

Transparency, corporate governance and firm performance in The Netherlands

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ABSTRACT We explore the relations between transparency, corporate governance, and performance for Dutch exchange-listed firms over 1997-2007. Our measure for transparency is based on annual report information. In 2005 a new accounting standard (IFRS) became mandatory and applicable to the annual reports of Dutch listed firms. We investigate the effects of IFRS by comparing pre and post IFRS periods. We find that under IFRS transparency has increased substantially, and that the determinants of transparency have also changed. Pre-IFRS, disclosure is mainly driven by firm size, leverage and protective preference shares. Post-IFRS, we observe very little variation in disclosure practices.

PRACTICAL IMPLICATIONS Our study documents the effects of the introduction of IFRS among Dutch non-financial listed firms. We find that these firms disclose more information in their annual reports after the mandatory adoption of IFRS. In the post-IFRS period a limited degree of discretion remains with regard to the disclosure of governance and strategy information, compared to the preceding period.

1 Introduction

In this study we explore the relation between firm financial reporting transparency (henceforth transparency), corporate governance, and performance. These topics are interrelated and deserve further investigation. Our empirical analysis focuses on Dutch exchange-listed firms. We start our empirical analysis by documenting the impact that corporate governance characteristics and firm performance have on transparency. Then, we examine the relationship between transparency and subsequent firm performance. Our sample consists of Dutch non-financial firms with shares listed on the Euronext Amsterdam exchange. IFRS became mandatory in 2005 and was applicable to the annual reports by all Dutch listed firms. We investigate the effect of IFRS by comparing pre-IFRS (1997-

2003) and post-IFRS (2005-2007) periods. Our study contributes to the documentation of determinants of disclosure in various institutional regimes by adding Dutch evidence, as well as to the description of the consequences of the introduction of IFRS, which has been a major step in the development of global harmonized accounting standards.

Exchange-listed firms have professional managers, who are at best partial owners of the company. This setting leads to agency problems, which can be mitigated by transparency and corporate governance regimes. Agency problems are inherent in a corporation due to the separation of ownership from control (Berle & Means, 1930, 1932; Jensen & Meckling, 1976; Fama & Jensen, 1983). Both corporate governance and transparency are mechanisms that mitigate these agency problems. As a consequence, corporate governance mechanisms are expected to influence firm performance (e.g., Shleifer & Vishny, 1997; La Porta, Lopez-de-Silanes, Shleifer & Vishny, 1998; La Porta, Lopez-de-Silanes, & Shleifer, 1999) and corporate transparency (e.g., Core, 2001; Healy & Palepu, 2001; Botosan & Plumlee, 2002; Graham, Harvey & Rajgopal, 2005; Lambert, Leuz & Verrecchia, 2007). Transparency takes different forms and thus is based on different sources.¹ Our main focus in this study is on annual reports of stock-listed firms. We thus study transparency as a governance device, in conjunction with alternative devices, and in relation to the ultimate goal of governance mechanisms, which is the reduction of agency costs and hence improved performance.

The Netherlands provides an interesting setting to observe the relations between corporate governance, transparency and performance. While the equity market is an important source of capital and all firms face a common set of legal, political and economic constraints, there is considerable discretion in the disclosure environment, particularly prior to the introduction of IFRS. Regarding the corporate governance environment, there are interesting and subtle governance features related to legal form, takeover defences,

and cross-listing that are unique to The Netherlands. In particular, there is not an active takeover market in The Netherlands and the country is known for constraining the rights of minority shareholders. All of these suggest The Netherlands is an interesting setting to observe the relation between performance, and corporate governance and transparency.

The 2005 introduction of IFRS has induced a major adjustment of accounting standards, which provide key directions for annual financial reporting. To investigate the determinants of corporate disclosure, we thus construct disclosure measures and compare the results for pre-IFRS and post-IFRS periods. Similarly, we investigate the performance consequences of disclosure for pre-IFRS and post-IFRS periods. We apply a new transparency index based on 186 data items, for which the data was hand-collected from annual reports (Botosan, 1997). Next, we provide insight into the effects of IFRS, which became mandatory for Dutch firms in 2005, on both transparency and performance. In addition, we add to the existing literature on the adoption of IFRS (Soderstrom & Sun, 2007; Armstrong *et al.*, 2010; Brüggemann *et al.*, 2013).

The remainder of the paper is organized as follows. Section 2 provides more background on corporate governance and transparency issues as they particularly relate to The Netherlands. Section 3 describes the sample, data, variables definitions and research methods. Section 4 presents the empirical results and section 5 concludes.

2 Governance, transparency, and the Dutch case

2.1 Corporate governance, transparency, and firm performance

Listed firms are managed by professional managers, who may or may not own a stake in the firm. When internally generated capital is insufficient to finance the activities of the firm, the firm needs outside capital. This outside capital can be obtained either by issuing shares or attracting new debt. The providers of outside capital face information asymmetries (Akerlof, 1970; Hölmstrom, 1979). Berle and Means (1930, p. 58) argue that *'the stockholder has no direct influence on management'* and *'their respective interests are often opposed.'* Berle and Means (1932) were one of the first to address the large corporation characterised by the separation of ownership and control.² Building on Berle and Means (1930), Jensen and Meckling (1976) analytically develop the relationship between shareholders (principals) who engage managers (agents) to manage the firm on their behalf. Both the principal and agent are utility maximizers. To ensure that agents do not engage in activities which are not in the interest of the principal, agency costs for monitoring and bonding are incurred as well as residual losses because monitoring and bonding are costly.

Corporate governance devices, including transparency, reduce agency costs and enhance firm value. The literature suggests that major outside shareholders constrain management's deviation from value-maximizing behaviour (e.g., Agrawal & Knoeber, 1996; Cho, 1998; Holderness & Sheehan, 1988; La Porta *et al.*, 1999; Morck, Shleifer & Vishny, 1988). These outside shareholders can be individuals, financial institutions (e.g., banks, insurance companies and pension funds) and industrial firms. The influence of shareholders is adversely affected by constraints on their voting rights and by management's attempt to prevent changes in corporate control that adversely affect their interests (e.g., Stulz, 1988; Malatesta & Walkling, 1988). Examples include anti-takeover defences, instruments limiting the disciplining role of shareholders and the market for corporate control (DeAngelo & Rice, 1983). Two additional monitoring mechanisms are debt markets and cross-listings. Debt markets discipline management's deviation from value-maximizing behaviour (Jensen, 1986). When a firm increases its debt, management needs sufficient cash flows for interest payments and for paying back the principal amount borrowed. This reduces management's discretion because they prefer to avoid financial distress. Cross-listings on a foreign exchange can be a disciplining mechanism. In particular, UK and US listings require more company and compensation disclosure than Continental European exchanges (Lins, Strickland & Zenner, 2005). These higher disclosure requirements are referred to as increased bonding costs.

Corporate governance mechanisms evolve to mitigate agency costs, via practices, laws or regulations. Annual reports are a form of corporate disclosure enabling outsiders to monitor the firm's activities. Corporate disclosure is an important means of reducing information asymmetry between management and outside shareholders. Disclosure can be defined as any intentional release of financial or non-financial information (Gibbins, Richardson & Waterhouse, 1990; Healy & Palepu, 2001). There are different ways information can be disclosed, by the firm itself (e.g., annual reports, interim reports, quarterly reports, prospectuses, press releases, conference calls, websites) or via intermediaries (e.g., financial analysts, brokerage firms, credit rating agencies). The external user could also assess the disclosed information on its fundamental qualities, such as relevance and faithful representation, and whether there is an acceptable combination of enhancing qualities, such as comparability, verifiability, timeliness and understandability (Harrison, Horngren, Thomas & Suwardy, 2013). Annual reports of listed firms are audited and require an auditor's report which improves the reliability of the information.

Disclosure can be quantitative or qualitative, mandatory or voluntary, and take place via formal or infor-

mal channels. Mandatory disclosure is information disclosure based on external requirements, law (especially relevant in civil law countries), regulation and standards. Standards can be defined by quasi-private organizations, e.g., US GAAP by the Financial Accounting Standards Board (FASB) and IFRS by the International Accounting Standards Board (IASB). Voluntary disclosure is any disclosure in excess of mandatory disclosure. Clearly, irrespective of the legal and regulatory regimes, firm management has discretion over the information provided to financiers.

Disclosure, like any other governance device, can complement as well as substitute for other governance mechanisms (Agrawal & Knoeber, 1996). When disclosure is complementary to other governance devices, information in annual reports acts as a bonding device mitigating agency problems and we expect well-governed firms to have better disclosure policies. For example, large blockholders can use their information advantage, which they achieve by using economies of scale based on their shareholdings, to reduce information asymmetry for themselves and all other providers of capital. Large shareholders can monitor management or effectively reduce the information asymmetry by demanding more information disclosure via the annual report. Alternatively, corporate governance devices may substitute for each other (Agrawal & Knoeber, 1996). For example, if management is entrenched by anti-takeover defences, managers may enhance disclosure both under pressure from the capital market and to legitimize their protection.

Transparency may affect firm value in at least two ways, through the reduction of agency costs, as described in this section, and/or through a reduction of information risk (Botosan, 1997; Botosan & Plumlee, 2002; Barth & Landsman, 2003; Brown, Hillegeist & Lo, 2004; Easley & O'Hara, 2004; Dutta & Nezhobin, 2016). Information risk implies that non-transparency has a negative effect on value. Previous studies investigate the effect of disclosure on cost of capital of equity (e.g., Botosan, 1997), the weighted average cost of capital (Barth & Landsman, 2003), the private information portion of the bid-ask spread in market microstructure literature (Brown *et al.*, 2004; Easley & O'Hara, 2004) and the earnings price ratio as a measure of the cost of equity capital (Easton, 2004).³ The results of these studies indicate that disclosure reduces information asymmetry and lowers the cost of capital, which increases firm value.

2.2 Corporate governance in The Netherlands

In this section, country-specific aspects of corporate governance and transparency in The Netherlands are described. Overall, in our time window of 1997-2007, we find an increased awareness of the importance of corporate governance, but relatively stable regulation.

Before 2013, Dutch listed firms were legally required to operate under a two-tier board structure consisting of a management board and supervisory board.⁴ The management board is ultimately responsible for achieving the company's objectives, its strategy and policy, and results. The supervisory board is composed of individuals that are "independent" of the company, so-called "outsiders." Such outsiders are usually "professional managers" and it is not uncommon for them to be former management board members. Supervisory board members typically receive a fixed remuneration for their services and very few hold shares in the company.⁵ More recently, it is not uncommon for supervisory board members to hold a stake in the firm (Het Financieel Dagblad, 2016).

Dutch managers are shielded from shareholder influence and the threat of hostile takeovers by legal measures. Voogd (1989) provides a very detailed overview of these anti-takeover defences that were or are applied in The Netherlands. Listed firms can have two mechanisms that function as anti-takeover defences. The first is the *Priority Share*. These shares have special voting rights, e.g., when the general meeting of shareholders has to vote on a merger or a takeover attempt, additional capital financed by a public offering, or alterations to the company charter and company liquidation.

The second mechanism is the *Protective Preference Share*, which should not be mistaken for financial preference shares that have preference only when it comes to dividend payments. Protective preference shares are used when the authorised capital consists of sufficient preference shares to dilute the voting rights of issued shares. Protective preference shares can be issued by management in case of a hostile takeover. Management issues these protective preference shares to a friendly trust office or outside investor. Preference shares are sold at a low nominal value with an obligation to pay only 25% of the amount up front. Management can also provide a loan to the friendly party to cover the amount. Preference shares have super voting rights but votes are restricted to a maximum of 50% or 100% of the current outstanding shares depending on the anti-takeover defences in place.

A third anti-takeover mechanism is the *Certificate*. In its articles of association, a firm allows another party to issue and administer certificates of its shares. A Trust Office (*Stichting Administratiekantoor*) initiates a certification process and subsequently administers the certificates. During the certification process, the firm's ordinary shares are exchanged for certificates. Normally, a trust office is friendly to the firm's management. Although the trust office typically has some board members of the firm on its board, the chairman and majority of the trust office members are required to be outsiders. Holders of certificates only have dividend

rights. The trust office holds all voting rights including approval of the dividend policy.

In sum, these three anti-takeover instruments clearly limit the influence of ordinary shareholders and the market for corporate control for Dutch listed firms. As a reaction to these three share types, as of 1997, provisions of Euronext Amsterdam only allow a company to have two of the three anti-takeover defences.

Improvements in Dutch corporate governance started in 1997 predominantly through self-regulation. A committee on Corporate Governance (also known as Peters Committee) was formed based on an agreement between the Association of Securities Issuing Companies (*Vereniging Effecten Uitgevende Ondernemingen*, VEUO) and Euronext Amsterdam in 1996. In 1997, it published a set of 40 recommendations based on a broad consultation among interested parties. The goal was to achieve improved effectiveness of management, supervision and accountability to investors in Dutch listed firms by 1) self-regulation through transparency and monitoring, and 2) reliance on self-enforcement through market forces in order to implement and enforce the recommendations. In their annual reports firms disclosed the extent to which they implemented the recommendations. The Monitoring Committee Corporate Governance provided its first report at the end of 1998 and a second evaluation report in 2002. Later in 2003, just after a major accounting scandal involving Ahold, the new Committee Corporate Governance (also known as Tabaksblat Committee) was formed. At the end of 2003, this new committee presented its 'code of best practices.' Also, corporate law was changed requiring all firms to disclose in their annual reports whether they complied with each of the recommendations, and if not, why (comply or explain). Towards the end of 2004, the newly formed Monitoring Committee Corporate Governance Code published its first monitoring report, and continues to do so annually. The 'code of best practices' was revised in 2007 and became effective the beginning of 2008.

Several monitoring analyses have been conducted.⁶ De Jong, DeJong, Mertens and Wasley (2005) examine the Dutch self-regulation efforts, by comparing the results for the pre-Peters and post-Peters periods, including the effects of several corporate governance related variables on firm performance (Tobin's Q). The study covered the period 1992-1999.

2.3 Financial reporting in The Netherlands

Zeff, Van der Wel and Camfferman (1992) provide an extensive overview of financial reporting in The Netherlands, describing the development of reporting in The Netherlands covering the twentieth century. Dutch civil code is based on the French code of law. The development of Dutch financial reporting law was slow. The first law was enacted in 1837, which merely

required a *merchant* to prepare an inventory listing and a balance sheet. However, the law did not include publication of this information. The reporting law of 1928 included the requirement for large and listed firms to publish a balance sheet and an income statement. In the 1950s, Dutch firms were already voluntarily improving their annual reporting, encouraged by e.g., the Henri Sijthoff Prize (Zeff *et al.*, 1992).⁷ The 1971 law on external financial reporting (*Wet op de Jaarrekening van Ondernemingen*) provides both strict guidelines and aspects that allow for discretion.

In The Netherlands, in 1976, the section on legal persons in the civil code (Book 2) was enacted that included the unchanged 1971 law on external reporting. In addition to law, Dutch reporting is also based on jurisprudence and on guidelines for annual reporting (*Richtlijnen voor de Jaarverslaggeving*). The jurisprudence originates from the *Ondernemingskamer* (Enterprise Court), a special chamber which is part of the court of Justice in Amsterdam. Stakeholders can address the *Ondernemingskamer* when they feel that the annual reporting laws were violated. However, the *Ondernemingskamer* takes no investigative actions on its own. The Dutch Accounting Standards Board (*Raad voor de Jaarverslaggeving*, or RJ) is an executive body, which is responsible for drafting and publishing Guidelines for annual reporting. It consists of preparers (employers' organizations), users (financial analysts, institutional investors and trade union federations) and auditors (the Dutch Institute of Accountants) of financial reports. Even though these guidelines of the Dutch Accounting Standards Board are recommendations and not legally binding, they are considered as references for auditors when auditing financial reporting and applied by courts when considering a verdict.

In 1973 the International Accounting Standards Committee (IASC) was founded to develop international accounting standards. The IASC was succeeded by the International Accounting Standards Board (IASB) in 2001 to continue the work of the IASC by developing international accounting standards, International Financial Reporting Standards (IFRS). As of 2005, all listed firms in the European Union must apply International Financial Reporting Standards. Ernst & Young (2006, 2013) show that the accounting standards for Dutch listed firms are considerably stricter under IFRS, even though the Dutch Accounting Standards Board had already started before 2005 to adjust the recommendations towards IFRS rules. Covering the period 2002 to 2013, the reports count the number of items that are stricter according to IFRS or stricter according to Dutch law and regulation. They find that IFRS is stricter moving from 126 to 241 items, and Dutch laws and regulations are stricter moving from 48 to 111 items. Clearly, IFRS reduced the discretion of management when it comes to disclosing firm information.

3 Research Design

As stated in the introduction, the purpose of this study is to assess the relation between transparency, corporate governance and firm performance. We do so by evaluating these relationships pre-IFRS and post-IFRS, allowing us to examine the impact of mandatory accounting standards on transparency. Our selection of variables is based on existing literature on transparency and governance; because of the exploratory nature of our work and the broad set of variables we do not provide explicit hypotheses up front.

3.1 Sample and data

Our sample is all non-financial firms listed on Euronext Amsterdam in the period 1996 to 2007. We exclude financial firms because of their regulatory structure. The number of listed non-financial firms is not constant over time, due to IPOs, takeovers, and de-listings. We impose no requirements on our sample other than our variable definitions. Our variable definitions require lagged data ($t-3$) and future data ($t+4$), which requires data from 1994 to 2011. The final sample contains 193 firms with 654 firm-year observations.

The firm-specific disclosure variables are hand gathered from each company's annual report for the uneven years 1997-2007 (we omit the even years due to the time-consuming nature of the data collection and the stability of the data). Financial data is obtained from Statistics Netherlands (*Centraal Bureau voor de Statistiek*) and the Review and Analysis of the Companies in Holland (REACH) dataset. The number of analysts following a company is obtained from I/B/E/S. We use annual reports to identify board members and to obtain information missing from Statistics Netherlands and REACH. Data on ownership structure is obtained from the leading Dutch financial daily newspaper (*Het Financieele Dagblad*) that annually publishes a list of exchange-listed firms and their stakeholders (in accordance with the notifications for The Law on Disclosure of Shareholdings, *Wet Melding Zeggenschap*). Information about takeover defences and cross-listings are collected from the yearly overviews of all securities listed at Euronext Amsterdam (*Gids bij de Officiële Prijscourant van de Amsterdamse Effectenbeurs*).

3.2 Variable definitions

This section provides the definitions of the variables employed in our study, primarily focusing on transparency, corporate governance and (firm) performance characteristics.

In order to measure transparency we apply indices. We focus on transparency measures based on annual reports, one of the traditional opportunities by which managers provide information about the firm to their providers of capital and other stakeholders. We follow an approach that measures transparency in the tradi-

tion of CIFAR (Center for International Financial Analysis & Research, 1995; Botosan & Plumlee, 2002; Camfferman & Cooke, 2002; Botosan, Plumlee & Xie, 2004). Our selection of disclosure items starts with the 85 items in the CIFAR index for industrial firms in the 1995 issue of CIFAR (Center for International Financial Analysis & Research, 1995). We remove items that show no variation across firms (e.g., presence of balance sheet, total assets, end of book year) and items related to pension costs. Next, we include the most relevant items according to participating analysts in the Limperg study by Hoogendoorn and Mertens (2001) that focuses on The Netherlands.⁸ Ultimately we have a set of 186 criteria. Each of the 186 items is classified under a set of CIFAR index categories, i.e., financial information, per share information, accounting standards information, corporate governance and strategic information, and other.⁹ For each annual report, we check and code each item based on two questions. Is the item included in the annual report? If so, we code the item as 1, if not, we continue with the second question. Would the item have been applicable to the firm, even though it is not included? If so, we code it 2, if not it is coded 3. Items coded 1 belong to the group of ones, those coded 2 belong to the group of twos, and those coded 3 belong to the group of threes. The items that belong to the ones, twos and threes can vary depending on each annual report. The ones, twos and threes are mutually exclusive.

For each firm in our sample, we check each item in the annual reports of 1997, 1999, 2001, 2003, 2005 and 2007. We determine an index based on all criteria and per CIFAR index category (excluding the category other information).¹⁰ The index is Disclosure (Discl), which is calculated as the number of criteria belonging to the ones divided by the sum of the number of criteria belonging to ones and twos. The transparency indices used in the empirical tests are DisclAll, based on all criteria, and for each of the categories, i.e., financial information (DisclFinancial, 124 items), per share information (DisclShares, 33 items), accounting standards information (DisclAccStandards, 15 items) and corporate governance and strategic information (DisclGovStr, 12 items).

Next, we provide definitions of performance, corporate governance and other variables. These variables are lagged by one year as they serve as explanatory variables, and dummy variables start with 'd'. The performance variables are Tobin's Q, ROA, and Growth. Tobin's Q is measured as (total assets – shareholders' equity + market value equity) / total assets. ROA is return on assets, which equals operating income / total assets. Assets are the total assets (in thousands of euros). GrowthAssets is historical asset growth equalling (total assets - total assets _{$t-3$}) / total assets _{$t-3$} . We apply different corporate governance variables. The variable

related to the financing structure of the firm is Leverage. Leverage is measured as long-term debt / total assets. The variables related to the formal corporate governance institutions are priority shares, preference shares, and certification. dPriorityShares scores 1 if the firm uses priority shares, otherwise 0. dPreference shares scores 1 if the firm uses preference shares, otherwise 0. dCertification scores 1 if the firm uses certification, otherwise 0. Next, we address the variables concerned with the shareholder capital structure.¹¹ CALL measures the total percentage of share ownership by all large shareholders. The variables concerned with different owner types are shareholdings by large shareholders, i.e., shareholdings by insiders, financials and banks. We identify each type by a dummy variable and measure for each type the total percentage per type. OwnershipInsiders measures the ownership by insiders (%). OwnershipFinancials measures total ownership by financial institutions (%), excluding banks. OwnershipBanks measures the ownership by banks (%). If a shareholder of the before mentioned types owns shares of a firm then the related dummy variable scores 1, and otherwise 0. Finally, we also include outside analysts based on I/B/E/S, i.e., AnalystsFollowing measured by the average number of analysts following the firm.

4 Results¹²

4.1 Summary of descriptive statistics

Descriptive statistics for transparency, corporate governance, firm performance and other variables are presented in Table 1 for the full period 1997 to 2007.

Firms have a mean disclosure score of 0.654 for the overall disclosure index (DisclAll), which implies that on average 65.4% of the relevant items are disclosed. When comparing means of the different categories of the overall disclosure index, results range between 0.582 and 0.740, i.e., in an increasing order the means are for accounting standards information 0.582, financial information 0.633, governance and strategic information 0.668, and per share information 0.740. Performance measures show that the mean value for Tobin's Q is 1.757 and return on assets (ROA) is 6.8%. Our growth measure, the three-year historical growth rate of the firm's book value of assets shows a mean of 36.7%. Overall we conclude that the average Dutch firm achieves a positive return on its business activities and provides shareholders with a positive return on their investment. It is also reasonable to assume that market participants have positive expectations about future growth opportunities. The average firm has an asset size of €1,673 million. The sample shows some skewness for asset size, median values are €254 million due to some relatively large firms. Firms have experienced considerable growth in asset size, 36.7%. Firms have a mean Leverage of 13.2%. For variables related to formal corporate governance institutions, average shareholdings owned by all large shareholders (CALL) are 46.4%. By types, 21.4% of firms have large shareholders that are insiders with combined shareholdings of 7.565%. 65.6% of firms have large financial shareholders which total 12.786%. In 51.4% of firms, banks are large shareholders, owning in total 7.184%. We can assume that the average firm has shareholders that have an incentive to monitor and discipline firms. Furthermore, they can be expected to have the necessary skills to monitor. The average number of AnalystsFollowing a specific firm is 11.236 analysts.

4.2 Summary of descriptive statistics: The pre-IFRS and the post-IFRS period

Figure 1 graphs the transparency indices over time, the overall index for disclosure and indices for the four categories. The transparency measures increase consistently over the entire period, with a strong upward movement between 2003 and 2005 coinciding with the mandatory IFRS adoption period, i.e., early adopters in 2004 and finally all firms in 2005. This provides a strong argument for analysing the pre-IFRS and post-IFRS period separately. Furthermore, there is convergence in the scores for the categories, medians after 2005 have a narrower range than before that period. The general upward trend can be explained by increased expectations about continuous improvements in reporting and corporate governance and by events which contributed positively to such shifts in expectation. That is, IFRS adoption and The Netherlands initiatives in corporate governance, the Peters' Committee 'Code of best practice' in 1997 and the renewal of the code in 2004 by the Tabaksblat Committee.

Next, we provide an overview of the descriptive statistics by separating results for the pre-IFRS and post-IFRS periods (Table 2). We report the same statistics for the pre-IFRS and post-IFRS periods as reported in Table 1 and the differences in means for these two periods. For the disclosure all index (DisclAll) means for the pre-IFRS and the post-IFRS pe-

Figure 1 Corporate transparency index: Disclosure

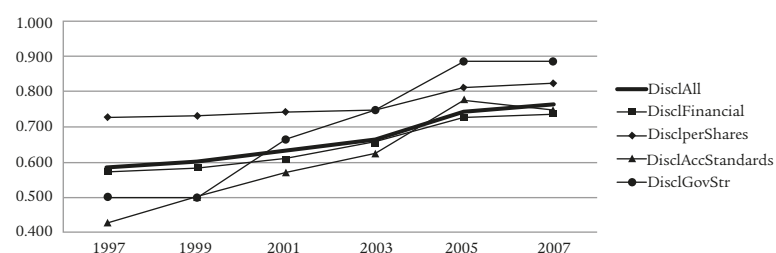


Table 1 Summary statistics

	Full period (1997-2007)					
	Mean	sd	25%	median	75%	N
Transparency measures						
DiscAll	0.654	0.112	0.578	0.649	0.730	654
DiscFinancial	0.633	0.116	0.544	0.632	0.716	654
DiscShares	0.740	0.144	0.667	0.760	0.833	654
DiscAccStandards	0.582	0.242	0.400	0.600	0.750	654
DiscGovStr	0.668	0.225	0.500	0.667	0.857	654
Performance, corporate governance and other variables						
Assets	1,672,945	4,335,136	49,672	254,281	1,042,573	654
GrowthAssets	0.367	0.825	-0.038	0.162	0.459	640
TobinQ	1.757	1.232	1.080	1.356	1.938	654
ROA	0.068	0.128	0.038	0.086	0.124	654
Leverage	0.132	0.126	0.015	0.107	0.212	654
dPriorityShares	0.339	0.474	0.000	0.000	1.000	654
dPreferenceShares	0.673	0.470	0.000	1.000	1.000	654
dCertification	0.246	0.431	0.000	0.000	0.000	654
CALL	0.464	0.289	0.223	0.475	0.689	654
OwnershipInsiders	7.565	17.700	0.000	0.000	0.000	654
OwnershipFinancials	12.786	14.451	0.000	6.820	21.110	654
OwnershipBanks	7.184	9.671	0.000	5.020	11.400	654
dOwnershipInsiders	0.214	0.410	0.000	0.000	0.000	654
dOwnershipFinancials	0.656	0.475	0.000	1.000	1.000	654
dOwnershipBanks	0.514	0.500	0.000	1.000	1.000	654
AnalystsFollowing	11.236	10.676	2.000	8.210	18.000	654

This table contains a summary of the descriptives of Dutch listed firms for the period 1997-2007, this study covers data from 1994 to 2011. The first column includes for each variable the name or an abbreviated version. For the each variable we report the mean, standard deviation (sd), 25%, median, 75% and the number of observations (N). The first group of variables are the transparency measures. Disclosure is measured as $(\#_{ones}) / (\#_{ones} + \#_{twos})$. The disclosure (DiscAll) is based on all 186 items. Other disclosure subgroups are financial information (DiscFinancial, 124 items), per share information (DiscShares, 33 items), accounting standards information (DiscAccStandards, 15 items) and corporate governance and strategic information (DiscGovStr, 12 items). For each annual report, we check and code each of the 186 disclosure criteria (items) based on two questions. Is the criterion (item) included in the annual report? If so, the criterion (item) is coded 1, if not we continue to the following question. Would the criterion (item) have been applicable to the firm, even though it is not included? If so, it is coded 2, if not it is coded 3. Criteria (items) coded 1 belong to the group of ones, those coded 2 belong to the group of twos, and those coded 3 belong to the group of threes. The criteria (items) that belong to the ones, twos and threes can vary depending on each annual report. The ones, twos and threes are mutually exclusive. Next, we provide the definitions of the performance, corporate governance and other variables. These variables are lagged by one year. All financial variables are based on book values except for Tobin's Q (TobinQ) which is also based on the market value of equity. Dummy variables start with 'd'. TobinQ is measured as $(\text{total assets} - \text{shareholders' equity} + \text{market value equity}) / \text{total assets}$. ROA is return on assets, which equals $\text{operating income} / \text{total assets}$. Assets are the total assets (in thousands of euros). GrowthAssets is the historical assets growth equaling $(\text{total assets}_{t-1} - \text{total assets}_{t-3}) / \text{total assets}_{t-3}$. Leverage is measured as $\text{long-term debt} / \text{total assets}$. dPriorityShares scores 1 if the firm uses priority shares, otherwise 0. dPreference shares scores 1 if the firm uses preference shares, otherwise 0. dCertification scores 1 if the firm uses certification, otherwise 0. The variables concerned with the shareholder capital structure (a shareholder owns at least 5% of the outstanding shares): CALL measures the total percentage of share ownership by all large shareholders. The variables concerned with different owner types are shareholdings by large shareholders, shareholdings by insiders, financials and banks. We measure for each type the total percentage per type and a dummy variable. OwnershipInsiders measures the share ownership by insiders (%). OwnershipFinancials measures total share ownership by financials (%). OwnershipBanks measures the share ownership by banks (%). If a shareholder of the before mentioned types owns shares of a firm than the related dummy variable scores 1, and otherwise 0. Finally, we also include outside analysts based on I/B/E/S, i.e. AnalystsFollowing measured by the average number of analysts following the firm. Variables other than disclosure have been winsorized at 1%. The total number of observations is 654.

Table 2 Summary of descriptive statistics for the pre- and the post-IFRS period

	Pre-IFRS period (1997-2003)						Post-IFRS period (2005-2007)						Difference in means	
	mean	sd	25%	median	75%	N	mean	sd	25%	median	75%	N	p-value	t-value
Transparency measures														
DisclAll	0.617	0.096	0.558	0.611	0.682	467	0.747	0.095	0.684	0.759	0.814	187	0.000	15.797***
DisclFinancial	0.599	0.103	0.525	0.596	0.672	467	0.719	0.101	0.670	0.734	0.788	187	0.000	13.542***
DisclShares	0.715	0.140	0.652	0.739	0.808	467	0.804	0.135	0.737	0.815	0.913	187	0.000	7.488***
DisclAccStandards	0.517	0.222	0.364	0.500	0.667	467	0.742	0.213	0.625	0.769	0.909	187	0.000	11.819***
DisclGovStr	0.591	0.206	0.444	0.600	0.750	467	0.862	0.135	0.778	0.889	1.000	187	0.000	19.742***
Performance, corporate governance and control variables														
Assets	1,546,559	4,185,565	47,013	226,996	851,818	467	1,988,572	4,684,780	69,421	380,600	1,583,909	187	0.239	1.179
GrowthAssets	0.403	0.823	-0.009	0.182	0.486	453	0.281	0.826	-0.082	0.078	0.339	187	0.091	-1.693*
TobinQ	1.778	1.342	1.048	1.317	1.948	467	1.703	0.901	1.182	1.435	1.866	187	0.406	-0.831
ROA	0.073	0.133	0.045	0.092	0.128	467	0.056	0.116	0.026	0.069	0.111	187	0.142	-1.471
Leverage	0.128	0.127	0.005	0.097	0.208	467	0.142	0.123	0.031	0.120	0.223	187	0.221	1.224
dPriorityShares	0.360	0.480	0.000	0.000	1.000	467	0.289	0.454	0.000	0.000	1.000	187	0.077	-1.775*
dPreferenceShares	0.677	0.468	0.000	1.000	1.000	467	0.663	0.474	0.000	1.000	1.000	187	0.739	-0.333
dCertification	0.285	0.452	0.000	0.000	1.000	467	0.150	0.358	0.000	0.000	0.000	187	0.000	-4.033***
CALL	0.449	0.288	0.219	0.458	0.656	467	0.501	0.289	0.242	0.514	0.710	187	0.035	2.114**
OwnershipInsiders	7.880	18.590	0.000	0.000	0.000	467	6.777	15.271	0.000	0.000	0.000	187	0.472	-0.720
OwnershipFinancials	12.475	14.299	0.000	6.540	21.110	467	13.566	14.835	0.000	10.260	21.220	187	0.383	0.872
OwnershipBanks	7.062	9.559	0.000	5.020	11.400	467	7.488	9.966	0.000	5.020	11.400	187	0.612	0.508
dOwnershipInsiders	0.212	0.409	0.000	0.000	0.000	467	0.219	0.415	0.000	0.000	0.000	187	0.838	0.204
dOwnershipFinancials	0.651	0.477	0.000	1.000	1.000	467	0.668	0.472	0.000	1.000	1.000	187	0.671	0.425
dOwnershipBanks	0.516	0.500	0.000	1.000	1.000	467	0.508	0.501	0.000	1.000	1.000	187	0.853	-0.186
AnalystsFollowing	12.921	11.138	3.000	10.250	21.080	467	7.030	8.029	0.500	4.750	10.250	187	0.000	-7.539***

This table contains the summary of descriptive statistics for Dutch listed firms for the pre-IFRS period (1997-2003) and the post-IFRS period (2005-2007). The included variables are transparency measures and variables related to firm performance and corporate governance. For each variable we report the mean, standard deviation (sd), 25%, median, 75% and the number of observations (N). Variables other than Disclosure have been winsorized at 1%. Definitions of the variables are provided in Table 1. The number of observations for the pre-IFRS period is 467 and 187 for the post-IFRS period.

riod are 0.617 and 0.747, respectively. The difference between the means is significant at the 1% level with a t-value of almost 16. When comparing means of the different transparency measures for different periods, we note that they show a higher value in the post-IFRS period compared to the pre-IFRS period, i.e., the mean differences are all statistically significant at the 1% level. Clearly, these results show that transparency increased and managerial discretion regarding information disclosure has reduced since the introduction of IFRS.

Firm growth slowed in the post-IFRS period. The performance measures for the pre-IFRS and post-IFRS period show the mean value for Tobin's Q and return on assets (ROA) decreasing from 1.778 to 1.703 and from 7.3% to 5.6%, respectively. None of the performance measures are significantly different when comparing pre-IFRS and post-IFRS periods. Also, ownership concentration for all large shareholders (CALL) increases, whereas Priority Shares, Certification and the average number of AnalystsFollowing decrease; all are statistically significant.

4.3 Explaining transparency by firm performance and corporate governance: Pre-IFRS period and post-IFRS period

Table 3 presents the regression models used to analyse transparency from the perspective of firms' corporate governance and performance. The results for the regression models are grouped by pre-IFRS and post-IFRS periods, i.e., model 1-5 and model 6-10, respectively. The first model for each period is disclosure all (DisclAll), followed by the other disclosure indices. For each explanatory variable we report coefficients, t-statistics and per model the explanatory power and number of observations.

Starting with results for the pre-IFRS period models, in model 1, we find that asset size has a positive significant relationship with transparency. Firms typically become more complex with size, which could explain additional information disclosure. Leverage has a significantly positive relationship with the overall disclosure index. The economic relevance of the effect of leverage on the overall disclosure index can be illustrated by multiplying the change in leverage when moving from the 25%-percentile to the 75%-percentile with the coefficient of leverage to show the effect of leverage on disclosure. First, the change in leverage is 0.203 (from 0.005 to 0.208). Second, the change is multiplied by the coefficient of 0.082, which represents an increase of 0.017 ($0.203 * 0.082$), which is 1.7%. Firm performance, Tobin's Q and ROA, remain insignificant with respect to the model for the overall disclosure index. We also analyse priority shares, preference shares and certification; only preference shares have a significantly positive effect on overall transparency. The economic relevance of preference shares is that the presence of preference shares leads to an increase of 2.9% in the overall disclosure index. According to DeAngelo and Rice (1983) anti-takeover devices can lead to shareholder alignment or managerial entrenchment. The shareholder alignment hypothesis leads to a positive effect on shareholder value, whereas managerial entrenchment leads to a negative effect. We interpret our result as follows. The capital market may require increased transparency to offset the agency problem caused by managerial entrenchment via preference shares (Agrawal & Knoeber, 1996). In other words, disclosure serves as a disciplinary device used by managers. When we look into financial institutional owners, none of the variables, i.e., the presence of bank owners and financial owners, have a significant effect on transparency. Based on their access, large bank shareholders could already have information which offsets the bank's need for increased transparency. The explanatory power of the first model shows an acceptable adjusted R-squared of 0.363.

Next, we look into models 2 to 5. The explanatory power of the different models ranges between 0.153 and

0.382. The model that is used to explain the disclosure of financial information shows that asset size, leverage and presence of preference shares have a significant positive relationship with the disclosure of financial information. Second, the disclosure of per share information is explained positively and significantly by return on assets, preference shares and analysts following but negatively affected by priority shares and insiders. Third, the disclosure of accounting standards information is explained positively and significantly by Tobin's Q and preference shares, and we find a significantly negative relationship for the shareholdings of large shareholders (CALL). The final model addressing governance and strategy shows that asset size, Tobin's Q and preference shares have a significant positive effect on disclosure of governance and strategic information.

Next, we discuss results for the post-IFRS period. There is a distinct difference between the two periods. The second period shows no significant effect on the overall disclosure index, model 6. The explanatory power of the remaining models ranges between 0.026 and 0.112. Model 7 explains the disclosure of financial information and shows that none of the variables has a relationship with the disclosure of financial information. The disclosure of per share information is explained positively and significantly by return on assets (ROA) but is explained negatively and significantly by the presence of bank owners. If firms are more profitable, they are more likely to share the positive information by increasing their disclosure. Similarly, the disclosure of accounting standards information is negatively and significantly affected again by the presence of bank owners. Here banks already have access to needed information and as a consequence appear to mitigate the demand for such information by other shareholders.

The items related to the disclosure of governance and strategy are predetermined less by IFRS than the previous disclosure indices, leaving more room for variation. The governance and strategy model has the highest explanatory power. It shows mixed results for firm performance, i.e., Tobin's Q has a positive and significant coefficient whereas return on assets (ROA) has a significantly negative relationship with disclosure governance and strategic information. Priority shares and preference shares have a significant positive effect on disclosure of governance and strategy. We interpret this result in line with the managerial entrenchment hypothesis (DeAngelo & Rice, 1983) and we assume that the capital market requires increased transparency to offset the agency problem caused by managerial entrenchment. Consistent with earlier models of this period, the presence of bank owners has a significant and negative effect on disclosure but the presence of financial owners has a significantly positive effect on

Table 3 Explaining transparency by firm performance and corporate governance for the pre- and the post-IFRS period

	Pre-IFRS period (1997-2003)					Post-IFRS period (2005-2007)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	DiscIAll	DiscIFinancial	DiscIShares	DiscIAccStand	DiscIGovStr	DiscIAll	DiscIFinancial	DiscIShares	DiscIAccStand	DiscIGovStr
InAssets	0.013***	0.016***	-0.001	0.018	0.024***	-0.002	-0.0003	-0.006	-0.014	0.008
	(3.150)	(3.079)	(-0.183)	(1.777)	(3.031)	(-0.278)	(-0.034)	(-0.579)	(-0.911)	(0.825)
TobinQ	-0.002	-0.006	-0.003	0.036***	0.019***	-0.015	-0.023	-0.020	0.020	0.024*
	(-0.589)	(-1.431)	(-0.610)	(4.483)	(3.081)	(-1.065)	(-1.502)	(-1.162)	(0.938)	(1.947)
ROA	0.041	0.034	0.156**	-0.038	-0.108	0.073	0.075	0.231*	-0.154	-0.202***
	(1.150)	(0.790)	(2.176)	(-0.521)	(-1.572)	(1.005)	(1.026)	(1.978)	(-1.048)	(-2.926)
Leverage	0.082*	0.096*	0.036	0.061	0.070	0.002	-0.013	0.040	-0.066	0.160
	(1.883)	(1.911)	(0.568)	(0.581)	(0.940)	(0.025)	(-0.195)	(0.457)	(-0.468)	(1.580)
dPriorityShares	-0.017	-0.011	-0.046***	-0.014	-0.003	0.018	0.020	0.004	0.020	0.058**
	(-1.567)	(-0.858)	(-2.743)	(-0.553)	(-0.157)	(0.747)	(0.809)	(0.150)	(0.353)	(2.201)
dPreferenceShares	0.029***	0.020*	0.044**	0.091***	0.046**	0.005	-0.007	0.005	0.071	0.055**
	(2.846)	(1.674)	(2.252)	(3.470)	(2.200)	(0.239)	(-0.353)	(0.184)	(1.584)	(2.146)
dCertification	0.010	0.014	0.016	-0.022	-0.004	0.019	0.021	0.030	0.019	0.010
	(0.792)	(0.909)	(0.893)	(-0.873)	(-0.165)	(0.935)	(0.914)	(1.105)	(0.419)	(0.249)
CALL	-0.017	-0.020	0.003	-0.079*	-0.007	-0.005	0.005	-0.053	-0.044	0.052
	(-1.029)	(-1.099)	(0.088)	(-1.930)	(-0.166)	(-0.145)	(0.159)	(-1.017)	(-0.630)	(1.073)
dOwnershipInsiders	-0.004	0.006	-0.044*	-0.033	0.005	0.001	0.007	-0.003	-0.067	0.031
	(-0.328)	(0.424)	(-1.852)	(-0.996)	(0.225)	(0.055)	(0.264)	(-0.083)	(-1.086)	(1.077)
dOwnershipBanks	-0.001	-0.001	-0.011	0.021	-0.001	-0.038	-0.021	-0.061**	-0.129*	-0.073**
	(-0.117)	(-0.054)	(-0.606)	(0.702)	(-0.049)	(-1.624)	(-0.875)	(-1.991)	(-1.835)	(-2.392)
dOwnershipFinancials	0.009	0.011	0.026	-0.050	0.043	0.034	0.027	0.054	0.030	0.078**
	(0.763)	(0.717)	(1.190)	(-1.598)	(1.621)	(1.165)	(0.914)	(1.546)	(0.387)	(2.612)
AnalystsFollowing	0.011	0.005	0.027**	0.025	0.016	0.015	0.019	0.004	0.020	-0.002
	(1.424)	(0.561)	(2.064)	(1.384)	(1.181)	(1.159)	(1.373)	(0.204)	(0.883)	(-0.168)
Adjusted R-squared	0.363	0.293	0.153	0.257	0.382	0.010	0.026	0.041	0.056	0.112
N	467	467	467	467	467	187	187	187	187	187

This table presents the results of the regressions explaining the dependent variables DiscIAll, DiscIFinancial, DiscIShares, DiscIAccStandards (abbreviated to DiscIAccStand) and DiscIGovStr of Dutch listed firms for the pre-IFRS period (1997-2003) and the post-IFRS period (2005-2007). The explanatory variables are lagged by 1 year. Definitions of the dependent and the explanatory variables are provided in Table 1. In addition, InAssets is the natural logarithm of total assets. Explanatory variables are winsorized at 1%. To avoid biased standard errors, we follow the guidance provided by Petersen (2009), i.e. we estimate our models by applying an *ordinary least squares* regression method with firm clustered standard errors and year dummies. The intercept is included in the model but not reported in the table. T-statistics are included in parentheses. Significance levels are denoted as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

disclosure. Again, it could be argued that bankers do not require additional information to be disclosed as was explained before. Financial owners may be more distant to the firm compared to bankers. Therefore, they do prefer more governance and strategy disclosure.

4.4 Can transparency explain future performance?

As a final step, Table 4 investigates whether transparency can explain future performance for the pre-IFRS

and post-IFRS periods. It is a fundamental question, whether a reduction in information asymmetry leads to higher actual future firm performance. Panel A reports the results for the pre-IFRS period and Panel B reports the results for the post-IFRS period.

We report relations between the disclosure indices and future performance. The models include year fixed effects. We apply Tobin's Q, return on assets (ROA) and asset growth for future years, i.e. $t+1$, $t+2$, $t+3$ and $t+4$

Table 4 Transparency explaining future performance for the pre-IFRS period and the post-IFRS period

Panel A		Pre-IFRS period (1997-2003 → 1998-2007)											
		TobinQ ₊₁	TobinQ ₊₂	TobinQ ₊₃	TobinQ ₊₄	ROA _{t+1}	ROA _{t+2}	ROA _{t+3}	ROA _{t+4}	Growth Assets _{t+1}	Growth Assets _{t+2}	Growth Assets _{t+3}	Growth Assets _{t+4}
DiscIAll		-1.621***	-2.387***	-2.533***	-2.454***	0.127	0.101	0.183	0.066	0.118	-0.314	-0.583	-0.528
		(-2.722)	(-3.017)	(-2.595)	(-3.356)	(1.556)	(1.305)	(1.444)	(0.651)	(0.301)	(-0.918)	(-1.242)	(-1.260)
N		446	414	393	360	449	426	416	390	449	423	415	386
DiscIFinancial		-1.816***	-2.378***	-2.483***	-2.283***	0.073	0.049	0.114	-0.011	-0.170	-0.416	-0.753*	-0.665*
		(-3.102)	(-3.136)	(-2.706)	(-3.389)	(1.009)	(0.643)	(0.937)	(-0.129)	(-0.476)	(-1.341)	(-1.740)	(-1.850)
N		446	414	393	360	449	426	416	390	449	423	415	386
DiscIShares		-0.886**	-1.588**	-1.618**	-1.649***	0.160**	0.138**	0.208**	0.179**	0.288	0.121	-0.072	0.020
		(-2.183)	(-2.405)	(-2.449)	(-2.885)	(2.524)	(2.431)	(2.514)	(2.409)	(1.145)	(0.522)	(-0.216)	(0.065)
N		446	414	393	360	449	426	416	390	449	423	415	386
DiscIAccStand		0.816***	0.865**	0.563*	0.430*	0.026	0.025	0.015	-0.010	0.439***	0.184	0.278*	0.136
		(2.893)	(2.225)	(1.773)	(1.833)	(0.904)	(0.779)	(0.403)	(-0.310)	(3.942)	(1.613)	(1.899)	(0.976)
N		446	414	393	360	449	426	416	390	449	423	415	386
DiscIGovStr		0.077	-0.036	0.249	0.114	-0.004	0.012	-0.020	0.018	0.124	-0.136	-0.131	0.0003
		(0.311)	(-0.104)	(0.917)	(0.366)	(-0.123)	(0.335)	(-0.589)	(0.450)	(0.710)	(-0.884)	(-0.673)	(0.002)
N		446	414	393	360	449	426	416	390	449	423	415	386
Panel B		Post-IFRS period (2005-2007 → 2008-2011)											
		TobinQ ₊₁	TobinQ ₊₂	TobinQ ₊₃	TobinQ ₊₄	ROA _{t+1}	ROA _{t+2}	ROA _{t+3}	ROA _{t+4}	Growth Assets _{t+1}	Growth Assets _{t+2}	Growth Assets _{t+3}	Growth Assets _{t+4}
DiscIAll		-1.383	-2.088*	-1.756	-0.797	0.192	0.052	0.221	-0.024	1.185*	0.490	0.009	-0.716
		(-1.249)	(-1.732)	(-1.548)	(-0.466)	(1.640)	(0.427)	(1.307)	(-0.181)	(1.671)	(1.188)	(0.007)	(-1.325)
N		169	162	151	138	170	167	162	147	170	167	162	146
DiscIFinancial		-1.407	-1.980*	-1.549	-0.393	0.170	0.066	0.219	-0.034	0.782	0.186	0.506	-0.593
		(-1.352)	(-1.823)	(-1.427)	(-0.314)	(1.530)	(0.558)	(1.396)	(-0.276)	(1.145)	(0.445)	(0.401)	(-1.139)
N		169	162	151	138	170	167	162	147	170	167	162	146
DiscIShares		-0.630	-1.359	-0.908	-1.246	0.136*	0.039	0.091	0.051	0.513	0.301	0.206	-0.462
		(-0.795)	(-1.486)	(-0.958)	(-0.914)	(1.880)	(0.497)	(0.902)	(0.568)	(1.032)	(0.815)	(0.259)	(-1.243)
N		169	162	151	138	170	167	162	147	170	167	162	146
DiscIAccStand		0.057	0.147	-0.320	0.407	0.014	-0.004	0.058	0.016	0.579**	0.140	-0.753	-0.241
		(0.273)	(0.719)	(-0.735)	(1.116)	(0.299)	(-0.115)	(0.775)	(0.394)	(2.000)	(0.527)	(-1.312)	(-0.964)
N		169	162	151	138	170	167	162	147	170	167	162	146
DiscIGovStr		-0.939	-1.398	-1.285	-2.462	0.026	-0.109	-0.062	-0.140	0.770*	0.580	-1.564	-0.331
		(-1.183)	(-1.544)	(-1.139)	(-0.970)	(0.352)	(-1.374)	(-0.614)	(-1.510)	(1.665)	(1.559)	(-1.439)	(-0.725)
N		169	162	151	138	170	167	162	147	170	167	162	146

This table presents the results of the OLS regressions explaining the dependent variables future performance (TobinQ₊₁, TobinQ₊₂, TobinQ₊₃, TobinQ₊₄, ROA_{t+1}, ROA_{t+2}, ROA_{t+3}, ROA_{t+4}, GrowthAssets_{t+1}, GrowthAssets_{t+2}, GrowthAssets_{t+3}, GrowthAssets_{t+4}) of Dutch listed firms for the pre-IFRS period (1997-2003) and the post-IFRS period (2005-2007). Panel A shows the results for the pre-IFRS period (1997-2003) and Panel B shows the results for the post-IFRS period (2005-2007). The models include as explanatory variables DiscIAll, DiscIFinancial, DiscIShares, DiscIAccStandards (abbreviated to DiscIAccStand) and DiscIGovStr. Definitions of the dependent and the explanatory variables are provided in Table 1. To avoid biased standard errors, we follow the guidance provided by Petersen (2009), i.e. we estimate our models by applying an *ordinary least squares* regression method with firm clustered standard errors and year dummies. The intercept is included in the model but not reported in the table. T-statistics are included in parentheses. Significance levels are denoted as follows: *** p < 0.01, ** p < 0.05, * p < 0.10.

as measures of performance. Tobin's Q measures the firm's performance in terms of market value to book value, which combines both current year's performance and the expected future performance. Return on assets measures current performance, and asset growth indicates the actual growth in the firm's assets. Tobin's Q incorporates the expected future performance, beyond the future years as mentioned above. For the pre-IFRS period, we find that higher disclosure is followed by lower Tobin's Qs, an effect that lasts, at least, four years. It seems that by disclosing more, market expectations about future performance is lower given investors are better informed. When firms disclose less, the market expects a higher return for the risk they bear. However, the result for Tobin's Q after increasing disclosure is counterintuitive when comparing these results to our earlier reasoning in section 2.1. Based on the reasoning in 2.1 we would expect that by increasing disclosure we should reduce agency costs or reduce information risk, which should both lead to an increase in firm value. Instead, the relation between disclosure and Tobin's Q is in line with another potential and plausible explanation as provided by Miller (1977), who argues that in a setting with short selling constraints divergences in opinion on firm prospects lead to higher prices, because the optimistic traders drive up prices.¹³ In a related study, Dutta and Nezhobin (2016) study how information disclosure affects the cost of equity capital and investor welfare. Their analysis generates specific predictions regarding when to find a negative relationship between information disclosure and the cost of capital, and when to expect the opposite result. In particular, their model predicts that the cost of capital and disclosure quality should be positively (negatively) associated for high (low) growth firms. Firms' disclosure allows investors to assess firm value better and to remove optimistic judgement from prices, i.e., the argument that divergences in opinion on firm prospects lead to higher prices. Higher disclosure should lead to less variation in expectations about future performance, i.e., lower prices. In line with this notion we find that overall disclosure, as well as disclosure on financial information and per share information have consistent, significantly negative relations with Tobin's Q. The disclosure index for accounting standards has a significantly positive relation with Tobin's Q by lending credence to the financial disclosure. ROA reflects realised performance and has a positive relation with per share disclosure. Growth in assets has a weak but still positive relationship with accounting standards disclosure and a negative relationship with financial disclosure. When comparing reported results for pre-IFRS and post-IFRS periods, Panel A and Panel B, we see that transparency was more important when explaining future performance in the pre-IFRS period than in the

post-IFRS period. The increased transparency due to IFRS results in a higher level of transparency for all firms. This reduces the effect of transparency in explaining firm differences in future performance.

5 Conclusions

In this study we investigate the inherently interrelated topics of transparency, corporate governance, and performance. We investigate the development of reporting transparency based on annual reports of Dutch non-financial listed firms. We analyse the implications that corporate governance and firm performance have for reporting transparency by comparing the period before and after IFRS became mandatory, i.e., pre-IFRS period (1997-2003) and post-IFRS period (2005-2007). Finally, we focus on the effect that reporting transparency has on future firm performance.

The main findings are that transparency, measured by the number of items disclosed in annual reports, increased over the period 1997-2007. In particular, after the introduction of IFRS, we observe a strong increase in transparency.

Next, we investigate the relationship between transparency and corporate governance. In the period before IFRS, we find that disclosure is mainly driven by firm size and leverage. Large and highly levered firms are more inclined to disclose items in their annual report. Interestingly, firms that are shielded against a hostile takeover (DeAngelo & Rice, 1983) with preference shares also have higher disclosure scores. This indicates that the lack of discipline in the market for corporate control is at least partially compensated by additional disclosure (Agrawal & Knoeber, 1996). After the introduction of IFRS we find much less variation in disclosure practices, which has a profound effect on our analyses. The lower variation in disclosure proves the harmonization in our sample following reduced discretion; as a result little is left for our models to explain. Still, some interesting results emerge. For example, bank ownership reduces transparency, potentially, because banks do not need to rely on annual report information when they serve as a firm's house bank. The effect of preferred shares in the post-IFRS period is only applicable to disclosure of governance and strategy information and is in line with the managerial entrenchment hypothesis of DeAngelo and Rice (1983). IFRS mandates financial disclosure, not governance and strategy information.

Finally, we investigate the performance consequences of disclosure. Here, the pre-IFRS period yields systematically different results when compared to the years after the introduction of IFRS. Before 2004 firms have much more discretion in their disclosure policies. We also find that post-IFRS higher disclosure is followed by a lower Tobin's Q, an effect that lasts, at least, four years. This may imply that firms' disclosure allows in-

vestors to better assess firm value and to remove optimistic judgement from the prices. This finding is in line with Miller's (1977) argument that divergences in opinion on firm prospects lead to higher prices. The exception to this effect is information on accounting standards, which has a positive value effect. Clearly, accounting standard information serves as a valuable governance device by lending credence to the financial disclosure. After the introduction of IFRS, we find no systematic effects of transparency on performance. We see several limitations to our approach. First, the measure of disclosure is based on the number of items, which are unweighted, while readers of annual reports may attach more value to specific items. Of course, for several topics in the reports multiple items are included, which yields a weighting based on the number of related items. Although, we distinguish four groups of disclosure items, in future research, a more fine-grained distinction may yield additional insights. Second, our measure does not measure the quality of the items reported, but merely the presence in the report. For example, in many studies, attention is paid to the quality of earnings. Third, our approach suffers from endogeneity; the results in Table 3 and Table 4 make sense, however, we need to be careful with the interpretation. Transparency can influence performance and performance can influence transparency simultaneously. One approach to mitigate the simultaneity problem

is to evaluate the relationships before and after a significant shock to the system. Pre-IFRS and post-IFRS provides a partial approach to the endogeneity problem. Finally, our measure is based on annual reports, while firms disclose information also via other channels, including press releases, analyst calls, and executive manager speeches. A challenge for further research is to study the interactions across disclosure channels. ■

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Noten

1 ■ Barth and Schipper (2008, p. 175) point out that "financial reporting transparency" lacks an agreed upon definition", which differs depending on the context.

2 ■ Other studies that contributed to our understanding of the (listed) firm, and the relationship between owners and management are Coase (1937) and Dodd (1932). Dodd makes a distinction between the private enterprise with profit-maximization goal and enterprises with a public function, that also aim at serving the interest of society.

3 ■ From La Porta, Lopez-De-Silanes, Shleifer and Vishny (1997) and Bushman and Smith (2001), the country level CIFAR Index (Center for International Financial Analysis and Research) of criteria has been used to measure the quality of the financial accounting regime of a country. The CIFAR index, the quality of the legal system and corporate governance measures are associated with cross-country differences in economic performance. However, within a country such as The Netherlands, with legally required disclosures enumerated and a very good legal system, the

CIFAR is unlikely to be helpful explaining cross-firm differences in reporting.

4 ■ The One-Tier Board Act became effective on January 1st 2013, according to this act both NVs and BVs can opt for a one-tier board.

5 ■ Many Dutch firms have the "structured regime", which is the organizational form that is legally required for Dutch companies with more than 100 employees and a book value of shareholders' equity in excess of 11.4 million euros. The full structured regime results in the supervisory board taking over the following powers from shareholders: 1) establishing and approval of the annual accounts, 2) the election of the management board and 3) the election of the supervisory board itself (called co-optation). The supervisory board also has authority over major decisions made by the management board. Shareholders still vote on the dividend policy and mergers and acquisitions. The most prevalent exception to the full structured regime is Dutch multinationals with more than 50% of their employees outside The Netherlands. Such companies are exempt from the full structured regime. However, at the

discretion of the supervisory board and management board, such a company may voluntarily retain the full structured regime referred to as "voluntary structure regime," and it is the case that Dutch multinationals typically do so.

6 ■ The website of the Monitoring Committee Corporate Governance Code contains the documents and reports of the earlier committees, and includes an English language version of most documents and reports (<http://www.commissie-corporategovernance.nl>).

7 ■ The Henri Sijthoff Prize was initiated in 1954 by the publisher of *Het Financieele Dagblad*.

8 ■ In 2001 the Limperg Institute (a joint research effort by the Royal NIVRA - the equivalent of the AICPA- and five Dutch universities) published a study by Hoogendoorn and Mertens on the quality of financial reporting in The Netherlands. The study was based on detailed questionnaires, containing over 1,812 disclosure items (of which 1,380 items are related to the financial statements), and in-depth interviews with 21 financial analysts in The Netherlands and the UK. Based on their disclosure preferences, 583 disclosure

items were identified as important items (of which 487 items are related to the financial statements).

⁹ Initially, the category corporate governance and strategic information was split-up in two separate categories, i.e. corporate governance information (7 items) and strategic information (5

items). The Netherlands requires that a company discloses its annual results three months after the company's year-end.

¹⁰ Disclosure for other information is not included in the analysis because the category only contains 2 items. The items belonging to the category other information are part of DiscAll.

¹¹ We focus on shareholders owning at least 5% of the outstanding shares.

¹² Via <http://repub.eur.nl/pub/93079> a more detailed description of the data is available in the dissertation of the first author.

¹³ See also Diether, Malloy and Scherbina (2002).

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