shares	0.433	0.000	0.496	312
Dummy preference shares	0.673	1.000	0.470	312
Dummy certificates	0.372	0.000	0.484	312
Dummy structured regime	0.679	1.000	0.467	312
Panel B: Deal characteristics at a deal level				
	all deals			N
	Mean	Median	St.dev.	
Transaction value (€ thousands)	520,761	90,756	1,201,059	152
Transaction value/market capitalization	0.136	0.031	0.255	152
Sales target/sales acquirer	0.094	0.015	0.291	555
Dummy listed target	0.072	0.000	0.259	865
Dummy diversifying acquisition	0.205	0.000	0.404	865
Dummy focus shifting acquisition	0.049	0.000	0.215	865
Dummy payment in cash and equity	0.036	0.000	0.186	865
Dummy payment in equity	0.059	0.000	0.236	865
Dummy payment in cash	0.191	0.000	0.393	865
Dummy domestic acquisition	0.240	0.000	0.428	865
Dummy European acquisition (excluding NL)	0.445	0.000	0.497	865
Dummy US acquisition	0.192	0.000	0.394	865

Table 4.1: Descriptive statistics of acquirer and deal characteristics

The table presents the means, medians, standard deviations and the number of observations of firm and deal variables. The market capitalization is the beginning of the year market value of equity. The return on assets is calculated as operating profits standardized by book value of total assets. We measure the Tobin's q as the ratio of a firm's market value to replacement value of assets as calculated in De Jong, DeJong, Mertens and Wasley (2005). We calculate free cash flow as in Lehn and Poulsen (1989). Leverage is total debt divided by book value of total assets. The relative size of the board is the number of executive board members divided by total number of board members. The takeover index is the aggregate value of all four takeover defense dummies (i.e. priority shares, preference shares, certificates and structured regime). The transaction value is the amount paid for the target.

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To get an impression about the shareholders' wealth effects around acquisition announcements, Table 4.2 provides statistics of the percentage abnormal returns (panel A) and the euro wealth transfers (panel B) for different event windows.

Panel A: Descriptives of the market reaction to acquisition announcements for different event windows

	Event window					
	[-20, 20]	[-10, 10]	[-5, 5]	[-2, 2]	[-20, -3]	[3, 20]
Mean	1.30% ***	0.96% ***	1.13% ***	1.07% ***	0.08%	0.15%
Minimum	-55.76%	-68.33%	-36.09%	-22.48%	-66.47%	-39.07%
25%	-6.16%	-3.97%	-2.63%	-1.45%	-4.31%	-3.85%
Median	1.00%	0.45%	0.54%	0.61%	-0.16%	-0.15%
75%	7.29%	5.40%	4.43%	3.31%	4.37%	4.16%
Maximum	68.22%	71.17%	40.39%	39.27%	32.57%	50.23%
Standard deviation	12.42%	9.04%	6.78%	4.95%	7.86%	7.69%
N	865	865	865	865	865	865

Panel B: Descriptives of the wealth transfer in € millions around acquisition announcements for different event windows

	Event window					
	[-20, 20]	[-10, 10]	[-5, 5]	[-2, 2]	[-20, -3]	[3, 20]
Mean	23.04	1.89	6.57	17.89 *	-28.70	33.84
Minimum	-9,040.49	-6,377.08	-5,144.17	-2,726.24	-6,545.32	-3,646.44
25%	-66.75	-55.36	-41.87	-20.13	-51.37	-54.05
Median	3.05	1.49	1.49	2.22	-0.37	-0.42
75%	87.75	52.87	51.62	37.06	53.80	47.92
Maximum	16,146.15	9,302.80	3,717.78	1,790.41	7,199.73	11,871.74
Standard deviation	1,033.73	665.18	482.74	294.73	673.89	839.78
N	865	865	865	865	865	865

Table 4.2: Acquirer returns around acquisition announcements for different event windows

This table presents the descriptive statistics of the percentage abnormal returns and the wealth transfer in millions of euros for different event windows. The acquisition announcement day is day zero. Abnormal returns are calculated by using the market model as described in MacKinlay (1997), with the estimation window running from day -120 to day -20. We aggregate the abnormal returns for the different event windows. The euro wealth transfer is the cumulative abnormal returns for the event window times the acquirer's market capitalization at the beginning of the fiscal year. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

Panel A of the table shows significantly positive abnormal returns around acquisition announcements for four out of the six event periods, indicating that acquisitions in the Netherlands on average enhance shareholder wealth. During the five days around the acquisition announcement, shareholders experience a significant increase of 1.07% in their returns. The share price does not experience a significant change from 20 days until 3 days prior to the acquisition announcement and 3 days until 20 days after the announcement, suggesting that the information about the acquisition is discounted into the market price immediately around the release of the information.

Panel B provides the abnormal euro returns around acquisition announcements. Shareholders experience an average significant increase in their wealth of €17.89 million during the five days around an acquisition announcement. Wealth changes in the other event windows are not significantly different from zero. Note that the standard deviation of the euro returns are extremely large, suggesting both large gains and losses for shareholders of acquiring firms. The extreme values provide support for this suggestion. For instance, the minimum value for the five days window indicates a loss of about €2.7 billion and the maximum value indicates a gain of about €1.8 billion. The extreme values of the other event windows are even larger.

As Table 4.2 suggests that most of the announcement returns occur during the five days around the acquisition announcement, Figure 4.1 provides the average development of the share price over the forty days around the announcement and Figure 4.2 shows the distribution of the cumulative abnormal returns over the five days event window.

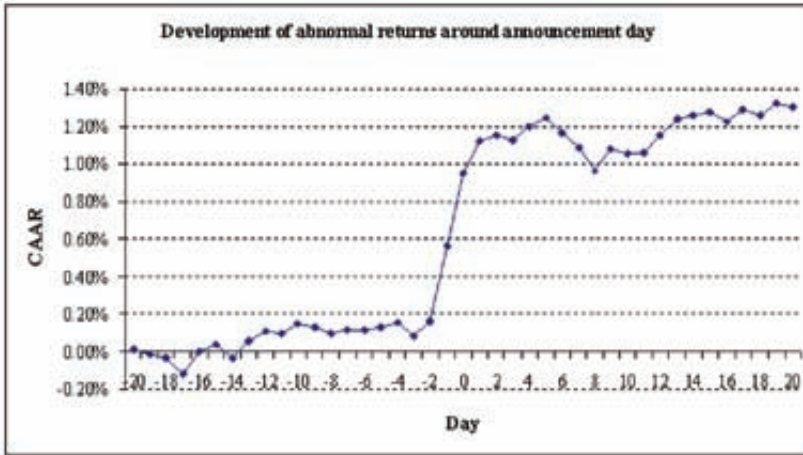


Figure 4.1: The development of abnormal returns around acquisition announcements

This figure shows the cumulative average abnormal returns of the days around acquisition announcements. The day of the announcement is day zero.

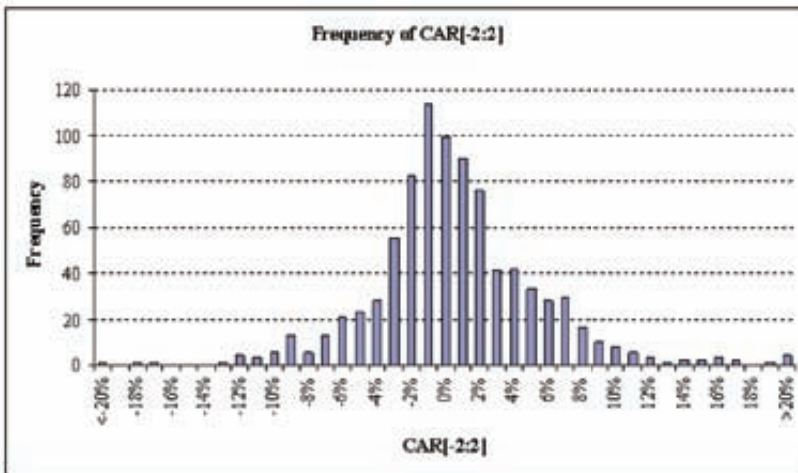


Figure 4.2: The distribution of abnormal returns

This figure provides the distribution of the five days cumulative abnormal returns around acquisition announcements. The horizontal axis shows the five days cumulative abnormal returns and the vertical axis shows the frequency in which this return occurs.

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Figure 4.1 shows a slight price run-up prior to the acquisition announcement, which does not differ significantly from zero. The sharp increase in average abnormal returns starts at two days prior to the announcement day and lasts for about five days. Afterwards, the cumulative abnormal returns remain relatively stable around the 1.2%. Figure 4.2 shows that the distribution of the cumulative abnormal returns appears to be normally distributed. Besides, acquisition announcements are more often value increasing than value decreasing. The results further show that the distribution of abnormal returns is somewhat skewed towards positive returns.

When disclosing a planned acquisition, firms usually provide reasons why they take over another firm. As the motivation behind acquisitions is important information for the market, table 4.3 lists the stated motivations, the frequency of these motivations and the related acquirer returns.

Stated motives for acquisitions	Number	Percentage	CAR
Cost reduction	60	7%	1.32% *
Geographic expansion	150	17%	1.19% ***
Broadening product line	61	7%	0.93%
Increasing market share	321	37%	1.21% ***
Diversification/vertical integration	22	3%	1.56% *
Other motive	19	2%	0.86%
No motive	232	27%	0.74% **
Total	865	100%	1.07% ***

Table 4.3: Stated motives for acquisitions and the related abnormal returns

This table presents the frequency of acquirers' motives for the acquisition as disclosed in their acquisition announcements. Cost reduction consists of economies of scale, synergy, efficiency and access to low wage labor. The table also provides the average cumulative abnormal returns over five days surrounding the acquisition announcements per stated motive. The table shows *, ** and *** for CAR values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

We categorize the motives into seven groups; 1) cost reduction, 2) geographic expansion, 3) broadening the firm's product line, 4) increasing the firm's market share, 5) diversification, 6) another motive, which do not belong to the first five groups, and 7) no motive provided. The most common motives are an increase in market share that occurs in 37% of all announcements and geographic expansion that occurs in 17% of all announcements. Both motives yield significantly positive abnormal returns (1.21% and 1.19%, respectively), indicating that these types of acquisitions are value enhancing for shareholders. The acquisitions in which firms can

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reduce their costs in the form of economies of scale or access to low wage labor also provides positive abnormal returns (1.32%). A remarkable result is that shareholders respond positively to diversifying reasons, while previous studies find diversifying acquisitions to be negatively related with the market reaction. The abnormal returns are 1.56%, which is the highest percentage compared to all other reasons. Note that in 3% of all acquisition announcements, firms state that the prime motive to acquire a firm is to diversify, whereas 20.5% of all acquisitions are diversifying acquisitions. Furthermore, firms do not provide a motive for their acquisition in 27% of the sample, yet the abnormal returns are significantly positive. The data do not show a significant response to firms that aim to broaden their product line or give another motive. The main conclusion from Table 4.3 is that the stated motive does seem to explain the acquirer's wealth change, as shareholders respond significantly to some of the stated motives and not to others.

The market response and total wealth effects around acquisitions depend on the period in which the acquisition takes place (Harford, 2005; Moeller, Schlingemann and Stulz, 2005). In particular, the abnormal returns are higher at the beginning of merger waves than later during the merger wave. Table 4.4 presents the percentage abnormal returns and the euro wealth effects per year. A more visual overview can be drawn from Figure 4.3.

<i>year</i>	<i>n</i>	CAR [-2,2]			Wealth effects in € millions		
		<i>Mean</i>	<i>Median</i>	<i>% positive</i>	<i>Total</i>	<i>Mean</i>	<i>Median</i>
1993	61	1.42% ***	1.03%	69%	1,075.61	17.63 ***	2.03
1994	83	-0.05%	-0.26%	41%	-1,190.58	-14.34	-2.55
1995	97	0.00%	-0.32%	42%	-1,602.75	-16.52	-2.06
1996	86	1.09% ***	0.73%	59%	749.88	8.72	2.21
1997	89	1.66% ***	0.78%	57%	2,820.43	31.69	1.54
1998	102	0.85%	0.72%	64%	839.57	8.23	3.68
1999	116	2.20% ***	1.93%	61%	7,756.35	66.87 *	5.91
2000	83	1.10% *	1.19%	59%	4,103.12	49.44	11.84
2001	44	1.31% *	1.79%	66%	-660.20	-15.00	4.58
2002	44	0.80%	0.56%	52%	-4.66	-0.11	5.45
2003	27	1.22%	2.34%	59%	468.61	17.36	9.75
2004	33	1.31% ***	1.47%	73%	1,123.02	34.03	3.73
ALL	865	1.07%	0.61%	57%	15,478.40	17.89	2.22

Table 4.4: The characteristics of shareholders' wealth effects per year

The table shows descriptives of the cumulative abnormal returns over five days surrounding acquisition announcements and the related euro wealth effects per year. The euro wealth effects are the cumulative abnormal returns for the event window times the acquirer's market capitalization at the beginning of the fiscal year. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

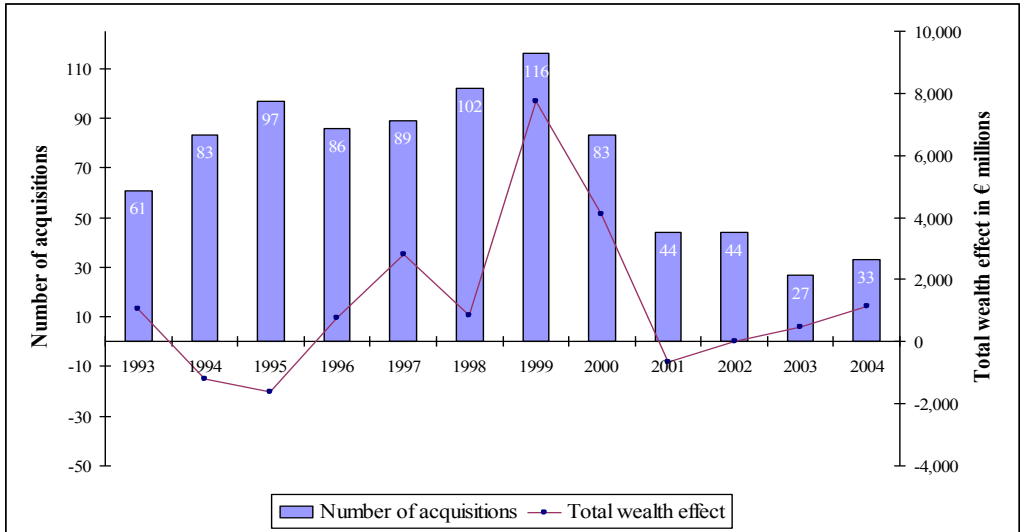


Figure 4.3: The number of acquisition announcements and the total wealth effects per year

This figure shows the number of acquisitions and the total aggregated wealth effects over five days around acquisition announcements per announcement year. The left vertical axis provides the number of acquisitions, the right vertical axis shows the total wealth effects in millions of euros and the horizontal axis shows the announcement year.

The results indicate that during the first half of the nineties, several value decreasing acquisitions take place. Though not statistically significant, the years 1994 and 1995 show zero and small negative abnormal returns and large negative wealth effects for the shareholders. During these years, the least amount of positive reactions to acquisition announcements occur. Afterwards, shareholders experience an increase in their wealth, with 1999 as most successful year. In that year, the total wealth gain due to acquisition announcements is €7.7 billion and the average abnormal return is 2.2%. The economic downturn started halfway 2000. The consequences of this downturn appear in 2001, which shows a decrease in the number of acquisitions. The total wealth losses are €660.2 million and €4.7 million in the year after.

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Strikingly, the average abnormal returns are positive during these years. These results suggest that, consistent with Moeller, Schlingemann and Stulz (2004, 2005), the negative wealth effects are a result of a few extremely large losses. Moeller, Schlingemann and Stulz (2005) argue that managers of highly valued firms can exercise more discretion and hence, are more likely to make value-destroying acquisitions. Firm size can also drive the results (Moeller, Schlingemann and Stulz, 2004). Acquisitions by small firms are generally value enhancing, but the euro gains are small as well. On the contrary, larger firms make larger acquisitions that can result in large euro losses. Both effects together can result in positive returns and negative wealth effects at the same time. In Section 4.4.3, we examine the value-destructing deals into more detail. Finally, in the last two years of our sample the number of acquisitions is still low, yet the acquisition announcements that take place do yield positive abnormal returns.

4.4.2 Explaining wealth effects

So far, we discussed the characteristics and abnormal returns of our sample of acquisition announcements by means of a univariate analysis. This section discusses the factors that influence shareholders' wealth around an acquisition announcement. Table 5 shows the results of four ordinary least squares regressions with the five days abnormal returns as the dependent variable.

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	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Intercept	0.111 *** (0.000)	0.114 *** (0.001)	0.106 *** (0.003)	0.097 *** (0.009)
Tobin's q	-0.001 (0.611)	-0.004 (0.172)	0.000 (0.895)	0.000 (0.890)
Free cash flow/total assets	-0.011 (0.915)	0.144 (0.209)	-0.023 (0.822)	-0.003 (0.973)
Return on assets	0.000 (0.779)	0.000 (0.378)	0.000 (0.835)	0.000 (0.841)
Leverage	-0.004 (0.762)	0.003 (0.833)	-0.003 (0.805)	0.002 (0.863)
ln(size)	-0.006 *** (0.000)	-0.003 ** (0.021)	-0.006 *** (0.002)	-0.005 *** (0.006)
Dummy equity payment	0.022 ** (0.044)	0.000 (0.964)	0.023 ** (0.035)	0.023 ** (0.033)
Dummy listed target	0.002 (0.826)	-0.010 (0.186)	0.000 (0.977)	0.000 (0.975)
Dummy diversifying	-0.005 (0.229)	-0.003 (0.536)	-0.005 (0.269)	-0.005 (0.228)
Dummy Domestic target	-0.002 (0.752)	0.000 (0.962)	0.001 (0.839)	0.001 (0.807)
Dummy European target, but not Dutch	-0.008 (0.101)	-0.003 (0.584)	-0.006 (0.216)	-0.006 (0.211)
Dummy US target	-0.001 (0.822)	0.004 (0.562)	0.001 (0.930)	0.001 (0.931)
Relative size of acquisition		0.058 *** (0.000)		
Relative size of the board			0.013 (0.468)	0.017 (0.362)
Block shareholders			0.003 (0.730)	0.003 (0.703)
Insider ownership			-0.011 (0.526)	-0.008 (0.656)
Dummy cross-listing US or UK			-0.001 (0.767)	-0.003 (0.486)
Takeover defense index			-0.004 * (0.060)	
Dummy priority shares				-0.005 (0.241)
Dummy preference shares				0.001 (0.910)
Dummy certificates				-0.001 (0.779)
Dummy structured regime				-0.010 * (0.086)
Number of observations	865	644	865	865
Adjusted R -squared	5.11%	12.03%	4.66%	4.99%

* significant at 10%; ** significant at 5%, *** significant at 1%

Table 4.5: Regression analysis of acquirer return around acquisition announcements

The table provides the results of ordinary least squares regressions that explain the abnormal returns during five days around acquisition announcements. All variables in this table are defined in Table 1. All regressions include year and industry dummies. P -values are documented in parentheses and based on White's heteroskedasticity corrected standard errors. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively.

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Consistent with Moeller, Schlingemann and Stulz (2004), the first regression indicates that larger firms are more likely to make value reducing acquisitions. Furthermore, firms that finance their deal with equity experience 2.2% higher abnormal returns than firms that do not use equity as payment. Although this result is not in line with previous research on US firms, Goergen and Renneboog (2004) find similar results for European firms. A possible explanation for the positive relation is the high amount of private targets that get acquired. The results further show that the target's country of origin does not influence shareholders' wealth. None of the country dummies is significant. Firm and deal characteristics that do not influence acquirer returns are the firm's Tobin's q , free cash flow, return on assets, leverage, whether the target is listed and whether the deal is diversifying.

The size of the target relative to the acquirer firm size is an indication for the impact of the deal for the acquiring firm. Unfortunately, few firms disclose the price they pay for the target (152 out of 865) and we do not know the target sales of all deals (555). To examine the impact of the deal size, we construct the variable 'relative size of acquisition' in which we set the value to the relative price paid, calculated as price paid for the target divided by the market value of the acquirer firm's equity. If this value is not available, we take the ratio of target sales to acquirer sales. Regression 2 of Table 4.5 includes the relative size of the acquisition. We find the relative size to be positively related with acquirer returns, suggesting that larger acquisitions are more likely to be firm value enhancing. Another effect of including this relative size is that the equity payment dummy loses its significance, which may be a result of the smaller sample size. However, when running regression 1 with the same observations as regression 2 (results are not tabulated), the equity payment dummy remains significant, implying that the dummy is an artifact of the relative size of an acquisition. Firms that acquire relatively large targets are more likely not to have enough cash available, increasing the probability to pay with equity. A comparison between the R-squared of regression 1 (with 644 observations) and regression 2 implies a significant increase in explanatory power ($p=0.000$).

To examine the impact of corporate governance on shareholders' wealth around acquisition announcements, Regression 3 includes the variables relative size of the board, percentage of block shareholders, percentage insider ownership, a dummy for being cross-listed in the US or UK and the takeover defense index. We expect a better governance structure within a firm to bring about less discretion for managers, resulting in higher abnormal returns. The

results suggest a marginal impact of corporate governance on firm's decisions as only the coefficient for takeover defense index is significant. In line with Masulis, Wang and Xie (2006) and in line with our expectations, the coefficient is negative. *Ceteris paribus*, for each implemented takeover defense mechanism, shareholders' wealth decreases with 0.4%. To investigate which of the takeover defense mechanisms drive the negative effect, we include the four defense dummies in regression 4. The restricted regime dummy appears to mainly drive the takeover defense effect. In particular, the abnormal returns around acquisition announcements are 1.0% lower for firms that have adopted a structured regime as compared to firms that have not adopted such a regime. Comparing the 1.0% with the average of 1.07% abnormal returns for the whole sample, the impact of a structured regime is high.

4.4.3 Which firms make wealth-destructing deals?

As previously mentioned, our results suggest that a small number of acquisitions drive down the total shareholders' wealth around acquisition announcements. In this section, we investigate whether firm and deal characteristics differ for wealth-destructing deals versus non-wealth destructing deals. In particular, we expect these wealth-destructing deals to occur in firms where managers are able to exercise discretion and make acquisitions that maximize their own utility. Corporate governance should prevent managers from making large loss deals. Moeller, Schlingemann and Stulz (2005) examine wealth-destructing deals with a loss of at least \$1 billion disclosed by US firms. We focus on deals with losses of more than €150 million, because our sample exclusively consists of Dutch firms that are on average smaller than US firms and we aim to construct a sample that is large enough to draw robust conclusions¹⁹. From our sample of 865 acquisition announcements, 80 acquisitions announced by 9 firms are wealth-destructing. The total wealth destruction of these 80 acquisition announcements is €38 billion. Table 4.6 presents descriptives and mean comparisons of the sample with and without these wealth-destructing deals.

¹⁹Our sample includes eight deals with shareholders' losses of more than €1 billion.

Panel A: Acquirer characteristics at a firm-year level

	Excl. firm-years with wealth-destroying deals			Firm-years with wealth-destroying deals			Difference (1)-(2)		p-value	
	Mean(1)	Median	Stdev.	Mean(2)	Median	Stdev.	N	N		
<i>Financial characteristics</i>										
Market capitalization (€ thousands)	1,542,605	423,689	6,037,254	11,981,138	8,434,009	10,410,319	46	46	-10,438,533	0.000
Leverage	0.274	0.247	0.187	0.310	0.239	0.195	46	46	-0.036	0.348
Tobin's q	1.459	1.302	0.664	2.067	1.805	1.081	46	46	-0.609	0.000
Free cash flow/total assets	0.031	0.034	0.036	0.039	0.037	0.052	46	46	-0.007	0.171
Return on assets	0.197	0.107	3.795	1.142	0.114	3.300	46	46	-0.945	0.113
<i>Governance characteristics</i>										
Number of supervisory board members	3.271	3.000	1.593	4.891	5.000	1.251	46	46	-1.621	0.000
Number of executive board members	5.801	6.000	2.171	7.478	7.000	1.847	46	46	-1.678	0.000
Relative size of executive board	0.644	0.667	0.114	0.604	0.600	0.059	46	46	0.041	0.018
Percentage largest outside blockholder	0.171	0.100	0.182	0.163	0.090	0.184	46	46	0.008	0.789
Total percentage outside blockholders	0.305	0.240	0.242	0.207	0.150	0.183	46	46	0.098	0.009
Total percentage inside blockholders	0.066	0.000	0.148	0.011	0.000	0.074	46	46	0.055	0.014
Dummy cross listing US and/or UK	0.244	0.000	0.431	0.739	1.000	0.444	46	46	-0.495	0.000
Takeover defense index	2.211	2.000	1.014	1.848	2.000	0.918	46	46	0.363	0.018
Dummy priority shares	0.395	0.000	0.490	0.652	1.000	0.483	46	46	-0.257	0.001
Dummy preference shares	0.688	1.000	0.464	0.587	1.000	0.498	46	46	0.101	0.179
Dummy warrants	0.398	0.000	0.491	0.217	0.000	0.417	46	46	0.181	0.019
Dummy structured regime	0.729	1.000	0.445	0.391	0.000	0.493	46	46	0.338	0.000

Table 4.6: Differences between wealth-destroying deals and non-wealth-destroying deals

This table presents the means, medians, standard deviations and the number of observations of firm years with wealth-destroying deals and firm years without wealth-destroying deals in panel A. The last two columns show the mean difference and the p-value of the mean difference between the two types of firm years. Panel B provides these statistics for wealth-destroying deals and non-wealth-destroying deals. A deal is classified as wealth-destroying when the negative wealth effect is more than €150 million. All variables in this table are defined in Table 1. The table shows *, ** and *** for mean differences that are significantly different from zero at a 10%, 5% and 1% level, respectively.

Panel B: Deal characteristics at a deal level

	Earl wealth-destroying deals			Wealth-destroying deals			Difference (1)-(2)	p-value
	Mean(1)	Median	Stdev.	Mean(2)	Median	Stdev.		
Transaction value (\$ thousands)	469	70	1,232	824	363	968	-354	0.138
Transaction value inside transaction	0.148	0.030	0.271	0.068	0.038	0.099	0.080	0.176
Subs held/sales acquired	0.099	0.017	0.300	0.038	0.004	0.119	0.061	0.008
Dummy listed target	0.064	0.000	0.244	0.150	0.000	0.359	-0.086	0.004
Dummy diversifying acquisition	0.201	0.000	0.401	0.238	0.000	0.428	-0.036	0.470
Dummy force shifting acquisition	0.048	0.000	0.215	0.050	0.000	0.219	-0.002	0.951
Dummy payment in equity	0.064	0.000	0.244	0.013	0.000	0.112	0.051	0.064
Dummy payment in cash	0.196	0.000	0.397	0.138	0.000	0.347	0.059	0.204
Dummy payment in cash and equity	0.039	0.000	0.195	0.000	0.000	0.000	0.039	0.070
Dummy domestic acquisition	0.246	0.000	0.431	0.188	0.000	0.393	0.058	0.245
Dummy Europe acquisition (excluding NL)	0.452	0.000	0.498	0.375	0.000	0.463	0.077	0.186
Dummy US acquisition	0.181	0.000	0.365	0.300	0.000	0.461	-0.119	0.010

Table 4.6: Differences between wealth destroying deals and no-wealth destroying deals (continued)

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Panel A provides the firm characteristics. Consistent with Moeller, Schlingemann and Stulz (2005), firms that make value-destroying acquisitions are larger (market capitalization of €12.0 billion vs. €1.5 billion) and have a higher Tobin's q (2.067 vs. 1.459). The higher Tobin's q is in line with the arguments that a high valuation of firms increases the likelihood of managers to act in their own interest (Jensen, 2005; Moeller, Schlingemann and Stulz, 2005). According to Jensen (1986), managers in firms with excess free cash flows are more likely to make value reducing acquisitions. However, this theory does not apply to wealth-destructing acquisitions, as firm years in which wealth-destructing acquisitions occur do not have significantly more free cash flows. Governance characteristics also provide some significant results. Although both the supervisory board and the executive board are larger in firms with wealth-destructing deals, the relative size of the executive board is smaller (60.4% versus 64.4%). The smaller relative number of executives in the board implies better monitoring and therefore a lower probability to make large losses. Moreover, the percentage of outside blockholders that are other monitoring agents is lower within firm years with wealth-destructing deals (20.7% vs. 30.5%). Insider ownership should increase the incentives of managers to act firm value maximizing and hence not to make large losses around acquisition announcements. Insider ownership of 1.1% for firm years with wealth-destructing acquisitions and of 6.6% for firm years without such deals is evidence that is consistent with this line of reasoning.

A remarkable result is that firms making wealth-destructing deals are more often cross-listed in the US and/or the UK (73.9% vs. 24.4%). A cross-listing is amongst others a bonding mechanism for managers to act value-maximizing (Coffee Jr., 1999, 2002), however, the results suggest the opposite. An alternative explanation comes from the fact that Dutch firms with a cross-listing in the US and/or UK are typically larger. The significant difference may be an artifact of firm size. Another surprising result is the lower amount of takeover defense mechanisms in firm years with value-destructing deals (1.8 vs. 2.2). Distinguishing between the different takeover defense mechanisms gives 21.7% of all firm years with wealth-destructing acquisitions have certificates, 39.1% have adopted the structured regime, 58.7% have preference shares and 65.2% have priority shares. For firm years without the wealth-destructing deals, these percentages are 39.8%, 72.9%, 68.8% and 39.5%, respectively. Therefore, only the relatively high application of priority shares for firm years with wealth-destructing deals as compared to firms without such deals meets our expectations.

Panel B provides the differences in deal characteristics between wealth-destructing deals and non-wealth-destructing deals. As wealth-destructing deals have a large impact on the euro value of firms, we expect the transaction value for these deals to be larger as well. The table shows a higher transaction value for value-destructing deals, yet the difference is not statistically significant. This also applies for the transaction value standardized by the market value of equity of the acquirer. Unexpectedly, the ratio of target sales to acquirer sales, which is also a proxy for the size of the deal, is smaller for value-destroying deals (3.8% vs. 9.9%). Moeller, Schlingemann and Stulz (2005) suggest that the absolute change of returns around acquisition announcements reflect both the net present value of the acquisition itself and the information that is revealed about the firm by announcing an acquisition. The large loss deals may be a reflection of the information about the firm beyond the acquisition announcement. Furthermore, targets of value-destructing deals are more often listed (15% vs. 6.4%) and located in the US (30% vs. 18.1%). In contrast to Moeller, Schlingemann and Stulz (2005), we find less equity payments in wealth-destructing deals. In particular, 1.3% of the wealth-destructing deals are financed with equity, whereas this is 6.4% for non-wealth-destructing deals (this is 0% vs. 3.9% for mixed payment methods).

Now that we know the characteristics of firms announcing wealth-destructing deals and the characteristics of such a deal itself, we aim to predict the likelihood that a wealth-destructing acquisition occurs. In a logit regression with exclusively a dummy for the firm being in its highest valuation year, Moeller, Schlingemann and Stulz (2005) find that firms make wealth-destructing deals when their valuation is high. This result is consistent with the arguments of Jensen (2005), who reasons that a high valuation of firms increases the likelihood of managers to act in their own interest. Apart from the Tobin's q , we include additional firm, governance and deal variables in the regression in which the dependent variable that takes on the value of one if the deal is value-destructing and zero otherwise. We are particularly interested in whether good corporate governance structures provide more protection for shareholders.

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	Coefficient (<i>p</i> -value)
Intercept	-28.020 *** (0.000)
Tobin's <i>q</i>	0.995 *** (0.000)
Free cash flow/total assets	4.451 (0.634)
Return on assets	0.059 (0.393)
Leverage	3.696 *** (0.005)
ln(size)	1.509 *** (0.000)
Dummy equity payment	-1.105 (0.298)
Dummy listed target	0.472 (0.279)
Dummy diversifying	0.455 (0.194)
Dummy European target, but not Dutch	0.339 (0.452)
Dummy Domestic target	0.841 (0.131)
Dummy US target	0.329 (0.521)
Relative size of the board	-3.981 * (0.079)
Block shareholders	0.720 (0.553)
Insider ownership	0.986 (0.744)
Dummy cross-listing US or UK	0.700 (0.215)
Dummy priority shares	0.995 * (0.056)
Dummy preference shares	-0.899 * (0.072)
Dummy certificates	0.193 (0.715)
Dummy structured regime	-0.163 (0.774)
Number of observations	865
McFadden <i>R</i> -squared	35.68%

* significant at 10%; ** significant at 5%, *** significant at 1%

Table 4.7: Regression analysis explaining the likelihood of a wealth-destructing acquisition announcement

The table provides the results of a binary logit regression that explains the likelihood of an acquisition announcement to be wealth destructing. A deal is classified as wealth-destructing when the negative wealth effect is more than €150 million. All variables in this table are defined in Table 1. The regression includes year and industry dummies. *P*-values are in parentheses and based on Huber/White's heteroskedasticity corrected standard errors. The table shows *, ** and *** for values that are significantly different from zero at a 10%, 5% and 1% level, respectively

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With a McFadden R -squared of 35.68%, the model can reasonably predict the likelihood that firms make value-destructing acquisitions. The significantly positive Tobin's q is in line with the theory that managers of highly valued firms are more likely to make value decreasing decisions. Leverage shows a significantly positive coefficient, suggesting that firms with more leverage are more likely to make value-decreasing acquisitions in spite of the fact that leverage acts as a monitoring device (Jensen, 1986). As De Jong (2002) argues that Dutch managers are not disciplined by leverage, shareholders can perceive acquisition announcements of firms with high leverage as highly risky and hence respond negatively to the announcement. Furthermore, larger firms are also more likely to make wealth-destructing deals. This result is consistent with Moeller, Schlingemann and Stulz (2004), who find a size effect in explaining acquirer returns around acquisition announcements. As larger firms make larger deals, they are also more likely to make larger losses.

The governance variables suggest that the relative size of the board, priority shares and preference shares influence the likelihood of a wealth-destructing deal. In line with our expectations, a larger proportion of executives on the board give the executives more possibilities to exercise discretion, increasing the probability to make value-destroying acquisitions. Furthermore, firms with priority shares, providing friendly shareholders with special rights such as merger approval, are better protected against takeover defenses and therefore more likely to make wealth-destructing deals. On the other hand, preference shares, another takeover defense mechanism, negatively influence the probability of wealth-destructing acquisitions. The other governance variables – i.e. block shareholders, insider ownership, being cross-listed in the US or UK, certificates and structured regime – do not show a significant impact. Free cash flows, return on assets and none of the deal characteristics influence the probability of value-destructing deals either. In sum, the significant coefficients of firms' Tobin's q , leverage and size imply that managers exercise discretion in their acquisition decisions resulting in a higher probability of making wealth-destructing acquisitions. Corporate governance does have an effect on acquirer wealth gains in acquisitions; however, the results suggest a rather minor effect.

4.5 Conclusion

This chapter provides an extensive description of the acquisition market within the Netherlands for the period starting in 1993 until 2004. We investigate the change in shareholders' wealth during the days around acquisition announcements and the impact of a firm's governance structure on shareholders' wealth change. From an international perspective, the Netherlands provides an interesting setting, as the market for corporate control is virtually absent. Dutch firms can implement four types of defense mechanisms – priority shares, preference shares, certificates, adoption of structured regime – that severely restrict shareholders' power. Limited shareholder power leaves much room for managers to exercise discretion in their acquisition decisions. We examine shareholders' wealth change in terms of the percentage abnormal returns and the absolute euro change.

We investigate a sample of 865 acquisitions in the period 1993-2004 and find that, even though shareholders have limited power, their average wealth increases around acquisition announcements. We also find that an adequate corporate governance structure has a minor influence on acquisition announcements. In explaining acquirer returns, only one governance factor provides significant results. Specifically, firms that adopt the structured regime have lower acquirer returns, which is in line with managers exercising discretion when shareholders' power is low.

In addition to returns expressed as the corrected percentage share price change, we also measure the changes in the market values of the firm's equity in euros. We find the same striking result as Moeller, Schlingemann and Stulz (2005) that during 2001 and 2002 average acquirer returns are positive, whereas the total euro wealth effect for shareholders is negative. In order to shed light on this counter-intuitive finding, we examine which firms are more likely to announce deals that result in a wealth loss of more than €150 million. Our results indicate that high q firms, firms with high leverage and larger firms are more likely to make value-destructing acquisitions. The finding that high q firms are dominantly present among the group of wealth destructing companies is in line with Jensen's (2005) prediction of agency problems resulting from overvalued equity. The positive impact of leverage on the likelihood of managers to announce value-destructing deals is in line with the results of De Jong (2002), who finds Dutch managers to avoid the disciplining role of leverage, especially when they overinvest. Once more, the results

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on explaining the likelihood of wealth destructing deals suggest a minor impact of corporate governance. A smaller relative amount of executive board members and firms that do not have priority shares decrease the likelihood of value-destructing acquisitions.

Chapter 5:

Summary and suggestions for further research

5.1 Summary

In this chapter we summarize our findings. In chapter 2 we investigated the relation between board interlocks and firm risk in Dutch firms. Dutch firms are interesting from a governance perspective since they operate with a two tier board structure, separating daily management from supervision. This allowed us to investigate the effect of supervisory directors' connectivity on firm risk. We found that supervisory board interlocks reduce the firm's systematic risk and that bankers on the board increase the firm's ability to mitigate downside risk. Both effects are empirical support for the view that interlocks are a node through which information on business practices flows and network resources are engaged. However, we also found that interlocks of the chairman of the supervisory board increase the firm's risk. This can be explained through busyness, arguing that more interlocks of the chairman lead to a weaker corporate governance and reduced monitoring. An alternative explanation is that the chairman actively uses network information and resources to steer the firm's decision making towards higher risk decisions.

In chapter 3 we investigated the increasing importance of communication between firms and financial markets, particularly in the 1990s. We studied the financial market reactions to major strategic announcements of Royal Philips NV in the period 1971-2001. Amidst exogenously changing financial markets we analyzed Philips' financial market communication and the markets' appreciation of Philips' investor relations activities and their reaction in terms of share liquidity, analyst following, dispersion of their forecasts. We found strong negative announcement reactions, particularly in the late 1990s. We conclude that Philips communication inadequately addressed the investor needs for

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information, and that particularly in the late 1990s Philips has been incapable to convincingly communicate its strategic intentions to the market. A high level of consistent voluntary disclosure and adequate investor relations are key in assuring that a firm and its securities are fairly valued.

In chapter 4 we examined 865 acquisitions by Dutch industrial firms over the period 1993–2004. Theoretical work based on principal–agent problems predicts that managers of exchange-listed corporations may pursue acquisitions even when these do not add value for the shareholders. Corporate governance structures serve to constrain managers in their acquisition activity. In this chapter we measured the shareholder wealth effects of acquisitions and the factors that determined these wealth effects, including the governance characteristics of corporations. Firms in the Netherlands are interesting from the perspective of corporate governance, because the managerial board has a relatively strong position vis-à-vis shareholders. Several takeover defenses commonly used in the Netherlands not only limit shareholder influence during takeover battles, but also in absence of such fights. On the other hand, ownership is relatively concentrated, which may provide shareholders with the incentives and power to monitor the management. The average abnormal share return following acquisition announcements is 1.1%, which is a significant positive effect. There is only a significant negative impact of the so-called structured regime, a situation where several shareholder rights are delegated to the supervisory board. This result suggests that governance improves acquisition decisions.

5.2 Suggestions for further research

In chapter 2 we investigated the relation between board interlocks and firm risk. Based on statistical analyses we concluded that board interlocks may reduce risk. Our explanation for this phenomenon is that interlocks may serve as a node through which information may be obtained and network resources may be shared. There are various ways in which board interlocks may reduce (systematic) risk. A possible risk reduction effect may be related to the information effect' of board interlocks. In order to identify a possible information effect we can, for instance, divide our dataset into subsamples. We would

expect the effect to be strongest in intransparent firms. Such a division into subsamples could be based on firm transparency (intransparent firms versus transparent firms). A similar division into subsamples could be made to distinguish a 'network resources effect', or other risk reduction effects of board interlocks. Further research is needed to further investigate the nature of the interlocks. The effect on firm risk may be different depending on the nature of the interlock. The nature of interlocks may be functional, industrial, professional or otherwise, each with its own specific effect on firm risk. Adding industry relatedness to the connectivity variables may also prove useful in better understanding of the risk reduction effects of board interlocks. Another finding in our research is that the relation between board interlocks and systematic risk is negative whereas the relation between interlocks of the chairman and downside risk is positive. In other words, board interlocks reduce firm risk but interlocks of the chairman increase firm risk. This difference is interesting and may be explained in several ways. Explanations for this could be found in the difference of network information obtained, or differences in deploying information and network resources in the firm's decision making process or the difference in responsibility between the chairman and other supervisory board members.

In chapter 3 we investigated the increasing importance of communication between firms and financial markets, particularly in the 1990s, using Philips as a case study. An aspect for further research are Philips' announcements on capital expenditures, reorganizations and lay-offs that have been excluded from this study. Such announcements are a direct consequence of the firm's strategy. The relation between such announcements and the financial markets reaction could provide valuable additional insights on how these announcements have been communicated to the market. A case study method was selected for our research since the nature of our research question required a rich and holistic approach in which the complex setting, with many important variables, could be investigated. Further research may address the concern of lack of representativeness of the case study approach. For such research the financial market communication of a sample of firms should be investigated and the financial markets' reaction to these companies' restructuring announcements. The findings of this case study can be used as hypotheses to be tested.

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In chapter 4 we measured shareholder wealth effects of acquisitions and the factors that determine these effects, including the firms' governance characteristics. We find positive announcement returns and conclude that takeover defenses used by Dutch firms had only very limited negative effect on shareholder value around acquisitions. A possible explanation for this effect is that high concentration provides shareholders with both an incentive and the means to exercise control over management. Further research could investigate the relation between acquisition announcement returns and ownership. Various aspects of ownership could be included such as shareholder characteristics, distribution of ownership, firm and industry characteristics and board representation.

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Nederlandse samenvatting (Dutch translation)

In hoofdstuk 2 onderzochten we de relatie tussen meervoudige bestuursfuncties en ondernemingsrisico bij Nederlandse bedrijven. Nederlandse bedrijven zijn interessant vanuit het perspectief van bestuur, omdat zij werken met een tweeledige bestuursstructuur, waarbij dagelijks bestuur is gescheiden van toezicht. Hierdoor waren wij in staat om het effect te onderzoeken van dubbelfuncties van commissarissen op het ondernemingsrisico. Wij vonden dat meervoudige bestuursfuncties van de leden van raad van commissarissen het systematisch bedrijfsrisico vermindert en dat bankiers in de raad van commissarissen de mogelijkheden van de onderneming vergroot om neerwaarts risico te beperken. Beide effecten zijn empirische steun voor de opvatting dat dubbelfuncties een knooppunt zijn, waarlangs informatie over zakelijke gebruiken stroomt en waarlangs middelen uit het netwerk kunnen worden ingeschakeld. Maar we vonden ook dat meervoudige bestuursfuncties van de voorzitter van de raad van commissarissen van het bedrijf het ondernemingsrisico verhoogt. Dit kan worden verklaard door drukte, met het argument dat meer bestuursfuncties van de voorzitter leiden tot een zwakkere bestuursstructuur en een verminderd toezicht op het dagelijks bestuur. Een alternatieve verklaring is dat de voorzitter actief netwerkinformatie en middelen gebruikt om de besluitvorming van het bedrijf te sturen in de richting van beslissingen met een hoger risico.

In hoofdstuk 3 onderzochten we het toenemende belang van communicatie tussen bedrijven en financiële markten, met name in de jaren 1990. We bestudeerden de financiële marktreacties op belangrijke strategische aankondigingen van Koninklijke Philips NV in de periode 1971-2001. Temidden van exogeen veranderende financiële markten analyseerden we Philips' financiële marktcommunicatie en de waardering van de markten van Philips' investor relations activiteiten, en de gevolgen voor de liquiditeit van het aandeel, het aantal analisten dat het aandeel actief volgt en de spreiding van hun voorspellingen. We vonden sterk negatieve koersreacties op aankondigingen, met name in de late jaren 1990. We concluderen dat Philips' communicatie onvoldoende tegemoet kwam aan de informatiebehoefte van beleggers, en dat vooral in de late jaren 1990

Philips is niet in staat is geweest om haar strategische intenties overtuigend aan de markt te communiceren.

In hoofdstuk 4 hebben we 865 overnames onderzocht door Nederlandse industriële bedrijven over de periode 1993-2004. Theorie op basis van de principle-agent tegenstelling voorspelt dat managers van beursgenoteerde bedrijven acquisities kunnen doen, zelfs wanneer deze geen waarde toevoegen voor hun aandeelhouders. Bestuursstructuren dienen ervoor om managers in hun acquisitieactiviteiten te beperken. In dit hoofdstuk meten we effecten van acquisities op aandeelhouderswaarde en de factoren die deze waarde-effecten bepalen, inclusief de bestuurs-kenmerken van deze bedrijven. Bedrijven in Nederland zijn interessant vanuit het perspectief van bestuursstructuur, omdat het dagelijks bestuur een relatief sterke positie ten opzichte van de aandeelhouders heeft. Verschillende beschermingsconstructies, vaak in Nederland gebruikt, beperken niet alleen de invloed van aandeelhouders bij het overname gevechten, maar zonder dergelijke. Anderzijds is het eigendom van Nederlandse bedrijven relatief geconcentreerd, waardoor aandeelhouders de prikkels en macht heeft om het bestuur controleren. Het gemiddelde abnormale koerseffect rondom overname aankondigingen is 1,1%, en dat is een significant positief effect. Er is slechts een belangrijke negatief effect bij de zogenaamde structuur regeling, een situatie waarin meerdere aandeelhoudersrechten aan de raad van commissarissen worden gedelegeerd. Dit resultaat suggereert dat bestuursstructuur acquisitie beslissingen verbetert.



About the Author

Michiel Wolfswinkel (1963) studied Business Economics at the Erasmus University in Rotterdam. His program included a combination of corporate finance, corporate legal and corporate fiscal electives. After his graduation in 1989 he initially worked for Coopers & Lybrand, advising firms and multinational corporations on international tax planning and structuring. His corporate career started with the AT&T / Unisource telecommunication venture, a subsidiary of three European PTT's, where he spent some 7 years. He moved through the ranks of financial management and taking restructuring assignments and increasingly complex mergers and acquisitions roles.

For AT&T / Unisource he negotiated several joint ventures in Poland, Czech and Hungary, and a complex carve out transaction with Vivendi in France. When the AT&T / Unisource venture was unwound he took senior financial management roles with MatrixOne and Eneco. At Eneco, he lead the 250 million euro project financing for the off shore wind farm Amalia. In subsequent roles as CFO at the executive board of VDM NV and Qurius NV, both publicly quoted companies, he actively worked with capital markets in the US and The Netherlands.

His working experience includes a broad array of tasks in financial management, capital markets and investor relations, mergers & acquisitions, banking relations and regulatory affairs.

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CORPORATE GOVERNANCE, FIRM RISK AND SHAREHOLDER VALUE OF DUTCH FIRMS

This dissertation consists of three studies in the field of corporate governance. The research examines the impact of the way Dutch firms are managed and controlled on risk characteristics and the implications for shareholder value. The first study examines the relation between board interlocks and firm risk. In particular, we measure the effect of supervisory directors' connectivity on firm risk. We find yet unknown aspects of connectivity and based on our findings the validity of the motivation behind recent Dutch civil law amendments can be questioned. In the second study we examine how firms adapted their communication with investors to the changing demands of the financial markets in the 1990s. Using Royal Philips NV as a case study we find that Philips' communication was not able to satisfy the demands of the changing financial markets. As a consequence, its shareholders have suffered billion euro value losses. In the third study, we measure the effect of managers' discretion offered by takeover defenses on shareholder wealth. Dutch firms are known for the frequent use of takeover defenses, protecting managers and providing them a relatively strong position towards shareholders. We find that acquisitions conducted by Dutch firms generate significant positive abnormal announcement returns, which suggests that shareholders have other means to control management.

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