



A Wealth-Based Explanation for Earnings Conservatism *

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Abstract. This study extends research on earnings conservatism – the degree to which the accounting system recognizes bad news regarding future cash flows in a more timely manner than good news – by arguing that heterogeneous executives' risk attitudes will influence the degree of conservatism. Prior research has demonstrated that differences in earnings conservatism are mainly the result of differences in institutional factors (Basu (1997) and Ball et al. (2000a)). We hypothesize that more risk-averse managers, who demand a risk premium that offsets the effects of the variance in their compensation, will report more conservative earnings. Earnings conservatism will temper expectations among stakeholders about the future cash flows to be distributed thereby diminishing the likelihood of disappointing outcomes and potential litigation or threats for executives of being fired. The more risk-averse manager would be more inclined to reduce such conflicts, since they will have a destabilizing effect on his future compensation. The empirical results for a sample of Dutch companies over the period of 1983 to 1995 confirm our hypothesis: more risk-averse managers report earnings more conservatively than do less risk-averse managers.

Key words: capital markets, earnings conservatism, financial reporting.

JEL classification: G14, G38, M41.

1. Introduction

Research on accounting conservatism has demonstrated that differences in conservatism, which is the extent to which the accounting system recognizes bad news regarding future cash flows in a more timely manner than good news,¹ are mainly the result of differences in institutional factors. Basu (1997) for example, shows

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¹ See Basu (1997) and Ball et al. (2000a) for similar definitions of this concept.

that the liability exposures of auditors and managers for untimely disclosure of unfavorable news explains earnings conservatism. Ball et al. (2000a) demonstrate that the political influence on financial reporting explains conservatism; their investigation of the properties of earnings among seven countries shows that earnings reported in common law countries are more conservative than earnings reported under a codified law regime. Ball et al. (2000b) show that, among other factors, the "closeness" of the relation between financing parties and managers affects properties of financial reporting, in particular timeliness and conservatism.

These studies show that managers play an important role in the financial reporting game: they seem to have an interest in determining the level of conservatism. However, the studies do not test the relation between incentives or preferences of managers and financial reporting directly. Essentially, they assume that managers have equal incentives in a given country at any moment in time. In other words: managers would assess the effects of litigation pressure, political influence, or networking influences equally.

This study extends existing research on earnings conservatism by arguing that heterogeneous incentives of individual firms' managers will influence the degree of conservatism. More specifically, we try to explain differences in conservatism by measuring individual managers' risk preferences (risk-aversion). The approach for measuring risk preferences in this study is similar to that of Lambert et al. (1991) who show that managers' risk preferences create differences in perceptions that individual executives place on their decisions. They show that risk-averse managers are over-represented in the utility industry and less risk-averse executives are generally employed in industrial firms. Using a rationale similar to that of Lambert et al. we examine whether managers exercise their discretion over reporting earnings numbers such that these numbers are consistent with the way they manage their risk attitudes. It is hypothesized that managers who are most inclined to avoid conflicts with shareholders, report more conservative earnings. This behavior may result from an ill-diversified wealth portfolio or a particular level of risk-aversion.

As argued above, an important reason why managers report earnings conservatively is to lower expectations among stakeholders about the cash flow to be distributed which reduces the likelihood of disappointing outcomes and potential conflicts. This will create a positive effect on establishing the manager's reputation among outside parties, especially investors. However, it may be the case that not all managers are equally interested in lowering the likelihood of conflicts: individual managers incentives may actually differ in this respect.

We test the hypothesis that managers' risk preferences are associated with the level of conservatism in reported earnings. To test this hypothesis, we assume that managers' risk preferences are reflected in their required compensation. More specifically, we expect that more risk-averse managers – who generally require higher risk premiums in their required compensation – report more conservative earnings than do less risk-averse managers. Empirical results of an investigation

among listed Dutch firms over the period 1983 to 1995 confirm our predictions concerning cross-sectional differences in earnings conservatism.

The empirical research presented in this study investigates the reporting practices of a sample of Dutch firms. Bouma and Feenstra (1997) use the word *permissive* to characterize the Dutch regulatory system concerning financial reporting: the system that enforces financial accounting standards is not very effective. A key reason is that legal liability exposure related to financial reporting issues is low. In those circumstances it is likely that the variance in reporting practices and the resulting variance in earnings conservatism might be relatively high. Therefore the Dutch setting seems to be especially interesting for testing hypotheses about the association between managers' risk preferences and the degree of earnings conservatism.

In addition to the findings that more risk-averse managers' firms report more conservative earnings, the results indicate that the average degree of conservatism in earnings for Dutch companies is low as compared to US firms, for example. Furthermore, the outcomes show an increasing earnings conservatism over time, on average, although these results are less pronounced than the results for the differences in conservatism based on manager's risk preferences. A possible explanation for the growing degree of conservatism during the nineties is that reputational consequences of untimely reporting of unfavorable news increased over time. This could be due to the increased attention to corporate governance issues in the Netherlands since the beginning of the nineties, which led to an increased media interest in managers' performance. Managers might have responded to the increased media exposure by reporting more conservative earnings.

The study proceeds as follows. Section 2 describes the financial reporting environment and corporate governance issues in the Netherlands and the effect it might have on earnings conservatism. In section 3 we discuss arguments why managerial risk-aversion would be related to conservatism. In section 4 we describe our methodology for measuring managers' risk preferences and earnings conservatism. Section 5 discusses the sample selection procedures and provides an overview of our data sources. Section 6 presents the empirical results. Some caveats concerning the research design are discussed in section 7. Finally, section 8 concludes.

2. Reporting and Governance in the Netherlands

In this section, we will give a global description of the way in which financial reporting is regulated in the Netherlands in order to clarify the influence of the institutional arrangements on the reporting behavior of firms' managers. Furthermore, we will discuss related corporate governance issues, including the reasons for the increased attention towards these issues during the nineties.

2.1. FINANCIAL REPORTING

An important objective of the Dutch legislation on financial statements is that it requires financial statements to comply with norms acceptable in the economic and social climate. Dutch legislation thus acknowledges the fact that contemporary financial reporting is subject to change. The Dutch legislators did not choose to specify detailed accounting methods in the law, but to delegate these issues, and their interpretation to two separate bodies: the Council on Annual Reporting and the Enterprise Chamber of the Court of Amsterdam.

The Council on Annual Reporting is a private sector reporting standards body, but it derives its mandate, support, and funds from the government. The Council views its task as defining the norms with respect to financial reporting to be acceptable in the economic and social climate. The Council plays a complementary and important role in the development of Dutch financial reporting standard setting. Council members are appointed by organizations of employers, employees, financial analysts, and auditors. The wide membership of the Council, representing a variety of stakeholders in Dutch financial reporting, is intended to give it external legitimacy and authority.

The Council advises on financial reporting issues by way of publishing guidelines. These guidelines, however, are generally compromises between the different stakeholders represented by the Council. A consequence of this approach is that the guidance is characterized by ambivalence and a lack of clear directions for improvements. Furthermore, companies are able to deviate from the guidelines without appropriate disclosure of justification in the financial statements (Zeff et al., 1992).

Another factor weakening the position of the Council is the growing internationalization of accounting standards development. The professional association of auditors, the Dutch Institute of Chartered Accountants (NIVRA), has committed itself to promoting the use of the international standards of the International Accounting Standards Board (IASB) in the Netherlands. But the NIVRA is also involved in the Council on Annual Reports, appointing four of the twelve Council members. Furthermore, the president and most of the members of the Council are certified public accountants, and thus members of the NIVRA; this might lead to a conflict in loyalty. However, as the influence of international standard setting bodies grows, the NIVRA increasingly leans toward accepting international standards, thereby affecting the Council's position on financial reporting issues accordingly. Camfferman (1997), for example, notes that since 1987 the Council has become increasingly docile in its position towards international developments, in particular the activities of the IASB.

The position of the Council on Annual Reporting would definitely be stronger if their guidelines were enforceable, but they are not. Moreover the employer and NIVRA representatives in the Council opposed to making them so (Buijink and Eken 1999). Thus a serious weakness was built into the functioning of the Council,

which is only partially offset by the Enterprise Chamber, the court for resolving disputes involving legal entities. The Enterprise Chamber, however, follows the Dutch law in financial reporting, and not the voluntary Council guidelines, which does not contribute to the authority of the Council.

In addition to the problem of non-enforceability of the Council guidelines, Dutch law contains a rule affecting the authority of the Enterprise Chamber as well. Dutch company law requires that financial statements give a faithful representation of the financial position of the reporting company. In cases where rule-following would prevent firms from giving a faithful representation of their financial position, the law requires that firms give at least sufficient information to allow inference of their financial position. This is the principle of "insight", and Dutch company law assigns a higher priority to this than to rule-following (Schoonderbeek 1997).

The principle of insight is especially beneficial to the managers of the reporting firm. Effectively, the law grants managers the opportunity to justify their reporting decisions based on this principle. That this overriding principle actually holds can be deduced from the financial reporting disputes brought to the Enterprise Chamber. In several cases firms' managers successfully appealed the insight principle to justify their reporting behavior, which must have been frustrating to plaintiffs, and in the end to the Court as well (see for instance the court case against the transporting firm Pakhoed described in Buijink and Eken 1999).

The subjective interpretation of the principle of insight and the otherwise ambivalent financial reporting norms did have had an adverse effect on the effectiveness of the Enterprise Chamber. Perhaps the word "disappointing" best characterizes the functioning of the Enterprise Chamber's verdicts in financial reporting issues. Illustrative for the ineffectiveness of the Enterprise Chamber's is the small number of financial reporting cases it has settled. In more than two decades, only 54 cases have been held at the Enterprise Chamber (Buijink and Eken 1999). The number reached its peak during the end of the seventies and the beginning of the eighties and has since then decreased to a minimum.

The Dutch institutional system, where the principle of insight has an overriding impact, together with a marginally functioning Enterprise Chamber, and with only voluntary guidelines issued by the Council on Annual Reporting, makes that Dutch companies ultimately enjoy a great deal of freedom in the way they report their financial information. Adding to this relative freedom are the reporting requirements of the tax authorities. The earnings number published by companies in their financial statements is not tied to that reported to the tax authorities. The tax requirements for measuring assets and liabilities are different from those required for published financial statements, resulting in an earnings number reported to the tax authorities that differs from that reported to external stakeholders. The tax independence of published financial statements magnifies the perception of a liberal reporting regulatory environment.

The freedom in Dutch financial reporting has not generally been perceived as being detrimental to the quality of Dutch financial statements. Dutch companies

were inclined to introduce innovations in financial reporting, thereby defining the norms acceptable in the economic and social climate themselves. Traditionally, the large number of Dutch firms that operate on a worldwide scale have introduced financial reporting innovations from abroad, mainly from the US (Camfferman 1997). It might be that, due to their innovative behavior, these firms gave Dutch financial statements their reputation of a rather high quality – documented, for example, by Amir et al. (1993) and Hoogendoorn and Mertens (1996).

2.2. CORPORATE GOVERNANCE

From the beginning of the nineties, managers' attitudes towards outside parties – in particular investors – seem to have changed gradually. The traditional Dutch tripartite way of organizing society – government, employers' and employees' representatives – implied that investors' interests were not always of major importance for a long time. The composition of the Council on Annual Reports still reflects this attitude: since 1984 there is only one seat for the professional association of financial analysts which is assumed to represent investors' interests.

The rather neglected attention toward investors might have begun to change around 1991, when Royal Philips Electronics NV announced a major restructuring of its business. Along with a depressed business cycle around that time, this event gave way to a number of corporate reorganizations, performed mostly under the then popular *back to core business* and *creating shareholder value* themes. From that moment, business affairs gained attention in the public domain. Managers were exposed to higher levels of scrutiny from the investment community and the financial press. Media attention to corporate governance and business affairs increased gradually and managers became aware of the potential attention they could attract.

In 1996 the Association of Share Issuing Companies and the Association of Security Traders initiated the Committee on Corporate Governance. In its 1997 report, the Committee published its recommendations for improvements in Dutch corporate governance. The letter accompanying the report mentions that the main reasons for initiating the discussion on corporate governance in the Netherlands were the regained attention to value creation by companies for Dutch society and the increased international attention to the role, position, and influence of suppliers of capital in particular. The accompanying letter reveals that the initiating parties must have found their inspiration in the Cadbury report in the UK issued in 1992. Dutch companies, however did not enthusiastically commit themselves to implementing the recommended improvements of the Committee on Corporate Governance. Investigations by the Association of Security Owners in 1998 show that many firms adopted the non-controversial recommendations mainly.

To summarize, the Dutch financial reporting environment seems to be rather tolerant, mainly because of the subjective interpretation of the overriding principle of insight, the ambivalent financial reporting norms, and the ineffectiveness of the system enforcing financial accounting standards. These factors make the legal li-

ability exposure of managers related to financial reporting issues rather low. This could imply that the variance in reporting practices and the resulting variance in earnings conservatism might be relatively high. Therefore, the Dutch setting seems to be especially interesting for testing hypotheses about the association between managers' risk-aversion and the degree of earnings conservatism.

Although the research in this study does not perform a cross country investigation of earnings conservatism, results are presented in a format comparable to Basu (1997), Pope and Walker (1999), and Ball et al. (2000a). Therefore, we may actually compare conservatism in the Netherlands with that in Australia, Canada, the US, the UK, France, Germany and Japan. It is interesting to make this comparison since the system enforcing reporting standards in the Netherlands seems to be ineffective. In the US, however, legal liability concerning reporting is a serious issue, which is for example documented by Kothari et al. (1989), Skinner (1994), Dechow et al. (1996), and Basu (1997).

We noted, however, that beginning in the nineties public attention to business affairs and corporate governance issues seems to have increased in the Netherlands. Managers might have responded to this public exposure by reporting increasingly conservative during this time period.

HYPOTHESIS 1. Since the beginning of the nineties, earnings conservatism of Dutch companies has increased.

3. Managers' Risk-Aversion and Earnings Conservatism

Contracting theory predicts that it is in the interest of managers to contract with providers of capital to reduce value decreasing behavior, or shirking (Jensen and Meckling 1976; Watts and Zimmerman 1986). In efficient markets, rational investors protect themselves against the value decreasing behavior of the manager by discounting the value of the claims on future cash flows of the firm. Managers can opt to contract not to engage in value reducing behavior (bonding), which should reduce shirking. Such contracting lowers the cost of capital of a firm, which ultimately increases its chances of surviving competition and minimizes the chances of managers being removed from their positions. Therefore, such contracting is in the interest of managers and less in the interest of capital providers due to the fact that they can diversify the manager-specific behavior away. Managers, on the other hand, are generally ill-diversified since a manager's wealth is tied to one asset, his human capital (the capitalized value of the future income stream he expects to generate), which is generally related to the performance of the firm (see for instance Hall and Murphy 2000).

Basu (1997) and Ball et al. (2000a,b) show that there is a demand for earnings numbers that are verifiable independently from managers. The accounting system "produces" these earnings numbers, and it causes reported earnings to be inherently conservative. Conservatism means that earnings reflect favorable news in a less

timely manner than unfavorable news. Reported earnings are conservative because it is more costly to verify gains (or news about future gains) than losses (or news about future losses).² Ball (1987) provides a rationale for conservatism: it reduces expectations among stakeholders about future cash flows to be distributed thereby avoiding conflicts between managers and outside parties contracting with the firm. Conflicts, especially threats of litigation, will result more easily when outcomes are worse than anticipated. Conservatism decreases the chance that these situations occur. A manager who cares about his career, has a strong interest in limiting such conflicts. As a result there is a positive relationship between the manager's incentives for conflict reduction and earnings conservatism.

The preceding text suggests that reporting earnings conservatively is merely beneficial, but this is not *per se* the case. It is likely that earnings conservatism makes reported earnings less informative about firm performance or about firm value. The analysis of conservatism in one of the subsections below shows that it decreases the variation of reported earnings of firms with favorable future prospects. For these firms, the earnings number is less informative about performance and value. It is therefore likely that the manager strikes a balance between reporting a conservative (but not very informative) earnings number and reporting an informative but less conservative (more timely) earnings number. In the former case, the manager faces difficulties in communicating his performance, but his reported earnings number is less liable to litigation threats. In the latter case, the manager has the possibility to instantly communicate his performance to outsiders. However, in doing this he increases the likelihood of conflict with respect to an ultimate overstatement of his reported performance. If the negative consequences of reporting timely earnings for a manager are high, then it is likely that the manager will choose to report earnings conservatively, and as a consequence, he seems willing to accept the problems involved in communicating his performance to outsiders.

There are several articles that model the relation between current decisions made by managers and wealth concerns. DeMarzo and Duffie (1995), in addressing hedging and hedge accounting, formally model this a link. Zwiebel (1995) develops a model that shows possible settings that make managers refrain from undertaking innovative investments. In a setting typified by reputational concerns and asymmetric information, Zwiebel's model shows that managers display conservative investment behavior. Both DeMarzo and Duffie and Zwiebel use a model of learning developed by Holmstrom and Ricart I Costa (1986), that assumes that investors learn managerial competence from reported performance only. Managers know this and report in such a way that it efficiently advances reputation building such that past performance of a manager serves as a rational basis for forecasting future performance.

² It should be noted that the concept of conservatism presented here is consistent with the textbook notion of accounting prudence: Losses should be recognized immediately, whereas gains should be recognized when realized.

Lambert et al. (1991) use a similar argument to explain decision making differences across individual managers. They mention factors that could cause individual managers to value cash flows accruing to their firms differently. The structure of portfolios of assets held, for example, differs across individual managers. For some, the weight of their human capital in the total portfolio of their assets is high, whereas for others it is low. Further, some managers are not allowed to invest in all available securities, whereas others enjoy more freedom concerning investing. Also risk preferences differ across managers, which results in differences in the extent to which they discount the cash flow effects of their decisions. Lambert et al. show, for instance, that managers with different risk preferences self-select into industries fitting these risk preferences. More risk-averse managers, who demand higher wage *levels* that offset wage *variation*, are predominantly present in utility firms. Less risk-averse managers, who require lower risk premiums, are over-represented in industrial firms.

We try to link the risk aversion of managers to their reporting decisions. More precisely, we argue that more risk-averse managers, who demand a risk premium that offsets the effects of the variance in their compensation, will report more conservative earnings. Conservatism tempers expectations among stakeholders about what can be distributed, thereby diminishing the likelihood of disappointing outcomes and potential litigation threats. It is likely that managers bear the cost of these conflicts, for instance in case of being fired or reputational damage. Both situations will lead to increasing variability in the manager's future compensation. This will hold no matter how the cash compensation scheme of executives is constructed in terms of a fixed part and a variable (earnings related) part. Thus for testing our hypotheses about the association between earnings conservatism and managers' risk aversion, we do not need to make explicit assumptions about the way executive compensation is composed. Hence, the more risk-averse manager should have an interest in reducing the likelihood of conflicts about the interpretation of financial statement information. This leads to our second hypothesis:

HYPOTHESIS 2. More risk-averse managers report more conservative earnings than do less risk-averse managers.

4. Research Methodology

This section presents the methodology underlying the empirical research presented in this study. The first subsection describes the methodology for measuring managers' risk preferences, the second subsection describes the methodology for measuring earnings conservatism.

4.1. MEASURING MANAGERS' RISK PREFERENCES

Our methodology for measuring managers' risk preferences follows that of Lambert et al. (1991). They regress average executive compensation *levels* on average

executive compensation *variances* using compensation data of 370 firms over the period 1970 to 1984. The slope coefficient of the regression of *levels* on *variances* is a measure of risk aversion. A positive slope value indicates that a manager demands a risk premium to offset compensation variance. Likewise, a higher slope value indicates that a manager demands a higher premium to offset compensation variance. The average slope of their sample of utility firms is higher than the industrial sample confirming that more risk-averse managers prefer jobs in the utilities, and less risk-averse managers in industrial companies.

To partition our sample of managers into two groups with extreme risk preferences, we employ a method that retrieves subsamples of firms with extreme slope values. Lambert et al. do not investigate the distribution of slope values, however. They do not need to, because their sample choice was based on expectations about risk preferences in two distinct industry types. However, we have no priors about the distribution of risk attitudes among the group of firms in our sample, so we have to find other ways to locate managers with different risk attitudes. We exploit the idea that alternative selections of subsets of firms from a sample would provide different regression slope values.³ The objective then is to find two distinct samples of firms: the one that gives the highest, and the one that gives the lowest regression slope value.

A randomization procedure is employed to retrieve these two firm groups. From the 64 firms with 10 years of known compensation data, a random subsample of 18 firms is selected 10,000 times. Compensation data of these 18 firms are used in a cross-sectional regression where a ten-years time-series average *level* of compensation is regressed on a ten-years time-series *variance* of compensation. We use size (the natural log of sales) as a control variable in the regression. The sample size of 18 is chosen on an *ad hoc* basis.

The coefficients of each regression, as well as the 18 firm identifiers, are recorded into a database. The randomization procedure fills the database with 10,000 records, each containing information from one regression: slope values, *t*-statistics, standard errors, R^2 's, etc., together with information identifying the eighteen firms used for that particular regression. This way of recording the regression results enables us to retrieve the firms belonging to a particular regression outcome.

After the randomization procedure the database is sorted on slope values and partitioned into ten slope deciles. Those 15 firms that dominate the highest slope decile (while underrepresented in the lowest slope decile) are designated as firms employing more risk-averse managers. Those 15 firms that dominate the lowest slope decile (while underrepresented in the highest slope decile) are considered as the firms managed by less risk-averse executives. The 34 firms with intermediate positions were not assigned to either group.

Table I presents descriptive statistics for the firms for which 10 years of time-series data was available. Total cash compensation data were hand-collected from

³ It would be correct to speak of firm-manager combinations, as we use firm specific compensation information.

financial statements. Financial reporting standards in the Netherlands require firms to report only the total compensation accruing to executives. Due to reasons concerning personal privacy of executives, firms do not have to report compensation information for individual managers.⁴ However, the financial statements present information about the number of executives on the board, and leaving and entering the board. This makes it possible to determine the average – per executive – compensation. This average amount serves as a proxy for the compensation of individual board members.

It should be noted that the compensation data of the 15 high slope value firms display less dispersion compared with that of the other firms. The 15 high slope value firms are probably a more homogeneous group than the other firms. It is likely that the inference that these firms employ more risk-averse managers is correct, but one should exercise caution in denoting the other 15 firms as employers of less risk-averse managers.

Table I also reveals that firms with more risk-averse managers display a better market performance (a median market adjusted return of 6% per year) than do their low risk-averse counterparts (a median market adjusted return of 2% per year). This is an interesting result on its own, because one might argue that more risk-averse managers who get relatively fixed wages will have less incentives to work hard, which would decrease the performance of the company as well. This argument, and the related argument that the degree of conservatism is only an expression of poor performance, does not hold for our sample. This makes our suggested claim of a positive association between risk-aversion and conservatism more convincing.

In Table II, we present industry characteristics for the two groups of firms with different managers' risk preferences. Although the building construction industry seems to be over-represented in the group of firms with more risk-averse managers group and the chemical and pharmaceutical industry in the group of firms with less risk-averse managers, there seems to be no serious industry bias as both groups of firms are involved in at least 10 different industries.

Table III shows results of the regressions and the randomization procedure. The lowest slope value found was -0.00016 , a value not significantly different from zero (a t -value of -0.17). The highest slope value found was 0.00405 , with a t -value of 3.13 . The slope value of the 15 firms paying their executives a relatively high risk premium was 0.00293 (t -value of 18.7); the slope value for the 15 firms paying their executives a relatively low risk premium was 0.00016 (t -value of 0.91). The median slope value for the lowest slope decile was 0.00036 , and for the highest slope decile 0.00269 . The adjusted R -squares of the regressions are relatively high, with a median R -square value of 0.85 for the total sample, 0.77 for the lowest slope decile, and 0.96 for the highest slope decile.

As might be expected, Table III also reveals that there is a significant relation between the size of the firm and the average compensation of managers for both

⁴ Only recently, in June 2000, the government has decided that firms are required to disclose more detailed compensation information on individual managers.

Table I. Descriptive statistics of compensation data^a.

Panel A: Total sample				
	Mean	Median	StDev ^b	Nobs ^c
<i>av comp</i> ^d	818.77	698.59	473.65	64
<i>av var comp</i> ^e	105,304	55,231	160,458	
<i>av ln assets</i> ^f	13.65	13.55	1.47	
<i>map</i> ^g	0.07	0.03	0.37	
<i>Y</i> ^h	4.64	3.02	5.58	
<i>B</i> ⁱ	37.44	23.57	41.73	
<i>PtoB</i> ^j	1.92	1.32	2.29	
Panel B: More risk-averse managers				
	Mean	Median	sd	Nobs
<i>av comp</i>	850.51	761.87	275.87	15
<i>av var comp</i>	126,008	104,933	190,566	
<i>av ln assets</i>	13.79	13.76	1.37	
<i>map</i>	0.14	0.06	0.44	
<i>Y</i>	4.44	2.73	4.74	
<i>B</i>	31.57	20.39	27.24	
<i>PtoB</i>	1.77	1.22	1.78	
Panel C: Less risk-averse managers				
	Mean	Median	sd	Nobs
<i>av comp</i>	903.79	596.43	823.66	15
<i>av var comp</i>	137,769	33,171	243,263	
<i>av ln assets</i>	13.94	13.84	1.51	
<i>map</i>	0.07	0.02	0.41	
<i>Y</i>	2.57	2.75	7.13	
<i>B</i>	30.75	20.26	28.81	
<i>PtoB</i>	1.98	1.37	2.25	

^aAll monetary amounts are in Dutch guilders.^{b,c}Standard deviation, number of observations.^dExecutive compensation (*1000); 10-years firm average.^e10-years executive compensation variance (*1000).^fSize proxy: 10 years average of natural log of assets.^gThe market adjusted performance: the buy and hold return over the fiscal year, corrected for the equally weighed performance of the composite of the Dutch stock market (Datastream item TOTMKNL).^{h,i,j}Net income per share, after extraordinary items; book value of equity per share; price to book value.

Table II. Industry descriptives for firm/manager groups^a.

Panel A: More risk-averse firm/manager group		
Industry	Code ^b	Nfirms ^c
Food products	15	1
Paper products	21	1
Publishing	22	2
Electrical machinery	31	2
Building constructing	45	4
Automotive dealers and gasoline service stations	50	1
Wholesale trade	51	1
Retail	52	1
Transportation	60 & 61 & 63	1
Business services	74	1
Panel B: Less risk-averse firm/manager group		
Industry	Code	Nfirms
Food products	15	2
Textiles	17 & 18	1
Publishing	22	1
Chemicals and pharmaceuticals	24	3
Office machinery and computers	30	1
Electrical machinery	31	1
Means of transportation, other than motor vehicles	35	1
Building constructing	45	2
Wholesale trade	51	1
Retail	52	1
Transportation	60 & 61 & 63	1

^aDescriptives of Dutch listed firms over the period 1983–1995.^bBIK 2-Digit industry code.^cNumber of firms.

groups of firms. The slope coefficient of the size variable is lower for the firms with more risk-averse managers than for their counterpart, which can be interpreted as a, *ceteris paribus*, lower sensitivity of compensation for changes in firm size. It does not mean that more risk-averse managers work for smaller firms on average. The median amount of assets (946 million versus 1,025 million Dutch guilders) is almost equal between the distinctive groups of firms as can be seen from Table I.

4.2. MEASURING EARNINGS CONSERVATISM

The methodology of measuring earnings conservatism corresponds to that of Basu (1997), Ball et al. (2000a,b), and Pope and Walker (1999). It assumes that ac-

Table III. Association between levels and variances of executive compensation.

	$AvComp = \beta_0 + \beta_1 VarComp + \beta_2 size + \epsilon^a$			
	β_1	β_2	Rsq ^b	Nobs ^c
Total (medians) ^d	0.00154	145.80	0.85	10000 · 18
Upper Decile (medians) ^e	0.00269	105.53	0.96	1000 · 18
Lower Decile (medians) ^f	0.00036	169.36	0.77	1000 · 18
Max ^g	0.00405	98.60	0.83	1 · 18
(<i>t</i>) ^h	(3.13)	(3.53)		
Min ⁱ	-0.00016	119.75	0.77	1 · 18
(<i>t</i>)	(-0.17)	(5.56)		
More risk-averse managers ^j	0.00293	83.12	0.99	1 · 15
(<i>t</i>)	(18.7)	(3.30)		
Less risk-averse managers ^k	0.00016	177.41	0.84	1 · 15
(<i>t</i>)	(0.91)	(7.42)		

^aResults are from a randomization procedure, where a sample of 18 manager/firm combinations was drawn 10,000 times from a pool of 64 manager/firm combinations. *AvComp* is the 10 years time-series executive average compensation. *VarComp* is the 10-year time-series executive variance in compensation. *Size* is the 10-year time series average natural log of assets. ϵ is the error term.

^bR-squares adjusted for degrees of freedom.

^cNumber of observations.

^dMedian regression coefficients of all 10,000 regressions.

^eMedian regression coefficients of decile with highest slope values.

^fMedian regression coefficients of decile with lowest slope values.

^gCoefficients of sample generating highest slope value.

^hWhite heteroskedasticity-consistent *t*-values.

ⁱCoefficients of sample generating lowest slope value.

^jCoefficients of the group of firm/manager combinations denoted as more risk-averse.

^kCoefficients of the group of firm/manager combinations denoted as less risk-averse.

counting earnings reflect prior firm value changes. The underlying model can be described as follows:

$$Y_t = f(dV_{t-0}, dV_{t-1}, \dots, dV_{t-n}, \epsilon_t) \quad (1)$$

where Y_t denotes reported earnings of fiscal year t and dV_t denotes the change of value over the same period. ϵ_t denotes noise due to imperfect accounting accruals (Ball et al. 2000a)

Modeling earnings conservatism requires a different specification:

$$Y_t = f(a_{t-0}dV_{t-0}, a_{t-1}dV_{t-1}, \dots, a_{t-n}dV_{t-n}) \quad (2)$$

where $a_{(\cdot)}$ represents the effect of accrual accounting. In the case of unfavorable, or bad earnings news, $a_{(\cdot)}$ has a larger effect on Y_t than in the case of favorable, or good news.

To measure conservatism, reported earnings (Y_t) should be compared to a benchmark. Like Basu, Ball et al., and Pope and Walker, this study assumes that economic earnings (X_t) act as a benchmark for reported earnings (Y_t). Further, we assume that stock prices perfectly reflect economic earnings.⁵ Given these assumptions, it is possible to empirically investigate the extent to which reported earnings reflect economic earnings.

Further, we assume economic earnings follow a random walk:

$$X_t = X_{t-1} + \Delta\eta_t \quad (3)$$

where $\Delta\eta_t$ is an update of beliefs about economic earnings. $\Delta\eta_t$ is earnings news, and earnings news has zero mean, constant variance, and subsequent values of $\Delta\eta_t$ are uncorrelated.

We define κ as the (deterministic) relationship between economic earnings and prices.

$$P_t = \kappa X_t \quad (4)$$

where P_t is the market value of the firm. κ is the reciprocal of the appropriate non-stochastic risk adjusted discount rate. Because of the deterministic relation between economic earnings and prices, relation (4) can be inverted:

$$X_t = \frac{P_t}{\kappa} \quad (5)$$

The earnings innovation in (3) can be split into a *good news* component: $\Delta\eta_t^+$ ($\Delta\eta_t = \Delta\eta_t^+ > 0$); a *bad news* component: $\Delta\eta_t^-$ ($\Delta\eta_t = \Delta\eta_t^- < 0$); and a variable (η_t) representing the effects of prior period news on current reported earnings: $\eta_t = f(\Delta\eta_{t-1}, \Delta\eta_{t-2}, \dots, \Delta\eta_{t-\infty})$ (Pope and Walker 1999).

A model that relates reported earnings to economic earnings can be specified as follows:

$$Y_t = X_t - \varphi_t \Delta\eta_t^+ + \nu_t \Delta\eta_t^- + \eta_t \quad (6)$$

This model shows that reported earnings (Y_t) do not perfectly reflect economic earnings X_t . Parameter φ_t defines the under-recognition of good news in earnings ($\Delta\eta_t^+ > 0, \Delta\eta_t^- = 0$). This parameter moderates optimism in economic earnings. Parameter ν_t defines the over-recognition of bad news in earnings ($\Delta\eta_t^+ =$

⁵ Economic earnings are essentially a construct and impossible to observe in practice. We actually assume that prices conform to a semi-strong efficient market. This implies that prices reflect, amongst other things, differences in accounting choices including differences in earnings conservatism.

0, $\Delta\eta_t^- < 0$), which reflects the idea that reported earnings reflect unfavorable economic earnings more quickly. Conservative accounting results in positive values for both φ_t and v_t .

Standardizing by opening prices (P_{t-1}) allows model (6) to be estimated with the use of stock returns:

$$\frac{Y_t}{P_{t-1}} = \frac{1}{\kappa} \frac{P_t}{P_{t-1}} - \frac{\varphi_t \Delta\eta_t^+}{P_{t-1}} + \frac{v_t \Delta\eta_t^-}{P_{t-1}} + \frac{\eta_t}{P_{t-1}}. \quad (7)$$

We introduce a dummy (*News*) for bad news firms to estimate separate coefficients for two firm groups: bad news firms and good news firms. Bad news firms are those with a negative market adjusted performance during period t .⁶ The use of the dummy allows us to rewrite (7) as:

$$\frac{Y_t}{P_{t-1}} = \frac{1}{\kappa} + \frac{1 - \varphi_t}{\kappa} R_t + \frac{\varphi_t + v_t}{\kappa} \text{News} \cdot R_t + \frac{\eta_t}{P_{t-1}}. \quad (8)$$

This model underlies Basu (1997) and Ball et al. (2000a), who use the following regression equation:

$$\frac{Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News} + \beta_2 R_t + \beta_3 \text{News} \cdot R_t + \epsilon_t. \quad (9)$$

The slope coefficients of regression Equation (9) measure the responsiveness of reported earnings to the news captured in prior returns. The slope coefficients, therefore, can be denoted as *return response coefficients* (RRC's).

The regression equation used in this study differs from that used by Basu (1997) and Ball et al. (2000a,b). The regressions are run on pooled time-series and cross-sectional data. It is likely that the error terms are serially correlated. It is assumed that they follow an AR(1) process, which makes us to estimate an additional coefficient in the regression; a first-order serial correlation coefficient ρ . This results in the following regression specification:

$$\frac{Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News}_t + \beta_2 R_t + \beta_3 \text{News} \cdot R_t + \epsilon_t \quad (10)$$

$$\epsilon_t = \rho \epsilon_{t-1} + v_t. \quad (11)$$

Empirical comparisons of conservatism require a comparison of the slope values for good news (β_2) versus the slope coefficient of bad news ($\beta_2 + \beta_3$). Due to conservatism, the good news slope value (β_2) is lower than the bad news slope coefficient ($\beta_2 + \beta_3$). The steeper slope indicates that reported earnings (Y) reflect economic earnings (R) more timely when firms face unfavorable future prospects, and

⁶ The market adjusted performance is defined as the difference between the buy and hold return over the fiscal year and the buy and hold return of an equally weighted market index.

less timely when they face favorable prospects. The larger the dispersion between the slope values, the more conservative reported earnings are. We use a conservatism measure (CM) that standardizes the bad news slope value by the good news slope value:

$$CM = \frac{\beta_2 + \beta_3}{\beta_2} = \frac{1 + v_t}{1 - \varphi_t}. \quad (12)$$

Conservative earnings result in CM values larger than 1: *bad news* earnings are more responsive to returns than are *good news* earnings. The measure of conservatism (12) is chosen to facilitate comparison with existing research, and it is unaffected by the cost of capital ($1/\kappa$).

5. Data

Our sample consists of yearly observations of firms listed on the Amsterdam Exchanges that have accounting data coverage in *Jaarboek van Nederlandse Ondernemingen*, over the period 1983 to 1995. Prices, returns and other market data are obtained from Thompson Financial. Eight firms with fiscal year-ends other than December 31 are excluded. The sample of firms includes observations of merged firms for which Datastream maintains historical price data. In the case of merging firms, observations of the merger year and the first fiscal year after the merger are excluded. Observations of firms with extreme low trading volume (here, firms with unchanged stock prices for more than two consecutive months) are excluded. The total number of firms in the data set is 124.

Regression variables are trimmed. Values which exceed 3 times the standard deviation away from the mean are excluded from the sample.

Table IV presents descriptives of the firm sample. Panel A of the table reflects the traditional industry structure in the Netherlands. Firms in the trade, food processing, construction, and services industry dominate the sample composition.

The lower panel shows that the number of firms included in the sample ranges from 69 in 1983 to 115 in 1995. The increasing number of firms in the sample period can be attributed to the number of newly listed firms exceeding the number of delisted firms during the time period. The total number of firms (124) included in the sample differs from the maximum number of firms reported in panel B (115). This is due to firms that merged or delisted.

The data used for this research cover a limited period of time, from 1983 to 1995. Although the accounting rules in the Netherlands in its current form became effective from 1984 onwards, data of 1983 are not excluded since firms often change their policies in advance of anticipated changes in regulation.

Table IV. Industry descriptives and firm-year observations

Panel A: Industry descriptives ^a			
Industry		Code ^b	Nfirms ^c
Food products		15	10
Textiles		17 & 18	4
Paper products		21	3
Publishing		22	6
Chemicals and pharmaceuticals		24	5
Rubber, plastics		25	6
Glass, pottery, concrete		26	3
Steel		27	1
Metal products		28	3
Machinery		29	3
Office machinery and computers		30	1
Electrical machinery		31	6
Optical instruments		33	1
Motor vehicle parts and supplies		34	1
Means of transportation, other than motor vehicles		35	2
Furniture		36	1
Building constructing		45	14
Automotive dealers and gasoline service stations		50	2
Wholesale trade		51	18
Retail		52	3
Hotels		55	1
Transportation		60 & 61 & 63	4
Telecommunications		64	1
Finance		65 & 67	7
Insurance		66	4
Real estate		70	1
Information technology		72	5
Business services		74	8
Total			124

Panel B: Firms across years							
1983	69	1984	73	1985	76	1986	89
1987	96	1988	104	1989	107	1990	112
1991	112	1992	112	1993	114	1994	115
1995	115						

^aDescriptives of Dutch listed firms over the period 1983–1995.^bBIK 2-Digit industry code.^cNumber of firms.

Table V. Contemporaneous asymmetric association between earnings and leading returns.

$\frac{(C)Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News}_t + \beta_2 R_t + \beta_3 \text{News } R_t + \epsilon_t^a$ $\epsilon_t = \rho\epsilon_{t-1} + v_t$						
	β_0	β_1	β_2	β_3	CM^b	
$Y, RW_{(12)}$	0.11	-0.02	0.04	0.05	0.36	2.13
t^c	18.80	-3.77	4.97	2.11	7.82	
p^d	0.00	0.00	0.00	0.03	0.00	
$Nobs^e$	1013	$R^2:f$	0.30	DW:g	1.92	
$CY, RW_{(15)}$	0.10	-0.01	0.06	0.03	0.38	1.43
t	19.55	-1.55	8.61	1.51	5.73	
p	0.00	0.12	0.00	0.13	0.00	
$Nobs$	1019	$R^2:$	0.34	DW:	1.81	

^aResults are from pooled time-series and cross-sectional regressions of variables of Dutch listed firms over the period 1983–1995. Conservatism results in conservatism measure (CM) values larger than 1. Y_t , (CY_t) are the earnings of fiscal year t after (before) extraordinary items. R_t is the raw buy and hold return over the return window. P_{t-1} is the stock price at the start of the return window. $News_t$ is the news dummy variable for firms with negative market adjusted performance. ρ is the first-order serial correlation coefficient. $RW_{(m)}$ is the raw buy and hold return over the return window of m months length starting at the beginning of the fiscal year.

^b $CM = \frac{\beta_2 + \beta_3}{\beta_2}$.

^{c,d}White heteroskedasticity-consistent t -values; and p -values.

^{e,f,g}Number of observations, R-squares adjusted for degrees of freedom, and Durbin Watson statistic.

6. Results

This section presents empirical results of tests of conservatism. Table V presents results about the level of conservatism for all firm-year observations. The results are based on regressions that use specification (10). Table VI shows results for partitioned samples based on time periods and on risk preferences. In Tables VII and VIII we report test results which investigate the robustness of the results in Table VI.

Table V displays pooled cross-sectional time-series regression results. The table presents results of regressions of two different earnings numbers, net earnings (Y) and net earnings before extraordinary items (CY). Further, results of regressions of two different buy and hold return windows are shown: one of 12 months and one of 15 months. Both return windows start at the beginning of the fiscal year. The 15-months window acknowledges the fact that management decides about the level of earnings conservatism in the period between year-end and the earnings

Table VI. Contemporaneous asymmetric association between earnings and leading returns.

$$\frac{(C)Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News}_t + \beta_2 R_t + \beta_3 \text{News } R_t + \epsilon_t^a$$

$$\epsilon_t = \rho \epsilon_{t-1} + v_t$$

Panel A: Sample partitioned in periods

	Early (<1991)			Late (>1990)		
	β_2	β_3	CM	β_2	β_3	CM
$Y, RW_{(12)}$	0.08	0.06	1.70	0.05	0.05	1.90
t^b	7.03	1.84		2.95	1.30	
p^c	0.00	0.07		0.00	0.19	
$Nobs, R^2, DW^d$	512	0.35	1.69	512	0.15	2.02
$CY, RW_{(15)}$	0.06	0.01	1.21	0.06	0.06	1.95
t	7.62	0.58		4.15	2.24	
p	0.00	0.56		0.00	0.03	
$Nobs, R^2, DW$	506	0.34	1.89	513	0.29	1.92

Panel B: Samples partitioned on risk preferences

	More risk-averse			Less risk-averse		
	β_2	β_3	CM	β_2	β_3	CM
$Y, RW_{(12)}$	0.07	0.10	2.46	0.09	0.01	1.06
t	2.54	1.72		5.02	0.10	
p	0.01	0.09		0.00	0.92	
$Nobs, R^2, DW$	138	0.33	2.30	159	0.37	2.02
$CY, RW_{(15)}$	0.05	0.11	3.37	0.05	0.01	1.14
t	2.44	2.34		5.84	0.30	
p	0.02	0.02		0.00	0.77	
$Nobs, R^2, DW$	140	0.40	1.70	155	0.69	2.12

^aResults are from pooled time-series and cross sectional regressions of variables of Dutch listed firms over the period 1983–1995. Conservatism results in conservatism measure (CM) values larger than 1. Y_t , (CY_t) are the earnings of fiscal year t after (before) extraordinary items. R_t is the raw buy and hold return over the return window. P_{t-1} is the stock price at the start of the return window. $News_t$ is the news dummy variable for firms with negative market adjusted performance. ρ is the first-order serial correlation coefficient. $RW_{(m)}$ is the raw buy and hold return over the return window of m months length, starting at the beginning of the fiscal year.

^{b,c}White heteroskedasticity-consistent t -values; and p -values.

^dNumber of observations, R-squares adjusted for degrees of freedom, and Durbin Watson statistic.

Table VII. Contemporaneous asymmetric association between earnings and leading returns.

Results for differences over time						
$\frac{(C)Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News}_t + \beta_2 \text{Late}_t + \beta_3 \text{News}_t \text{Late}_t +$ $+ \beta_4 R_t + \beta_5 \text{News}_t R_t + \beta_6 \text{Late}_t R_t +$ $\beta_7 \text{News}_t \text{Late}_t R_t + \epsilon_t$ $\epsilon_t = \rho \epsilon_{t-1} + v_t^a$						
	β_4	β_5	β_6	β_7	$CMLate^h$	$CMEarly^h$
$Y, RW_{(12)}^b$	0.08	0.06	-0.03	-0.01	1.96	1.69
t^c	7.21	1.95	-1.59	-0.70		
p^d	0.00	0.05	0.11	0.49		
$Nobs, R^2, DW$	1024 ^e	0.28 ^f	1.79 ^g			
$CY, RW_{(15)}$	0.07	0.01	-0.01	0.05	2.23	1.17
t	8.11	0.53	-0.68	1.51		
p	0.00	0.60	0.50	0.13		
$Nobs, R^2, DW$	1019	0.34	1.82			

^aResults are from pooled time-series and cross-sectional regressions of variables of Dutch listed firms over the period 1983–1995. Conservatism results in conservatism measures ($CMLate$ and $CMEarly$) values larger than 1. Y_t , (CY_t) are the earnings of fiscal year t after (before) extraordinary items. R_t is the raw buy and hold return over the return window. P_{t-1} is the stock price at the start of the return window. $Late_t$ is the time dummy variable for observations of 1991 and later. $News_t$ is the news dummy variable for firms with negative market adjusted performance. ρ is the first-order serial correlation coefficient.

^b $RW_{(m)}$ is the raw buy and hold return over the return window of m months length, starting at the beginning of the fiscal year.

^cWhite heteroskedasticity-consistent t -values.

^d p -values of the coefficient.

^eNumber of observations.

^fR-squares adjusted for degrees of freedom.

^gDurbin Watson statistic.

^h $CMLate$ and $CMEarly$ are measures of conservatism for both time periods (1991 and later, and before 1991).

$CMLate = (\beta_4 + \beta_5 + \beta_6 + \beta_7)/(\beta_4 + \beta_6)$ $CMEarly = (\beta_4 + \beta_5)/\beta_4$.

announcement date. This decision process may be affected by the firm's stock performance in that period. Further, the 15-months period minimizes interference with reporting announcements about the first quarter.

Earnings announcements for the sample are approximately normally distributed over trading days. The median firm reports on March 15, 75% percent of the firms report before March 31, and by the end of April, 99% of all firms have announced their earnings number. The decision about the figures to be reported is likely to be made some time period before the actual earnings announcement; the decision

Table VIII. Contemporaneous asymmetric association between earnings and leading returns.

Results for differences in risk preferences						
$\frac{(C)Y_t}{P_{t-1}} = \beta_0 + \beta_1 \text{News}_t + \beta_2 \text{Rav}_t + \beta_3 \text{News}_t \text{Rav}_t +$ $+ \beta_4 R_t + \beta_5 \text{News}_t R_t + \beta_6 \text{Rav}_t R_t +$ $+ \beta_7 \text{News}_t \text{Rav}_t R_t + \epsilon_t$ $\epsilon_t = \rho \epsilon_{t-1} + v_t^a$						
	β_4	β_5	β_6	β_7	CMRAV ^h	CMNon-RAV ^h
$Y, RW_{(12)}^b$	0.05	0.01	-0.02	0.14	6.52	1.16
t^c	2.67	0.16	-0.58	1.79		
p^d	0.01	0.87	0.56	0.07		
N, R^2, DW	293 ^e	0.38 ^f	2.03 ^g			
$CY, RW_{(15)}$	0.07	-0.03	-0.03	0.15	3.43	0.60
t	5.03	-0.90	-1.05	2.51		
p	0.00	0.37	0.30	0.01		
N, R^2, DW	290	0.53	1.97			

^aResults are from pooled cross-sectional and time-series regressions of variables of Dutch listed firms over the period 1983–1995. Conservatism results in conservatism measures (CMRAV and CMNon-RAV) values larger than 1. Y_t , (CY_t) are the earnings of fiscal year t after (before) extraordinary items. R_t is the raw buy and hold return over the return window. P_{t-1} is the stock price at the start of the return window. Rav_t is the dummy variable for firms that employ more risk-averse managers. News_t is the news dummy variable for firms with negative market adjusted performance. ρ is the first-order serial correlation coefficient.

^b $RW_{(m)}$ is the raw buy and hold return over the return window of m months length starting at the beginning of the fiscal year.

^cWhite heteroskedasticity-consistent t -values.

^d p -values of the coefficient.

^eNumber of observations.

^fR-squares adjusted for degrees of freedom.

^gDurbin Watson statistic.

^hCMRAV and CMNon-RAV are measures of conservatism, for both firm groups hiring managers with distinct risk preferences: more risk-averse and less risk-averse
 $\text{CMRAV} = (\beta_4 + \beta_5 + \beta_6 + \beta_7) / (\beta_4 + \beta_6)$ $\text{CMNon-RAV} = (\beta_4 + \beta_5) / \beta_4$.

requires processing. Thus, part of the 25% earnings announcements made in April is likely to be decided before March 31. Hence the 15 months return window, which ends at March 31, captures the returns that affect management decisions about the level of conservatism.

Results of the 12-months window in combination with the net earnings number (Y), and results of the 15-months window in combination with the earnings number before extraordinary items (CY), are presented. Additional regression results (from a 15-months window combined with net earnings, for example) are not shown here. These results, however, are consistent with the results presented in Table V.

Table V displays results of regressions performed on the entire sample. The slope values for good news (β_2) and the incremental bad news slope (β_3) are significant with one exception and the size of the coefficients is comparable with results of the code law country conservatism values of Ball et al. (2000a). When compared to results of Basu (1997) the conservatism measure shows that Dutch earnings numbers are less conservative than US earnings. This result seems to confirm the idea that legal liability concerning reporting in the Netherlands is viewed as less serious than in the US.

Table VI shows regression results of samples of firms with different characteristics. Panel A shows results of differences in conservatism over two time periods (up to and including 1990, and after 1990) which refer to Hypothesis 1. Panel B displays results of differences in conservatism across firms managed by executives with different risk preferences, which refer to Hypothesis 2.

From panel A of Table VI we see quite similar degrees of earnings conservatism in both time periods for the 12-months return window. The increase in conservatism from 1.70 for the years before 1991 to 1.90 for the later years is small. For the 15-month window the results are relatively strong. The conservatism measure increases over time, from 1.21 to 1.95. The incremental bad news slope value (β_3) for the early years does not significantly differ from zero. This seems to indicate that earnings before 1991 were not conservative at all.

The results of panel B are more pronounced. The results show that firms with more-risk-averse managers report more conservative earnings than do firms with less risk-averse managers. The conservatism measures of the firms with more risk-averse managers (2.46 and 3.37) are higher than those of firms that are managed by less risk-averse executives (1.06 and 1.14). The conservatism measures of the first group are even higher than the overall conservatism measures (2.13 and 1.43) shown in Table V. Further, the incremental bad news slope values (β_3) are significant for the first group of firms at a 10% level, whereas they are not for the second group. Good news slope values are significant for both firm-manager groups.

Except for one case, Tables V and VI show that the explained variation for regressions with earnings before extraordinary items combined with a 15-months buy and hold return ($CY, RW_{(15)}$) is higher than for the regressions using the net income number combined with the 12-months buy and hold return ($Y, RW_{(12)}$). Further untabulated analysis reveals that these different results are mainly caused by the difference in return window length. It suggests that earnings reflect the longer return window better than the shorter return window, which is consistent with the idea that managers actually decide about the reported earnings number after the fiscal year-end.

Panel A of Table VI suggests an increase of earnings conservatism over time at first sight, while panel B seems to confirm that firms managed by more risk-averse executives report more conservatively than do firms with less risk-averse managers. As Table VI uses regressions performed on separate subsamples, one cannot make inferences about the extent to which the coefficients differ from each

other. In order to resolve this problem, Tables VII and VIII test whether the slope values used in the conservatism measures found in panels A and B of Table VI are significantly different. An additional dummy is introduced to designate firms from the two time periods and from the two classes of risk preferences. With the respective additional dummy variables (*late*) and (*rav*), a single regression performed on the entire sample suffices.

Table VII shows that the conservatism measures are higher for the years after 1990, but this inference is based on insignificant coefficient values. The coefficient of interest (β_7) is significant at a 15% level (p -value of 0.13) and only for the 15-month return window. For the 12-month window results, the coefficient driving the denominator of the conservatism measure (β_6) is significant at a 15% level (p -value of 0.11). This indicates an underreporting of good news. One might therefore only conclude with care that earnings conservatism has increased since the beginning of the nineties. Hence, the support for Hypothesis 1 is weak.

The sample in Table VIII consists of the two groups of firms managed by executives with distinct risk preferences.⁷ The results show that the incremental bad news coefficient for firms with more risk-averse managers (β_7) is positive (0.14) and significant (p -value of 0.07) at a 10% level for the 12-months return window. The incremental bad news coefficient for firms with less risk-averse managers (β_5) does not significantly differ from zero. Furthermore, the conservatism measures are strikingly different for the two firm types (6.52 vs. 1.16). For the 15-months return window, the results are even stronger: the coefficient (β_7) has a higher value than that for the 12-months window and its significance (p -value of 0.01) goes beyond the 5% level. Here again, the coefficient (β_5) remains insignificant. Further, the R^2 value of the 15-month window regression (0.53) is high when compared to R^2 values of other regressions. This indicates a good model fit.

The results of Table VIII confirm the hypothesized relation between managers' individual risk preferences and earnings conservatism, which was already intuitively suggested from panel B of Table VI: more risk-averse managers seem to report in a way that tempers expectations among shareholders about the cash flow to be distributed.

Results of regressions using a lagged dependent variable as an instrument instead of using a first-order serial correlation coefficient give results which are almost equal to those reported above.

7. Caveats

It should be noted that although the variables used in the regressions presented above are trimmed, Jarque-Bera test statistics reject normality consistently. Normal probability plots of error terms confirm the results from the Jarque-Bera test: the

⁷ Untabulated regressions using all firms (totaling 124, with *Rav* dummies assigned to the 15 firms of more risk-averse managers), thus not only those assigned to the two compensation groups, show results consistent with those presented here.

plots (not tabulated) show S-shaped curves, indicating that a few extreme observations dominate the regression outcomes, and that error terms are not symmetrically distributed. The number of negative outliers dominates the number of positive outliers. These non-normalities affect the slope coefficients, which are likely to be sensitive to a small fraction of extreme observations. Improvements after trimming the data to eliminate outliers are only moderate. The regression results of Table VI when performed with untrimmed data show different conservatism measures (0.96 for less risk-averse managers, and 2.65 for more risk-averse managers, with a significant β_7 slope value, for the 15 months window; -1.50 for less risk-averse managers, and 11.95 (!) for more risk-averse managers, with a significant β_7 slope value, for the 12 months window). Thus, conclusions remain unaffected for the risk aversion related results. However, country specific results are quite sensitive to the inclusion of outliers. The analysis in Table V about the average level of conservatism in the Netherlands yield a conservatism measure of 4.57 for the 12 months window using untrimmed data which is about as twice as high as the result of a regressions using trimmed data, while the resulting 15-months window conservatism measure using untrimmed data does not differ substantially from that using trimmed data.

The analysis above shows that outliers have the potential to bias the coefficients of the regressions that measure conservatism. The effect of the outliers is that results of research on conservatism in this and other studies probably overstate actual levels of conservatism, because the results of a few firms may be generalized for the whole sample. Therefore, results of research investigating conservatism should be interpreted with care. High values of conservatism, for instance, could be the result of a relatively large proportion of firms taking a "big bath", which could be caused by the firms' sensitivity to competitive forces within an industry (i.e., shake outs), a depressed business cycle, as well as by factors investigated in this study. Future research that studies the properties of firms for both outlier, and non-outlier groups should help to increase our understanding of the forces driving conservatism.

8. Concluding Remarks

The research presented in this study investigates conservatism of reported earnings, a characteristic inherent to accounting. It is shown that conservatism is affected by a manager's concern about how firm performance is reported. To minimize potential conflicts, such as litigation, with respect to measured firm performance, a manager may have incentives to report earnings conservatively in order to diminish expectations among stakeholders about the future cash flows to be distributed. Differences in conservatism across firms can be explained by the notion that not all managers are equally interested in reducing conflicts. Some managers care more about minimizing conflicts than others. This study shows that more risk-averse managers report more conservatively than do less risk-averse managers.

The study revisits research in the positive tradition, introduced by Watts and Zimmerman (1978, 1986), by explaining one particular property of reported earnings numbers, earnings conservatism. Whereas prior research has resulted in a country based or legal liability based explanation for conservatism, this study shows that individual risk preferences of managers within a given country also play a role in understanding earnings conservatism. Since managers ultimately decide about the way of financial reporting, it is reasonable to assume that managers' individual preferences drive part of the variation in earnings conservatism.

The empirical results in our study show evidence of an increase of earnings conservatism in the Netherlands over the period 1983 to 1995. An explanation for the increased conservatism of reported earnings numbers could be that managers responded to outside pressure to report about performance more objectively, or verifiably. This could be the result of increased attention to their performance by a range of outside parties. When compared to other common law countries, such as the US, conservatism in the Netherlands is relatively low, which we speculate to being due to a ineffective financial reporting enforcement system.

The relation between wealth concerns of managers and conservative reporting behavior raises issues for financial reporting policy making. Most initiatives concerning financial reporting regulation assume that investors benefit from increasing regulation. These initiatives generally require that managers disclose more information, and that the information disclosed should be of a higher quality. Furthermore, discussions about corporate governance show a decrease in tolerance concerning disclosure practice. These developments set the stage for a more effective and powerful financial reporting enforcement system. Our research shows that it is likely that such changes in reporting regulation could have an effect on the way executives communicate about firm performance. The effect of increased conservatism may be that the informativeness of reported earnings with respect to firm value will diminish, which increases the demand for alternative earnings numbers, for example, earnings numbers that can be helpful for valuation purposes. The growing importance of "street earnings", documented by Bradshaw et al. (2000) seems to confirm this expectation.

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