The Relationship between Earnings Quality, Control Mechanisms of Corporate Governance, and Future Stock Price Returns. The case of the Netherlands

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Abstract

This article extends prior research on the relation between earnings quality (assessed by accruals) and future stock price returns and adds new research on the relationships between direct and indirect corporate governance mechanisms of control with accruals and future stock price returns. We study public companies of the Netherlands and find the presence of mispricing associated with very high and very low accruals. We also find evidence that direct corporate governance control mechanisms, such as the existence of separate, independent, and skilled audit committees, are related to higher earnings quality and higher future stock price returns.

Keywords: Corporate Governance, Earnings Quality, Earnings Management, Accruals, Stock Returns

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1. Introduction

In this article, we investigate whether relationships or links exist between a measure of aggregate accruals (Richardson, 2009), a set of corporate governance mechanisms, which capture both direct (Audit Committee level) and indirect (Board of Directors level) control over the financial reporting process, and future stock price returns. We examine public companies of the Netherlands for two reasons. First, we build on prior research showing that differences in accruals indicate mispricing in the Dutch stock market. Second and more importantly, while the Netherlands is ranked as one European country with among the best corporate governance systems1, it also presents an interesting feature in the Dutch corporate governance code for public companies (apply or explain clause). Specifically, we ask the general research question of whether, given differences in terms of direct and indirect corporate governance control mechanisms among extreme deciles of accruals accounting for Dutch companies, it is possible to improve a pure "earnings quality" stock selection tool. Our study contributes to the international finance and corporate governance literature as well as to the investment community. In fact, by investigating a European country it has the potential to provide additional insights into the challenges of accounting and corporate governance based anomalies to capital market efficiency and their pervasiveness outside the U.S. Equally important are insights for investors, portfolio managers, and analysts interested in developing proxies for aggressive accounting or corporate governance practices for European stocks. Financial analysts, portfolio managers and investors are in the business of processing and interpreting companies' information where the goal is to determine a fair value. An important step in the determination of a firm's value in the assessment of earnings and the quality of earnings as an indication of current and future performance.

The remainder of the article proceeds as follows: Section 2 summarizes the related literature. Section 3 develops the hypothesis and the research questions. Section 4 describes the research methodology. Section 5 provides the empirical results for Dutch public companies and Section 6 concludes.

2 Literature Review

2.1 Accruals Mispricing

Basilico and Johnsen (2012) study the presence and magnitude of the accruals anomaly in nine European countries, with particular interest in finding which countries maintain the mispricing after the introduction of International Financial Reporting Standards (IFRS) in 2005. The Netherlands is one of the countries analyzed and the authors find that the country maintains the mispricing for the period from 2006 till 2010.

[1] Heydrick and Struggles, 2011

2.2 Corporate Governance

A vast body of literature acknowledges the importance of corporate governance mechanisms to improve financial reporting quality and past literature has demonstrated that good governance helps to reduce the risk of financial reporting problems. According to Hermann (2003, p.44), "*Good governance goes in-hand with reduced risk of financial reporting problems and other bad accounting outcomes*." Researchers found evidence on the association between poor governance and poor quality of financial reporting, including earnings manipulation, financial restatements and frauds (Beasley, 1996; Dechow et. al., 1995; Dechow et al., 2002; Peasnell et al., 2000; Klein, 2002; Kao and Chen, 2004). Consequently, monitoring associated with sound governance restricts opportunities for the manipulation of earnings. These early studies focus mainly on the role of the entire Board of Directors as a monitoring tool and the role of non-executive directors in enhancing the quality and integrity of financial reporting information.

According to agency theory (Fama and Jensen, 1983; Shleifer and Vishny, 1997), boards with a majority of non-executive directors reduce agency conflicts because non-executives provide an effective monitoring tool for the board. The inclusion of outside directors (typically expert managers from other large organizations who are also independent) increases the boards' ability to be more efficient in monitoring top management and any related collusion practice. Hence, independent directors become a potentially powerful governance mechanism to mitigate agency costs and protect shareholders wealth (Li, 1994).

Other studies, like Davidson et al. (2005), add variables such as the presence of an audit committee and the external audit function and provide evidence of the association of such variables with the reliability of reported earnings. Additionally, the literature investigates observable characteristics of these mechanisms. As studied in the past, key characteristics of the Board of Directors are the inclusion of "independent" directors and the separation of the roles of Chief Executive Officer (CEO) and the Chairman of the Board (Koh et al., 2007; Basilico and Grove, 2008). An interesting characterization of independence comes from the finance literature and relates to school ties (Cohen et al., 2010), which can occur among directors. The idea here is to study whether social networks affect governance matters. On the other hand, key characteristics for the audit committee are size, independence, expertise and diligence (De Zoort and Salterio., 2001; Klein 2002; Krishnan, 2005). Finally, an indication of good governance for the external audit function is the engagement of a top tier audit firm (Cohen et al., 2002). Thus, independence is an important factor at the audit committee level too. Consequently, the expectation is that an independent audit committee should decrease the level of earnings management.

A recent article by Kent et al. (2010) studies the association between corporate governance mechanisms and accruals quality. Specifically, the authors derive measures of discretionary and innate (nondiscretionary) components of accruals and regress them against corporate governance characteristics. Their sample is made up of listed Australian companies in 2004. They find a relationship between the use of a Big 4 audit firm and a larger audit committee and discretionary accruals while innate accruals are related to an independent Board of Directors and to a larger and more independent audit committee as well as the use of a Big 4 audit firm.

3 Theory and Research Questions

We extend the work by Kent et.al (2010) by not only studying the relationship between corporate governance quality indicators and accruals (a proxy for earnings quality) but also by investigating the relationships between these corporate governance indicators and future stock returns. From a theoretical standpoint, this article contributes to both agency theory and capital markets efficiency theory. From a practical point of view, this article attempts to verify whether it is possible to improve earnings quality ratings with corporate governance ratings to form a better stock selection screening tool.

One way for managers to manipulate earnings is to manipulate accruals. Accruals are the difference between firms' accounting earnings and its underlying cash flow. Under accrual accounting basis (as opposed to cash accounting), revenues are recorded when a good or service has been provided to the customer (not when cash is collected) and expenses are reductions in net assets associated with the creation of those revenues (not when cash is paid). While we cannot completely discard the usefulness of accrual accounting since it provides more timely and relevant information for decision making than cash accounting, this article argues that it is important to discern earnings manipulation in the company performance evaluation process. Building on prior research which investigated the impact of legal, governance and accounting differences among European countries (Basilico and Johnsen, 2012), we use Dutch public companies since the Netherlands represents an interesting corporate governance framework.

Concerning corporate governance, board members and board committees should provide controls that ensure compliance with reporting requirements (Dechow et al., 1995; Davidson et al., 2005). Prior research suggests that monitoring associated with sound governance lowers the instances of earnings manipulation (Klein, 2002;

Davidson et al., 2005; Koh et al., 2007). Following Koh et al. (2007), I distinguish between governance structures that have a direct role in the financial reporting process (audit related governance) and those, which have an indirect role (board related governance). This distinction is also highlighted as an important one in the OECD Principle VI.D.7[2]. The Netherlands constitutes an interesting case from a governance angle because it is a European country with a stellar corporate governance system[3], but at the same time, and similarly to other countries, the Dutch corporate governance code (the Tabaksblat Code) contains an "apply-or explain" principle, offering public companies the possibility to deviate from the corporate governance code as long as any such deviations are explained. To the extent that such deviations are approved by a general meeting of board members, the company is deemed to be in compliance. Therefore, it is important to study corporate governance control mechanisms since the correct mechanisms may not be fully in place, due to this exception in the Dutch code.

As such, the main research objectives of this article are:

1. To investigate whether there are significant differences in terms of direct and indirect corporate governance control mechanisms within the extreme groups of high and low accruals.
2. To investigate whether there is a relationship between levels of accruals and direct (Audit Committee) and indirect (Board of Directors) corporate governance mechanisms of control.
3. To investigate whether there is a relationship between direct (Audit Committee) and indirect (Board of Directors) corporate governance mechanisms of control and future stock returns.

4 Data and Sample Statistics

The sample consists of public companies whose country code is the Netherlands as established by the International Standards Organization and with data available on the Standard and Poor's Global Vantage database. We consider both active and inactive companies[4] as of December 2009 and, similar to prior research studies, we exclude financial firms (those with GICS[5] sector 40) from the final sample because of peculiarities in the accruals of such firms. Financial data were collected for the year 2010 using the Standard and Poor's Global Vantage Database while corporate governance variables were hand collected using the Reuters' People database as well as individual company's proxy statements.

To measure the accruals mispricing we use a measure introduced by Richardson (2009): the "balance sheet based accruals ratio." It is calculated by measuring the net change across all noncash accounts. Therefore, aggregate accruals are simply the change in net assets (net of cash and debt related accounts) from the start to the end of the period. Further, this measure needs to be made comparable across companies by adjusting for differences in company size. This is done by deflating the aggregate accrual measure by the average value of Net Operating Assets (NOA). The ratio is calculated as follows:

$$Accruals\ Ratio\ BS = \frac{\text{NOAT t} - \text{NOA t}-1}{(NOAt + NOA\ t-1)\ /2} \quad (1)$$

Where:

NOAt = Net Operating Assets at time t

NOAt-1= Net Operating Assets at time t minus 1

NOA = (Total Assets – Cash and Short Term Investments) – (Total Liabilities – Long Term Debt – Debt in Current Liabilities)

In addition to these balance sheet items, we calculate 1, 3 and 6 months future holding period returns (1MHPR, 3MHPR, 6MHPR) by compounding monthly returns.

According to Hilb (2008), all members of the board (excluding the CEO and possibly one other member of top management) should be independent in order to properly fulfill their fiduciary functions. As Hilb further points out, there is an important distinction between nonexecutive board members and independent board members, e.g., all independent directors are nonexecutive, but not all nonexecutives are independent. Accordingly, we use the following corporate governance variables.

In particular, board independence is measured with four variables:

CEO Duality: a dummy variable, coded 1 when the CEO is not the Chairman of the Board and coded 0 otherwise,

First Level of Board Independence: a dummy coded 1 when there are no more than two executives sitting on the Board and coded 0 otherwise,

Second Level of Board Independence: a dummy coded 1 when the majority of the board members are independent according to comprehensive definition of independence (see the British PIRC[6] report, Clarke 1998:122; Hilb 2008:59) including not having directorships in common with other directors,

Third Level of Board Independence: a dummy coded 1 when no directors share a school tie (Cohen et al., 2002) and coded 0 otherwise.

[2] OECD stands for "Organization for Economic Co-operation and Development"

[3] Heydrick and Struggles, 2011

[4] I look at both active and inactive companies to control for survivorship bias.

[5] The Global Industry Classification Standards (GICS) is collaboration between Standard & Poor's and Morgan Stanley Capital International.

[6] PIRC is the U.K.'s leading independent research and advisory consultancy providing services to institutional investors on corporate governance and corporate social responsibility.

The Audit Committee independence is instead measured by one variable:

Audit Committee Independence: a dummy coded 1 if all members of the audit committee are independent according to the definition previously mentioned.

Further, we collect and measure whether both the Board and the Audit Committee are skilled in the field of accounting and finance with two variables:

Skilled Board: a dummy coded 1 if at least one of the members of the board has a degree in finance, accounting and (or) a graduate degree in business (i.e. an MBA) and coded 0 otherwise.

Skilled Audit Committee: a dummy coded 1 if at least one of the members of the committee has a degree in finance, accounting and (or) a graduate degree in business (i.e. an MBA) and coded 0 otherwise.

We also tabulate whether a company in the sample does have a **Separate Audit Committee**. Different from Kent et al. (2010), we don't exclude companies, which don't have an audit committee from the sample. In fact, different from the Sarbanes-Oxley Act of 2002, the Dutch Corporate Governance Code (the Tabaksblat Code) contains an "apply-or-explain" principle, offering the possibility to deviate from the Corporate Governance Code as long as any such deviations are explained. To the extent that such deviations are approved by a general Board meeting, the company is deemed to be in full compliance with the Corporate Governance Code. Accordingly, we think it is important to distinguish between companies that do have an established audit committee and those who don't, due to the possible significant control mechanisms that an audit committee exerts on financial reporting quality.

Finally we tabulate both the size of the Board of Directors (**BoD Size**) and of the Audit Committee (**Audit Size**).

5 Research Design

In order to test whether there are significant differences in terms of direct and indirect corporate governance control mechanisms within the extreme groups of high and low total accruals, we perform a test of differences for independent variables.

Further, to assess the link between accruals, future stocks returns and corporate governance indicators in the Netherlands (research questions 2 and 3), we regress both the accruals ratio and three holding period returns (1, 3, and 6 months) against various combinations of the above mentioned corporate governance variables for the year 2010. Specifically, we test the following equations:

$$\text{AccRatio Rank}_{it} = \beta_0 + \beta_1 \text{ BoDIndRank} + €_{it} \quad (2)$$

$$\text{AccRatio Rank}_{it} = \beta_0 + \beta_1 \text{ BoDIndSkilRank} + €_{it} \quad (3)$$

$$\text{AccRatio Rank}_{it} = \beta_0 + \beta_1 \text{ AudRank} + €_{it} \quad (4)$$

$$\text{AccRatio Rank}_{it} = \beta_0 + \beta_1 \text{ OverallRank} + €_{it} \quad (5)$$

$$\text{1moHPR}_{t+1} = \beta_0 + \beta_1 \text{ BoDIndRank} + €_{it} \quad (6)$$

$$\text{1moHPR}_{t+1} = \beta_0 + \beta_1 \text{ BoDIndSkilRank} + €_{it} \quad (7)$$

$$\text{1moHPR}_{t+1} = \beta_0 + \beta_1 \text{ AudRank} + €_{it} \quad (8)$$

$$\text{1moHPR}_{t+1} = \beta_0 + \beta_1 \text{ OveralRank} + €_{it} \quad (9)$$

Equations 6, 7, 8 and 9 will also be tested with the dependent variables of 3 and 6 month holding periods for future stock price returns. Concerning the relationship between accruals and future stock returns, we also supplement the above technique with a group or decile analysis.

6. Empirical Results

Table 1 provides an overview of the sample data set. The total sample size is comprised of 90 active stocks as of the end of 2009. As Table 1 shows the sample size varies from 85 to 89 observations when looking at the different corporate governance variables analyzed in this article[7]. Looking at the second column in Table 1, it can be noticed that three variables present an equal representation in the sample. In fact, CEO Duality, Second Level of Board Independence and Skill of the Audit Committee are equally represented in the overall sample with roughly 50% of companies with and without the above mentioned corporate governance characteristics. Further, the majority of the companies in the sample do present a 'First Level of Board Independence' and at the same time the majority has a 'Skilled Board of Directors'. On the contrary, the majority of the sample does not have an Audit Committee and of the 28 companies with information on school ties among the directors, the majority does not satisfy this level of independence. Table 2 presents descriptive statistics for the independent variables sorted in ten different deciles where decile 1 contains companies with the highest level of accruals (lowest quality of earnings) and decile 10 contains companies with the lowest level of accruals (highest quality of earnings). The higher quality of earnings companies or deciles have more separate, independent, and skilled audit committees than the lower quality of earnings companies or deciles.

[7] In Table 1, the variable BoardIndLev3 presents only 28 observations. Hence, it was dropped from the overall analysis. Future research may look into additional sources to try to increase the coverage of this variable.

Table 1. Sample Sizes and Corporate Governance Mechanism Characteristics

	Sample	%
Presence of CEO Dual	45	51%
Absence of CEO Dual	44	49%
Total	89	
Presence of BoardIndLev1	60	68%
Absence of BoardIndLev1	28	32%
Total	88	
Presence of BoardIndLev2	42	48%
Absence of BoardIndLev2	45	52%
Total	87	
Presence of BoardIndLev3	6	21%
Absence of BoardIndLev3	22	79%
Total	28	
Presence of BoardSkill	58	65%
Absence of BoardSkill	31	35%
Total	89	
Presence of AudComInd	32	36%
Absence of AuditComInd	57	64%
Total	89	
Presence of AudComSkill	41	48%
Absence of AuditComSkill	44	52%
Total	85	

Table 1 provides descriptive statistics for the group as a whole of public companies in the Dutch sample. It presents a series of dummy variables. Dual is a dummy variable, coded 0 if the CEO is also the Chairman of the Board of Directors(BoD) and coded 1 otherwise; Ind Lev 1 is a dummy coded 0 if there are more than two executives sitting on the BoD and coded 1 otherwise; Ind Lev 2 is a dummy coded 1 if the majority of the members of the BoD are independent and coded 0 otherwise; Ind Lev 3 is a dummy coded 1 if there no members sitting on the BoD with school ties and 0 otherwise; Skilled BoD is a dummy coded 1 if there is at least one member of the BoD with an accounting and (or) finance background and coded 0 otherwise; BoD Size is the number of directors comprising the BoD; Sep Audit Com is a dummy coded 1 if there is an audit committee and coded 0 otherwise; Audit Com Ind is a dummy coded 1 if the all of the members of the audit committee are independent and coded 0 otherwise; Skilled Audit Com is a dummy coded 1 if there is at least one member of committee with an accounting and (or) finance background and coded 0 otherwise; Audit Com Size is the number of directors comprising the committee.

Table 2. Descriptive Statistics: % Values for Independent Corporate Governance Variables Sorted by Accruals in 10 Deciles

		Dual	Ind Lev 1	Ind Lev 2	Ind Lev 3	Skilled BoD	BoD Size	Sep Aud	Aud Com Ind	Skilled Audit Com	Audit Com Size
Low Accr	Decile 10	0.66	0.88	0.68	0.39	0.87	6.50	0.75	0.65	0.65	2.59
	Decile 9	0.54	0.43	0.43	na	1.00	7.21	0.36	0.32	0.35	2.45
	Decile 8	0.11	0.33	0.3	na	0.95	9.63	0.44	0.42	1.00	2.44
	Decile 7	0.44	0.67	0.56	0.65	0.98	8.67	0.33	0.31	0.65	2.65
	Decile 6	0.33	0.67	0.55	na	0.62	8.89	0.67	0.66	0.22	2.65
	Decile 5	0.56	0.66	0.54	na	0.87	7.25	0.42	0.44	0.38	2.21
	Decile 4	0.24	1.00	0.26	na	1.00	8.25	0.38	0.38	0.63	2.71
	Decile 3	0.88	0.87	0.71	na	1.00	6.22	0.33	0.33	0.22	2.25
	Decile 2	0.55	0.68	0.55	na	0.42	7.36	0.21	0.2	0.21	2.36
High Accr	Decile 1	0.66	0.67	0.23	na	0.54	6.20	0.35	0.31	0.45	2.41

Table 2 provides descriptive statistics for the group of public companies in the Dutch sample sorted by levels of accruals. Table 2 presents a series of dummy variables. Dual is a dummy variable, coded 0 if the CEO is also the Chairman of the Board of Directors (BoD) and coded 1 otherwise; Ind Lev 1 is a dummy coded 0 if there are more than two executives sitting on the BoD and coded 1 otherwise; Ind Lev 2 is a dummy coded 1 if the majority of the members of the BoD are independent and coded 0 otherwise; Ind Lev 3 is a dummy coded 1 if there are no members sitting on the BoD with school ties and 0 otherwise; Skilled BoD is a dummy coded 1 if there is at least one member of the BoD with an accounting and (or) finance background and coded 0 otherwise; BoD Size is the number of directors comprising the BoD; Sep Audit Com is a dummy coded 1 if there is an audit committee and coded 0 otherwise; Audit Com Ind is a dummy coded 1 if the all of the members of the audit committee are independent and coded 0 otherwise; Skilled Audit Com is a dummy coded 1 if there is at least one member of committee with an accounting and (or) finance background and coded 0 otherwise; Audit Com Size is the number of directors comprising the committee.

Research Question 1 attempts to investigate whether there are significant differences in terms of direct and indirect corporate governance control mechanisms within the extreme groups of high and low accruals (deciles 1 and 10, respectively). As Table 3 shows, we find that significant differences exist for three corporate governance variables: Second Level of Independence, presence of a Separate Audit Committee and presence of an Independent Audit Committee. In fact, except for one variable (CEO Duality which has the same mean score among both the low and high accruals groups), all the corporate governance variables show a higher mean score associated with the 'low level of accruals' (the decile 10 group). These results indicate that corporate governance quality is linked to higher earnings quality in financial reporting.

Table 3. Test of Differences for Independent Variables in Decile 1 (high accruals) and Decile 10 (low accruals)

	Dual	Ind Lev 1	Ind Lev 2	Ind Lev 3	Skilled BoD	BoD Size	Sep Aud	Aud Com Ind	Skilled Audit Com	Audit Com Size
Decile 10 μ	0.66	0.88	0.68	0.39	0.87	6.50	0.75	0.65	0.65	2.59
Decile 1 μ	0.66	0.67	0.23	na	0.54	6.20	0.35	0.31	0.45	2.41
p-value	1	0.24	0.05	na	0.22	1.00	0.05	0.05	0.25	1.00

Table 3 is a test of differences for independent variables between the two extreme deciles of the sample under analysis. The variables tested are: Dual is a dummy variable, coded 0 if the CEO is also the Chairman of the Board of Directors (BoD) and coded 1 otherwise; Ind Lev 1 is a dummy coded 0 if there are more than two executives sitting on the BoD and coded 1 otherwise; Ind Lev 2 is a dummy coded 1 if the majority of the members of the BoD are independent and coded 0 otherwise; Ind Lev 3 is a dummy coded 1 if there are no members sitting on the BoD with school ties and 0 otherwise; Skilled BoD is a dummy coded 1 if there is at least one member of the BoD with an accounting and (or) finance background and coded 0 otherwise; BoD Size is the number of directors comprising the BoD; Sep Audit Com is a dummy coded 1 if there is an audit committee and coded 0 otherwise; Audit Com Ind is a dummy coded 1 if the all of the members of the audit committee are independent and coded 0 otherwise; Skilled Audit Com is a dummy coded 1 if there is at least one member of committee with an accounting and (or) finance background and coded 0 otherwise; Audit Com Size is the number of directors comprising the committee.

In order to further explore whether there is a relationship between different levels of accruals and direct and indirect corporate governance mechanisms of control (Research Question 2), we regress the dependent variable of aggregate accruals against four different composite rankings formed with different combination of the corporate governance dummies using equations 2, 3, 4 and 5. As Table 4 shows, we find a significant inverse relation with the Audit Ranking (which combines the three direct corporate governance mechanisms: presence of a separate, independent, and skilled audit committee), meaning that companies with low (high) levels of accruals are associated with high (low) direct corporate governance mechanisms of controls. Similarly, the Board of Directors Independence Ranking (which combines CEO duality and two levels of independence) and the Overall Ranking (which averages all seven corporate governance variables in Table 2) show negative coefficients, indicating inverse relations but they are not statistically significant.

Table 4. Cross-Sectional Regressions of Corporate Governance Rankings on Accruals Rankings for the Netherlands (for the year 2010)

Regression	Coefficient	T-test	Rsquared
BoDindRank	-2.01	-0.25	0.000
BoDIndSkilRank	0.25	0.025	0.010
AudRank	-7.95	1.870	0.037
OverallRank	-2.18	-0.265	0.000

Table 4 provides regression results for all companies in the sample. The dependent variable is the Accruals rank while the independent varibles are four different composite rankings formed with different combination of the corporate governance dummies. Specifically, BodIndRank is a composite percentile ranking score calculated by averaging three variables measuring different levels of Independence of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2); BodIndSkillRank is a composite percentile ranking score calculated by averaging four variables measuring different levels of Independence and Skills of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2 and Skilled BoD); AudRank is a composite percentile ranking score calculated by averaging three variables related to the Audit Committee (presence of a Separate, Independent and Skilled Audit Committee; Overall Rank is a composite percentile ranking score calculated by averaging all the seven above mentioned variables.

Finally, Research Question 3 investigates whether there is a relationship between direct and indirect corporate governance mechanisms of control and future stock returns. We regress three different dependent variables of holding period returns for the year 2010 (1, 3 and 6 months) against four different composite rankings formed with different combinations of the corporate governance variables, using equations 6 through 9. Table 5 summarizes the results in three panels. Panel A presents regression results related to the dependent variable of the 1 month, future holding period returns. We find that the Overall Ranking or composite score has a positive and statistically significant coefficient, indicating that companies with an independent and skilled board of directors as well as a separate, independent and skilled audit committee, exhibit higher 1 month future holding period returns. Panel B presents regression results related to the dependent variable of the 3 month, future holding period returns. Similarly, we find that the Board of Directors Independence Ranking, the Audit Ranking, and the Overall Ranking all have positive and statistically significant coefficients, indicating that companies with an independent and skilled board of directors as well as a separate, independent and skilled audit committee, exhibit higher 3 month future holding period returns. Finally, Panel C presents regression results related to the dependent variable of 6 month, future holding period returns. Similarly, we find that both the Audit Ranking and the Overall Ranking have positive and statistically significant coefficients, indicating that companies with an independent and skilled board of directors as well as a separate, independent and skilled audit committee, exhibit higher 6 month future holding period returns. Thus, more corporate governance rankings are significant for future stock returns in longer holding periods.

Table 5. Cross-Sectional Regressions of Corporate Governance Rankings on Holding Period Returns for the Netherlands (for the period 2010)

Regression	Coefficien	T-Test	Rsquared
Panel A: 1 m HPR			
BoDIndRank	0.00	0.029	0.0000
BoDIndSkilRank	0.00	0.205	0.0000
AudRank	0.13	0.389	0.0170
OverallRank	0.06*	1.884	0.0180
Panel B: 3 m HPR			
BoDIndRank	0.11*	1.500	0.015
BoDIndSkilRank	-0.08	-0.830	0.007
AudRank	0.09*	1.990	0.012
OverallRank	0.04*	1.990	0.034
Panel C: 6 m HPR			
BoDIndRank	-0.07	1.113	0.014
BoDIndSkilRank	-0.05	-0.713	0.005
AudRank	0.03*	1.507	0.002
OverallRank	0.01*	1.825	0.004

Table 5 provides regression results for all companies in the sample. The dependent variable is respectively the 1 (Panel A), 3 (Panel B) and 6 (Panel C) Holding Period Return while the independent varibles are four different composite rankings formed with different combination of the corporate governance dummies. BodIndRank is a composite percentile ranking score calculated by averaging three variables measuring different levels of Independence of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2); BodIndSkillRank is a composite percentile ranking score calculated by averaging four variables measuring different levels of Independence and Skills of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2 and Skilled BoD); AudRank is a composite percentile ranking score calculated by averaging three variables related to the Audit Committee (presence of a Separate, Independent and Skilled Audit Committee; Overall Rank is a composite percentile ranking score calculated by averaging all the seven above mentioned variables.

We supplement the above regression stock returns analysis with an analysis of stock returns across deciles. Table 6 presents the 1, 3 and 6 month holding period, stock returns for portfolios sorted into seven variables which describe different direct and indirect corporate governance mechanisms of control. Specifically, we present evidence of whether by sorting and building portfolios into 'long' companies with these seven corporate governance characteristics and 'short' companies without these same characteristics, it is possible to have a positive return spread. Table 6 shows that in six of the seven different sorts or groups, there is a positive spread. The only exception is the 'Second Level of Board of Directors Independence', which has a negative spread in all three time frames. Thus, these results reinforce the importance of key corporate governance characteristics for positive future stock price returns.

Table 6. Returns for Portfolios Sorted by Individual Corporate Governance Characteristics

	1 MHPR Return (Arithmetic)	3 MHPR Return (Arithmetic)	6 MHPR Return (Arithmetic)	Sample Size	%
	Panel A: Dual CEO				
Presence of CEO Dual	0,27%	-1,12%	-14,72%	45	50,56%
Absence of CEO Dual	-1,16%	3,48%	-11,88%	44	49,44%
Delta	1,19%	7,70%	3,97%		
	Panel B: BoardIndLev1				
Presence of BoardIndLev1	-0,05%	1,25%	-12,86%	60	68,18%
Absence of BoardIndLev1	-1,25%	0,94%	-14,29%	28	31,82%
Delta	1,20%	0,32%	1,43%		
	Panel C: BoardIndLev2				
Presence of BoardIndLev2	-1,01%	-5,42%	-18,41%	42	48,28%
Absence of BoardIndLev2	-0,14%	7,41%	-8,62%	45	51,72%
Delta	-0,87%	-12,83%	-9,80%		
	Panel D: BoardSkill				
Presence of BoardSkill	0,31%	3,97%	-11,08%	67	88,16%
Absence of BoardSkill	-2,88%	-6,44%	-21,00%	9	11,84%
Delta	3,18%	10,41%	9,92%		
	Panel E: Audit Committee				
Presence of an Audit Comm	-0,03%	3,81%	-11,95%	58	65,17%
Absence of an Audit Comm	-1,22%	-3,89%	-15,92%	31	34,83%
Delta	1,19%	7,70%	3,97%		
	Panel F: Audit Committee Independence				
Presence of AudComInd	0,31%	5,26%	-13,21%	32	35,96%
Absence of AuditComInd	-0,97%	-1,75%	-13,40%	57	64,04%
Delta	1,28%	7,01%	0,19%		
	Panel G: Audit Committee Skill				
Presence of AudComSkill	0,33%	1,32%	-13,24%	41	48,24%
Absence of AuditComSkill	-1,31%	0,69%	-14,85%	44	51,76%
Delta	1,64%	0,63%	1,61%		

Table 6 provides summary return statistics, that is annualized returns and return spreads for all companies in the sample. Stocks are ranked based on the presence or absence of seven variables, which describe different direct and indirect corporate governance mechanisms of control. Dual is a dummy variable, coded 0 if the CEO is also the Chairman of the Board of Directors (BoD) and coded 1 otherwise; Ind Lev 1 is a dummy coded 0 if there are more than two executives sitting on the BoD and coded 1 otherwise; Ind Lev 2 is a dummy coded 1 if the majority of the members of the BoD are independent and coded 0 otherwise; Ind Lev 3 is a dummy coded 1 if there are no members sitting on the BoD with school ties and 0 otherwise; Skilled BoD is a dummy coded 1 if there is at least one member of the BoD with an accounting and (or) finance background and coded 0 otherwise; BoD Size is the number of directors comprising the BoD; Sep Audit Com is a dummy coded 1 if there is an audit committee and coded 0 otherwise; Audit Com Ind is a dummy coded 1 if the all of the members of the audit committee are independent and coded 0 otherwise; Skilled Audit Com is a dummy coded 1 if there is at least one member of committee with an accounting and (or) finance background and coded 0 otherwise; Audit Com Size is the number of directors comprising the committee.

Tables 7a through 7d show results of a decile analysis on four different composite rankings: Board Independence Ranking, Board Independence and Skill Ranking, Audit Committee Ranking, and Overall Ranking respectively. At this level of aggregation or rankings, we find positive spreads for the composite score measuring Board of Directors Independence (1 and 6 months HPR), Board of Directors Independence plus Skills (6 months HPR) and the Overall Ranking (1 month HPR). These more granular groups or sorts may be influenced by interactions with different levels of accruals characteristics. Future research may investigate results of a double sorting within the individual accruals group of the above four composite rankings. Again, these results reinforce the importance of key corporate governance characteristics for positive future stock returns.

Table 7a. Returns for Portfolios Sorted by Accruals and Composite Board of Directors Independence Ranking

		1MHP Return	3MHP Return	6MHP Return
High Level of Independence	Decile 10	-1.62%	2.25%	-7.78%
	Decile 9	2.78%	-1.78%	-25.15%
	Decile 8	-5.20%	-14.32%	-21.39%
	Decile 7	-0.77%	-2.98%	-11.01%
	Decile 6	0.17%	-3.77%	-20.93%
	Decile 5	-1.71%	3.30%	-3.18%
	Decile 4	0.70%	5.25%	-4.56%
	Decile 3	5.96%	24.56%	-9.16%
	Decile 2	-2.88%	-3.54%	-16.92%
Low Level of Independence	Decile 1	-3.25%	2.70%	-12.65%
	Decile 10-Decile 1	1.63%	-0.45%	4.87%

Table 7b. Returns for Portfolios Sorted by Accruals and Composite Board of Directors Independence and Skilled Ranking

		1MHP Return	3MHP Return	6MHP Return
High Level of Independence/ Skill	Decile 10	-5.15%	-2.69%	-15.02%
	Decile 9	4.25%	-3.45%	-28.64%
	Decile 8	-3.75%	-6.81%	-12.71%
	Decile 7	-0.81%	4.30%	-7.18%
	Decile 6	3.07%	-0.35%	-9.07%
	Decile 5	-0.03%	-1.19%	-11.06%
	Decile 4	0.66%	17.17%	-11.39%
	Decile 3	1.65%	4.21%	-9.57%
	Decile 2	-3.85%	-1.50%	-16.52%
Low Level of Independence/ Skill	Decile 1	-4.75%	-1.98%	-18.25%
	Decile 10-Decile 1	-0.40%	-0.71%	3.23%

Table 7c. Returns for Portfolios Sorted by Accruals and Composite Audit Committee Independence and Skilled Ranking

		1MHP Return	3MHP Return	6MHP Return
High Level of Independence/ Skill Audit	Decile 10	-3.25%	1.26%	-16.87%
	Decile 9	-1.03%	-4.98%	-14.54%
	Decile 8	4.56%	7.44%	-13.80%
	Decile 7	3.75%	25.76%	-5.24%
	Decile 6	-2.42%	-0.24%	-12.34%
	Decile 5	-2.78%	-1.54%	-12.69%
	Decile 4	-2.83%	-2.75%	-10.93%
	Decile 3	-2.56%	-6.50%	-22.25%
	Decile 2	-2.98%	-13.25%	-25.65%
Low Level of Independence/ Skill Audit	Decile 1	1.50%	3.54%	-6.25%
	Decile 10-Decile 1	-4.75%	-2.28%	-10.62%

Table 7d. Returns for Portfolios Sorted by Accruals and Composite Overall Ranking

		1MHP Return	3MHP Return	6MHP Return
High Level of Independence	Decile 10	5.02%	0.85%	-16.25%
	Decile 9	-1.78%	3.99%	-8.24%
	Decile 8	2.06%	21.12%	-14.54%
	Decile 7	-5.01%	-2.98%	-15.99%
	Decile 6	-4.54%	-6.37%	-14.69%
	Decile 5	-3.16%	-11.07%	-19.80%
	Decile 4	-0.55%	1.22%	-15.64%
	Decile 3	-0.08%	0.85%	-6.35%
	Decile 2	1.45%	-5.85%	-22.24%
Low Level of Independence	Decile 1	-1.85%	3.82%	-8.63%
	Decile 10-Decile 1	6.87%	-2.97%	-7.62%

Table 7 provides summary return statistics, that is annualized returns and return spreads for all companies in the sample. Stocks are ranked based on four different composite rankings. 7a: BodIndRank is a composite percentile ranking score calculated by averaging three variables measuring different levels of Independence of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2); 7b: BodIndSkillRank is a composite percentile ranking score calculated by averaging four variables measuring different levels of Independence and Skills of the Board of Directors (CEO Duality, Ind Lev 1 Ind Lev 2 and Skilled BoD); 7c: AudRank is a composite percentile ranking score calculated by averaging three variables related to the Audit Committee (presence of a Separate, Independent and Skilled Audit Committee; 7d: Overall Rank is a composite percentile ranking score calculated by averaging all the seven above mentioned variables.

7. Conclusions

This article provides useful insights into important issues related to both capital markets efficiency and agency theory. Specifically, in terms of capital markets efficiency, we add to the literature that direct and indirect corporate governance mechanisms of control are potentially a threat to capital market efficiency. Also, in terms of agency theory, we show that corporate governance control mechanisms contribute to lower asymmetries between the principal (investors) and the agent (management). In fact, we provide some initial evidence that direct corporate governance characteristics are related to the level of accruals and to future stock price returns. First we find that the characteristics of corporate governance variables differ between companies with higher and lower quality of earnings. Specifically, we find that companies with the highest level of earnings quality are characterized by an indenpendent board, as well as the existence of a separate, independent, and skilled audit committee. Second, we find that there exists a significant negative relationship between the level of accruals and an independent, separate audit committee. This is a potentially interesting finding because it shows that an audit committee with good corporate governance characteristics is an effective control mechanism over earnings management. Regarding the relationship between corporate governance indicators and future stock returns, the decile analysis shows positive return spreads for all the individual variables except for the second level of independence. Contrary to Kent et al. (2010), we do find initial evidence that there is a relationship between audit committee characteristics and level of aggregate accruals. This result may relate to the fact that we did not exclude companies without an audit committee, thereby possibly explaining the Kent et al. (2010) limitation of self selection biases.

Such results are relevant for portfolio managers and investors, who may want to screen companies based on direct corporate governance control variables in order to earn higher stock price returns. Also, Dutch regulators may want to reconsider the principle of "apply or explain" and make it stricter since we find higher accruals for companies that do not have a separate, independent and skilled audit committee. Hence, it is possible that companies which explain deviation for not applying corporate governance code rules, may be, more prone to earnings management because they don't have all the control mechanisms in place.

Future research may investigate whether there are differences among countries which have an "apply-or-explain" rule and those which do not. This could reinforce the case for regulators to be stricter in the application of corporate governance codes. Additionally, future research could look at a double sorting process, screening by both decile sorting of accruals and by corporate governance rankings, consistently outperforms just accruals decile sorting. Finally, a limitation of this study may be the data availability of corporate governance variables.

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