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Investor Protections and Concentrated Ownership: Assessing Corporate Control Mechanisms in the Netherlands

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Abstract. *The Berle–Means problem – information and incentive asymmetries disrupting relations between knowledgeable managers and remote investors – has remained a durable issue engaging researchers since the 1930s. However, the Berle–Means paradigm – widely dispersed, helpless investors facing strong, entrenched managers – is under stress in the wake of the cross-country evidence presented by La Porta, Lopez-de-Silanes, Shleifer and Vishny, and their legal approach to corporate control.*

This paper continues to investigate the roles of investor protections and concentrated ownership by examining firm behaviour in the Netherlands. Our within-country analysis generates two key results. First, the role of investor protections emphasized in the legal approach is not sustained. Rather, firm performance is enhanced when the firm is freed of equity market constraints. Second, ownership concentration does not have a discernible impact on firm performance, which may reflect large shareholders' dual role in lowering the costs of managerial agency problems but raising the agency costs of expropriation.

But have we any justification for assuming that those in control of a modern corporation will also choose to operate it in the interests of the owners?

(Berle and Means, 1932, p. 113)

… the stockholders' position, once a controlling factor in the running of the enterprise, has declined from extreme strength to practical impotence.

(Berle and Means, 1932, p. 131)

1. INTRODUCTION

The Berle–Means problem – information and incentive asymmetries disrupting relations between knowledgeable managers and remote investors – has remained a durable issue engaging researchers since the 1930s. However, the Berle–Means paradigm – widely dispersed, helpless investors facing strong, entrenched managers – is under stress and of only modest applicability for most developed countries. In a recent paper, La Porta *et al.* (LLS, 1999), examine the 20 largest firms in 27 wealthy countries, and show that concentrated ownership is the norm, not the exception.[1] The Berle–Means paradigm is appropriate for the United States and United Kingdom, countries whose legal environments provide very good protection of minority shareholders' rights. LLS's cross-country results emphasize that investor protections and concentrated ownership are the key elements for understanding how the modern corporation is controlled and 'how to assure financiers that they get a return on their financial investment' (Shleifer and Vishny, 1997, p. 773).[2]

This paper continues to investigate these two mechanisms of corporate control by examining the roles of investor protections and concentrated ownership on firm behaviour in the Netherlands. A within-country analysis complements the prior cross-country research because several factors – taxes and regulations – can be held constant. Dutch firms are very useful for studying these mechanisms of control because several devices exist for circumscribing investor protections that are used by many, but not all, firms. Ownership concentration also ranges widely.

The goal of this paper is to assess the impact of corporate control mechanisms on firm performance. Section 2 discusses the system of corporate control in the Netherlands, and reviews the roles of three key sets of actors: management and supervisory boards, shareholders and institutions. Financial statement, anti-investor protection and ownership data are available for 93

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1. See Barca and Becht (2001) and Gugler (2001) for further analysis of concentrated ownership.
2. Roe (1994) presents an alternative and provocative theory of how political forces created a dispersed structure of corporate ownership in the United States. See Carney (1997) and LLS (1999, Sec. III) for critiques, and Roe (1999) for further elaboration of his thesis.

firms for the period 1992 to 1996. Section 3 discusses these data, and documents the variation in anti-investor protections and concentrated ownership in the sample. Section 4 discusses the ambiguous effects of anti-investor protections and concentrated ownership as corporate control mechanisms on long-run performance (measured by the long-run return on assets computed as a five-year average) and the appropriateness of focusing on the cross-section dimension of the data.

Empirical results are contained in the next two sections. Section 5 contains a simple test of the substitution hypothesis between investor protections and ownership concentration that is an important element in the legal approach to corporate governance. We find no support for the substitution hypothesis in our Dutch data. Rather, it seems that once anti-investor protections are in place, the firm is either avoided or abandoned by concentrated owners (though alternative interpretations of this simple correlation exist). Regression results are contained in Section 6. We uncover a strong positive relation between the absence of investor protections and profitability. That is, as firms are freed from the pressure of equity markets, profitability rises. No systematic relation is uncovered for ownership concentration.

A summary and conclusions are presented in Section 7. In interpreting the results presented in this paper, it is important to keep in mind that this evidence is more in the spirit of interesting conditional correlations than definitive tests about fundamental causes. The current research aims to stimulate and direct theoretical modelling that will ultimately provide the basis for more formal hypothesis testing.

2. CORPORATE CONTROL IN THE NETHERLANDS

The Dutch system of corporate control contains three key sets of actors: management and supervisory boards, shareholders and institutions.[3]

2.1. Management and supervisory boards

The focal point of the corporate control system is a two-tiered board structure consisting of a management board (*Raad van Bestuur*) in charge of the day-to-day operations of the firm, and a supervisory board (*Raad van Commissarissen*). The supervisory board's scope of influence varies substantially depending on which organizational regime the firm adopts. The structural

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3. Detailed descriptions of the system of corporate control and finance in the Netherlands can be found in CPB (1997, Ch. 10), Gelauff and den Broeder (1997), de Jong *et al.* (2001) and Kabir *et al.* (1999). We have relied particularly heavily on Gelauff and den Broeder's work in writing this section.

regime (*Structuurregeling*) described here applies to the majority of public limited liability companies (*Naamloze Vennootschappen*, NVs) listed on the Amsterdam Stock Exchange. (The other two regimes – mitigated structural and common – are discussed in Section 2.2.) The supervisory board has three primary functions: appoint (usually for an indefinite term), monitor and dismiss members of the management board (though the latter rarely occurs);[4] draft the annual financial statement for presentation at the annual shareholders meeting;[5] and approve major business decisions proposed by the management board concerning, for example, expansions, acquisitions, restructurings or financing.

Members of the supervisory board are appointed for four-year terms by co-option; that is, by the incumbent members of the supervisory board.[6] An individual cannot serve on both the supervisory and management boards of the same company. In practice, the management board has a very large influence on appointments to the supervisory board (van der Goot and van het Kaar, 1997).[7] The two-tiered board structure in the Netherlands differs substantially from that in Germany, where the supervisory board is appointed by the shareholders at the annual meeting and exerts substantial independent influence on management. The close relations between management and supervisory boards makes the Dutch two-tiered system somewhat similar to the US system, where executive managers sit on the board of directors (comparable to the supervisory board) and the chief executive officer often chairs the board of directors. In sum, the Dutch supervisory board is largely advisory, though that counsel may receive more attention depending on the background of the advising member.

2.2. Shareholders

Shareholders/investors exercise control through voting at the annual meeting (*Algemene Vergadering van Aandeelhouders*) and, for large investors, by sitting

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4. Dutch management board turnover, calculated as the number of management board members leaving the firm by other than natural causes and scaled by board size, is approximately 8% (van Oijen, 2000). This figure is somewhat low compared to those reported for other countries; Kaplan (1994) reports turnover rates of 12% (excluding cases of death and illness) for the United States and 10% for Germany.
5. The responsibilities for hiring and firing the auditor reside with the supervisory board, though the management board is consulted frequently about these choices.
6. The mean [median] number of members on the supervisory and management boards for our sample of firms is 4.95 [5] and 2.95 [3], respectively.
7. Inside (managerial) ownership of listed firms is unimportant in the Netherlands. Based on an ownership criterion of 5%, 19 of 137 firms were owned by insiders sitting on the management board and an additional and different 6 firms for those on the supervisory board (de Jong *et al.*, 2001, Table 11). Majority ownership was achieved by the management board of 5 firms and by the supervisory board of 1 firm. For the 137 firms, average ownership is 4.86% and 1.82% for management and supervisory boards, respectively.

on the supervisory board. At the annual meeting, the influence of investors is circumscribed under the structural regime in two ways. First, few important issues come before the annual meeting: the financial statement drafted by the supervisory board is voted on (amendments are not permitted) and nominations for the supervisory board may be proposed and rejected (though election is by incumbent members of the supervisory board). Large investors can exert influence by refusing to approve the financial statements and supervisory board nominations.

Second and more devastating to investors' voting rights, management has available four potent devices for diluting voting power and separating control rights from cash flow rights:

- **Preference shares** ('prefs') have the same voting rights as ordinary equity, but have a fixed payout with priority over payouts of ordinary dividends. These shares can be issued at any time without explicit approval of the shareholders provided that shareholders had given management the option of issuing prefs at its discretion. Whenever management feels threatened, it issues prefs in the name of the holder, who is frequently a continuity foundation (*Stichting Continuiteit*) friendly to the firm's management. Only 25% of the nominal value (determined by management) of these shares needs to be paid by the holder. Preference shares, which can be issued on a temporary basis, effectively increase the voting power of managers. This anti-investor protection ($AIP(1)$) is used by 66% of the firms in our sample.
- **Tradable depository receipts** (TDRs) also separate cash flow and control rights. Under this procedure, the ordinary equity capital is deposited at an administrative office (*Administratie-kantoor*), and TDRs are issued (similar to American Depository Receipts issued on non-US equity). TDRs generally entitle the holder to cash flow rights, but control rights reside with the administrative office. This anti-investor protection ($AIP(2)$) is used by 32% of the firms in our sample.
- **Priority shares** (*Prioriteits-aandelen*) carry special voting rights on matters such as 'proposing or preventing the appointment of particular new members of the management and supervisory boards, approving the issue of ordinary shares, liquidation of the company or changing the articles of association' (Gelauff and den Broeder, 1997, p. 67). Priority shares are issued by management at its own discretion, usually to a friendly foundation. The holder does not need to pay for these shares. The issuance of a small number of priority shares is sufficient to curtail the voting power of extant shareholders. This anti-investor protection ($AIP(3)$) is used by 24% of the firms in our sample.

The transfer of these three types of shares is opaque, and enhances management's discretion. Shares are usually issued to a continuity foundation or administrative office that is friendly to management. Typically, these foundations and offices are not obliged to publish a balance sheet, and hence

the price of shares is unknown. Consider the case of the well-known company, Philips Electronics. Philips' balance sheet reveals that it has placed 300 million common shares, 500 million preference shares and 10 (!) priority shares with the (no doubt friendly) continuity foundation Anton Philips. The foundation has not published a balance sheet, and the transfer price for the preference and priority shares remains unknown to outsiders.

In the face of these three AIPs, shareholders have little reason to pursue aggressively their limited tasks granted under the structural regime. The Dutch annual meeting differs radically from its German and US counterparts, where, in principle, shareholders have a powerful effect on the course of events primarily by electing the supervisory board (or board of directors) and voting on important matters brought before shareholders.

The above AIPs all focus on altering effective voting rights by issuing shares. In considering voting rights in the Netherlands, it is important to bear in mind that investor protections and the tasks voted upon at the annual meeting are directly linked to the applicable organizational regime. Under other organizational regimes available to Dutch firms, shareholders exercise much more influence. A fourth AIP is created by the option that allows firms to choose to be governed according to the rules and regulations of the structural regime described above, even if they are not required to do so by law.[8]

Investor protections are enhanced under the other two legal regimes relevant to public limited liability companies. Firms that meet the criteria for the structural regime but are majority foreign-owned can follow the mitigated structural regime (*Gewijzigde Structuurregeling*). Under this legal regime, the supervisory board's responsibilities for appointing and dismissing members of the management board and drafting the annual financial statement are transferred to the annual shareholders meeting, enhancing investor protections. Public limited liability companies that do not meet the criteria for the structural regime can adopt the common legal regime (*Vennootschapsrecht*) for which a supervisory board is optional. If a supervisory board is in place, appointments are determined at the annual meeting, and its only major responsibility is to approve major management decisions.[9] All other important decisions, especially the appointment of the management board, are made at the annual shareholders meeting.[10] In sum, investor protections

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8. The majority of Dutch firms listed on the Amsterdam Stock Exchange are required to follow the structural regime because they satisfy all of the following conditions: the firm is a public limited liability company, subscribed capital exceeds 25 million guilders (approximately $12.5 million), employment in the Netherlands exceeds 100, and employees are represented by a works council.

9. A survey of 180 smaller limited liability companies (with 50 to 1,000 employees) – who were not legally obligated to install a supervisory board but did so voluntarily – revealed that the main motive for the installation was the need for expert advice (Gelauff and den Broeder, 1997, pp. 44–45).

10. For firms not organized under the structural regime, the responsibilities for hiring and firing the auditor reside with the annual meeting.

are substantially enhanced under the mitigated structural and common regimes, which transfer power from the supervisory board to the annual meeting. The voluntary adoption of the structural regime can thus be viewed as another device weakening investor protections because the structural regime's supervisory board is largely influenced by management at the expense of investors. This anti-investor protection (*AIP*(4)) is used by 25% of the firms in our sample.

2.3. Institutions

Several institutions – financial intermediaries, works councils and informal networks – are the third set of key actors in Dutch corporate governance. Financial intermediaries also hold equity positions and, as discussed above, shareownership *per se* may have little impact on controlling managers. However, their equity stakes are occasionally large, and they are considered long-term, 'patient' investors. Consequently, financial intermediaries frequently obtain seats on the supervisory board.[11] Furthermore, banks are actively involved in extending short-term credit, and thus have a direct and potentially powerful channel of influence on management (cf. Shleifer and Vishny, 1997, Sec. IV.C). The role of Dutch banks is much greater than in the United States, where banks are largely prohibited from owning equity and, until very recently, were small by the standards of continental Europe.[12] By contrast, banks have a long-standing and prominent role on the corporate landscape in Germany where they hold large positions in both debt and equity and actively serve on, and frequently chair, supervisory boards.

Employees are represented by a works council (*Ondernemings-raad*) that is voluntary but exists at virtually all large firms. The works council has some influence with and occasional membership on the supervisory board, where usually one member represents workers' concerns. The works council has the same rights as shareholders to propose or reject nominations to the supervisory board. The position of the works councils bears some resemblance to that played by organized labour in the United States, where union representatives occasionally hold a seat on the board of directors. By contrast, legal statutes grant German workers much more nominal influence on

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11. While bank equity ownership is much greater in Germany than in the Netherlands (14.2% vs. 0.7%), pension funds and insurance companies own more equity in the Netherlands than in Germany (13.4% vs. 7.1%) but much less than their US counterparts (24.7%). (Data are for 1993, and are taken from Gelauff and den Broeder, 1997, p. 46.)

12. US banks are generally prohibited from owning equity in corporations (other than similar financial organizations referred to as congenerics), though equity may be acquired during loan workouts. Under US law, the principle of equitable subordination provides banks a strong incentive to avoid equity ownership. In the event of bankruptcy, banks that hold both equity and debt can have their claims as senior creditors subordinated if the courts determine that the bank used its influence as equityholder to act inequitably towards other stakeholders.

corporate affairs, including between one-third and one-half of the seats on the supervisory board.[13] However, the chair of the German supervisory board holds the tie-breaking vote, and this position is usually held by a person (frequently a banker) sympathetic to management's concerns.

Networks of outside board members are potentially important for control. These individuals hold positions on the management and supervisory boards of several companies, and/or they are 'distinguished experts' drawn from the ranks of politicians, civil servants, lawyers, professors and former directors. With their perspective and experience, these outside board members may provide valuable advice to firms.

2.4. Summary

Dutch firms are affected by a variety of different corporate control mechanisms. The extent of investor protections and concentrated ownership vary across firms, and this variation will be used in the empirical work to assess the impacts of these corporate control mechanisms on firm performance. Financial intermediaries, works councils and informal networks are additional control mechanisms that may also affect firm performance, but they will not be analysed further in this study.

3. THE DATASET

We draw on two sources to construct the variables used in the empirical analysis. Our sample extends from 1992–96, unless otherwise noted. Financial statement data are obtained from the AMADEUS/REACH database covering 165 Dutch firms. We focus only on firms involved in manufacturing, omitting financial and service firms (the latter because they hold a substantial amount of intangible assets that would distort the performance measure). The data will be time-averaged to form the cross-section used in the econometric work. Thus, a balanced panel is highly desirable, and we omit firms involved in mergers or takeovers. Two firms are excluded: Hunter Douglas because of erratic data and Royal Dutch Shell because it is registered in both the United Kingdom and the Netherlands. These restrictions lead to a final sample consisting of 93 firms. Variables based on financial statement data are as follows:

CFA = Cash flow (operating income plus depreciation).
CVCFA = Coefficient of variation of *CFA* (the standard deviation divided by the mean) stated as a percentage.

13. German co-determination laws require that, for stock companies with 500 or more employees, one-third of the seats on the supervisory board must be held by persons elected by the employees. The fraction increases to one-half for stock companies with 2,000 or more employees.

Table 1 Summary statistics

Variable	Median (m) (1)	Mean (μ) (2)	Standard deviation (σ) (3)
CFA	75.636	406.331	1,214.386
CVCFA	21.617	28.572	28.587
DIVERSITY	1.700	1.988	2.052
LEVERAGE	62.028	60.495	12.351
OWN(L)	15.000	25.118	21.920
PROF	9.072	9.727	4.775
SIZE	5.972	6.094	1.655

Notes: The entries are the median (m), mean (μ) and standard deviation (σ) of the indicated variable averaged from 1992 to 1996 for each of the 93 firms. *CFA* is cash flow (operating income plus depreciation); *CVCFA* is the coefficient of variation (the standard deviation divided by the mean) of *CFA*; *DIVERSITY* is the percentage of two-digit industrial activity (classified according to the 58 BIK codes) in which the firm is involved outside its core business, measured by revenues; *LEVERAGE* is (*TA* less stockholders' equity)/*TA*; *OWN(L)* is the ownership stake of the largest shareholder stated as a percentage of all outstanding ordinary equity; *PROF* is profitability (before-tax profits plus financial expenses)/*TA* stated as a percentage; *SIZE* is the natural logarithm of *TA*.

DIVERSITY = The percentage of two-digit industrial activity (classified according to the 58 BIK codes) in which the firm is involved outside its core business, measured by revenues.
LEVERAGE = (*TA* less stockholders' equity)/*TA* stated as a percentage.
PROF = Profitability (before-tax profits plus financial expenses)/*TA* stated as a percentage.
SIZE = The natural logarithm of *TA*.
TA = Total assets less depreciation.

For each of the 93 firms, these variables are averaged from 1992 to 1996.[14] The medians (m), means (μ) and standard deviations (σ) are presented in Table 1.

Data for anti-investor protections (AIPs) and ownership concentration (OWNs) for the firm are obtained from the Monitoring Commissie Corporate Governance (1998). The AIPs and two of the ownership variables enter as indicator variables. In those rare cases where the defining characteristic (e.g. issuing preference shares) changes over the sample, the indicator is determined by the most frequent value of the characteristic. The ownership stake (*OWN(L)*) is a continuous variable. The variables are defined as follows:

AIP(1) = 1 if a firm issues preference shares; 0 otherwise.
AIP(2) = 1 if the percentage of shares issued as tradable depository receipts is equal to or greater than 50%; 0 otherwise.

14. For those series analysed as ratios, the ratios are computed and then summed over time; that is, $ratio_i = \Sigma_t(a_{i,t}/b_{i,t})$. All of the ratios are defined so that $b_{i,t}$ is far from zero. This procedure eliminates the need for price deflators, which are unavailable on a firm-specific basis.

Table 2 Distribution of anti-investor protections across levels of ownership concentration

	Number of firms (1)	Ownership concentration (*OWN(L)*)					
		0–5 (2)	5–10 (3)	10–20 (4)	20–40 (5)	40–50 (6)	50 + (7)
All firms	93	2	23	28	19	7	14
AIP(1)	61	2	20	20	12	3	4
AIP(2)	30	0	12	8	8	2	0
AIP(3)	22	1	5	8	2	1	5
AIP(4)	23	1	6	5	7	2	2
No AIPs	14	0	1	2	3	2	6

Notes: The entries are the number of firms that use a given anti-investor protection (AIP). Column 1 contains the total number of firms using a given AIP; the remaining entries in a given row distribute this total across levels of ownership concentration. All of the AIPs are indicator variables taking a value of 1 for the criteria above and 0 otherwise: $AIP(1) = 1$ if a firm issues preference shares; $AIP(2) = 1$ if the percentage of shares issued as tradable depository receipts is equal to or greater than 50%; $AIP(3) = 1$ if a firm issues priority shares; $AIP(4) = 1$ if a firm is not required to implement the structural regime, but does so voluntarily. See Section 2.2 for further discussion of the AIPs. Ownership concentration is measured by the ownership stake of the largest shareholder stated as a percentage of all outstanding ordinary equity (*OWN(L)*).

$AIP(3) = 1$ if a firm issues priority shares; 0 otherwise.
$AIP(4) = 1$ if a firm is not required to implement the structural regime, but does so voluntarily; 0 otherwise.
$OWN(L)$ = Ownership stake of the largest shareholder stated as a percentage of all outstanding ordinary equity.
$OWN(20) = 1$ if $OWN(L) \geq 0.20$; 0 otherwise.
$OWN(40) = 1$ if $OWN(L) \geq 0.40$; 0 otherwise.

As shown in the first row of Table 2, the largest shareholder (as measured by *OWN(L)*) controls more than 20% of outstanding ordinary equity for over 40% of the firms. Fifteen per cent of the firms are majority owned. Table 2 also includes information on the distribution of the AIPs across categories of ownership concentration. The first row contains the distribution for all 93 firms. Relative to this benchmark, the different AIPs are used more or less in similar proportions. As shown in the last line of Table 2, firms that do not use any AIPs have a large fraction of majority (mostly foreign) ownership.

4. ASSESSING CORPORATE CONTROL MECHANISMS

Corporate control mechanisms are assessed by their impact on economic performance. Links between good governance and good performance are well

established. As argued by Berle and Means, the incentives of managers controlling the firm differ from those of owners and, in large, publicly held corporations, most owners/investors have little incentive to expend resources to ensure that the firm is operated in their interests. Consequently, resources may be directed to activities that benefit managers rather than firm performance. Jensen (1986) has emphasized that these agency problems are likely to become particularly severe when managers have an abundance of internal resources relative to investment opportunities (i.e. 'free cash flow'). The important consequence is that the Berle–Means agency problem may lead the firm to a suboptimal allocation of resources that compromises performance.

Investment decisions and hence corporate performance may also be adversely affected by undue pressure from equity investors for two reasons. The 'managerial myopia' model argues that equity markets may not allocate capital efficiently because of an absence of stable, dedicated investors with a long-term interest in the firm's performance. Formal models of strategic behaviour establish that, when inside managers know more about the firm's operations than outside owners, high hurdle rates that distort investment can occur because of a premium due to signal jamming, obfuscation or hidden action. A second concern about powerful shareholders has been raised by Burkhart *et al.* (1997). In their model, tight controls by shareholders and the possibility of termination reduce management's incentives to engage in non-contractable personal investment activities that would benefit the firm. Rather than being ameliorative, empowered investors pressure management into an undue focus on short-term earnings or an excessive concern about expropriation at the expense of long-run performance.[15]

In sum, agency problems adversely affect firms, and corporate control mechanisms that reduce the impact of these problems should be associated with better performance. However, as the myopia and termination models suggest, the link between investor protections and performance is ambiguous. While empowered investors may mitigate agency conflicts, myopia and termination problems may be exacerbated.

A similar ambiguity affects concentrated ownership. Agency problems that arise from the separation of ownership from control can be checked by concentrated ownership. With a sufficiently large equity stake in the firm, an investor has the incentive to invest resources in monitoring and disciplining managers and thus reducing agency problems. However, concentrated owners may also use their controlling position to expropriate benefits for themselves at the expense of small shareholders by, for example, diverting resources towards other firms in which they have substantial cash flow rights. Thus, the lower costs of managerial agency problems will be balanced against

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15. For discussions of capital allocation systems suffering from short-termism, see de Jong (1996) for the Netherlands and Porter (1992) for the United States. Bohlin (1997) provides an excellent survey of formal models of managerial incentives and investment biases.

the higher agency costs of expropriation. As a result of these conflicting tendencies, the effects of AIPs and concentrated ownership on firm performance are ambiguous theoretically. Their ultimate impact is an empirical matter.

Firm performance is measured by the long-run return on assets computed as a five-year average. This computation exhausts the time dimension of our data, and thus our empirical work is based on cross-section analyses. Focusing on the cross-section dimension of the data is appropriate because the questions motivating this study focus on long-run relations among profitability and various corporate control mechanisms. Moreover, there is very little time-series variation in the AIPs and concentrated ownership. This near-constancy of the corporate control variables suggests that they can be treated as exogenous regressors over our sample period.[16]

Finally, financial market data do not provide a good measure of the impact of corporate control variables on economic performance. In a sense, asset prices are too good a measure because they capitalize the effects of favourable/unfavourable corporate governance policies. Hence, the financial return for a firm serving shareholders' interests may differ little from the financial return for a firm with serious and unresolved corporate governance problems. The Brainard–Tobin q is also not a good measure because it gravitates towards its equilibrium value of unity, and it will be difficult to discern the impacts of control variables. Financial market data would be useful for examining firms switching control mechanisms over time, but such time-series variation and the associated event studies are not available to us in this dataset.

5. THE SUBSTITUTION HYPOTHESIS

An important implication of the legal approach to corporate governance is that concentrated ownership substitutes for poor investor protections. This relation has been confirmed in the cross-country comparisons reported in La Porta *et al.* (LLSV, 1998) and LLS (1999). For our within-country analysis, the comparable implication is that the AIPs will be positively correlated with ownership concentration.

Table 3 evaluates this hypothesis in terms of correlation coefficients for various AIPs and three measures of ownership concentration – the value of the largest stake ($OWN(L)$) and indicator variables set to unity if the largest stake exceeds 20% ($OWN(20)$) or 40% ($OWN(40)$). There is scant evidence of a positive relation.[17] Rather, in the case of preference shares or tradable

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16. A deeper understanding of exogeneity and corporate control requires us to model the adoption of corporate control mechanisms, but this important task is not tackled in this paper.
17. The reported results for $AIP(2)$ may be biased towards a positive correlation. Under $AIP(2)$, the percentage of shares held by an administrative office may be sufficiently large that the

Table 3 Correlation of anti-investor protections and ownership concentration

	AIP(1) (1)	AIP(2) (2)	AIP(3) (3)	AIP(4) (4)	OWN(L) (5)	OWN(20) (6)	OWN(40) (7)
AIP(1)	1.000						
AIP(2)	0.112	1.000					
AIP(3)	− 0.023	− 0.222	1.000				
AIP(4)	− 0.005	− 0.022	0.033	1.000			
OWN(L)	**− 0.413**	**− 0.291**	**0.020**	**− 0.027**	1.000		
OWN(20)	**− 0.348**	**− 0.167**	**− 0.063**	**0.018**	0.794	1.000	
OWN(40)	**− 0.367**	**− 0.263**	**0.062**	**− 0.071**	0.860	0.635	1.000

Notes: The entries are the correlation coefficients between anti-investor protections (AIPs) and measures of ownership concentration (OWNs). All of the AIPs are indicator variables taking a value of 1 for the criteria above and 0 otherwise: AIP(1) = 1 if a firm issues preference shares; AIP(2) = 1 if the percentage of shares issued as tradable depository receipts is equal to or greater than 50%; AIP(3) = 1 if a firm issues priority shares; AIP(4) = 1 if a firm is not required to implement the structural regime, but does so voluntarily. Ownership concentration is measured by the ownership stake of the largest shareholder stated as a percentage of all outstanding ordinary equity (OWN(L)) or indicator variables, OWN(20) and OWN(40), taking a value of 1 for the criteria above and 0 otherwise: OWN(20) = 1 if OWN(L) ≥ 0.20; OWN(40) = 1 if OWN(L) ≥ 0.40. For a sample of 93 firms, the critical values for the null hypothesis of no correlation are 0.170, 0.201 and 0.261 for the 10%, 5% and 1% significance levels, respectively. The figures in **bold** are those used to evaluate the substitution hypothesis.

depository receipts, the correlations are negative and significant at the 1% level. Thus, the substitution hypothesis receives little support.

The above statement of the substitution hypothesis may not be sufficiently sensitive to a key maintained assumption. Who moves first: concentrated owners or management boards?[18] If concentrated owners move first by taking a dominant equity position, the anticipated correlation may be reversed. Concentrated owners have an incentive to adopt good corporate governance practices, and we might expect the AIPs to be eliminated. Under this scenario, ownership concentration would be negatively correlated with the AIPs.

As indicated by the analysis of the Dutch corporate governance system in Section 2, management boards have a great deal of autonomy in adopting anti-investor protections, and it appears more appropriate to assume that management boards 'move first'. Under this assumption, two scenarios might then unfold. First, a firm shielded from investors by the AIPs might be very

firm is also classified as a concentrated owner. In this case, AIP(2) and OWN(L) would be positively correlated, though such a correlation does not reflect a substitution of governance mechanisms. This bias does not affect the conclusion to be drawn about the substitution hypothesis in Table 3.

18. We thank our reviewer for highlighting the importance of these additional assumptions.

inefficient and hence tempting for an owner to accumulate a large equity stake so that the potential efficiency gains are captured. This scenario is consistent with the substitution hypothesis, and would yield a positive correlation between AIPs and concentrated owners. Second, outside investors, regardless of the size of their equity stake, may find AIP-shielded firms undesirable. In this case, potentially large shareholders would avoid (and existing large shareholders would abandon) the firm, and we would expect a negative correlation between the AIPs and concentrated ownership.

While simple correlations presented in Table 3 should not be over-interpreted, it appears that once managers compromise investor protections with AIPs, large shareholders either avoid or abandon the firm to its managers. In this initial analysis, concentrated ownership does not appear to play an ameliorative role in Dutch corporate governance.

6. FIRM PERFORMANCE, INVESTOR PROTECTIONS AND CONCENTRATED OWNERSHIP

The roles of investor protections and concentrated ownership as corporate governance mechanisms are assessed in terms of their impact on long-run profitability. We begin our analysis by establishing a benchmark regression without any governing mechanisms but containing several conditioning variables – the coefficient of variation of cash flow (*CVCFA*), a measure of the diversity of the firm's lines of business (*DIVERSITY*), leverage (*LEVERAGE*), a measure of firm size (*SIZE*) and seven industry dummies (not reported).[19] All variables are five-year averages. As shown in column 1 of Table 4, only *LEVERAGE* is statistically significant at conventional levels (as well as most of the industry dummies), an effect that can be interpreted as reflecting the adverse effects of finance constraints in external capital markets or as a signal of maturity (since older firms tend to be both more highly levered and less profitable than younger firms).

The remaining entries in Table 4 examine the impact of three anti-investor protections that depend on share issuance – preference shares (*AIP*(1)), tradable depository receipts (*AIP*(2)) or priority shares (*AIP*(3)). We begin by allowing for the broadest possible scope for the AIPs; if a firm uses any one of these three AIPs, then a dummy variable is one. As shown in column 2, the AIPs have a substantial positive impact on firm performance that is both statistically and economically significant. In the latter regard, firms that have one or more of these AIPs are 25% more profitable than the complementary class of firms.[20] The remaining entries consider two of the AIPs at time, and the issuance of priority shares (*AIP*(3)) has the most consistent positive impact on profitability.

19. The explicit equation specification is presented in the notes to Tables 4 to 6.
20. Firms without *AIP*(1), *AIP*(2) or *AIP*(3) constitute 19% of the sample.

Table 4 Profitability regressions: the role of anti-investor protections

	(1)	(2)	(3)	(4)	(5)
A. Anti-investor protections					
AIP(1) or *AIP*(2) or *AIP*(3)		2.408			
		(1.241)			
AIP(1) or *AIP*(2)			0.282		
			(1.336)		
AIP(1) or *AIP*(3)				2.184	
				(1.047)	
AIP(2) or *AIP*(3)					2.776
					(1.083)
B. Conditioning variables					
Constant	18.409	16.598	18.142	17.367	14.678
	(3.596)	(3.508)	(4.347)	(3.465)	(3.544)
CVCFA	-0.835	-1.056	-0.865	-0.961	-0.987
	(2.104)	(2.203)	(2.171)	(2.163)	(2.011)
DIVERSITY	0.171	0.124	0.164	0.104	0.066
	(0.283)	(0.264)	(0.291)	(0.266)	(0.270)
LEVERAGE	-10.609	-9.229	-10.339	-9.285	-6.058
	(4.408)	(4.408)	(5.046)	(4.393)	(4.497)
SIZE	0.337	0.243	0.325	0.247	0.216
	(0.321)	(0.330)	(0.311)	(0.325)	(0.311)
C. Statistics					
Adjusted R^2	0.166	0.197	0.157	0.196	0.237
RSS	1.540	1.465	1.539	1.466	1.392

Notes: The parameter estimates are based on the following equation:

$$PROF = b_0 + b_1 * AIP + b_2 * CVCFA + b_3 * DIVERSITY$$
$$+ b_4 * LEVERAGE + b_5 * SIZE + \sum_j d_j * IDUM_j + e$$

where *PROF* is profitability (before-tax profits plus financial expenses)/*TA*, the latter defined as total assets less depreciation; *AIP* is the indicated combination in Panel A of the anti-investor protection variables: *AIP*(1) = 1 if a firm issues preference shares; *AIP*(2) = 1 if the percentage of shares issued as tradable depository receipts is equal to or greater than 50%; *AIP*(3) = 1 if a firm issues priority shares; *CVCFA* is the coefficient of variation (the standard deviation divided by the mean) of *CFA*, the latter defined as cash flow (operating income plus depreciation) divided by *TA*; *DIVERSITY* is the percentage of two-digit industrial activity in which the firm is involved outside its core business, measured by revenues; *LEVERAGE* is (*TA* less stockholders' equity)/*TA*; *SIZE* is the natural logarithm of *TA*; $IDUM_j$ is a dummy for the *j*th industry; *e* is an error term. The *b*'s and *d*'s are estimated by ordinary least squares. Standard errors in parentheses are heteroscedastic-consistent. RSS is the residual sum of squares raised to 10^{-3}.

Table 5 evaluates the impact of the fourth AIP, the voluntary adoption of the structural regime (*AIP*(4)). As shown in column 1, firms that transfer power away from the annual meeting to the management and supervisory boards are one-third more profitable than the average sample firm. Columns

Table 5 Profitability regressions: the role of anti-investor protections

	(1)	(2)	(3)	(4)
A. Anti-investor protections				
AIP(4)	3.312			
	(1.318)			
AIP(4) and *AIP*(1)		2.205		
		(1.527)		
AIP(4) and *AIP*(2)			3.788	
			(2.113)	
AIP(4) and *AIP*(3)				6.214
				(2.861)
B. Conditioning variables				
Constant	17.626	18.479	17.850	17.409
	(3.309)	(3.465)	(3.567)	(2.992)
CVCFA	− 0.325	− 0.625	− 0.177	− 1.028
	(2.093)	(2.092)	(2.249)	(1.809)
DIVERSITY	0.068	0.162	0.205	0.084
	(0.281)	(0.271)	(0.258)	(0.267)
LEVERAGE	− 10.734	− 9.794	− 9.375	− 10.299
	(4.115)	(4.466)	(4.529)	(4.018)
SIZE	0.379	0.257	0.301	0.454
	(0.304)	(0.304)	(0.301)	(0.274)
C. Statistics				
Adjusted R^2	0.247	0.186	0.197	0.266
RSS	1.374	1.485	1.464	1.338

Notes: The parameter estimates are based on the following equation:

$$PROF = b_0 + b_1 * AIP + b_2 * CVCFA + b_3 * DIVERSITY$$

$$+ b_4 * LEVERAGE + b_5 * SIZE + \sum_j d_j * IDUM_j + e$$

where *PROF* is profitability (before-tax profits plus financial expenses)/*TA*, the latter defined as total assets less depreciation; *AIP* is the indicated combination in Panel A of the anti-investor protection variables: *AIP*(1) = 1 if a firm issues preference shares; *AIP*(2) = 1 if the percentage of shares issued as tradable depository receipts is equal to or greater than 50%; *AIP*(3) = 1 if a firm issues priority shares; *AIP*(4) = 1 if a firm is not required to implement the structural regime, but does so voluntarily; *CVCFA* is the coefficient of variation (the standard deviation divided by the mean) of *CFA*, the latter defined as cash flow (operating income plus depreciation) divided by *TA*; *DIVERSITY* is the percentage of two-digit industrial activity in which the firm is involved outside its core business, measured by revenues; *LEVERAGE* is (*TA* less stockholders' equity)/*TA*; *SIZE* is the natural logarithm of *TA*; *IDUM_j* is a dummy for the *j*th industry; *e* is an error term. The *b*'s and *d*'s are estimated by ordinary least squares. Standard errors in parentheses are heteroscedastic-consistent. RSS is the residual sum of squares raised to 10^{-3}.

2 to 4 interact *AIP*(4) with each of the three other AIPs. The interactions in columns 3 and 4 are statistically and economically significant.

The precisely estimated and economically important positive effects of AIPs on profitability run counter to the legal approach to corporate

governance. The results in Tables 4 and 5 cast some doubt on the prevailing view that active stock markets and empowered investors are key to robust firm performance.

Many papers have argued that ownership concentration will attenuate agency problems. Given the wide variation in ownership concentration in the Netherlands (cf. Table 2), this issue can be explored with our data. Table 6

Table 6 Profitability regressions: the role of concentrated ownership

	(1)	(2)	(3)	(4)
A. Concentrated ownership				
$OWN(L)$	0.010	− 0.041		
	(0.023)	(0.069)		
$OWN(L)^2$		0.001		
		(0.001)		
$OWN(20)$			− 0.769	
			(1.027)	
$OWN(40)$				0.315
				(1.296)
B. Conditioning variables				
Constant	18.030	19.067	19.159	18.230
	(3.333)	(3.595)	(3.410)	(3.380)
$CVCFA$	− 0.756	− 0.597	− 0.849	− 0.790
	(2.167)	(2.198)	(2.065)	(2.160)
$DIVERSITY$	0.179	0.181	0.181	0.174
	(0.295)	(0.292)	(0.276)	(0.291)
$LEVERAGE$	− 10.826	− 10.615	− 10.280	− 10.676
	(4.560)	(4.545)	(4.462)	(4.507)
$SIZE$	0.364	0.306	0.282	0.353
	(0.301)	(0.297)	(0.293)	(0.303)
C. Statistics				
Adjusted R^2	0.158	0.152	0.161	0.157
RSS	1.536	1.527	1.530	1.538

Notes: The parameter estimates are based on the following equation:

$$PROF = b_0 + b_1 * OWN' + b_2 * CVCFA + b_3 * DIVERSITY$$

$$+ b_4 * LEVERAGE + b_5 * SIZE + \sum_j d_j * IDUM_j + e$$

where *PROF* is profitability (before-tax profits plus financial expenses)/*TA*, the latter defined as total assets less depreciation; *OWN'* is the indicated measure of concentrated ownership in Panel A; *CVCFA* is the coefficient of variation (the standard deviation divided by the mean) of *CFA*, the latter defined as cash flow (operating income plus depreciation) divided by *TA*; *DIVERSITY* is the percentage of two-digit industrial activity in which the firm is involved outside its core business, measured by revenues; *LEVERAGE* is (*TA* less stockholders' equity)/*TA*; *SIZE* is the natural logarithm of *TA*; *IDUM$_j$* is a dummy for the *j*th industry; *e* is an error term. The *b*'s and *d*'s are estimated by ordinary least squares. Standard errors in parentheses are heteroscedastic-consistent. RSS is the residual sum of squares raised to 10^{-3}.

contains several specifications using different measures of ownership concentration – the ownership stake of the largest shareholder stated as a percentage of all outstanding ordinary equity ($OWN(L)$) entered as a linear term, as both linear and quadratic terms or as indicator variables, $OWN(20)$ or $OWN(40)$. For the Dutch firms in our sample, there is little systematic relation between ownership concentration and firm performance, and little support for the proposition that ownership concentration attenuates agency problems.

7. SUMMARY AND CONCLUSIONS

Recent research in corporate governance has reaffirmed the importance of the Berle–Means problem of pervasive agency problems, but also has exposed an important fault line in the Berle–Means paradigm – the assumption of small and uninformed investors. The emerging legal approach to corporate governance highlights that the assumption of small investors is not applicable in most industrialized countries, and emphasizes the importance of investor protections and ownership concentration as complementary means for solving governance problems. To date, most of the empirical work has been cross-country.

This paper uses the interesting institutional features in the Dutch economy to undertake a within-country analysis. Two key conclusions emerge. First, the role of investor protections emphasized in the legal approach is not sustained. Rather, we find that performance is enhanced when the firm is freed of equity market constraints. Second, ownership concentration does not have a discernible impact on firm performance. Our results indicate that concentrated ownership decreases with AIPs, a result consistent with potentially large shareholders avoiding or abandoning firms with anti-investor protections. In regression models of profitability, we find no systematic effect of concentrated ownership, which may reflect the tension between the lower costs of managerial agency problems versus the higher agency costs of expropriation by large shareholders.

These conclusions concerning investor protections and concentrated ownership should be viewed as preliminary. Three important caveats remain. First, as is well known, results for one country may not be applicable outside its borders. Second, as shown by Edwards and Weichenrieder (2004), cash flow and control rights have distinct effects on firm performance, and exploring these differences is an important item on our research agenda. Third, a better understanding is needed of the forces leading to the adoption of AIPs and concentrated ownership. In this study, the adoption was taken as exogenous because of the stability of the corporate control variables over our sample. Nonetheless, we would like to have a better appreciation of the forces at work influencing adoption decisions and the subsequent effects on firm performance.

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REFERENCES

Barca, F. and M. Becht (eds.) (2001), *The Control of Corporate Europe*, Oxford University Press, Oxford.

Berle, A. A., Jr and G. C. Means (1932), *The Modern Corporation and Private Property*, Macmillan, New York. Revised edition published by Harcourt, Brace & World, 1968.

Bohlin, E. (1997), 'A Survey of Managerial Incentives and Investment Bias – Common Structure but Differing Assumptions', *Journal of Business Finance and Accounting* 24, 197–248.

Burkart, M., D. Gromb and F. Panunzi (1997), 'Large Shareholders, Monitoring, and the Value of the Firm', *Quarterly Journal of Economics* 112, 693–728.

Carney, W. J. (1997), 'Large Bank Stockholders in Germany: Saviors or Substitutes?', *Journal of Applied Corporate Finance* 9, 74–81.

CPB, Netherlands Bureau for Economic Policy Analysis (1997), *Challenging Neighbors*, Springer, Heidelberg.

Edwards, J. S. S. and A. J. Weichenrieder (2004), 'Ownership Concentration and Share Valuation', *German Economic Review*, this issue.

Gelauff, G. M. M. and C. den Broeder (1997), *Governance of Stakeholder Relationships: The German and Dutch Experience*, Société Universitaire Européenne de Recherches Financières Studies No. 1.

Goot, L. R. T. van der and R. H. van het Kaar (1997), 'Beschermings-constructies, Structuurregime En Ondernemings-waarde', *Maandblad voor Accountancy en Bedrijfs-economie* 71, 497–507.

Gugler, K. (2001), *Corporate Governance and Economic Performance*, Oxford University Press, Oxford.

Het Financieele Dagblad, Wet Melding Zeggenschapsrecht (*WMZ*) (various issues).

Jensen, M. C. (1986), 'Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers', *American Economic Review* 76, 323–329.

Jong, A. de, R. Kabir, T. Marra and A. Röell (2001), 'Ownership and Control in the Netherlands', in: F. Barca and M. Becht (eds.), *The Control of Corporate Europe*, Oxford University Press, Oxford, pp. 188–206.

Jong, H. W. de (1996), 'Rijnlandse Ondernemingen Presteren Beter', *Economisch-Statistische Berichten* 13, 228–232.

Kabir, R., D. Cantrijn and A. Jeunink (1999), 'Takeover Defenses, Ownership Structure, and Stock Returns in the Netherlands: An Empirical Analysis', *Strategic Management Journal* 18, 97–109.

Kaplan, S. N. (1994), 'Top Executive Rewards and Firm Performance: A Comparison of Japan and the United States', *Journal of Political Economy* 102, 510–546.

La Porta, R., F. Lopez-de-Silanes and A. Shleifer (1999), 'Corporate Ownership Around the World', *Journal of Finance* 54, 471–518.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. W. Vishny (1998), 'Law and Finance', *Journal of Political Economy* 106, 1113–1155.

Monitoring Commissie Corporate Governance (1998), *Monitoring Corporate Governance in Nederland*, Kluwer, Deventer.

Oijen, P. van (2000), 'Corporate Governance in the Netherlands', unpublished PhD thesis, University of Amsterdam.

Porter, M. E. (1992), *Capital Choices: Changing the Way America Invests in Industry*, Council on Competitiveness, Washington, DC.

Roe, M. J. (1994), *Strong Managers, Weak Owners: The Political Roots of American Corporate Finance*, Princeton University Press, Princeton, NJ.

Roe, M. J. (1999), 'Political Preconditions to Separating Ownership from Control: The Incompatibility of the American Public Firm with Social Democracy', Columbia University School of Law.

Shleifer, A. and R. W. Vishny (1997), 'A Survey of Corporate Governance', *Journal of Finance* 52, 737–783.