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СОБСТВЕННОСТЬ И КОНТРОЛЬ**

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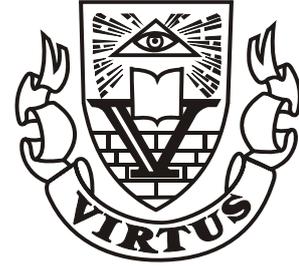
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# CORPORATE OWNERSHIP & CONTROL

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## **CORPORATE GOVERNANCE, PUBLIC ACCOUNTING FIRMS AND MULTINATIONAL CORPORATIONS: THE US SARBANES-OXLEY ACT PERSPECTIVE**

*Marc Massoud\*, E. Daniel Shim\*\**

### **Abstract**

The purpose of this paper is to review US corporate governance systems and to highlight the mandated roles of audit committee and external auditor within the SOX Act. In addition, it discusses requirements and implications of the SOX Act for the foreign accounting firms and multinational corporations. Finally this paper provides a perspective on improvement of corporate governance and financial integrity. In order to regain trust from the financial market, the SOX Act mandates (1) to improve auditor's independence by reducing conflicts of interest; (2) to increase corporate financial reporting responsibility by requiring a CEO or a CFO certify accuracy of annual report; and (3) to enhance financial disclosures. It also significantly increase criminal penalty for non-compliance. The authors believe that the combination of strengthening auditor's independence, increased corporate responsibility and severe penalty and restored corporate governance would create an environment that is intended by the SOX Act. Volker and Levitt (2004) put it very forceful way: "While there are direct money costs involved in good corporate governance, we believe that an investment in good corporate governance, professional integrity and transparency will pay dividends in the form of investor confidence, more efficient markets and more market participation for years to come." We concur with them and believe that the SOX Act will help in restoring trust in corporate governance and improve financial integrity and quality of financial information. We also agree that the benefits of the SOX Act will outweigh the costs of compliance in the long-run.

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### **Introduction**

The US historically has had the most robust capital markets in the world in large part due to better corporate governance systems. It is undeniable now that most US capital markets participants including financial analysts, accountants and regulators are under attack. As more and more disclosures have come to light, many of these market participants have shown to behave irresponsibly, unethically and/or illegally.

"Shortly after the Enron scandal, other scandals involving corporate giant (Tyoc, WorldCom, Xerox, Adeptia, Ahold, etc), brokerage firms (e.g., Merrill Lynch), stock exchanges (e.g., New York Stock Exchange), large public accounting firms (e.g., Arthur Anderson, Deloitte, Ernst & Young, KPMG, PricewaterhouseCoopers) and managers of mutual funds (e.g., Piper Jaffray) were uncovered." (Corporate Governance and SEC, Skousen, Glover and Prawitt, 2005, p.5)

Confidence in our capital markets has been undermined. Restoring the trust and credibility of markets is one of the most important missions for all parties concerned. Investors and public were initially

misled and then punished as the bubble expanded and burst amidst a blaze of corporate misdeeds. Major fraud cases over the last three years have destroyed over \$200 billion of equity value (Gadiesh, 2004).

Recently, we all have heard the same questions over and over again: What happened to the US capital market systems? Where were the board of directors and the corporate governance? Where were the competent and self-governing external auditors? Where were the lawyers, the guardians of the systems? Where were the investment bankers and the financial analysts, the prodigies of the fuel that fed the bubble?

Perhaps greed and conflict of interests prevented the participants from performing their respective functions properly. Many forgot that their actions and in-actions put their most valuable assets, the credibility as well as the interests of their shareholders at risk. Their reputation may never be regained or may take years to refurbish.

The essence of the good governance system is the proper stewardship; monitoring and managing people, processes and activities of a corporation on behalf of owners, shareholders. Good corporate governance creates a system that demands proper stewardship over

invested capital and faithfully reports the economic condition and performance of the enterprise (Skousen et al, 2004. p.7). That money, invested by the shareholders, is to be protected. The board of directors is supposed to monitor the management and external auditor are responsible in providing assurance and in attesting financial integrity and financial well-being of a corporation and in reporting its opinion to shareholders and management.

The purpose of this paper is to review the Sarbanes-Oxley (SOX) Act and to highlight the mandated roles of audit committee and external auditor within the Sarbanes-Oxley Act and to examine whether these requirements will improve corporate governance and financial integrity. In addition, it also discusses requirements and implications of the Sarbanes-Oxley Act for the foreign multinational corporations, required to register with US SEC.

The remainder of the papers is as follows: The second section will provide an overview of the Sarbanes-Oxley Act and the required role of audit committee and external auditor. The third section discusses the requirements and implications of the Sarbanes-Oxley Act to the foreign accounting firms and multinational corporations. The fourth section discusses corporate governance of UK and Germany. The final section provides perspectives and implications of the SOX Act.

### **The role of audit committee and external auditors within the Sarbanes-Oxley act for US corporations**

McEachern and Massoud (1990) suggest that "the main role of the audit committee is to oversee the financial reporting process and enhance the credibility of that process."

The SOX Act establishes new responsibilities for the audit committee in its capacity as a committee of the board of directors. The responsibilities include the appointment of the external auditor, determination of audit fees and oversight of the auditor. The audit committee must pre-approve all services provided by external auditor, after determining that the services do not pose conflict with the auditor's independence. Moreover, audit committee must be comprised of independent directors and, among other things, whether at least one member have to meet the specified criteria of an "audit committee financial expert." In addition external auditor is required to directly report to the audit committee which has new and expanded obligations to serve on behalf of the board of directors as the watchful guardian of shareholders interests. Thus the SOX Act strengthened and expanded the audit committee responsibilities. Table 1 summarizes the responsibility and relationship of Audit Committee and external auditor.

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Insert Table 1 Here  
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In addition, the Sarbanes-Oxley Act mandates establishment of the Public Company Accounting Oversight Board (PCAOB). The Board is a non-profit organization to oversee the accounting and auditing standards of the public companies. The purpose of PCAOB is to protect the interests of the investors and to further the public interests by monitoring for an informative, fair and independent audit report. In March 2004, the PCAOB approved the first important standard, "An Audit of Internal Control over Financial Reporting Performed in conjunction with an Audit of Financial Statement." Section 404 (a) of SOX and SEC's related implementation rule require the management of public company to assess the effectiveness of the company's internal control on financial reporting. Section 404(b) as well as Section 103 directed PCAOB to establish the professional standards governing independent auditor and assessing the effectiveness of internal controls. The new standard requires auditors to review management assessment of the effectiveness of company internal controls, run their own tests of those controls and judge the effectiveness of corporate board members who sits on a firm's audit committee (www.pcaobus.org). The PCAOB in effect ended self-regulations of auditing and attestation standards, Generally Accepted Auditing Standards (GAAS).

### **The Sarbanes-Oxley act requirements and implications to the foreign accounting firm and multinational corporations**

According to Section 106 of the SOX Act, foreign public accounting firms who audit a U.S. company required to register with the PACOB. This would include foreign firms that perform some audit work, such as in a foreign subsidiary of a U.S. company, that is relied on by the primary auditor. The Board exercises authority over these foreign accounting firms. Foreign accounting firms that "prepare or furnish" an audit report involving U.S. registrants are subject to the authority of the Board. Additionally, if a registered U.S. accounting firm relies on the opinion of a foreign accounting firm, the foreign firm's audit workpapers must be supplied upon request to the Board or the Commission (AICPA, 2004).

The Securities and Exchange Commission adopted rules that the national securities exchanges and national securities associations should prohibit the listing of any security of an issuer that is not in compliance with the audit committee requirements established by the SOX Act. Table 2 summarizes the detailed requirement:

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Insert Table 2 here  
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Generally, listed issuers are required to comply with the new listing rules by the date of their first annual shareholders meetings after Jan. 15, 2004, but in any event no later than Oct. 31, 2004. Foreign private issuers and small business issuers will be required to comply by July 31, 2005. Many will argue that those

requirements will lead to a decrease in number of foreign company listed in the US exchange. Until now it is difficult to speculate about the effect of this requirement.

**Corporate governance in the UK and Germany**

One of major issues about requiring foreign companies to adopt the SOX Act is that many foreign companies have their own country’s corporate governance rules. According to section 301 of the SOX Act, foreign corporations listing security in the US national securities exchanges and national securities associations should adhere to the audit committee requirements. The following presents a highlighted summary of corporate governance of UK and Germany.

**United Kingdom.** In 1992, the Cadbury Committee (The Committee on the financial aspect of corporate Governance) investigated the accountability of the Board of Directors to shareholders and to society as a whole. The committee made recommendations to improve financial reporting, accountability and Board of Directors’ oversight. The Cadbury Committee recommendations led to the Greenbury Report in 1995. The Greenbury Report recommended to establish extensive disclosures on directors’ remuneration in the annual report of the UK companies. The Hempel report in 1998 confirmed much of the work of Cadbury and Greenbury Committees. That has led to the Confined Code on Corporate Governance (2003). Compliance with these codes is a part of stock exchange requirement.

This code requires that the annual report of a major UK company should contain a report from the

remuneration committee, a statement on corporate governance, a statement on internal controls, a statement on the going concern status of company and a statement of the directors’ responsibilities. The following is a list of requirement that differs from under the SOX regulations:

1. The chair of the board should meet with non-executive directors without the executive present.
2. Led by the senior independent director, the non-executive directors should meet without the chair present at least annually to appraise her performance and on such other occasions as are deemed appropriate.
3. The chair of the board and CEO should be separated. The division of responsibilities should be clearly established, set out in writing, and agreed by the board.
4. At least half of the board, excluding the chair, should be comprised of non-executive directors and should be independent.
5. The board should appoint one of the independent non-executive directors to be the senior independent director. The senior independent director should be available to shareholders if they have concerns that have not been alleviated by top company officials.
6. Shareholders should be invited specially to approve all new long-term incentive arrangements and significant changes to existing schemes unless prohibited by the Listing Rules.

A recent survey of 310 service executives around world indicates that the US is generally ahead of the pack in corporate governance (KPMG, 2003).

	Germany	UK	US
1. Which of the following countries has done most to improve standards of corporate governance over the past year?	7%	16%	71%
2. Which of the following countries has the farthest to go in improving standards of corporate governance?	7%	6%	23%

**Germany.** The German systems of corporate governance reflect their unique structures of legal rights and arrangements. The corporate decision-making process and corporate governance are shared among stakeholders, shareholders, employees, and customers. This broad view “encompasses the product markets, the capital and labor markets, any informal organizational arrangements which may exist and function alongside the formal structure.”

Germany has a strong employee co-determination program. Work councils have extensive participation in decision-makings and employees are also respected in the corporate boardroom. These differences are contrasted with the shareholder-oriented approach to corporate governance in the US.

One of the distinguishing characteristics of German corporate governance is the two-tier board of directors system. The two-tier system of governance creates different rights and obligations for member of

each board that are set out in the German Stock Corporation Act and German Corporate Governance Code. Figure 1 shows the relationships with key stakeholders groups.

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 Insert Figure 1 Here  
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The management board is charged with managing the enterprise for the benefit of a wide array of stakeholders. The supervisory board, whose members are elected by the shareholders at the annual meeting, does not have the formal right to give specific instructions to members of the management board, but management board is required to report to the supervisory board at regular intervals. The major functions of the supervisory board are to appoint and dismiss the members of the management board and to determine management remuneration. The management

board normally takes into consideration on specific position of the supervisory board.

A potential problem in the German corporate governance is the dual obligations of members of the supervisory board. On one hand, they are obliged to act in the best interests of the company while on the other hand they have certain obligations toward their specific constituencies. This conflict of interests may influence the role and actions of the supervisory board.

The German Stock Corporation Act and German Commercial Codes establish the regulations for the preparation of financial statements. The act also details Audit requirements. Table 1 demonstrates these provisions and compares the functions of the management board in Germany and US.

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Insert Table 3 Here  
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The functions of the supervisory board are similar to that of the audit committee in the US. A comparison of the German and US requirement indicates two important differences: First, employee participation in decision-making process is an integral part of the German governance systems while no employee participation is presented in the US systems. Second, the German system relies more on a consensus of decision-makers, which take into consideration all the stakeholders in addition to shareholders.

### **Perspective and implication of SOX act**

The SOX Act poses new challenges to management. The new legislation puts on a significant the responsibility for fraud detection, though it does not relieve duties of the audit committee or the auditor. The board of directors and audit committee are ultimately responsible for overseeing management's assessment of fraud and the entity programs and its control systems. The audit committee is expected to investigate alleged wrongdoing brought to its attention.

The SEC implementation rules for SOX made it clear that increased transparency of financial information is central to the new regulation. "By increasing transparency regarding key aspects of corporate activities and control, the proposals are designed to improve the quality of information available to the investor. ([www.sec.gov/rules/final/33-8177.htm](http://www.sec.gov/rules/final/33-8177.htm))

In order to regain trust from the financial market, the SOX Act mandates (1) to improve auditor's independence by reducing conflicts of interest; (2) to increase corporate financial reporting responsibility by requiring a CEO or a CFO certify accuracy of annual report; and (3) to enhance financial disclosures. It also significantly increase criminal penalty for non-compliance.

**Auditors Independence.** The SOX Act attempts to ensure auditor independence. The law contains significant provisions designed to strengthen both the

fact and perception of auditor independence. The auditor is required to directly report to the company's audit committee which has new and expanded obligations to serve on behalf of the board of the directors as the watchful guidance of shareholder's interests. In the past, management has been a primary contact for the external auditor's communication with the audit committee. However the audit committee is now the appropriate contact for the external auditors.

### **Corporate Responsibility and Severe Penalty**

SOX affirms that CEO and CFO carry primary responsibility for company financial reports filed with the SEC and require them to certify the completeness and accuracy of information and the effectiveness of internal control. If an executive certify a report that turn out to be false and misleading, he/she will be facing severe criminal charges, a possibility of up to 20 years in prison. Certifying officers can also be forced to reimburse all or part of compensations earned based on erroneous financial statements.

**Can the SOX Help Regain Public Trust?** The single most important question is whether the SOX Act will produce what was its primary intended goal: Regain public trust and the elimination of massive companywide abuses and financial fraud that rocked US corporations and capital market participants recently. To name a few: Enron, Global Crossing, Tyco Internationals and WorldCom. So far the law has been good for shareholders, good for companies and good for government. SOX got people focused on quality and integrity of financial reports.

Many companies recently hired Chief Governance Officer (CGO) and Chief Compliance Officer (CCO). The CCO is supposed to monitor company's internal control systems while CGO makes sure that the board properly functions. The companies instituted CGO or CCO includes Hershey Foods, Motorola, Pitney Bowes, Pfizer, Estman Kodak, Sunoco, and American Express. The provision causing the most trouble is Section 404 which requires CEO and CFO to assess the adequacy of their company's internal control. This simply stated goal turns out to require a vast amount of work. In many cases, this led many firms to do massive overhaul of their information technology systems which requires huge expenditures.

The combination of strengthening auditor's independence, increased corporate responsibility and severe penalty and restored corporate governance would create environment that is intended by SOX Act. Volker and Levitt (2004) put it in a very forceful way: "While there are direct money costs involved in good corporate governance, we believe that an investment in good corporate governance, professional integrity and transparency will pay dividends in the form of investor confidence, more efficient markets and more market participation for years to come." We concur with them and believe the benefits of the SOX Act will outweigh the costs of compliance.

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## Appendices

**Table 1.** New Roles for Audit Committees and Auditors. (AICPA 2004).

1. Auditors Report to Audit Committee. Now, auditors will report to and be overseen by a company's audit committee, not management.
2. Audit Committees Must Approve All Services. Audit committees must preapprove all services (both audit and non-audit services not specifically prohibited) provided by its auditor.
3. Auditor Must Report New Information to Audit Committee. This information includes: critical accounting policies and practices to be used, alternative treatments of financial information within GAAP that have been discussed with management, accounting disagreements between the auditor and management, and other relevant communications between the auditor and management.
4. Offering Specified Non-Audit Services Prohibited. The new law statutorily prohibits auditors from offering certain non-audit services to audit clients. These services include: bookkeeping, information systems design and implementation, appraisals or valuation services, actuarial services, internal audits, management and human resources services, broker/dealer and investment banking services, legal or expert services unrelated to audit services and other services the board determines by rule to be impermissible. Other nonaudit services not banned are allowed if preapproved by the audit committee.
5. Audit Partner Rotation. The lead audit partner and audit review partner must be rotated every five years on public company engagements.
6. Employment Implications. An accounting firm will not be able to provide audit services to a public company if one of that company's top officials (CEO, Controller, CFO, Chief Accounting Officer, etc.) was employed by the firm and worked on the company's audit during the previous year.

**Table 2.** Requirement for foreign multinational corporations

Under the new rules, national securities exchanges and national securities associations will be prohibited from listing any security of an issuer that is not in compliance with the following requirements.

1. Each member of the audit committee of the issuer must be independent according to the specified criteria in Section 10A(m) of the Securities Exchange Act of 1934.
2. The audit committee must be directly responsible for the appointment, compensation, retention and oversight of the work of any registered public accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the issuer, and the registered public accounting firm must report directly to the audit committee.
3. The audit committee must establish procedures for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls or auditing matters, including procedures for the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.
4. The audit committee must have the authority to engage independent counsel and other advisors, as it determines necessary to carry out its duties.
5. The issuer must provide appropriate funding for the audit committee.

The new rules will establish Section 10A(m)'s two criteria for audit committee member independence.

1. Audit committee members must be barred from accepting any consulting, advisory or compensatory fee from the issuer or any subsidiary, other than in the member's capacity as a member of the board or any board committee.
2. An audit committee member must not be an affiliated person of the issuer or any subsidiary apart from capacity as a member of the board or any board committee.

The new rules will apply to both domestic and foreign listed issuers. It is important to note that, based on significant input from and dialogue with foreign regulators and foreign issuers and their advisers, several provisions, applicable only to foreign private issuers, have been included that seek to address the special circumstances of particular foreign jurisdictions. These provisions include

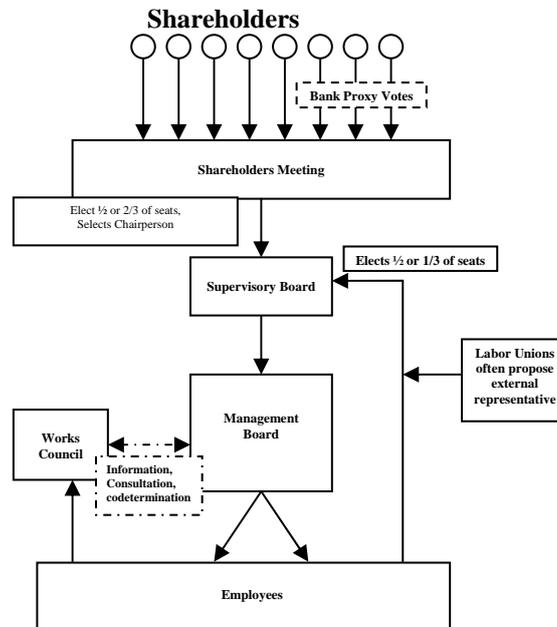
1. allowing non-management employees to serve as audit committee members, consistent with "co-determination" and similar requirements in some countries;
2. allowing shareholders to select or ratify the selection of auditors, also consistent with requirements in many foreign countries;
3. allowing alternative structures such as boards of auditors to perform auditor oversight functions where such structures are provided for under local law; and
4. addressing the issue of foreign government shareholder representation on audit committees.

The new rules also will make several updates to the Commission's disclosure requirements regarding audit committees, including updates to the audit committee financial expert disclosure requirements for foreign private issuers.

**Table 3.** A Comparison of Responsibilities for Financial Reporting Oversight

Financial Reporting Item	Responsible Board	
	Germany*	U.S
Prepare financial statements	Management Board	Management
Assess propriety and appropriateness of accounts	Supervisory Board	Audit Committee
Prepare management report	Management Board	Management
Legal requirement to approve Financial statements	Supervisory Board	Audit Committee
Review and approval of quarterly financial reports	Supervisory Board	Audit Committee
Internal Control system	Management Board	Management
Risk early recognition system (going concern evaluation)	Management Board	External auditors
Appointment of auditors	Supervisory Board	Audit Committee
Role of the external audit	Support Supervisory Board and Perform a control function In the public interest	Protect public interest

\*The source for the Financial reporting and other requirements in Germany is the Institut der Wirtschaftsprüfer's (German equivalent of the AICPA) issues paper *Financial Reporting, Auditing and Corporate Governance* (2003)



**Figure 1.** The Legal Structure of Corporate Governance in Germany\*

\*Jackson, G., M. Hopner, and A. Kurdelbusch. 2004. Corporate governance and Employees in Germany: Changing Linkages, Complimentarities, and Tensions. *RIETI Discussion Paper Series 04-E-009*: 49.

## DETERMINANTS OF BOARD COMPOSITION: EVIDENCE FROM TUNISIAN COMPANIES

*Sonda Marrakchi Chtourou\**, *Soumaya Ayedi\*\**, *Yosra Makni Fourati\*\*\**

### Abstract

This study focuses on the composition of boards of directors in the Tunisian context. We model the composition of the board of directors as a function of alternative governance mechanisms, some board characteristics and other control variables. On a sample of 97 Tunisian firms, we find evidence that the proportion of outsiders on the board of directors is positively associated with large block, institutional and overseas ownerships, and board size. We document that the CEO duality is associated with a decrease in the board independence. We fail to find an evidence that increased debt ratio to total assets is inversely associated with the outside board representation. While we predict a positive relationship between the board independence and the firm size, the organizational complexity and the quotation status; our results generally do not support this conjecture.

**Keywords:** board composition, corporate governance, agency conflicts, entrenchment.

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### 1. Introduction

The board of directors has long been recognized as a major structural mechanism to curtail managerial opportunism. In the modern corporation, the separation of ownership from control results in potential agency conflicts stemming from divergence between managerial and shareholder interests. In general, the small shareholders delegate their authority to the board of directors which is charged with the task of representing the shareholders' interests. The board delegates decision making to the managers and is responsible for determining long run targets of the company and for controlling managerial decisions. This situation leads to an agency problem, since the managers can use the firm's assets to serve their own interests in the detriment of those of the shareholders.

The central point of the effectiveness of any board of directors is its composition. From an agency perspective, the outside directors are objective and independent, especially in evaluating issues closely related to the fate of internal managers (Fama and Jensen, 1983). Outsiders have particular incentives to monitor the managers on behalf of the shareholders because of their reputation on the external labour market (Fama and Jensen, 1983).

As argued by (Prevost et al, 2002a), within an agency theoretical context, the determinants of the board composition can be classified in three major areas: the alternative corporate governance mechanisms,

the other board characteristics and the potentially important control variables.

This study examines the determinants of the board composition in the context of the Tunisian market. Previous studies were conducted mostly in the US, UK and other comparatively large markets where the institutional environments differ greatly from that in Tunisia. Since institutional differences may have important implications for corporate governance in different countries (Shleifer and Vishny, 1997), the results of this study can thus enhance the understanding of how institutional differences impact on corporate governance.

Using a cross-sectional sample of 97 Tunisian firms, we find evidence that the proportion of outsiders on the board of directors is positively associated with large block, institutional and overseas ownerships, and board size. We document that CEO duality is associated with a decrease in board independence. We fail to find evidence that increased debt ratio to total assets is inversely associated with outside board representation. While we predict a positive relationship between board independence and firm size, organizational complexity and quotation status; our results generally do not support this conjecture.

The remainder of this paper is organised as follows. The next section briefly reviews the previous studies that have investigated the board composition. Section three gives a brief idea about of the formal legislative framework of the Tunisian corporate governance.

Section four describes our empirical design. Empirical results are reported and discussed in section five. Finally, section six serves as a conclusion.

## 2. Literature review

In this section we review two related strands of the literature that are relevant to this study. First we survey the area of board composition and whether or not boards are an effective means to control agency problems of the firm. Second, we review some of the studies that specifically model the determinants of board composition.

Fama and Jensen (1983) point out that the board of directors is the core of corporate governance and that its structure is so influential on its functions. They argue that outside directors are more efficient in monitoring the management and will not collude with the management. In this area, a large line of previous empirical studies has focused on the relationship between board independence and firm's performance (Baysinger and Butler, 1985; Rechner and Dalton, 1986; Hermalin and Weisbach, 1991; Beatty and Zajac, 1994; Bhagat and Black, 1999; Hermalin and Weisbach, 2002; etc.), following-on inconclusive results.

In addition to the studying of the relation between board independence and firm's performance, a number of studies has examined how boards accomplish some of the responsibilities commonly assigned to directors. Unlike the performance-related studies, these studies of board actions have generally found significant results. In particular, these studies indicate that board independence is important. Board composition appears to affect the quality of decisions on CEO replacement (Weisbach, 1988; Dahya et al., 2002), responses to a hostile takeover (Byrd and Hickman, 1992; Shivdasani, 1993; Cotter et al. 1997), adoption of a poison pill (Brickley et al. 1994), and the design of CEO compensation schemes (Core et al. 1999).

With regard to studies on the determinants of board composition, one of the earliest studies led by Hermalin and Weisbach (1988) who found that changes in board composition are influenced by the CEO succession process and firm's performance. Rediker and Seth (1995) report, on a sample of 81 banks holding companies, a substitutional effect between board independence and large shareholder's ownership, managerial shareholdings and inside directors' ownership. Fernandez and Arrondo (2002) reproduced this same study in the context of the Spanish market. The tests led on a sample of 149 companies listed on the Madrid Stock Exchange and over the period 1990-1997 found the same results as those of Rediker and Seth (1995). While Bathala and Rao (1995) support the substitution hypothesis between debt, dividend policy and inside ownership and outside board representation. They conclude that there is a positive relationship between institutional holdings and board independence. Prevost et al. (2002a) find that the proportion of outside board members on the board is inversely related to corporate insider ownership and positively related to

ownership concentration and debt leverage. Using a simultaneous equations approach, Prevost et al. (2002b) find that the proportion of outsiders on the board is negatively related to future growth, appears to be nonlinearly related to inside ownership and positively related to board size.

As a summary, the knowledge of the factors affecting the board composition seems to be an important step in understanding boards and their role in corporate governance. The existing body of studies following the determinants of board composition suggests that there is a causal relationship between several governance mechanisms, board characteristics and the outside board representation.

## 3. Corporate governance in Tunisia

At this point, it seems necessary to provide a brief summary of the formal legislative framework of the Tunisian corporate governance. Indeed, the institutional environment in Tunisia, as it pertains to corporate governance, is fundamentally different from that of the US, UK, Australia, and other relatively much larger and developed markets. In fact, these countries are characterised by a relatively strong market for corporate control and relatively dispersed stock ownership (Laporta et al. 1999) while Tunisia has a weak market for corporate control and concentrated stock ownership. Furthermore, it should be mentioned that Tunisia remains one of the rare countries that have not yet established a code of corporate governance.

The corporate legal framework comes essentially from "the Code *des sociétés commerciales*" (CSC, 2000) and is a primarily French civil law at its origin. The CSC (2000) gave companies large latitude in determining the characteristics of their boards. In fact, the board of directors of a limited company is composed of three members at least and twelve members at most (Article 189, CSC). Within these legal limits, the number of directors is freely fixed by the statutes which can envisage either a fixed number or a variable number and there are no rules governing the composition between executive and non-executive directors. Finally, the statutes of the company can choose the duality or the dissociation between the roles of chief executive officer and chairman of the board (Article 215, CSC).

## 4. Empirical Design

### 4.1- Hypotheses development Ownership concentration

In a corporation characterized by diffused stock ownership, no individual shareholder has an incentive to monitor the managerial behaviour because he would incur all the supervisory costs however the benefits would be shared by the other shareholders. Nevertheless, the large blockholders of tightly held firms present important incentives to control managerial actions as they bear a high proportion of the negative consequences of non value maximising

actions (Demsetz and Lehn, 1985). Consistent with this view, the previous studies found that outside board proportion and ownership concentration are substitutes (Li, 1994; Rediker and Seth 1995; Fernandez and Arrondo, 2002). However, in the Tunisian context we may not necessarily find this inversed relationship. In fact, the excessively high ownership concentration figures in Tunisia imply that outside takeovers are not a viable discipling mechanism. Thus, given the weak market for corporate control in Tunisia and the absence of hostile takeovers, more outside directors may be required. Accordingly, a positive relationship would be expected between board independence and ownership concentration. Consistent with this assumption, Prevost et al. (2002a) documents a positive relationship between the ownership concentration and the proportion of outside directors on the board.

Our first hypothesis therefore is:

**Hypothesis 1:** *The proportion of the outside directors is positively related to the ownership concentration.*

### **Institutional holdings**

Institutional investors can be seen as potential controllers of equity agency problems as their increased shareholding can give them a stronger incentive to monitor firm performance and managerial behaviour (Farinha, 2003). Historically, as noted by Bathala and Rao (1995), institutional investors dissatisfied with management or stock performance are known to pursue the “exit mechanism”, i.e. selling the stock holdings. However, this mechanism is becoming costly because it may lead to a steep decline in the stock prices. Thus, institutional investors feel compelled to control managerial actions. The most direct and cost effective manner to do so is to increase board independence. Therefore, a positive relationship should exist between the proportion of outside board members and the proportion of institutional holdings. Bathala and Rao (1995) find a consistent evidence with this assumption.

Accordingly, our second hypothesis is:

**Hypothesis 2:** *The proportion of the outside directors is positively related to the institutional ownership.*

### **Foreign investors**

Marchand and Paquerot (2004) argue that the presence of foreign investors appears to transform the rules of the French Corporate Governance. They base their presumption on Heidrick and Struggles study (1999) showing a certain correlation between the internationalization of the shareholder base and the “Anglo-Saxon” application of Corporate Governance. In addition, Simon (2003) points out that overseas investors seem to demand a higher standard of corporate governance from Hong Kong companies. Consistent with these assumptions, we predict that foreign investors tend to claim high standard of

corporate governance from Tunisian firms, i.e. demand more board independence.

Thus, the following hypothesis is proposed:

**Hypothesis 3:** *The proportion of the outside directors is positively related to the foreign ownership.*

### **Debt financing**

In the agency framework, debt financing is ascribed a significant role in mitigating agency problems. On one hand, the issue of debt instead of equity facilitates an increase in managerial ownership and therefore a greater alignment of interests between managers and shareholders (Jensen and Meckling, 1976). On the other hand, the contractual obligations associated with debt financing reduce the amount of free cash-flows which the managers could use in non value enhancing investments (Jensen, 1986). Additionally, debt forces managers to undertake fewer self-serving activities and become more efficient because of the threat of bankruptcy and the loss of reputation or dismissal (Grossman and Hart, 1982).

Debt financing negatively affects the capability of managers to incur in non optimal activities and in this way, could substitute the control by the board of directors. Consistent with this argument, Bathala and Rao (1995) find an inverse relationship between the proportion of outside board members and the debt leverage of the firm.

Consequently, we propose the following hypothesis:

**Hypothesis 4:** *The proportion of the outside directors is negatively related to the debt financing.*

### **Board size**

As Dalton and Kesner (1987) report, there is evidence in the US and other countries that larger boards are associated with greater proportions of outside directors. Similarly, Denis and Sarin (1999) find that the board size is positively related to the fraction of independent outsiders.

Therefore we expect:

**Hypothesis 5:** *The proportion of the outside directors is positively related to the board size*

### **CEO duality**

A further board characteristic that may have a significant impact on board composition is related to duality which occurs when the same person undertakes the combined roles of chief executive officer and chairman of the board. Prevost et al. (2002a) argue that CEOs who also assume the dual role of board chairmanship are likely to entrench their positions by stacking the board in their favour with insiders who are unlikely to be critical of their performance. Consistent with their assumption, the authors find that firms with CEOs who assume the chairmanship of the board tend to have fewer outside board members.

This leads us to propose:

**Hypothesis 6:** *The proportion of the outside directors is negatively related to the CEO duality*

#### 4.2- Variable definition

OUTDIR is the dependent variable which refers to outside board representation. Similarly to Byrd and Hickman (1992) and Prevost et al. (2002a,b), we define outside directors as individuals who (1) are not employees of the firm; (2) do not have business ties (e.g. consultant, supplier, etc.) with the firm; and (3) do not have any apparent family relationship with the firm's CEO. We measure this variable by the proportion of outside directors to total directors on the board (Hermalin and Weisbach, 1988; Li, 1994; Bathala and Rao, 1995; Denis and Sarin, 1998; Prevost et al. 2002a,b; Fernandez and Arrondo, 2002; etc.).

The first four independent variables are the measures of the alternative mechanisms to control agency problems. Indeed, large shareholders (Bathala and Rao, 1995), institutional investors (Shleifer and Vishny, 1986 and Farinha, 2003) and foreign investors (Marchand and Paquerot, 2004) can be seen as potential controllers of equity agency problems as their increased shareholdings can give them a stronger incentive to monitor firm performance and managerial behaviour. Debt was also rationalised by Jensen and Meckling (1976) as a vehicle for reducing agency problems. PPLOWN refers to large block ownership, which is measured as the percentage of shares held by the large blockholder. INSTOWN refers to institutional ownership. Institutional investors are defined as banks, mutual funds and insurance companies. INSTOWN is measured as the percentage of shares held by institutional investors (e.g. Bathala and Rao, 1995). FOROWN refers to overseas ownership, which is measured as the percentage of shares held by foreign investors. TDTA is the debt ratio obtained by dividing the book value of total debts to total assets (e.g. Prevost et al. 2002 a,b).

Besides, we consider in our regression analysis some board characteristics as potential determinants of the board independence. Thus, BDSIZE refers to the board of directors' size and is measured as the number of directors on the board (Li, 1994; Prevost et al. 2002a,b). DUALITY is a dummy variable taking the value of one if the current CEO of the firm is also the chairman of the board, and zero otherwise (Li, 1994; Prevost et al. 2002a,b).

We use a number of control variables defined in the previous literature to account for any potential effects of external factors in our analysis. First, we control for firm size by using the logarithm of total assets. It proxies for a possible size effect that has been suggested in the literature (Kesner, 1988; Li, 1994; Prevost et al. 2002a,b). Second, we control for organizational complexity by using the number of business segments on which the firm operates (Prevost et al. 2002a). We expect large companies with high diversification activities to have more independent board of directors. Finally, we use a dummy variable

that take 'one' if the firm is listed on the Tunisian Stock Exchange (TSE) to control for the quotation status of the firm as our sample include even listed and unlisted firms.

#### 4.3- Data source

Data for this study are obtained from a sample of 20 non financial firms listed on the TSE as of December 31, 2002 and 77 non financial unlisted Tunisian firms. Data are taken from two sources: from listed companies' annual reports available on the TSE web site, and from questionnaire (provided in Appendix) addressed to unlisted firms.

#### 4.4- Empirical methodology

Our basic methodology consists in estimating the following multivariate regression model using Ordinary Least Squares (OLS) method:

$$\text{OUTDIR} = \alpha_0 + \alpha_1 \text{PPLOWN} + \alpha_2 \text{INSTOWN} + \alpha_3 \text{FOROWN} + \alpha_4 \text{TDTA} + \alpha_5 \text{BDSIZE} + \alpha_6 \text{DUALITY} + \alpha_7 \text{FSIZE} + \alpha_8 \text{BUSSEG} + \alpha_9 \text{QUOTE} + \varepsilon$$

The dependent variable, OUTDIR, is defined as the percentage of outsiders on the board. PPLOWN refers to large block ownership, which is measured as the percentage of shares held by the large blockholder.

Concerning independent variables, INSTOWN refers to institutional ownership; measured as the percentage of shares held by institutional investors. FOROWN refers to overseas ownership, which is measured as the percentage of shares held by foreign investors. TDTA is the debt ratio obtained by dividing the book value of total debts by total assets. BDSIZE: board of directors' size and is measured as the number of directors on the board. DUALITY is a dummy variable taking the value of one if the current CEO of the firm is also the chairman of the board, and zero otherwise. FSIZE is a proxy of the firm size. It is measured by the logarithm of total assets book value. BUSSEG refers to organizational complexity of the firm and is considered as the number of business segments in which the firm operates. Finally,QUOTE refers to firm's quotation status which takes the value of one if the company is listed on TSE, and zero otherwise. Table 1 summarizes the hypothesis of our study and the measures of all variables considered in our analysis.

### 5. Empirical results

#### 5.1- Descriptive statistics

Table 2 reports the descriptive statistics of the variables. It shows that the mean (median) proportion of outside directors (OUTDIR) is 44.85 (44.44) percent. Compared to the US (for example, Bathala and Rao indicate a mean of 70.73 percent outside directors on a sample of 261 American firms) and most European countries (for example, Li (1994) points out that a mean of 83 percent of French board directors are outsiders), Tunisian boards are characterized by less outsiders.

**Table 1.** Variables definition and hypothesis

Dependent variable		Measure
OUTDIR		The percentage of outsiders on the board of directors.
Independent variables	Measures	Hypothesis
↳ <u>Alternative corporate governance mechanisms:</u>		
PPLOWN	The percentage of shares held by the large blockholder.	H1: The proportion of the outside directors is positively related to the ownership concentration.
INSTOWN	The percentage of shares held by institutional investors.	H2: The proportion of the outside directors is positively related to the institutional ownership.
FOROWN	The percentage of shares held by foreign investors.	H3: The proportion of the outside directors is positively related to the foreign ownership.
TDTA	The book value of total debts divided by total assets.	H4: The proportion of the outside directors is negatively related to the debt financing.
↳ <u>Board characteristics:</u>		
BDSIZE	Current number of directors on the board.	H5: The proportion of the outside directors is positively related to the board size.
DUALITY	Equal to one if the CEO is also the chairman of the board and zero otherwise.	H6: The proportion of the outside directors is negatively related to the CEO duality.
↳ <u>Control variables:</u>		
Variable	Measures	predicted Sign
FSIZE	The logarithm of total assets book value.	+
BUSSEG	The number of business segments in which the firm operates.	+
COTE	Equal to one if the firm is listed on TSE and zero otherwise.	+

However, it is consistent with outsider directors' proportion in other small countries. For example, Prevost et al. (2002a) report a mean value about 42 percent of outside directors in New Zealand. The mean proportion of shares held by large owners (PPLOWN) is 46.52 percent with minimum of 7.5 percent and maximum of 99 percent. This provides an evidence of a highly concentrated ownership structure of Tunisian firms. The means proportions of stock held by institutional (INSTOWN) and foreign (FOROWN) investors are, respectively, about 9 and 15 percent. On the other hand, the mean proportions of debt to total assets (TDTA) is about 50 percent.

The typical board consists of 6 members, which is similar to that pointed out by Prevost et al. (2002a) in the New Zealand context. Nevertheless, it is considerably smaller than that in others countries. For example, Dalton and Kesner (1987) report a mean board size of 11.44 in the United Kingdom (UK) and 12.96 in the United States (US). Approximately, the three quarters of the sample exhibits CEO duality, which is nearly similar to that reported in the Dalton and Kesner study for US (82 percent), but higher than that found in UK (30 percent) and in New Zealand (as Prevost et al. (2002a) report a mean of 38 percent).

**Table 2.** Sample Descriptive statistics

Variables	Mean	Median	Standard deviation	Minimum	Maximum
OUTDIR	0.4485	0.4444	0.3557	0	1
PPLOWN	0.4652	0.3800	0.2708	0.0750	0.9900
INSTOWN	0.0910	0	0.1620	0	0.6900
FOROWN	0.1506	0	0.2995	0	0.9900
TDTA	0.4959	0.5080	0.2395	0.0532	0.9688
BDSIZE	5.9175	6.0000	2.5358	3	12
FSIZE	8.9949	8.8317	1.5822	5.38	12.28
BUSSEG	1.4536	1	0.6618	1	4
	Mode	Standard deviation	Frequency of '0'	Frequency of '1'	
DUALITY	1	0.4555	28	69	
QUOTE	0	0.4066	77	20	

Notes: OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on the Tunisian Stock Exchange and zero otherwise.

Table 3 illustrates the correlation coefficients for all variables used in this paper. It shows that the

proportion of outside directors is positively associated with the proportion of shares held by the principal

shareholder (0.259\*), by institutionals (0.237\*) and by foreign investors (0.423\*\*). However, board independence is negatively correlated with the incidence of CEO duality (-0.339\*\*). In sum, the correlation matrix shows that in general most interrelationships are as expected. On the other hand, Since Table 3 identifies a number of significant correlations amongst the explanatory variables, it is necessary to examine whether the regression results in

Table 4 may be compromised by multicollinearity. The highest Pearson correlation amongst the explanatory variables in Table 3 is 0.623 (board size and quotation status) with the next highest value being 0.523 (firm size and quotation status). However, since Judge et al. (1988) suggest that correlations below 0.8 should not normally result in serious multicollinearity, these are unlikely to significantly impair the validity of the regression results.

**Table 3.** Correlation Matrix for all variables

	OUTDIR	PPLOWN	INSTOWN	FOROWN	TDTA	BDSIZE	DUALITY	FSIZE	BUSSEG
PPLOWN	0.259*								
INSTOWN	0.237*	-0.168							
FOROWN	0.423**	0.457**	-0.001						
TDTA	0.039	0.075	0.261**	0.111					
BDSIZE	0.191	-0.322**	0.366**	-0.151	0.064				
DUALITY	-0.339**	-0.056	-0.096	-0.325**	0.011	0.042			
FSIZE	0.166	-0.104	0.262**	0.190	-0.054	0.360**	-0.209*		
BUSSEG	0.203*	-0.114	0.146	0.114	0.131	0.246*	0.024	0.313**	
QUOTE	0.201*	-0.192	0.273**	-0.038	-0.067	0.623**	0.100	0.523**	0.423**

*Notes:* OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on Tunisian Stock Exchange and zero otherwise. \*\* Denotes significance at the 1% level. \* Denotes significance at the 5% level.

## 5.2. The determinants of board composition

Table 4 presents the coefficients for the regression model and related statistics estimated using the OLS

method. The regression model is significant at the 1% level ( $F$ -value = 5.965,  $p$ -value = 0.000) with adjusted  $R$ -square of approximately 32 percent (better than the one reported in Prevost et al. study, i.e. 11.3 percent).

**Table 4.** Regression Estimates

Independent Variable	Regression coefficient ( $t$ -statistic)
Intercept	0.443 (1.702)*
PPLOWN	0.241 (2.381)**
INSTOWN	0.186 (1.932)*
FOROWN	0.284 (2.700)***
DEBT	-0.088 (-0.955)
BDSIZE	0.206 (1.769)*
DUALITY	-0.271 (-2.896)***
FSIZE	-0.155 (-1.439)
BUSSEG	0.135 (1.394)
QUOTE	0.125 (0.975)
$F$ -value	5.965
( $p$ -value)	(0.000)
$R$ -square	0.382
Adj. $R$ -square	0.318
$N$	97

*Notes:* OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on the Tunisian Stock Exchange and zero otherwise. Coefficients and the associated t-statistic for the significance of the coefficient in parenthesis are shown. The asterisks next to the t-statistic denote the significance level for a two-tailed test of the null hypothesis that the coefficient is equal to zero. \* Denotes significance at the 10% level. \*\* Denotes significance at the 5 % level. \*\*\* Denotes significance at the 1% level. The F-value is the model F-value with the associated p-value shown in parenthesis. R-square refers to the unadjusted and adjusted R-square of the model, respectively. N is the sample size used in the regression.

The ownership concentration variable PPLOWN is significantly positive at the 5 percent level which suggests that higher blockholder's ownership in Tunisian firms may result in a higher outsider representation in the board of directors. This supports the evidence suggested by Prevost et al. (2002a). These authors explain their findings by the fact that more outside directors may be required to compensate the lack of an affective takeover disciplining mechanism in New Zealand. Indeed, similar to the New Zealand context where ownership is concentrated, the Tunisian one does not face the disciplinary effect of the external takeover market. Our first hypothesis (H1) is consequently supported suggesting a complementary association between the proportion of board outsiders and the ownership concentration.

In addition, the institutional ownership variable (INSTOWN) is significantly positive at the 10 percent level which also suggests a complementary effect with outside board representation. This supports our second hypothesis supposing that a high propensity of shares owned by institutional investors leads to an increase in the proportion of outsiders in the board of directors. Our results are consistent with the findings of Bathala and Rao (1995) and imply, as it is pointed out by Shabou (2003) in the Tunisian context, that institutional investors seem to play a weaker governance role which is compensated by an increased number of outside board members. Indeed, as it reported in Bathala and Rao study (1995), institutional investors put pressure on firms to increase outside board members in order to protect their interests as shareholders.

Moreover, the overseas ownership variable indicates a positive coefficient which is statistically significant at 1 percent level. Subsequently, our third hypothesis is supported indicating that foreign investors need more outsiders on the board of directors. Our findings imply that international investors impose higher standard of corporate governance in Tunisian firms by enforcing the independence of the boards of directors. Based on Heidrick and Struggles (1999) study, Marchand and Paquerot (2004) conclude that overseas investors tend to transfer the international rules of corporate governance to the domestic firms in which they hold a fraction of capital.

Contrary to our hypothesised relationship (H4), the leverage (TDTA) variable has a negative but insignificant coefficient. Indeed, our study fails to find an association between the debt and the board

independence. It is not consistent with the evidence documented in Bathala and Rao (1995) study supporting a substitution effect of leverage on board composition. Besides, it is not consistent with the findings of Li (1994), Denis and Sarin (1998) and Prevost et al. (2002a) who conclude that there is a complementary relationship. On the other hand, our results are consistent with the recent findings of Dumontier et al. (2005) study, in the Tunisian context, relating audit quality requirement to debt. Thus, we conclude that, contrary to the implications of agency theory, debt must not be considered as a vehicle for reducing agency problems (Jensen and Meckling, 1976) in the Tunisian context. As it is pointed out by Dumontier et al. (2005), debt is generally obtained due to the business relationship between firms' managers and bankers.

On the other hand, board size (BDSIZE) has a positive coefficient that is significant at the 10 percent level. This is consistent with our predictions (H5) suggesting that larger boards of directors are associated with greater proportion of outsiders on the board. This is consistent with Prevost et al. (2002b) findings but is contrary to the evidence documented in Li (1994) and Prevost et al. (2002a) studies who fail to report any association between board size and board independence.

DUALITY is significantly negative at 1 percent level. While, this supports our last hypothesis (H6) and is consistent with the findings of Prevost et al. (2002 a,b) indicating that firms in which CEO performs the chairman function on the board tend to have fewer outside board members; it is contrary to the Li's (1994) evidence.

For the control variables included in our regression model, we first fail to report relationship between firm size and board independence. Our empirical results support the findings of Bathala and Rao (1995) on a sample of 261 American firms, but not those reported by Prevost et al. (2002 a,b) who conclude that there is an inverse relationship between firm size and outside board representation. This is may be contingent with the industry factors as it is pointed out by Finkelstein and D'Aveni (1994).

As documented in Bathala and Rao (1995) and Prevost et al. (2002 a,b) studies, the organizational complexity variable (BUSSEG) seems to be statistically insignificant. This indicates that firm's activities diversification has no bearing on the board composition.

Finally, our study documents that the firm's quotation status doesn't appear to influence the board composition.

## 6. Conclusions

In this paper we model the board composition as a function of alternative corporate governance mechanisms (i.e. large blockholder ownership, institutional ownership, overseas ownership and debt); some board characteristics (i.e. board size and duality) and other control variables (i.e. firm size, organizational complexity and quotation status). Using OLS regression estimates, the study documents a positive relationship between the proportion of outside board members and some governance mechanisms including large blockholder, institutional and foreign ownerships. These results are not consistent with the predictions of agency theory and suggest that firms optimally choose the board composition depending on the ownership structure, particularly on the extent funds provided by overseas investors to Tunisian firms. This is an important contribution of the study. A prior research on board composition has not considered this relationship. The results are also inconsistent with the predictions of agency theory regarding the monitoring role of debt, as we fail to document any relationship between debt leverage and board independence.

Additionally, our study reports a significant positive relationship between board independence and board size. This suggests that firms with larger boards of directors tend to appoint more outside members. Furthermore, our results support an inverse association between CEO duality and outside board representation. This is consistent with an entrenchment effect of CEO in dual leadership positions, that is CEO who assumes the chairmanship of board of directors has a preference for inside members rather than outsiders to improve his dominating position in the firm.

Finally, we fail to find relationship between each one of our control variables (firm size, organizational complexity, and quotation status) and board independence because of the insignificance of their coefficients in a multivariate regression.

Future researches seem to be considerably relevant, particularly in Tunisian context, to take into account inside manager ownership and firm performance in order to serve as a guide for institutional regulators. On a larger sample of Tunisian firms, a future study appears to be pertinent to control the effect of industry factors in dreading the potential effect of firm's size on the board composition.

## Notes

<sup>1</sup> www.bvmt.com.tn

<sup>2</sup> We also calculate the Spearman correlation among the independent variables to check whether multicollinearity exists among the variables. We find that the pair-wise correlations, generally, do not appear to indicate any concern over multicollinearity problems in estimating the regression equation.

<sup>3</sup> Furthermore, similar to Bathala and Rao (1995), we also utilize variance inflation factors (VIFs) to determine whether any of the explanatory variables may be involved in multicollinearities. QUOTE has the highest VIF, i.e. 2.096. However, since only VIFs in excess of 10 are deemed to be an evidence of a significant multicollinearity, standard interpretations of the regression results can be made.

<sup>4</sup> The firm size variable remains statistically insignificant in a multivariate analysis, even when it is measured by the logarithm of sales of the firm (as it is measured in Bathala and Rao study); everything being the same elsewhere.

<sup>5</sup> Finkelstein and D'Aveni (1994) document an inverse relationship between board composition and firm size for the chemical and computer industries in the US, but report an insignificant positive coefficient for the printing and publishing industries.

<sup>6</sup> We report a positive and significant association between BUSSEG and OUTDIR only when the quotation status variable is excluded from our OLS model estimating, everything being the same elsewhere.

<sup>7</sup> Note that the quotation variable become statistically significant suggesting that listed Tunisian firms seem to have more independent boards of directors, only when we remove the board size variable from our multivariate equation.

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#### Appendix. Questionnaire addressed to unlisted Tunisian firms

Please answer the following questions about your business by specifying the information requested or by checking the appropriate response.

↳ General information:

How many business segments does your firm operate in? \_\_\_\_\_

↳ Ownership structure:

Large blockholder's ownership % \_\_\_\_\_

Institutional investors ownership % \_\_\_\_\_

Foreign investors ownership % \_\_\_\_\_

↳ Board characteristics:

Board size \_\_\_\_\_

Number of outside directors \_\_\_\_\_

Is the current CEO also the chairman of the board of directors? Yes No

↳ Financial information:

Book value of total assets in December 31, 2002 \_\_\_\_\_

Book value of total debt in December 31, 2002 \_\_\_\_\_

# TOWARDS AN ORGANISATIONAL LAW OF THE POLYCORPORATE ENTERPRISE? A COMPARATIVE ANALYSIS

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## Abstract

“One key element in improving economic efficiency is corporate governance which involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. [...] If countries are to reap the full benefits of the global capital market, and if they are to attract long-term ‘patient’ capital, corporate governance arrangements must be credible and well understood across borders.”\*\* One aspect of the relationship between the company’s management and its shareholders is far from being well understood: How is this relationship affected if the single company is transformed into a parent company of a corporate group? In Germany, this topic has attracted the most vivid legal interest for some decades, but it is not even considered in other countries - neither in the context of corporate governance nor in the one of corporate groups. One reason might be that provisions concerning corporate groups are not perceived as a distinct body of law in most of these countries\*\*\*.

**Keywords:** corporate group, mergers and acquisitions, corporate governance, general meeting of shareholders, power of the board, concept of “Konzernleitungskontrolle”

\*\* Preamble to the OECD Principles of Corporate Governance as adopted at the meeting of OECD Ministers on 26-27 May 1999, document SG/CG (99) 1, available on <http://www.oecd.org/daf/governance/principles.htm>.

\*\*\* See Druery, ‘Das deutsche Konzernrecht aus der Sicht des übrigen Europa’ in: Lutter (ed.), ‘Konzernrecht im Ausland’, ZGR Sonderheft 11, 1994, 338. Within the European Union attempts of harmonisation have failed: “The draft proposal for a Ninth Directive on Groups [...] has been strongly criticised and no further steps are to be taken in the foreseeable future.”, Farrar et al., ‘Farrar’s Company Law’, 4th ed. 1998, 536.

## I. The framework

### A. The starting point: the classical model of the company

Traditionally, company law – not only in Britain, but virtually all over the world<sup>1</sup> - assumes any company to correspond to the model of an individual autonomous corporation<sup>2</sup>. A company (we may call it P Co) is perceived as a separate legal entity with its own economic business interests to pursue and a simple structure, composed of two constitutional organs, the board of directors and the general meeting of shareholders<sup>3</sup>.

The first of the typical features<sup>4</sup> that we should distinguish is the separate legal entity<sup>5</sup>. P Co is in law a separate person from its shareholders and as such capable of enjoying and being subject to legal rights and duties<sup>6</sup>. This feature is the precondition for P’s very existence: “A company exists because there is a rule

(usually in a statute) which says that a persona ficta shall be deemed to exist and to have certain of the powers, rights and duties of a natural person.”<sup>7</sup>

Secondly, the limited liability. Not necessarily linked with the concept of a separate legal entity<sup>8</sup>, this concept does by no means relieve the company of its liability<sup>9</sup>. P Co’s liability for its various debts is unlimited, which may lead to a complete exhaustion of its assets in case of an insolvent liquidation. P Co’s shareholders, however, are under no obligation to its creditors beyond their obligation on the par value of their shares<sup>10</sup>.

Finally, the autonomous organisational structure. Being an artificial person, P Co’s use of its legal capacity depends on rules attributing acts of natural persons to it<sup>11</sup>. Any company law must contain such rules providing authority to bind the company externally and competence to take decisions internally.

<sup>1</sup> Dorresteyn et al., ‘European Corporate Law’, 1994, 187.

<sup>2</sup> See Antunes, ‘Liability of Corporate Groups’, 1994, 13-20.

<sup>3</sup> Farrar, n 2 supra, 9.

<sup>4</sup> See Wheeler, ‘The Business Enterprise: A Socio-Legal Introduction’, in Wheeler (ed.), ‘A Reader on the Law of the Business Enterprise’, 1994, 2.

<sup>5</sup> The leading UK case is *Salomon v Salomon* [1897] AC 22, HL.

<sup>6</sup> This implies attributes such as the capacity to sue and to be sued in its own name, the ownership of its own assets and liabilities and the perpetual succession. See Farrar, n 2 supra, 79.

<sup>7</sup> Lord Hoffmann in *Meridian Global Funds Management Asia Ltd v Securities Commission*, [1995] 3 WLR 413, 418.

<sup>8</sup> See Farrar, n 2 supra, 79.

<sup>9</sup> Pettet, ‘Limited liability - A Principle for the 21st Century?’, (1995) 48 Current Legal Problems (II), 125, 6.

<sup>10</sup> The concept is often combined with a doctrine of adequate capitalisation or one of capital maintenance for creditor protection purposes, see Farrar, n 2 supra, 80.

<sup>11</sup> See again Lord Hoffmann, n 11 supra, 418.

Most company laws recognise at least two organs<sup>12</sup>: the board of directors manages the company and makes business policy decisions and the general meeting of the shareholders as a body elects the board and decides on certain fundamental corporate changes<sup>13</sup>.

## B. The recognition of the phenomenon of corporate groups

This model of the single company has to be contrasted with the economic reality characterised by the rise of corporate groups. They consist of legally independent but economically associated companies<sup>14</sup>. For example, P Co may hold all (or at least the majority) of the shares in another company, S Co. The parent company P Co and its subsidiary S Co form a corporate group.

Albeit this structure is fairly simple, it gives rise to complicated legal issues: "The group enterprise has created problems for the law which have not yet been solved"<sup>15</sup>.

### 1. The recognition of the corporate group in various branches of law

When tackling those problems, the law may recognise the corporate group by taking account not of the legally separate company, but of the economically connected group as a whole<sup>16</sup>. This has been done by a variety of legal branches in a number of circumstances.

One example is tax law in many countries<sup>17</sup>. There is a wide range of situations where special national rules exist for the taxation of profits of companies forming part of a group<sup>18</sup>, and on the European scale the parent-subsidiary directive abolishes the withholding tax on cross-border profit distributions within a group<sup>19</sup>.

This attitude of tax law is due to the idea that it should be neutral with respect to a business being conducted through a number of legally separate companies or through divisions of one company<sup>20</sup>. The

neutrality can be ensured by introducing reliefs for losses, dividends, gains and the like<sup>21</sup> or by requiring a consolidated tax return for the group<sup>22</sup> - the latter treating the corporate group more rigorously as a unit.

However, tax law does by no means recognise the corporate group under any circumstances. In many regards each group company is still regarded as a separate entity, particularly in international taxation. For instance, the Californian approach of Unitary Taxation<sup>23</sup> treating the corporate group as one entity has been regarded as being in complete breach of international principles of income taxation.

Accountancy law went further<sup>24</sup>: the national laws implementing the seventh company law directive of 13 June 1983 are based on the idea of the corporate group as one single unit<sup>25</sup>. The obligation to draw up consolidated accounts has the purpose to show the profitability and solvency of the group without looking at the separate legal entities of each of the associated undertakings. This is not a recent development: in Britain, the need for rules coping with the group enterprise was considered as early as 1904<sup>26</sup>.

Competition law also recognises the corporate group to a large extent<sup>27</sup>. When determining whether a merger is deemed to arise, the decisive question is - at least in the German<sup>28</sup>, French<sup>29</sup>, English<sup>30</sup> and European Merger Regulation<sup>31</sup> - whether there is common control or dominant influence. Hence little attention is paid to the legal separation, economic connection is the decisive criterion. The recognition of the corporate group can be found in a wide variety of other branches of law such as labour law<sup>32</sup>, insolvency law<sup>33</sup> or even criminal law<sup>34</sup>. The law of the corporate group defined as the sum of all those rules recognising the corporate group by ignoring the separate legal personality of its parts is hence an "atomised"<sup>35</sup> branch of law. Its rules are spilled over the entire legal system. The scale of this recognition differs, however, not only from one

<sup>12</sup> A two-tier board structure is provided in some countries. See Hueck, *'Gesellschaftsrecht'*, 19th ed. 1991, 201-2 for Germany and Merle, *'Droit commercial. Sociétés commerciales'*, 4th ed. 1994, 415-32 for France (where this structure is optional).

<sup>13</sup> Compare most recently OECD Principles, n 1 supra, 11. The latter statement is more questionable than it might seem. See infra, III.

<sup>14</sup> Dorrestejin, n 5 supra, 187.

<sup>15</sup> Farrar, n 2 supra, 9.

<sup>16</sup> See Immenga, *'The Law of Groups in the Federal Republic of Germany'*, in Wymeersch (ed.), *'Groups of Companies in the EEC'*, 1993, 85, 7.

<sup>17</sup> In France, relief for double taxation of dividends was introduced already in 1920, see Cozian, *'Précis de fiscalité des entreprises'*, 19th ed. 1995, 281. Also German tax law took the economic unity into account, by granting certain fiscal advantages to the "Organschaft" since the 1920s, see Immenga, n 20 supra, 89. Hence tax law often encouraged the group structure, contributing to its importance, Emmerich/Sonnenschein, n 3 supra, 28 et seq.

<sup>18</sup> For Britain Tiley/Collison, *'UK Tax Guide'*, 16th ed 1998, 1317 et seq.; and Cozian, n 21 supra, 280 et seq. for France.

<sup>19</sup> Council Directive (EEC) 90/435, OJ 1990 L 225. See de Hosson, *'The Parent-Subsidiary Directive'*, [1990] Intertax, 414-37 for an introduction.

<sup>20</sup> Prentice, *'A Survey of the Law Relating to Corporate Groups in the United Kingdom'*, in Wymeersch, n 20 supra, 279, 96.

<sup>21</sup> See n 21 supra. This is also the UK approach, see Shipwright/Keeling, *'Textbook on Revenue Law'*, 1997, 615 et seq.

<sup>22</sup> As in the US, see Shipwright/Keeling, n 25 supra, 551. In France, companies can opt for this regime under certain circumstances, see Cozian, n 21 supra, 284 et seq., Guyon, *'The Law on Groups of Companies in France'*, in Wymeersch, n 24 supra, 141, 6. and Guyon, *'Das Recht der Gesellschaftsgruppe in Frankreich'*, in Lutter, n 2 supra, 77, 83.

<sup>23</sup> See Lindencrona, *'What is Wrong with Unitary Taxation?'*, in Hopt (ed.), *'Groups of Companies in European Laws'*, 1982, 230.

<sup>24</sup> Farrar, n 2 supra, 474, claims that this is for less need for precision and certainty in this context.

<sup>25</sup> Emmerich/Sonnenschein, n 3 supra, 470.

<sup>26</sup> Farrar, n 2 supra, 529.

<sup>27</sup> Guyon, n 26 supra, 148.

<sup>28</sup> §23(2) GWB

<sup>29</sup> Order of 1 December 1986, Art. 39. See Guyon, n 26 supra, 148.

<sup>30</sup> s65 Fair Trading Act 1973. See Farrar, n 2 supra, 614-7.

<sup>31</sup> Art. 3 Council Regulation 4064/69, OJ 1989 L 395.

<sup>32</sup> For Germany see Immenga, n 20 supra, 90; for France Merle, n 16 supra, 690 and Guyon, n 26 supra, 147.

<sup>33</sup> Guyon, n 26 supra, 149.

<sup>34</sup> Predominantly the famous French case *Rozenblum*, Crim. 4 Feb 1985, Rev. soc. 1985, 648.

<sup>35</sup> Druey, n 2 supra, 345.

country to another, and not only within the same legal system, but even within the same legal branch<sup>36</sup>.

## 2. Corporate groups in UK company law

In the context of company law, the discussion of the corporate group is mainly focused on the risk that the interests of the subsidiary might be subordinated to those of the holding company or of the group as a whole. This might cause a loss of the subsidiary as a separate entity, possibly causing prejudice to minority shareholders and creditors. Company law can respond in different ways to this risk<sup>37</sup>. It can legitimate the formation of the group and the exercise of influence thereby implemented, but offer means of compensation for the risk of injury incurred, either to the subsidiary itself or to its shareholders and creditors<sup>38</sup>. On the other hand, it can put its emphasis on the interests of the separate entities and protect those interests, during the very formation as well as during the existence of the group. UK company law has chosen the second path<sup>39</sup>, and it provides mechanisms of protection which will briefly be outlined.

### a) The formation of the corporate group

The risk of a possible prejudice to the interests of creditors and minority shareholders arises first when a corporate group is formed. The acquisition of a substantial shareholding in the company by another company might result in their ending up in a disadvantaged position due to a possibly detrimental influence of the parent. Some mechanisms aim to prevent possible prejudice at this stage, already, particularly for minority shareholders, but to some extent also for creditors of the future subsidiary.

The rules governing substantial acquisitions of shares are primarily governed by the "City Code on Mergers and Take-overs" (hereafter Code) as well as by the statutory provisions of ss428-430F Companies Act 1985 (hereafter CA). The Code is not specifically designed to prevent the mentioned risks but to provide an orderly framework within a bid may be conducted<sup>40</sup>. However, some examples illustrate that its regulations will often have a protective effect<sup>41</sup>: a fundamental principle underlying the Code is that shareholders should have the right to exit the company if control of it changes<sup>42</sup>. The Code's attitude partial bids<sup>43</sup> has been said to be one of suspicion<sup>44</sup>, as those bids confer voting control and leave the remaining shareholders in a powerless position<sup>45</sup>. And procedural provisions

protect the shareholders by giving sufficient time and information to consider<sup>46</sup>, and the opportunity to express their views on the matter<sup>47</sup>. The overall effect is to protect shareholders against ending up in an unwanted minority position in a corporate group where their interests might be prejudiced<sup>48</sup>, mainly by giving them an opportunity to sell their shares and by providing them with sufficient time and information to take such a decision. S430A and s430B CA have a similar effect at a later stage: if the bid was successful and the offeror owns at least 90% in value of the shares the remaining shareholders can require the offeror to acquire their shares on the terms of the offer<sup>49</sup>. There are some shortcomings of the protection, though. The provisions will have a limited effect where shareholders are dispersed and not especially well-informed<sup>50</sup> and they do not apply to all target companies as most private companies are excluded<sup>51</sup>. Finally, the Code by its very nature pays little attention to creditors whose interests might also be prejudiced. On a very limited scale, its provisions might nevertheless be advantageous for them: the directors of the target company are obliged to consider also the creditors' interests when giving advice to the shareholders<sup>52</sup>. If the credit contract provides for a possibility to terminate the contract in the event of a change of control, the disclosure provisions of the Code might help the creditor to take advantage of this clause<sup>53</sup>.

Some other mechanisms having similar protective effects can only be mentioned here. The rules applicable to a scheme of arrangement, which could be used to form a group of companies, might protect potential minority shareholders<sup>54</sup> by its disclosure and majority requirements<sup>55</sup> and especially by the need of the court's approval<sup>56</sup>. They might also protect the future subsidiary's creditors by providing certain rules for disclosure and creditors' meetings, but also by the power of the court to make an ancillary order under s 427(3)(a) to transfer their liabilities to the future parent company in the course of a reconstruction. Another mechanism for shareholders to protect against ending up in a minority position in a subsidiary, though not a

<sup>36</sup> For tax law see above and for labour law Immenga, 20 supra, 90.

<sup>37</sup> See Immenga, n 4 supra, 7-8.

<sup>38</sup> *Ibid.*, 7.

<sup>39</sup> Farrar, n 2 supra, 532.

<sup>40</sup> See Introduction 1(a) of the Code.

<sup>41</sup> More comprehensively Schubert, 'Konzernrelevante Regelungen im britischen Recht', 1997, 34-54.

<sup>42</sup> Code, General Principle 10.

<sup>43</sup> i.e. offers to acquire something less than all the shares.

<sup>44</sup> Prentice, 'Groups of Companies: The English Experience', in Hopt, n 27 supra, 99, 114.

<sup>45</sup> *Ibid.* with further reference.

<sup>46</sup> Code, General Principle 4.

<sup>47</sup> See Prentice, n 48 supra, 115.

<sup>48</sup> *Ibid.* and Wooldridge, 'Aspects of the Regulation of Groups of Companies in European Laws', in Drury/Xuereb, 'European Company Laws', 1990, 103, 14.

<sup>49</sup> Farrar, n 2 supra, 607-9.

<sup>50</sup> Prentice, n 48 supra, 115 and Wooldridge, n 52 supra, 114.

<sup>51</sup> Code, Introduction 4

<sup>52</sup> Code, General Principle 9

<sup>53</sup> See Schubert, n 45 supra, 93.

<sup>54</sup> However, a typical scheme of arrangement will aim at turning the company into a wholly-owned subsidiary, so that there is by definition no risk of ending up as a minority shareholder of this subsidiary.

<sup>55</sup> s425(2) CA.

<sup>56</sup> The court will consider whether "an intelligent and honest man [...] might reasonably approve" as Maughan J has put it in *Re Dorman, Long & Co Ltd, South Durham Steel and Iron Co Ltd*, [1934] Ch 635 at 637. However, the courts are reluctant to interfere if a proper majority has approved the scheme, see *Re Heron International NV* [1994] 1 BCLC 667.

mandatory one, is to impose in the company's articles restrictions on the transfer of shares<sup>57</sup> which might turn out to be the only protection at this stage for shareholders in small private companies not falling under the Code.

## b) The existence of the corporate group

Within an existing group, we should distinguish the mechanisms protecting minority shareholders and those protecting creditors, both facing the risk of detrimental influence of the parent company. The mechanisms are found in some of the most complex areas of English company law: rather than studying the details, we will illustrate some important points by looking at an example.

### (1) Minority shareholders

P Co is the parent company of the subsidiary S Co, which is not wholly owned but has a minority shareholder, C. He seeks for remedies in the following situation: P Co uses its control over S to make the latter sell its products to P at a price below market value.

One remedy that C might invoke is an action on behalf of S Co in respect of the wrong done to this company<sup>58</sup>. Such a derivative action, regarded as the only true exception<sup>59</sup> to the rule in *Foss v Harbottle*<sup>60</sup>, requires fraud on the minority and wrongdoer control of the subsidiary<sup>61</sup>. By definition almost, the latter will easily be established, as opposed to the former. Leaving apart such difficulty, the remedy is unsatisfactory for further reasons<sup>62</sup>. The costs of bringing a derivative action are discouraging<sup>63</sup>, despite the courts' attempts to provide some assistance in this respect<sup>64</sup>. Perhaps most importantly, the remedy granted will be in favour of the subsidiary, which means that the value of C's shares will raise accordingly<sup>65</sup>. Depending on his stake in the company, this amount might not even cover his legal expenses<sup>66</sup>. Finally, the remedy is not easily available for procedural reasons<sup>67</sup>. Particularly will the court not allow the derivative action to proceed if there is another adequate remedy available<sup>68</sup>.

A more promising remedy is contained in s459 CA<sup>69</sup> and provides that a member may petition the court for a remedy if the company's affairs have been conducted in a manner unfairly prejudicial to members' interests. C could argue in accordance with *Scottish Co-operative Wholesale Society Ltd v Meyer*<sup>70</sup> that the policy of the directors of S to agree the low prices for the products and their unwillingness to seek other customers constitutes such conduct<sup>71</sup> unfairly prejudicial to his interests.

Those interests are not limited to strict legal rights, but might include legitimate expectations as to the conduct of the company's affairs, arising from the nature of the company and agreements and understandings between the parties<sup>72</sup>. However, this flexible approach will predominantly be taken in a small, private company, as dissatisfied members of larger private and public companies can sell their shares and withdraw from the company<sup>73</sup>. For this reason, it might already be difficult for C to show that a relevant interest is prejudiced by the pricing agreements<sup>74</sup>.

Additionally, the conduct has to be unfairly prejudicial, in the sense of causing prejudice or harm to the relevant interest of the member and also unfairly so<sup>75</sup>. The starting point is to ask whether the conduct is in accordance with the articles and the powers conferred upon the board<sup>76</sup>. Even a lawful conduct may be unfair, however, and not every unlawful conduct is unfair<sup>77</sup>. Most of the cases fall into well-defined, but not closed<sup>78</sup> categories<sup>79</sup>. The one that might apply here is mismanagement of the company's affairs. However, the court will normally be very reluctant to interfere with managerial decisions for two reasons<sup>80</sup>: it is not the competence of the court to resolve such questions and poor management quality is a risk to be taken by the shareholder. Only "serious economic mismanagement causing real economic harm to the

<sup>57</sup> See Hannigan, 'Share Transfer Problems in the Private Company', (1990) 11 CoLaw 170.

<sup>58</sup> For details, see Wedderburn, 'The rule in *Foss v Harbottle*', C.L.J. [1957], 194 and [1958], 93.

<sup>59</sup> Farrar, n 2 supra, 435.

<sup>60</sup> (1843) 2 Hare 461

<sup>61</sup> Farrar, n 2 supra, 435.

<sup>62</sup> See Prentice, n 24 supra, 279, 325.

<sup>63</sup> An example for an extremely expensive trial is *Prudential Assurance Co. Ltd v Newman Industries Ltd (No. 2)* [1982] Ch 204 costing three quarters of a million pounds.

<sup>64</sup> *Wallersteiner v Moir (No 2)* [1975] QB 373.

<sup>65</sup> In small private companies without marketable shares, C will not be able to take any advantage of this.

<sup>66</sup> In *Prudential Assurance Co. Ltd v Newman Industries Ltd (No. 2)*, the Court of Appeal held that the shareholder has no locus standi if the diminution in share value was the only loss.

<sup>67</sup> See SI 1994/1975, Rules of the Supreme Court 1965, ord. 15, r. 12A.

<sup>68</sup> *Barrett v Duckett* [1995] 1 BCLC 243

<sup>69</sup> This provision is the successor of s75 CA 1980, which in turn replaced the oppressive remedy contained in s210 CA 1948, interpreted very restrictively by the courts. See Wedderburn, 'Oppression of Minority Shareholders', (1966) 29 MLR 321.

<sup>70</sup> [1959] A.C. 324 based on s210 CA 1948.

<sup>71</sup> In a highly integrated group, even the unwillingness of the parent company to pay its debts can constitute a conduct of the subsidiary's affairs. See *Nicholas v Soundcraft Ltd and another* [1993] BCLC 360, CA.

<sup>72</sup> See, inter alia, *Re Saul D Harrison & Sons plc* [1995] 1 BCLC 14, CA

<sup>73</sup> Farrar, n 2 supra, 449-50. But the remedy is not necessarily confined to small companies, see *Re Elgindata Ltd* [1991] BCLC 959.

<sup>74</sup> Since the amendment of s459 in 1989, the remedy is at least available even if the prejudice concerns the members generally.

<sup>75</sup> *Re Saul D Harrison & Sons plc* [1995] 1 BCLC 14; *Re RA Noble & Sons (Clothing) Ltd* [1983] BCLC 273. The test is an objective, not a subjective one.

<sup>76</sup> Farrar, n 2 supra, 452.

<sup>77</sup> *Re Saul D Harrison & Sons plc* [1995] 1 BCLC 14, CA. See Farrar, *ibid.*, for further examples.

<sup>78</sup> *Re BSB Holdings Ltd (No 2)* [1996] 1 BCLC 155.

<sup>79</sup> Inter alia, removal and exclusion from the board, abuse of power and self-dealing by the directors.

<sup>80</sup> *Re Elgindata Ltd* [1991] BCLC 959, 993-4; *Re Sam Weller & Sons Ltd* [1990] Ch 682, 694.

company's business"<sup>81</sup> constitutes unfairly prejudicial conduct. Where it is possible to point to specific acts of mismanagement repeated over many years causing financial loss to the company, this is sufficient<sup>82</sup>, but that might be particularly difficult in cases like the pricing agreement of our example or in highly integrated groups<sup>83</sup>.

The appreciation of the conduct might be influenced by the company's affiliation to a group. In *Nicholas v Soundcraft Ltd and another*<sup>84</sup>, a loan given to the parent had not been repaid and caused financial difficulties for the subsidiary, but was held not to be unfairly prejudicial as it was in the subsidiary's interest to avoid the insolvency of the parent company. Albeit Farrar is not wrong that "English law has not yet developed a concept of group interest or a coherent doctrine of fairness in respect of group transactions" and that "the emphasis is still on the interest of individual companies"<sup>85</sup>, one might respectfully add that this interest of the individual company may well be influenced by the interests of other members of the group<sup>86</sup>.

Shareholders may have insufficient information to determine whether there has been unfairly prejudicial conduct<sup>87</sup> and the cost barrier is an impediment to the bringing of an action for relief<sup>88</sup>. Yet, s. 459 will apply at least in the harshest cases and is flexible as to the remedies<sup>89</sup> which aim to give relief to the shareholder directly, not to the company<sup>90</sup>. Thus, s. 459 will generally be the most helpful remedy for the minority shareholder of the subsidiary<sup>91</sup>.

An indirect, not enforceable mechanism of protection applicable for listed subsidiaries is contained in the Listing Rules. Paragraph 3.13 provides that a company with a controlling shareholder<sup>92</sup> must, *inter alia*, be capable at all times of operating and making decisions independently of that shareholder. Moreover, Chapter 11 provides for a competence of the general meeting to decide upon certain agreements with

associated persons, the voting right of those persons being excluded. These rules have the general effect to avoid that the subsidiary's business is conducted in the interest of the parent company or of the group rather than in the subsidiary's own interest<sup>93</sup>. Particularly, a situation as in our example will not arise where these rules apply, furthermore providing that transactions with the controlling shareholder must be at arm's length and on a normal commercial basis. Indirectly, it is the minority shareholder who benefits of the independence of the subsidiary maintained by these rules.

## (2) Creditors

The latter mechanism will equally protect the subsidiary's creditors. Where, however, the parent exercises detrimental influence some other mechanisms might prevent possible prejudice for them.

English courts adhere rather strictly to the principle laid down in the case *Salomon v A. Salomon and Co. Ltd*<sup>94</sup> over 100 years ago, preventing the subsidiary's creditor to reach the assets of the parent company: "Our law, for better or worse, recognises the creation of subsidiary companies, which though in one sense the creatures of their parent companies, will nevertheless under the general law fall to be treated as separate legal entities with all the rights and liabilities which would normally attach to separate legal entities"<sup>95</sup>. However, the courts have occasionally departed from that principle, but it seems impossible to find a general rule as to when the corporate veil will be pierced<sup>96</sup>. There have been some decisions where the separate corporate entity has been disregarded in the context of corporate groups<sup>97</sup>, but only in very exceptional circumstances to hold one group company liable for the debts of another<sup>98</sup>. In this situation, the courts are particularly reluctant to pierce the corporate veil<sup>99</sup> - and they certainly will not do it only because of the fact that the debtor is a subsidiary, even if it is a wholly-owned one<sup>100</sup>. An important new means of creditor protection is provided, however, by the wrongful trading provision, s214 Insolvency Act 1986 (hereafter: IA)<sup>101</sup>.

<sup>81</sup> *Re Five Minute Car Wash Service Ltd* [1966] 1 WLR 745; *Re Macro (Ipswich) Ltd* [1994] 2 BCLC 354.

<sup>82</sup> *Re Macro (Ipswich) Ltd* [1994] 2 BCLC 354

<sup>83</sup> See Prentice, n 24 supra, 327.

<sup>84</sup> [1993] BCLC 360, CA.

<sup>85</sup> Farrar, n 2 supra, 532.

<sup>86</sup> See also *Jesner v Jarrad Properties Ltd* [1993] BCLC 1032, CS.

<sup>87</sup> Wooldridge, n 52 supra, 115. *Re Hydrosan Ltd* [1991] BCC 19, made access to the company's documents easier for minority shareholders.

<sup>88</sup> See Prentice, n 24 supra, 327 and Schubert, n 45 supra, 143-5.

<sup>89</sup> The court "may make such order as it thinks fit for giving relief", s461(1) CA. The most common relief is a purchase order requiring the respondents to purchase the shareholders shares, see Farrar, n 2 supra, 455.

<sup>90</sup> As opposed to the one in the derivative action, see supra, text to n 69.

<sup>91</sup> S122(1)(g) IA, giving jurisdiction to wind up companies on the just and equitable ground can only be mentioned here. It is not redundant, though, as there may be cases where this section is applicable even if a petition on unfairly prejudicial grounds would fail. See Farrar, n 2 supra, 457.

<sup>92</sup> The definition in paragraph 3.12. includes any person who either controls 30% or more of the voting rights or is able to control the appointment of the voting majority of directors. Parent companies will generally fall under this definition.

<sup>93</sup> See Schubert, n 45 supra, 167. Surprisingly, there is not any English publication to refer to.

<sup>94</sup> [1897] AC 22, HL.

<sup>95</sup> Slade LJ in *Adams v Cape Industries plc* [1990] Ch 433, CA. The situation in France is broadly similar, see for example Com 20 oct. 1992, Rev. sociétés 1993, 449.

<sup>96</sup> For an example of an attempt to classify see Ottolenghi, 'From Peeping behind the Corporate Veil, to Ignoring it Completely', (1990) 53 MLR 338.

<sup>97</sup> *DHN Food Distributors Ltd v London Borough of Tower Hamlets* [1976] 3 AllER 462, CA, but the decision was not followed by *Woolfson v Strathclyde Regional Council* 1978 SLT 159, HL. Compare Kirkbride, 'Adams v Cape Industries Plc - Group Reality of Legal Reality?', (1991) BLR 21.

<sup>98</sup> See *Re Bank of Credit an Commerce International SA (No 3)* [1993] BCLC 1490, CA and *No 10* [1995] 1 BCLC 362, where the court was faced to a hopeless muddle.

<sup>99</sup> Farrar, n 2 supra, 74.

<sup>100</sup> See Lord Keith of Kinkel in *Woolfson v Strathclyde Regional Council* 1978 SLT 159, HL. Compare also Schmitthoff, 'The Wholly-Owned and the Controlled Subsidiary', J.B.L. 1978, 218-29.

<sup>101</sup> See Farrar, n 2 supra, 738-40.

In case of an insolvent liquidation, the liquidator is enabled to obtain a court order that directors are liable for the debts of the company. A proof of dishonesty is not required<sup>102</sup>, but the liquidator must establish that there was a moment in time when the director “knew or ought to have concluded that there was no reasonable prospect that the company would avoid going into insolvent liquidation”<sup>103</sup>.

S. 214(7) extends the liability to a shadow director defined as “a person in accordance with whose directions or instructions the directors of a company are accustomed to act”<sup>104</sup>. This might cause the liability of the parent for the subsidiary’s debts, provided that the former is a shadow director of the latter. This was first discussed in *Re Hydrodam (Corby) Ltd* by Millett J<sup>105</sup>. Where it is established that the board of the parent as a collective body gave instructions to the subsidiary’s directors and that the latter were accustomed to act in accordance with those instructions, the parent company is a shadow director of the subsidiary<sup>106</sup>. Instructions are given if the directors are directed “how to act in relation to the company”<sup>107</sup>. This requires more than the majority control of the subsidiary or even holding all its shares<sup>108</sup>, but it remains to be seen whether resolutions in the subsidiary’s general meeting can be regarded as such instructions, especially where it is vested with extensive decision powers. To prove this requirement<sup>109</sup> - and the one of “accustomed to act” - might be difficult. Single directions are not sufficient, but there must be a regular practice over a period of time and a regular course of conduct<sup>110</sup>. Even if all those requirements are established, liability under s214 IA will be excluded where the parent “took every step with a view to minimising the potential losses”<sup>111</sup>.

Another mechanism to protect the creditors are the disability rules enabling a company in liquidation to recover property by disallowing particular transactions to stand or certain types of claims<sup>112</sup>. For example, transactions at an undervalue entered into by a company which is insolvent during a certain period prior to the liquidation may be challenged. The interesting feature of those rules in the context of corporate groups are the modifications that apply for connected persons<sup>113</sup>: not only are the relevant periods prolonged, but the effectiveness of the rules is enhanced by the operation of certain presumptions. As

the complex definition of connected persons<sup>114</sup> contains not only parent companies controlling one third or more of the voting power of a subsidiary, but also other subsidiaries of the same parent company, these modifications will apply for all intra-group transactions.

### C. Conclusion

All mentioned mechanisms are rules of general company law. They generally operate whenever there is detrimental influence regardless whether it originates in a parent company, a controlling shareholder or some other outsider. This does not imply that there are no specific rules with regard to corporate groups in UK company law. Definitions of the terms “holding company” and “subsidiary” are laid down in s736 CA. Originally for accountancy purposes, they were given effect on other issues in 1948. Since the implementation of the seventh directive<sup>115</sup>, a separate definition for accountancy purposes is laid down in s258 CA, echoing the elastic definition of dominant influence and the concept of control contracts used in German law<sup>116</sup> - as opposed to s736 et seq., characterised by precise and detailed legal criteria and a series of supplements to avoid possible loopholes. Broadly, the latter applies where one company either controls or holds the voting rights in another company or, as a member, has the right to appoint or remove the majority of its board of directors. For the purpose of some provisions, the notion of “group” is defined as a holding company together with its subsidiaries<sup>117</sup>. Yet the scope of these definitions is very restricted. Leaving disclosure purposes apart their function is twofold<sup>118</sup>: on the one hand, s23 CA prohibits a subsidiary or its nominee from being a member of its holding company. On the other hand, a number of provisions extend certain obligations of companies to certain other members of the group and their directors<sup>119</sup> or, conversely, exempt certain transactions within a group that would otherwise be prohibited<sup>120</sup>. Those are the only provisions where UK company law takes specifically account of the economically connected group rather than of the legally separate company. Hence, there are only rare examples of an express recognition of the corporate group in UK company law.

<sup>102</sup> As opposed to the fraudulent trading provision of s213 IA. For an illustration of that provision’s shortcomings in the group context see *Re Augustus Barnett & Sons Ltd* [1986] BCLC 170.

<sup>103</sup> s214(2)(b) IA.

<sup>104</sup> s741(2) CA.

<sup>105</sup> [1994] 2 BCLC 180, 4.

<sup>106</sup> The individual directors of the parent will be shadow directors of the subsidiary where the instructions were given by them individually. See *ibid.*, 184.

<sup>107</sup> n 109 supra, 183.

<sup>108</sup> See Prentice, n 24 supra, 313.

<sup>109</sup> There is no presumption such as Prentice, *ibid.*, seems to assume. See *Re Hydrodam (Corby) Ltd*, n 109 supra, 180.

<sup>110</sup> *Re Unisoft Group Ltd (No 3)* [1994] 2 BCLC 609.

<sup>111</sup> s214(3) IA.

<sup>112</sup> See Prentice, n 24 supra, 318.

<sup>113</sup> See, *inter alia*, ss239 (6), 240 (1)(a), 241(2A)(b) IA and Prentice, n 24 supra, 319-22 for details.

<sup>114</sup> Contained in s249 in connection with s435(6),(10) IA.

<sup>115</sup> Its definition of the group is rather broad: mandatory tests based on legal control are accomplished by optional tests on factual control, see Farrar, n 2 supra, 472-4. Prentice, n 24 supra, 298, states for the UK implementation: “The definition of what constitutes a group [...] is the first time English legislature has tried to define the phenomenon in terms of substance, or economic reality, and not form.”

<sup>116</sup> §18(1) AktG. See Wooldridge, n 52 supra, 106 and compare also Wooldridge, ‘Groups of Companies - The Law and Practice in Britain, France and Germany’, 1981, 17-78.

<sup>117</sup> Compare ss153(5), 319(7), 333 CA. Schubert, n 45 supra, 23, is therefore wrong when claiming that no such term is used in English company law.

<sup>118</sup> See Farrar, n 2 supra, 535-6.

<sup>119</sup> For example, s151 and s330 CA.

<sup>120</sup> Compare the exemptions in the loan prohibitions for directors in Part X, for example s333 CA.

The mechanisms described above are not specifically designed for corporate groups, and they never apply merely because of the existence of a group. As was shown above, the mechanisms are only triggered within an existing group if some element of detrimental influence is established. As a conclusion, UK company law does not react to the status of the corporate group, but only to certain patterns of behaviour within a corporate group.

This statement alone, however, does by no means imply that the law is underdeveloped and that the results are unsatisfactory<sup>121</sup>. On the contrary, there may be good economic reasons for group companies to operate as autonomous, independent entities rather than being co-ordinated by interventions of the parent company<sup>122</sup>. Only if the latter policy is adopted, the risk of a possible prejudice for creditors and minority shareholders increases. It is reasonable if protective mechanisms of the law are restricted to this case<sup>123</sup>. The mentioned provisions of the Insolvency Act are a good example for such an approach: the harshest consequence, s 214, applies only if particular detrimental interventions can be positively established. More moderate mechanisms, the disability rules, can be triggered more easily because of the group structure unless it can be established that no such interventions took place, in which case the creditor is left as if he had dealt with an independent company.

But the legal mechanisms might be unsatisfactory in another respect. When focusing on the protection of creditors and minority shareholders of the subsidiary, the discussion in the UK<sup>124</sup> largely fails to notice another impact of the corporate group that will be dealt with in the next chapter.

## II. The focus

### A. Introduction

#### 1. The emergence of the “new” approach

This impact is one of the main themes of recent legal discussion about corporate groups in Germany<sup>125</sup>. The issue was already considered in 1902<sup>126</sup> and has been discussed by various scholars since<sup>127</sup>. However, Prof. M. Lutter and his disciples are credited for the “legal discovery of the 1970s”<sup>128</sup> as they drew drawing general attention to this approach<sup>129</sup>. Partly followed by

<sup>121</sup> As Farrar, n 2 supra, 536 seems to conclude.

<sup>122</sup> See Yeung, *Corporate Groups: Legal Aspects of the Management Dilemma*, [1997] LMCLQ 208, 209 et seq.

<sup>123</sup> Yet this approach is common to most legal systems, but the necessary degree of intervention is different. See Dorresteijn, n 5 supra, 211.

<sup>124</sup> But also in other countries, see infra, III.A.

<sup>125</sup> See Emmerich/Sonnenschein, n 3 supra, 17, 72-7 and 88-90 for a survey.

<sup>126</sup> Decision of the Reichsgericht in HoldheimsMS 11 (1902), 266 and 12 (1903), 197 (200).

<sup>127</sup> For example Filbinger, *Die Schranken der Mehrheitsherrschaft im Aktienrecht und Konzernrecht*, 1942, 30-1; Mestmäcker, *Verwaltung, Konzerngewalt und Rechte der Aktionäre*, 1958, 97.

<sup>128</sup> Kropff, *Zur Konzernleitungspflicht*, ZGR 13 (1984), 112.

<sup>129</sup> Particularly Lutter, *Zur Binnenstruktur des Konzerns*, in: Festschrift für Westermann, 1974, 347 et seq.; Hommelhoff, *Die Konzernleitungspflicht - Zentrale Aspekte eines*

the Bundesgerichtshof (BGH) in the landmark “Holzmüller” decision in 1982<sup>130</sup>, the wide-ranging implications are considered by countless publications<sup>131</sup>. The basic principles of the decision, however, are still far from being agreed upon by courts<sup>132</sup> and legal scholars<sup>133</sup>.

The particular feature of this approach is the shift of attention from the subsidiary towards the parent company. A strict application of company law rules tailored to the single entity causes a disruption of the legal status of the parent’s shareholders and an enhanced scope of the legal powers of its management. To find a remedy for these shortcomings is the purpose of this approach.

## 2. An illustration of the approach: the hivedown of a company’s business

An example<sup>134</sup> may illustrate these shortcomings. Suppose P Co is originally a single company active in two different businesses: it trades with forest products but also runs a maritime dock. According to its articles, agreed upon by all present members, the company’s objects are to run those two businesses, but the company may also form, acquire or participate in other companies and transfer the business to such companies. To run the maritime dock represents the overwhelming part of the actual activity, whereas the trading business has significantly lost importance.

Instead of running the two independent businesses as divisions of one company, the directors of P intend to separate them into two companies. Consequently a new company, S Co, is formed and incorporated. Assets and liabilities related to the maritime dock business are transferred from P to S in exchange for all of its shares. The result of this hivedown is a group structure where P as parent company runs the forest

*Konzernverfassungsrechts*, 1982 and Timm, *Die Aktiengesellschaft als Konzernspitze*, 1980.

<sup>130</sup> BGHZ 83, 122 = NJW 1982, 1703.

<sup>131</sup> Numerous as they are, it is difficult to give exhaustive references in this paper. Compare particularly Emmerich/Sonnenschein, n 3 supra, 72, referring to the most important publications.

<sup>132</sup> Compare, on the one hand: OLG Köln, Die AG, 86, 8, *Winterthur/Nordstern*; LG Frankfurt, Die AG 1993, 287 et seq.; OLG München, Die AG 1995, 232; OGH, GesRZ 1984, 217, on the other hand BGHZ 119, 1, 7 = NJW 1992, 2760, *Asea/BBC*; LG Mannheim, Die AG 1991, 29, 30, *SEN*.

<sup>133</sup> Compare particularly Gessler, *Einberufung und ungeschriebene Hauptversammlungszuständigkeiten*, in: Festschrift für Stimpel, 1985, 771 et seq.; Hübner, *Die Ausgliederung von Unternehmensteilen in aktien- und aufsichtrechtlicher Sicht*, *ibid.*, 791ff.; Lutter, *Organzuständigkeiten im Konzern*, *ibid.*, 825, more critical publications such as Martens, *Die Entscheidungsautonomie des Vorstandes und die Basisdemokratie in der Aktiengesellschaft - Anmerkungen zu BGHZ 83, 122 (“Holzmüller”)*, ZHR 147 (1983), 377; Werner, *Zuständigkeitsverlagerung in der Aktiengesellschaft durch Richterrecht?*, ZHR 147 (1983), 429 and the discussion of Westermann and Heinsius, *Organzuständigkeit bei Bildung, Erweiterung und Umorganisation des Konzerns*, ZGR 1984, 352 and 385.

<sup>134</sup> The example is based on the *Holzmüller* decision, n 134 supra. For an English note see Buxbaum, *Extension of Parent Company Shareholders’ Rights to Participate in the Governance of Subsidiaries*, AJCL 31 (1983), 511.

trading business and holds the shares in the wholly-owned subsidiary S running the maritime dock business.

X, a shareholder of P Co, is not satisfied with the hivedown by which the main profit centre of P had been transferred out of "his" company. He argues that the company's management had no power to decide such fundamental change of the corporate structure without the consent of the general meeting.

Moreover, he claims that the new structure involves a shift of decision power from P's general meeting to its board. X believes that the new structure enables the directors of P to circumvent the general meeting's right to decide on certain matters. He therefore argues that all decisions requiring a general meeting's resolution in a single company should be "passed-through" to the general meeting of the parent company if they were to be taken in the wholly-owned subsidiary.

### 3. The peculiarities of the approach

The arguments of X illustrate the difference to the issues related to minority shareholders in or creditors of a subsidiary who are prejudiced because of the detrimental influence of the parent<sup>135</sup>. Here we face the impact of the group structure on the allocation of power within the (future) parent company<sup>136</sup>. This impact is not confined to its minority shareholders, but concerns the general meeting as a body. Even if X was the only shareholder of P Co, the arguments would not change - although he will then obviously have means to influence the situation to his favour<sup>137</sup>.

The example illustrates that the arising questions are twofold<sup>138</sup>. First, does the management of a company have the power to transform a single company into a parent company or should the general meeting be involved in such decision? This limb of the approach focuses on the formation of the corporate group and is called "Konzernbildungskontrolle" in German<sup>139</sup>.

The second limb is concerned with the already existing group structure. Who has the power to take an important decision in the subsidiary? Provided that such decision is vested in the subsidiary's general meeting, who decides about the vote of the parent company as shareholder? This is the second limb's concern, referred to as "Konzernleitungskontrolle" in German<sup>140</sup>, which considers managing and controlling the existing group.

## B. "Konzernbildungskontrolle"

Prior to examine the issues of the first limb in more detail, the basic principles of the division of power between the board of directors and the general meeting in German public limited company law require some explanation<sup>141</sup>.

### 1. The principles of division of power according to the AktG

The relationship between board and meeting is governed by mandatory provisions of the Aktiengesetz (hereafter AktG) and must not be altered by the company's articles<sup>142</sup>. According to §119(1), the general meeting's power to decide is restricted to cases expressly provided for<sup>143</sup>. The board of directors, on the other hand, has extensive powers to manage the company under their own responsibility according to §76(1) and unlimited authority to bind the company<sup>144</sup>, §78(1) and §82(1). In relation to the company, however, §82(2) imposes a duty to respect the limits set especially by the articles or the general meeting, subject to a relevant competence provided for by the Act.

Hence, the statute provides for a limited power of the general meeting, only competent to decide where such power is expressly conferred to it - and a much wider power of the board, competent in all other cases. This mandatory limitation of the power of the general meeting was introduced by the draftsmen in 1937 to guarantee the independent conduct of business and was maintained in 1965 when a new AktG came into force<sup>145</sup>. Since 1937, the general meeting can thus not be regarded as the supreme organ of the company<sup>146</sup>: it has no power to interfere by particular directions concerning management decisions and the board is autonomous within its own limits of power. The general meeting has no power to elect or dismiss the board<sup>147</sup>, but it is the only body competent to alter the articles<sup>148</sup>.

### 2. Is the general meeting competent to decide on the hivedown?

X's first argument would succeed if there was a competence for the general meeting to decide on the hivedown. Such competence might arise on different grounds.

<sup>135</sup> See supra, Chapter I.

<sup>136</sup> See Galgano, *The Allocation of Power and the Public Company in Europe*, in: Drury/Xuereb, n 52 supra, 85, for a comparative view on this allocation in the single company and, for its impact on corporate governance, Buxbaum, *The Internal Division of Powers in Corporate Governance*, 73 CalLR (1985), 1671.

<sup>137</sup> E.g., by changing P Co's articles or by dismissing the directors.

<sup>138</sup> Compare Emmerich/Sonnenschein, n 3 supra, 73, and Ebenroth, *Konzernbildungs- und Konzernleitungskontrolle*, 1987.

<sup>139</sup> Most recently Liebscher, *Konzernbildungskontrolle*, 1995, Seydel, *Konzernbildungskontrolle bei der AG*, 1995 and Wahlers, *Konzernbildungskontrolle durch die Hauptversammlung der Obergesellschaft*, 1995.

<sup>140</sup> Particularly Timm, n 133 supra. More recently Mecke, *Konzernstruktur und Aktionärsentscheid*, 1992, 213 et seq.; Mülbart,

*Aktiengesellschaft, Unternehmensgruppe und Kapitalmarkt*, 2nd ed. 1996, 417 et seq.

<sup>141</sup> The third body, the supervisory board, is largely irrelevant for our purposes.

<sup>142</sup> §23(5) and Hueck, n 16 supra, 201.

<sup>143</sup> Particularly the power to elect the members of the supervisory board representing the shareholders, §119(1).

<sup>144</sup> See Hueck, n 16 supra, 211-5 for details.

<sup>145</sup> Hueck, n 16 supra, 201.

<sup>146</sup> See Hopt, *Handels- und Gesellschaftsrecht*, Vol. 2, 4th. ed. 1996, 234 and von Rechenberg, *Die Hauptversammlung als oberstes Organ der AG*, 1996.

<sup>147</sup> There is however, an indirect influence, see infra, III.B.1.

<sup>148</sup> Hueck, n 16 supra, 203.

First, X might claim a violation of the object clause. Albeit such violation does not make the hivedown invalid - there is no ultra-vires doctrine in German company law - the approval of the general meeting is, according to §82(2), nonetheless required for transactions with the result of the company's activities no longer complying with its object clause. Where the object clause provides only for running a certain business which is then hived down to a subsidiary, it is debated whether this "indirect way" of carrying on the business would still be covered by such an object clause<sup>149</sup>. The objects of P Co, however, include the forming, acquiring or participating in other companies as well as transferring the business to such companies<sup>150</sup>. Notwithstanding the mentioned discussion, at least the present hivedown does not violate P's object clause<sup>151</sup>.

X might, secondly, argue that the hivedown falls under §179a AktG<sup>152</sup> requiring the general meeting's approval for the transfer of all assets. But even if the maritime dock represents the overwhelming part of the company's actual commercial activities, the second business of forest trading including the relevant assets remain within the company. The Bundesgerichtshof decided that the provision does not apply if the company is, after the transfer, still able to carry on the business activities as stated in the object clause, even if only on a limited scale<sup>153</sup>. Therefore, a transfer of nearly all assets does not require as such the shareholders' approval. The second argument will fail.

Thirdly, X will argue that, apart from §179a AktG, there are plenty of other provisions requiring a shareholders' approval for decisions similarly implementing structural changes. He will enumerate the formation of a corporate group by contract (§293 AktG), the so-called integration (§319(2) AktG) and especially the hivedown of an undertaking as a whole according to §§123(2), 125 and 13(1) Umwandlungsgesetz of 1995 (Companies Restructuring Act, hereafter UmwG)<sup>154</sup>. But none of those provisions covers exactly the hivedown as it was carried out by the directors of P Co. Nonetheless, most authors argue that the general meeting should be

competent by analogy to the mentioned provisions<sup>155</sup>. According to the basic principles of German jurisprudence, however, an analogy to statutory provisions requires that there is a gap in the legislation contrary to the draftsmen's intention<sup>156</sup> - they must have "forgotten" to provide for the respective case. But the problem as arising in our example had already been discussed long before the enactment of the AktG in 1965<sup>157</sup>, and a discussion thereon can even be found in preparatory materials for a statute on a related subject enacted a couple of years earlier<sup>158</sup>. Even when the mentioned UmwG was enacted more than a decade after the *Holz Müller* decision, the legislator declined to include any provision for exactly that form of hivedown as opposed to earlier drafts of the Act<sup>159</sup>. Consequently, this reluctance must have been on purpose and to draw such analogy is in breach of legal methodology. Therefore, this argument will therefore fail.

As a conclusion, the general meeting of P Co seems not to be competent to decide - bad luck for X?

### 3. The first limb of the *Holz Müller* doctrine

The provision §119(2) provides that the general meeting may only decide management decisions if they are submitted by the board. Whether or not to submit such a question had hitherto been regarded as in the discretion of the board, due to the provision's wording, its function to enable ratifications of breaches of directors' duties and its effect to exclude a respective directors' liability according to §93(4) AktG<sup>160</sup>. Consequently, one would suppose that P's board has the possibility, but no obligation whatsoever to submit the hivedown decision to the general meeting.

In the famous *Holz Müller* case, based on similar facts, the Bundesgerichtshof ruled, however, that the board had no discretion, but was obliged to submit the decision to the shareholders. "There are, however, fundamental decisions, that, though formally within the power of the board to bind the company, within their power to manage the company's business subject to §82(2) and within the wording of the articles, have such a thorough impact on the membership rights of the shareholders as well as on their property rights embodied in their share capital that the board of directors may not reasonably assume to be competent to take those decisions on their own responsibility without participation of the general meeting"<sup>161</sup>.

<sup>149</sup> Supporting this approach: Hirte, *Bezugsrechtsausschluss und Konzernbildung*, 1986, 159; Lutter, n 137 supra, 846 et seq.; Rehlinger, *Ausgründung und Erwerb von Tochtergesellschaften und Rechte der Aktionäre*, 1982, 433 et seq.; Timm, n 133 supra, 89 et seq.; Westermann, n 137 supra, 360 et seq. Opposing: von Rechenberg, n 150 supra, 82; Götz, *Die Sicherung der Rechte des Aktionärs der Konzernobergesellschaft bei Konzernbildung und Konzernleitung*, AG 1984, 85, 90; Hommelhoff, n 133 supra, 267 et seq.

<sup>150</sup> In the *Holz Müller* case, such a wide object clause was adopted only some months before the hivedown - with the consent of the complaining shareholder! See BGHZ 83, 122, 123.

<sup>151</sup> BGHZ 83, 122, 128 et seq.

<sup>152</sup> Formerly §361.

<sup>153</sup> BGHZ 83, 122, 129.

<sup>154</sup> The latter provisions were not yet in force at the time of the *Holz Müller* decision. They would have had no impact on the decision, because assets and liabilities were transferred - like in our example - but not the undertaking or part of it as a whole as provided for in the UmwG. For details see Feddersen/Kiem, *Die Ausgliederung zwischen "Holz Müller" und neuem Umwandlungsrecht*, ZIP 1994, 1078.

<sup>155</sup> For example Hübner, Martens and Westermann, n 137 supra.

<sup>156</sup> Larenz, *Methodenlehre der Rechtswissenschaft*, 6th ed., 1991, 370.

<sup>157</sup> See n 130 and 131 supra.

<sup>158</sup> See the preparatory material for the Gesetz gegen Wettbewerbsbeschränkungen enacted in 1957: *Josten-Entwurf*, 1949, 55 et seq.

<sup>159</sup> Compare *Diskussionsentwurf zum UmwG*, 1988 and Schmidt, *Wider eine "lex Holz Müller"*, in: Festschrift für Heinsius, 1991, 715, 728 et seq.

<sup>160</sup> Wahlers, n 143 supra, 168; Liebscher, *ibid.*, 78; Martens, n 137 supra, 383 et seq.

<sup>161</sup> BGHZ 83, 122, 131.

This is the first limb of the *Holz Müller* doctrine. It is subject to the harshest criticism, less for its result, but foremost for the reasoning: most authors claim that §119(2) does not provide for any obligation of the board and argue that the result should be based on the mentioned analogy<sup>162</sup>. We will come back to the underlying concepts of those arguments. Yet two clarifications as to the scope of the decision need to be made. First this limb of the *Holz Müller* doctrine is not confined to corporate group issues. The above citation underlines that every fundamental decision might be subject to the doctrine, regardless whether concerning the formation of a group. Whether the rule applies to a particular decision is difficult to determine, if it is not unpredictable: what decisions are fundamental? And which fundamental decisions have a sufficient impact on shareholders' rights to fall under the rule?<sup>163</sup>

Even if the first limb of the *Holz Müller* rule does therefore not only apply in situations where a corporate group is formed, it does, secondly, not always apply in such situations. Obviously there is no need for the rule where the general meeting is competent on other grounds, for example where a hivedown violates the object clause, involves the transfer of all assets or is carried out by virtue of the UmwG. But even if none of those provisions is applicable, the *Holz Müller* rule will still not apply to all remaining measures resulting in a corporate group structure<sup>164</sup>. For instance, the hivedown of the company's canteen will hardly ever represent a fundamental decision with an important impact on shareholders' right.

Decisions concerning the structure of corporate groups are nonetheless the foremost application of the first limb of the *Holz Müller* rule, regardless whether the (future) parent hives down part of its business to a subsidiary or acquires or sells the participation in a subsidiary. The fundamental character of most such decisions can only be appreciated by considering their wide-ranging consequences, subject of the second limb of the second limb of the *Holz Müller* doctrine.

### C. "Konzernleitungskontrolle"

We remember X's argument that such structure involves a shift of decision powers from P's general meeting to its board and that he therefore demands a "pass-through" of all decisions in the subsidiary requiring a resolution of the latter's general meeting. This reasoning requires some illustration, first concerning the general idea and then in respect of a specific scenario.

#### 1. General idea

After the hive-down, P owns all shares in S. Due to further decline in the forest products sector, all substantial economic activity is carried on in the

subsidiary, whose business of running the maritime dock flourishes. Every decision that has to be taken in S Co will - according to the division of power outlined above - be taken by S's own board, unless any provision vests the power to decide in S's general meeting.

If such provision applies, who votes in S's general meeting and will therefore effectively take the decision? P's board, on the grounds of its power to manage the company, or P's general meeting, on the grounds that it would have power to decide if the decision was taken in a single company? There is however no express provision vesting this power in P's general meeting and voting for held shares seems to be part of the board's competence to manage the company's business. Consequently, all the decisions in S Co - and, the substantial activity of the group being carried on in this company, mainly all of the group's decisions - will be taken either by the subsidiary's own board or by the parent's one. Hence, the strict application of the statutory competence rules circumvents the decision power of the parent's general meeting, weakening the legal position of its shareholders<sup>165</sup> - albeit economically, the situation in this group resembles a single entity: "Important decisions are in this fashion transferred along with the transferred asset from the parent to the subsidiary."<sup>166</sup>

#### 2. The increase of share capital

The example of an increase of S Co's share capital reveals harsh consequences of this problem. Say S has a share capital of 500 Euro (500 shares of 1 Euro) and reserves of 500 Euro. The general meeting of S Co decides a capital increase (all the votes casted by the board of the parent) to 1000 Euro by issuing another 500 shares<sup>167</sup>. By special resolution it is decided that the new shares in S Co shall not be allotted to P Co, but to outside investors<sup>168</sup>. Such misapplication of P Co's pre-emption rights will result in S Co no longer being a wholly owned subsidiary and in P Co's stake dropping down to 50%. The dilution of its shareholding implies an important decrease of P Co's influence in the subsidiary. The control over P Co's former business activities is, by virtue of that second step, not only out of reach of P Co's shareholders, but even out of the company's reach - without, in principle, any involvement of P Co's general meeting at all. If the new shares are issued at 2 Euro (equalling the market price), the sum of share capital and reserves will amount to 2000 Euro. The value of P Co's shareholding will remain unchanged at 1000 Euro. But if the issue had been made at a price below market price, the shareholders would even suffer a loss in value. For instance, an issue at par value of 1 Euro would result in a decrease in value of P Co's main asset to 750 Euro.

<sup>162</sup> Compare the references n 137 supra.

<sup>163</sup> Heinsius, n 137 supra, 390 et seq. and Werner, *ibid.*, 433 et seq.

<sup>164</sup> See particularly Wahlers, n 143 supra, 199 et seq.; Ebenroth, n 142 supra, 48 and Mecke, n 144 supra, 57.

<sup>165</sup> BGHZ 83, 122, 142.

<sup>166</sup> BGHZ 83, 122, 137.

<sup>167</sup> See §182(1) AktG and ss80(1), 121(4) CA.

<sup>168</sup> Such allotment as if the pre-emptive basis did not apply requires a special resolution, §182(1) AktG and s95(1) CA.

Within a single company, the shareholders' pre-emption rights prevent such detrimental share issues and can only be removed by a special resolution. The example shows that this mechanism, tailored to the single entity, does not provide protection for the shareholders of the parent in case of a capital increase in the subsidiary<sup>169</sup>.

### 3. The second limb of the *Holz Müller* doctrine

Should therefore all decisions that would require a general meeting's resolution in a single company be "passed through" to the general meeting of the parent company if they were to be taken in the wholly owned subsidiary?

In the *Holz Müller* decision, the Bundesgerichtshof answered as follows: "Where the board of directors had transferred the most valuable part of the company's assets to a wholly owned subsidiary formed for this purpose, the parent company is under an obligation to every shareholder to obtain a resolution of its own general meeting concerning increases of the share capital of the subsidiary at a majority that would be necessary for such a measure in the parent company itself"<sup>170</sup>. Hence, the court decided in favour of such pass-through, at least under certain circumstances. Yet two observations need to be made concerning this second limb. First, the reasoning differs from the one in the first limb<sup>171</sup>: here, the Bundesgerichtshof argues that there is a gap in the statutory competences vested in the general meeting. The general meeting is given an "unwritten competence" to decide on the matter, which presents a real departure from the hitherto mandatory division of power described above and is conceptually rather different from the approach in the first limb, based on a duty of the directors to submit the decision to the general meeting. Secondly, many questions were left open by the court, particularly which decisions have to be passed through. The rule is not restricted to share issue decisions<sup>172</sup>. However, it was held that not every question to be decided by the subsidiary's general meeting had to be passed through, minor amendments of the articles for example being excepted<sup>173</sup>. Furthermore, it was left open whether the reasoning would change had there been prior approval of the hive-down<sup>174</sup>. Hence, the scope of the second limb is unclear<sup>175</sup>.

### D. The different concepts of the approach

Instead of discussing further ramifications, we will examine the judgement's underlying concept which

differs to an important extent from the one proposed by Lutter.

### 1. The concept of the court: a protective mechanism

Regardless of the different legal reasoning in the two limbs of the *Holz Müller* decision, there is one common, underlying theme. It is discernible in the first limb, where only those fundamental decisions with sufficient impact on the shareholders' rights have to be submitted and also in the second limb where not all decisions have to be passed-through. The criterion is always a possible impact on the shareholder's legal position, on his rights as a member of the company. In the second limb, this impact is direct and immediate: the pre-emptive right of the parent's shareholders, for example, is undermined by the share issue as such. Albeit the decisions examined in the first limb do not have such direct and immediate impact they are nonetheless the basis for a later undermining of the shareholders' position by decisions of second-limb-type. Hence, the whole reasoning of the court is based on a possible impact on shareholders' rights<sup>176</sup>. Consequently this approach aims to provide a protective mechanism (insofar similar to the mechanisms described in Chapter I), in this case for the benefit of the parent's shareholders.

### 2. The concept of Lutter: the organisational approach

A fundamentally different concept underlies the approach of the Lutter School, which the court considered but declined to comment<sup>177</sup>.

The group is regarded as a functional unit of several legal entities. Such functional unit or "corporatio sui generis"<sup>178</sup> is a business organisation in itself and raises similar questions as normal companies - it has to be founded, financed, managed and supervised, it has to resolve internal conflicts of interests between its members and finally it has to be dissolved<sup>179</sup>. Yet the corporate group as a legal phenomenon is claimed to blast the rules of traditional company law<sup>180</sup> - as, for example, but not only, in the *Holz Müller* scenario. Hence jurisprudence is attributed the task to prepare rules specifically tailored to the functional unit of the corporate group - instead of applying the rules of general company law that this academic school regards as unable to cope with the phenomenon<sup>181</sup>.

When trying to develop such rules for the decision-making of the group, Lutter refers to general "principles of the private organisational law"<sup>182</sup>,

<sup>169</sup> Compare particularly Hirte, n 153 supra, 184 et seq.; Martens, n 137 supra, 412 and Westermann, *ibid.*, 375.

<sup>170</sup> BGHZ 83, 122.

<sup>171</sup> Hopt, n 150 supra, 299.

<sup>172</sup> BGHZ 83, 122, 138 et seq.

<sup>173</sup> *Ibid.*, 140

<sup>174</sup> *Ibid.*, 122.

<sup>175</sup> See Heinsius, n 137 supra, 397, Martens, *ibid.*, 405 and Werner, *ibid.*, 434.

<sup>176</sup> Lutter, n 137 supra, 834.

<sup>177</sup> BGHZ 83, 122, 138.

<sup>178</sup> Lutter, n 137 supra, 827.

<sup>179</sup> Lutter, *The Law of Groups of Companies in Europe: A Challenge for Jurisprudence*, in: Forum Internationale, (1983) I n 1, 11.

<sup>180</sup> *Ibid.*, 9.

<sup>181</sup> *Ibid.*, 13.

<sup>182</sup> Lutter, n 137 supra, 826 et seq.

arguing that in every private organisation whatsoever, four categories of competences have to be distinguished<sup>183</sup>:

*the competence to manage*  
*the competence to control*  
*the competence to account*  
*the competence to take fundamental decisions that*  
*“for reasons whatsoever are beyond the ‘management*  
*of the company”*<sup>184</sup>

Those categories are then applied to the corporate group, in order to furnish this functional unit with a pattern of internal organisation<sup>185</sup>. The first three categories are attributed as follows: management and control are within the competence of the board of directors of the parent company. The accounting is vested in the management bodies of each subsidiary and the parent company. The question remaining is “who, within this corporate group is vested with the fundamental decisions, hence who decides on its formation, enlargement, restructuration and liquidation”<sup>186</sup>.

Lutter points to the shareholder meeting of the parent as competent body<sup>187</sup>. In organisations such as the partnership or the private limited liability company - and, to some extent also the public company - the members’ meeting is considered as the competent body to decide upon such fundamental decisions. Albeit not provided by the draftsmen, it is argued that one should regard such attribution as a principle of every private organisation and therefore applicable to the corporate group as well<sup>188</sup>. Hence, the general meeting of the parent company has the function of a “supreme body” of the corporate group, responsible for all fundamental decisions within the group.

### E. Why “organisational law” of the “polycorporate enterprise”?

The latter approach overcomes the protectionist concerns of the traditional law of corporate groups and has a broader, though debatable concept<sup>189</sup>. Whereas the former approach tried to protect different stakeholders in the corporate group, this concept regards the group as one functional unit and looks for an organisational, institutional framework for this unit.

That explains the title of this paper: First, the term “organisational law” is to be understood in the sense of rules providing for an internal organisation structure of

the corporate group<sup>190</sup>. To determine such structure, to attribute powers to the group’s bodies becomes an end in itself, no longer aiming to provide for a protective mechanism. This approach is not restricted to the separation of powers of management and owners, but also tries to find a “group interpretation” of the functions of all the different bodies within this group<sup>191</sup>.

Secondly, the approach does no longer consider the corporate group as the sum of independent companies, but as an independent, autonomous body<sup>192</sup>, itself attracting interest as a legal phenomenon rather than the elements it is composed of. 35 years ago, Ludwig Raiser called this functional unit a “poly-corporate association”<sup>193</sup>, which is an excellent description underlining both the unity and the diversity of such a functional unit<sup>194</sup>. “Poly-corporate” stands for the diversity, due to the multiple companies - still legal entities - that it is composed of. The companies resemble atoms, capable to form a complex structure, a molecule, if grouped together<sup>195</sup>. This molecule is regarded as different from its composing atoms, revealing a uniform structure as functional unity. “Association” stands for this unity, a consequence of the economic reality that groups are being led as one business organisation<sup>196</sup>. To avoid any impression of equal partnership between its members (that might arise by using the term “association”), which is absent within such groups, often organised like a hierarchy, the present writer chose the term “enterprise” instead.

The time is ripe to trace such “organisational law of the polycorporate enterprise” in various legal systems - a task that Lutter himself strongly supports: “There is barely another field of law that is better suited for a common European development by jurisprudence than the law of groups of companies, since groups of companies are realised to a great extent across the barriers of national borders; no national legislation has yet found a complete system but in all of them we can find fruitful approaches, which can be put together to a *Ius Commune Europae* of groups of companies”<sup>197</sup>.

### III. In search of traces in other jurisdictions

Curious to trace those fruitful approaches, we will first look for comparable legal discussion and then focus our research on one particular, but crucial aspect of the

<sup>183</sup> Ibid., 830.

<sup>184</sup> Ibid.

<sup>185</sup> Ibid., 830-5.

<sup>186</sup> Ibid., 832.

<sup>187</sup> Ibid., 833.

<sup>188</sup> Lutter, n 183 supra, 20.

<sup>189</sup> See Theisen, *Der Konzern: betriebswirtschaftliche und rechtliche Grundlagen der Konzernunternehmung*, 1991, 115 and Schneider, *Der Konzern als Rechtsform für Unternehmen - Zum Regelungsgegenstand eines Konzernverfassungsrechts*, in: Mestmäcker/Behrens, *Das Gesellschaftsrecht der Konzerne im internationalen Vergleich*, 1991, 563 distinguishing possible conceptual approaches of a law of groups of companies.

<sup>190</sup> For the wide-ranging policy and legal implications of such approach see Amstutz, *Konzernorganisationsrecht - Ordnungsfunktion, Normstruktur, Rechtssystematik*, 1993 and Ehrlicke, *Gedanken zu einem allgemeinen Konzernorganisationsrecht zwischen Markt und Regulierung*, ZGR 1996, 300.

<sup>191</sup> See Emmerich/Sonnenschein, n 2 supra, 90 with further references.

<sup>192</sup> Lutter, n 183 supra, 11 and Schneider, n 193 supra, 568 et seq.

<sup>193</sup> See Raiser, *Die Konzernbildung als Gegenstand rechts- und wirtschaftswissenschaftlicher Untersuchung*, in: Raiser et al. (eds.), *Das Verhältnis der Wirtschaftswissenschaft zur Rechtswissenschaft, Soziologie und Statistik*, 1964, 51, 4.

<sup>194</sup> See Bälz, *Einheit und Vielheit im Konzern*, in: Festschrift für Raiser, 1974, 287 and also Antunes, n 2 supra, 158 et seq.

<sup>195</sup> Lutter, n 183 supra, 11.

<sup>196</sup> See Mestmäcker, n 131 supra, 303 et seq. and, with qualifications, Yeung, n 126 supra, 209 et seq.

<sup>197</sup> Lutter, n 183 supra, 34.

organisational law of the polycorporate enterprise, the “Konzernbildungskontrolle”. We will consider which body of the company is competent to take what will simply be called ‘fundamental decisions’ from now on: decisions of fundamental structural changes, such as the transformation into a future holding company or the acquisition or sale of important participations.

### A. In search of a comparable legal discussion

However, this search seems disappointing. Apart from Austria<sup>198</sup> and Switzerland<sup>199</sup>, any discussion in this respect is virtually absent. In the US, an interesting article was published by Eisenberg<sup>200</sup> as early as 1971, later included in his book “*The Structure of the Corporation*”<sup>201</sup>. Since then, the issue seems to be forgotten. In Britain, Prentice<sup>202</sup> became aware of the problems and underlined the importance of dealing with them: “failure to do so would result in shareholder control being circumvented where a company carried on its business through subsidiaries”<sup>203</sup>. His discussion, hardly covering two pages, dates back to 1982 - the problems have apparently never been tackled again in the UK. In France, finally, despite some interesting approaches to the problems of corporate groups<sup>204</sup>, the distortions in the parent seem to be overlooked - with exceptions to which we will return later.

But our disappointment gives rise to new questions: why are those problems not discussed? Are they overlooked, not existing or already solved?

### B. In search of the power to decide on “Konzernbildung”

We try to find answers by considering the competence to take fundamental decisions, a consideration which is, according to the *Holz Müller* doctrine, not necessarily confined to the group context. Determining such competence requires to examine the relationship between general meeting and the board.

#### 1. The division of power

Under UK law the articles determine the relationship and confer certain powers of management to the board<sup>205</sup>. The conceptual difference to the German view of the company is striking: the “organisational law” even of the single entity is not governed by mandatory rules but determined by the company’s articles. The company is regarded as an organisation constituted by

the contract between its members<sup>206</sup>. The conception of the company is contractual - and not institutional<sup>207</sup>. However, the immediate outcome is less different than one might suppose: normally, art. 70 of Table A applies, unless any other form of management article is expressly adopted<sup>208</sup>. It states: “Subject to the provisions of the Act, the memorandum and the articles and to any directions given by special resolution, the business of the company shall be managed by the directors who may exercise all the powers of the company”. On that basis, an extensive power to manage is conferred to the board with which the general meeting can only interfere by special resolution or alteration of the articles - both requiring a 3/4 majority<sup>209</sup>. Despite the contractualist conception, the division of power is strict: “If powers of management are vested in the directors, they and they alone can exercise these powers”<sup>210</sup>. One might argue that the general meeting is nonetheless in a better position than its German counterpart, for it has the power to dismiss its board of directors by ordinary resolution<sup>211</sup>, whereas in Germany this power is formally vested in the supervisory board<sup>212</sup>. In practical terms, however, there is not much difference: if the German general meeting resolves that the directors have lost their confidence, those will regularly be dismissed as well, given that such resolution is a statutory reason for dismissal<sup>213</sup> and, particularly, that the members of the supervisory board representing the shareholders can in turn be dismissed by the general meeting<sup>214</sup>.

The general meeting’s competence under US company laws resemble the UK’s contractual model, but directors are normally removable only for good cause shown<sup>215</sup>. In France, the model is conceptually closer to the German one: the “conseil d’administration” is vested with the most extended powers to act for the company by a statutory provision<sup>216</sup>. However, there is also a contractualist feature: the articles can stipulate that particularly dangerous or important measures need the general meeting’s approval<sup>217</sup>. One should also note that the provision does not contain the specification “powers of management”, which was repealed in 1967, because of doubts whether such specification covers certain

<sup>198</sup> OGH Wien, AG 1996, 382.

<sup>199</sup> In great detail Amstutz, n 194 supra.

<sup>200</sup> Eisenberg, ‘*Megasubsidiaries: The Effect of Corporate Structure on Corporate Control*’, 84 HLR (1971), 1577.

<sup>201</sup> Eisenberg, 1976.

<sup>202</sup> Prentice, n 48 supra, 126-8.

<sup>203</sup> *Ibid.*, 127.

<sup>204</sup> See particularly Hannoun, ‘*Le droit et les groupes des sociétés*’, 1991 and Pariente, ‘*Les groupes des sociétés*’, 1993.

<sup>205</sup> *Automatic Self-Cleansing Filter Syndicate Co. Ltd v Cuninghame* [1906] 2 Ch 34

<sup>206</sup> Stokes, ‘*Company Law and Legal Theory*’, in: Wheeler (ed.), n 8 supra, 90.

<sup>207</sup> For the wider effects of this conceptual difference, see Albert, ‘*Capitalism against Capitalism*’, 1993, drawing the distinction between the “neo-American” and the “Rhine” model, the latter featuring a richer institutional framework.

<sup>208</sup> S8(2) CA. For companies registered before 1 July 1985, art 80 of the 1948 Table A applies. The different wording has no impact on the reasoning in the present paper. For details, see Farrar, n 2 supra.

<sup>209</sup> See ss9(1), 378(2) CA.

<sup>210</sup> *John Shaw & Sons (Salford) Ltd v Shaw* [1935] 2 KB 113 at 134.

<sup>211</sup> §303(1) CA.

<sup>212</sup> §83(3) AktG.

<sup>213</sup> See again §83(3) AktG and Hueck, n 16 supra, 202.

<sup>214</sup> §103(1) AktG. It should be noted that such dismissal requires a ¾ majority unless otherwise provided by the articles.

<sup>215</sup> See Eisenberg, n 205 supra, 2 for further references.

<sup>216</sup> Art. L. 98, Law n. 66-537 of 24 July 1966.

<sup>217</sup> Merle, n 16 supra, 435-6.

fundamental decisions<sup>218</sup>. This is interesting: even where doubts about the respective competence of the board had arisen in other countries, this question of wording is never considered. Under current French law, it is beyond doubt that the board of directors has, in principle, such competence.

Notwithstanding the important conceptual differences, we can conclude that X would be in a similarly unsatisfactory position had the hivedown taken place in a company with “standard” articles under the law of any of the mentioned jurisdictions - reason enough to consider his arguments.

## 2. Possible arguments against the board's competence

### a) Violation of the object clause

The argument that the structure did no longer comply with the company's object clause for the business being carried on through a subsidiary did not succeed because the clause included, inter alia, the participation in other companies carrying on such business. In the absence of such clause, however, the hivedown would presumably<sup>219</sup> violate the articles<sup>220</sup> and require prior modification by the general meeting.

In the UK, such clause is equally necessary: “Were it not for the practice of conferring express powers on companies to acquire shares in other companies [...], it would not be possible for one company to be the holding company of another”<sup>221</sup>. In those states of the US that have adopted the respective provision of the Model Business Corporation Act<sup>222</sup>, the power to acquire shares is expressly granted. Otherwise, such authority can be derived from the implied powers of the corporation, unless for the acquisition of shares in companies pursuing different business purposes<sup>223</sup>. In both countries, companies thus regularly have the power to held shares in other companies.

Strictly speaking, this is not yet a reply to the argument that the hivedown violates the object clause because the business is no longer carried on by the company itself, but by its subsidiary. This is not a question about ultra vires, but about whether *not* to pursue an object intra vires could be regarded as contrary to the memorandum. In spite of - or maybe because of - the long and complex history of the ultra vires doctrine in the UK, this question apparently has never given rise to any discussion. The reason might be the object clause's traditional function to limit the company's capacity<sup>224</sup>, as opposed to countries like Germany, where the company is a priori given all powers of a natural person<sup>225</sup>. A director's act not in

accordance with the clause might simply be subject of internal redress. Hence its function is similar to an “internal guideline” for the directors - and it makes little difference whether they decline to do what they are told or whether they do what they are not told to do. Given this difference, the first argument is very unlikely to succeed under UK law.

Rather different is the position under French law: having all powers of a natural person<sup>226</sup>, the company's power to held shares is beyond doubt. It was, however, quite early discussed whether the company may indirectly pursue its objects by acquiring shares in another company and no longer carrying on such business itself. This was accepted by the majority view<sup>227</sup>, implying that, in case of the hivedown, the argument would not succeed. For other fundamental decisions like selling shares in a subsidiary, this might be different. In *Dauphiné Libéré*<sup>228</sup>, it was held that the sale of all shares in the only subsidiary violated the parent's object clause, in spite of an express clause allowing the participation in companies carrying on specified businesses. According to the court, the “real and only” object was the control of that particular subsidiary and could no longer be pursued if those shares were sold. However, in *Bouygues c/ Patrimoine participations*<sup>229</sup>, such sale was held to be consistent with the object clause allowing the “participation of any kind and in any form”. We will return to the latter case, but can already conclude that under French law, even where a company's articles contain such participation clause, the directors cannot automatically assume to have competence to decide on fundamental changes, due to the court's possibly strict approach.

### b) Particular statutory provisions

X's further arguments were both linked to particular provisions vesting certain decisions in the general meeting, provisions which can also be found in other jurisdictions.

First, certain reorganisations are subject to the meeting's approval. In the UK, such approval is required where the business is transferred to another company in the course of a liquidation (s110 IA) or by scheme of arrangement (s425 CA). The former differs from a hivedown in that it involves the winding-up of the transferor company. If the business is transferred by way of scheme of arrangement, particularly by division of a public company according to s425A CA in connection with Sch 15B, the shares of the transferee company in return of which the business is transferred are receivable by the members of the transferor company. Generally, any transfer under those provisions implies that the shareholding of the members of the transferor company changes: instead of

<sup>218</sup> Merle, n 16 supra, 383.

<sup>219</sup> See n 153 supra and the text thereto.

<sup>220</sup> German Law does not distinguish between Articles of Association and the Memorandum as opposed to UK law, where the object clause is contained in the latter, see s2(1)(c) CA.

<sup>221</sup> Pennington, *Company Law*, 7th ed. 1995, 18.

<sup>222</sup> Model B.C.A. §4(g)

<sup>223</sup> Immenga, n 4 supra., 13.

<sup>224</sup> Farrar, n 2 supra, 98.

<sup>225</sup> See, for example, §1(1) AktG and Hueck, n 16 supra, 24-5.

<sup>226</sup> Art. 5, Loi 1966

<sup>227</sup> See, for example, Vanhaecke, *Les groupes des sociétés*, 1962, 38-9 and Baudeu, *Les sociétés liées par une participation en capital*, 1973.

<sup>228</sup> Grenoble 31 may 1983, J.C.P. 1984, II, 20177, note Reinhard.

<sup>229</sup> Trib. com. Paris 28 juin 1982, J.C.P. 1983, II, 20119, note Viandier.

or additional to shares in one company, they end up with shares in another company. This is the fundamental difference to structural changes such as the hivedown, where merely the assets of the company change, consequently not requiring any arrangement between the company and its members<sup>230</sup>. It is the company which ends up with shares in another company instead of its business assets.

The same reason generally prevents the French provisions about “scissions”<sup>231</sup> (divisions) to apply. But there is one interesting peculiarity: according to Art. 387 loi 1966, the transfer of a part of the company’s assets to another company in exchange for shares of the latter receivable by the former - thus including hivedowns - can be made subject to the “scission” provisions by agreement of both companies, then requiring the approval of the transferor company’s general meeting<sup>232</sup>. But even this provision does not help X, because there is no obligation for the board to conclude such agreement.

Secondly, and perhaps to greater benefit for X, provisions require the general meeting’s approval for important changes in the company’s assets, similar to the “transfer of all assets” rule in §179a AktG.

French law contains such provision in art. 396 loi 1966. Albeit apparently only applicable to liquidations, the courts applied the provision in the absence of such liquidation<sup>233</sup> and extended its scope considerably including the transfer of “nearly” all the assets<sup>234</sup>. In *Bouygues c/ Patrimoine participations*<sup>235</sup>, for example, the general meeting was held to be competent on this ground - a striking conceptual difference to the *Holz Müller* decision.

Many American state laws have a statutory “sale of substantially all assets” rule<sup>236</sup>, but it would not apply to a *Holz Müller*-type hivedown for two reasons<sup>237</sup>. The term “sale” refers to transactions resulting in the disposal of the transferor’s interest in the transferred business, whereas the (future) parent retains this interest indirectly<sup>238</sup>. Moreover, not “substantially all” assets were hived down<sup>239</sup>.

No such rule exists in Britain, despite several proposals. Hadden proposed to require shareholders’ approval for all “major disposals or acquisitions, whether by take-over or the purchase of assets, for major investment programmes and for ventures into entirely new spheres of activity”<sup>240</sup> - a very wide formula indeed, reversing much of a company’s

existing allocation of power. Much more restricted was the proposition of the Jenkins Committee in 1962: “Notwithstanding anything in the memorandum or articles of association the directors of a company should not be able without the specific approval of the company in general meeting to dispose of the whole or substantially the whole of the undertaking or assets of the company”<sup>241</sup>. It was argued that the function of the board is to manage the shareholders’ business, not to dispose of it<sup>242</sup>. Still, neither proposition would cover the hivedown, for the reasons given for the American rule - as opposed to another provision that the Jenkins Committee considered - but not recommended - for “fundamental changes (within the scope of the company’s existing objects clause)”<sup>243</sup>. Striking is the similarity to the formula used by the Bundesgerichtshof, but also the clarity with which such proposal was rejected, mainly for the difficulty to define its boundaries: “A man who has never made anything but saddles to go on horse’s back decides one day that he wants to make seats for motor-cars; is that a fundamental change, or is it not?”<sup>244</sup>

At least under current UK law, X’s arguments would therefore fail. There is less room for doubt about the board’s power to take a fundamental decision than under German law. We remember, however, that the Bundesgerichtshof based the requirement of the shareholders’ approval on another ground.

### C. In search of restrictions on such power

It was held that even within its competence, the board must, under certain circumstances, submit a decision to the general meeting: “[...] the board of directors breaches its duty of care if it does not make use of the possibility of §119(2) AktG”<sup>245</sup>, providing that the general meeting may only decide on management questions if asked to do so by the board.

#### 1. Directors’ duties

This argument, almost unanimously rejected in Germany<sup>246</sup>, invites us to consider directors’ duties as a mechanism to restrict the power of the board to take fundamental decisions. This idea is supported by a distinguished French scholar strongly criticising that *Bouygues c/ Patrimoine participations*<sup>247</sup> was decided on the grounds of a lack of competence rather than on the grounds of a breach of a “duty of loyalty”<sup>248</sup>. Courts and scholars in France and in Germany have apparently

<sup>230</sup> Compare the wording of s425(1) CA.

<sup>231</sup> As defined in art. 371(2) loi 1966.

<sup>232</sup> Merle, n 16 supra, 693-4.

<sup>233</sup> Trib. com. Paris 28 juin 1982, J.C.P. 1983, II, 20119, critically noted by Viandier.

<sup>234</sup> T. com. Paris, 2 mai 1989, J.C.P. 1990, II, 21575, note Marteau-Petit.

<sup>235</sup> N 233 supra.

<sup>236</sup> For example, Cal. Corp. Code §§ 3901-3903; Del. Code Ann. ti. 8 § 271. See Hübner, n 137 supra, 802 for further references.

<sup>237</sup> See Hübner, n 137 supra, 801-4 and Ebenroth, *ibid.*, 75-6.

<sup>238</sup> Eisenberg, n 205 supra, 228.

<sup>239</sup> Ebenroth, n 205 supra, 76.

<sup>240</sup> Hadden, ‘Company Law’, in Archer/Martin (eds.), ‘More Law Reform Now’, 1983, 21, 31.

<sup>241</sup> Report of the Company Law Committee (Cmnd. 1749, 1962), Recommendation 122 (e). See also para 117.

<sup>242</sup> *Ibid.*, para. 117, referring to the Institute of Chartered Accountants in England and Wales.

<sup>243</sup> *Ibid.*, para. 118.

<sup>244</sup> Sir Nutcombe Hume, Chairman of the Company Law Committee of the Federation of British Industries before the Committee. See Minutes of Evidence, 17 March 1961, para. 6460.

<sup>245</sup> BGHZ 83, 122, 131.

<sup>246</sup> See n 168 supra and text thereto.

<sup>247</sup> See n 233 supra.

<sup>248</sup> Note Viandier, *ibid.*, though his arguments relate presumably to the duty to act for proper purposes. See *infra*, III.C.1.

adopted reversed roles - a surprising, somewhat confusing observation. That confusion might stem from a common lack of a doctrine of directors' duties comparable to the British one<sup>249</sup>, which gives continental lawyers "great intellectual pleasure to study its different facets and admire the skill of the judges to adjust it to our present expectations"<sup>250</sup> - and perhaps also a remedy against their confusion!

However, there is presumably no breach of any of the two indicated duties' equivalents under British doctrine. Neither are we concerned with careless conduct which may give rise to a breach of their duty of care and skill, nor with any loyalty conflict such as misuse of the directors' position for personal benefit or a conflict of duty and interest or duty and duty.

The duty to act bona fide in the interest of the company<sup>251</sup> might also be considered, the relevant test being one of honesty, of whether or not the directors acted in what they - and not the court - considered to be in the interests of the company. If their intention is to circumvent shareholders' rights like their potential pre-emption rights such breach might indeed be established, given that the interest of the company also comprises the interests of present and future shareholders<sup>252</sup>. But generally, commercial or tax reasons for the decision will give rise to the directors' honest belief it being in the best interest of the company, prohibiting any argument related to this duty. The duty to act for proper purposes, however, provides objective grounds on which the directors' decision might be reviewed: "[...] an exercise of such a power though formally valid, may be attacked on the ground that it was not exercised for the purpose for which it was granted"<sup>253</sup>. Albeit this duty had often been synthesised with the requirement to act bona fide, recent cases establish the independence of the proper purpose doctrine for the revision of the exercise of directors' powers. It has been said to be the least discussed and the least well understood of the directors' fiduciary obligations<sup>254</sup>, yet it might provide a mechanism to control their power to take decisions of structural change. Still, most cases related to the company's internal composition concern share allotments. To transfer this approach to "Konzernbildungskontrolle" decisions requires some deal of speculation.

## 2. "Konzernbildungskontrolle" via the proper purposes doctrine?

The first consideration relates to the power on which the decision is based. Even though involving

fundamental changes, such decisions are regarded as an exercise of the directors' power to manage the company. This already differs from the share allotments, based on specific powers to allot shares. The greater width of the power makes it more difficult to restrain the directors because of the problem to define the boundaries of such power's proper purposes<sup>255</sup>.

However, it is submitted that such purpose of the power to manage can still be determined. One has to consider the ends or objects which were contemplated by those who granted the power, i.e. the incorporators and, indirectly, the legislator permitting the company to exist<sup>256</sup>. The present writer's view is that the consideration must not be confined to the purposes of the company as stated in the objects clause<sup>257</sup>, but should refer to the particular power in question<sup>258</sup>.

There is a strong argument that the reason for this wide power is to give the board great freedom to conduct the company's business or activity externally<sup>259</sup>. It certainly would be oversimplified to conclude that the purpose is therefore restricted to the exercise of such external powers. But different standards of review are applicable to external and internal powers and the courts are "more willing to intervene when management bothers itself with the composition of the company"<sup>260</sup>. This might also have an impact on the appreciation of whether the purpose to reorganise the company and transform it into a holding is a proper purpose of the power to manage. Particularly where such transformation appears, from an objective viewpoint, to aim at circumventing shareholders' rights, one could imagine that an English court will, one day, consider this to be an improper purpose. This might be a promising avenue for future development of the doctrine of proper purposes. As the law stands, however, many questions are left open: How should the directors' purpose be determined? What are the exact boundaries of impropriety in such cases? Who is entitled to complain? And, if such breach was established for a certain decision, might the same decision be taken with the shareholders' approval? Those questions are beyond the scope of this paper<sup>261</sup>. Still it hopefully raises a new aspect of a potential application of the proper purposes doctrine, underlining the need for further discussions.

## IV. Conclusion

A potential "Ius Commune Europae of groups of companies"<sup>262</sup> is, for two reasons, not likely to develop towards an organisational law of the polycorporate

<sup>249</sup> For France, see Tunc, 'A French Lawyer looks at British company law', (1982) 45 MLR 1, 13.

<sup>250</sup> Ibid.

<sup>251</sup> As established by *Re Smith & Fawcett Ltd* [1942] Ch 304 at 306.

<sup>252</sup> See generally Heydon, 'Directors' Duties and the Company's Interests', in: Finn (ed.) 'Equity and Commercial Relationships', 1987, 120.

<sup>253</sup> *Howard Smith Ltd v Ampol Petroleum Ltd* [1974] 1 AllER 1126, 1132 per Lord Wilberforce.

<sup>254</sup> Nolan, 'The Proper Purpose Doctrine and Company Directors', in: Rider (ed.), 'The Realm of Company Law', 1998, 1.

<sup>255</sup> Farrar, 387

<sup>256</sup> Worthington, 'Directors' Duties, Creditors' Rights and Shareholder Intervention', (1991) 18 Melbourne University LR 121, 4.

<sup>257</sup> Ibid.

<sup>258</sup> Nolan, n 258 supra, 4.

<sup>259</sup> Nolan, *ibid.*, 25

<sup>260</sup> Ibid.

<sup>261</sup> See generally Worthington, n 260 supra and Nolan, n 258 supra.

<sup>262</sup> Lutter, n 201 supra.

enterprise. First, even for the single company no other law provides for such a strict, mandatory institutional framework as German law. The internal division of power is instead, to varying extents, left to the incorporators' discretion. Consequently, no fixed "principles of private organisational law"<sup>263</sup> exist in respect of the attribution of powers to the company's bodies. How and why then develop an institutional framework for the group as a whole, if contractualism reigns over the single company?

Secondly, at least the UK approach to corporate groups is "atomised"<sup>264</sup> in two respects. It is an atomised branch of law because the solutions to group issues are spilled over the whole range of company law, if not even wider. And it is atomised in its approach, focusing on single atoms instead of the whole molecule, on single companies instead of the group. Arguably, it is impossible to reconcile this atomised view with the concept of Lutter, devoted to develop specific rules for the functional unit of the corporate group<sup>265</sup>.

Certainly, the approach of UK law has been strongly criticised: "How can poor old Salomon be expected to cope [...] We speak, teach, litigate and legislate about company law. But predominant reality is not today the company. It is the corporate group"<sup>266</sup>. Despite this criticism, it is submitted that the atomised view does by no means surrender to the reality of the corporate group. On the contrary, general company law offers satisfactory remedies for prejudiced creditors and minority shareholders of the subsidiary<sup>267</sup>.

This position does not imply that the offered solutions satisfy in every regard: no adequate answer is given to the distortions caused by the group phenomenon within the holding company. So far, this question is not even considered, which is a considerable jurisprudential shortcoming.

Nonetheless, this does not urge the need to adopt the concept of the organisational law of the polycorporate enterprise. On the contrary, general company law will be able to cope with the distortions caused by the group structure, if jurisprudence becomes aware and offers solutions by adapting provided mechanisms. As an example, this paper proposed the development of the doctrine of proper purposes to control the considerable power of the board to take the fundamental decision of the formation of a corporate group by hiving down the company's business, a decision which might circumvent important rights of the company's shareholders. The issue equally has an important impact on corporate governance<sup>268</sup>, which will hopefully give rise to critical analysis on the matter, for simplifying policy statements are not sufficient.

This brings us back to the very recent OECD report on corporate governance, already cited at the very beginning. It contains a statement "of the most basic rights of shareholders, which are recognised by law in virtually all OECD countries", the value of which shall be left to the reader's appreciation: "Shareholders have the right to participate in [...] decisions concerning fundamental corporate changes such as [...] extraordinary transactions that in effect result in the sale of the company"<sup>269</sup>.

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<sup>263</sup> Lutter, n 186 supra.

<sup>264</sup> See n 39 supra.

<sup>265</sup> See Teubner, 'Unitas Multiplex - Corporate Governance in Group Enterprises', in: Sugarman/Teubner (eds.), 'Regulating Corporate Groups in Europe', 1990, 67, 85 and 92 et seq. for further critical aspects of the functional unit approach.

<sup>266</sup> Wedderburn, 'Multinationals and the Antiquities of Company Law', (1984) 47 MLR 87, 92.

<sup>267</sup> Compare particularly Ehrlicke, n 194 supra, 324-5.

<sup>268</sup> See Buxbaum, n 140 supra.

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<sup>269</sup> See n 1 supra, 7.

## FINANCIAL SOURCES OF R&D INVESTMENT

*Ester Martínez-Ros and Josep A. Tribó\*\**

### Abstract

This paper explores how firms finance their R&D projects. There are several instruments that can be used, however, due to information asymmetries and the combination of tangible and intangible returns that R&D projects generate, debt-financing is the worst alternative. The novelty of this paper is that it combines aspects of the resource-based view with those of the agency theory. This, in terms of a firm's decision making, is to consider that a firm's R&D investment is, on the one hand, partly determined by its financing resources and, on the other hand, a major determinant of its financial structure. The theoretical hypotheses are supported in the empirical study that makes use of a data sample of Spanish manufacturing firms for the period 1991-99. The main implication for managers that can be extracted from our study is that the most powerful financing incentive mechanism to stimulate R&D effort is to follow a *deep pocket* policy of internal funds accumulation.

**Keywords:** R&D investment, financing instruments, resource-based view, agency theory.

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### 1. Introduction

An important issue in business strategy is how to manage knowledge in order to increase the competitive advantage of companies. On one hand, the traditional is that markets provide incentives as well as external information networks (Freeman, 1991) that drive a firm's search for excellence. On the other hand, a more recent view looks to the firm's fundamentals (resources and capabilities) and the evolution paths it has adopted or inherited (Teece, Pisano and Shuen, 1997) as the core of its competitive strategy. Those firms that have accumulated a higher stock of knowledge are more able to dominate the market (Tidd, Bessant and Pavitt, 1997). This knowledge is integrated into specific organization routines (Pavitt, 1984, Teece, 1986) and innovations that improve a firm's productivity (Kamien and Schwartz, 1975) through better information exchange and communication among employees. Thus, given its importance, a central issue is to investigate the resources necessary to improve the innovation process.

In order to address this problem we should recognize that a firm's investment in innovation is risky due to the uncertain returns (Fleming, 2001) and intangible assets involved (Santarelli, 1991). This has

important implications for the combination of resources that stimulate these investments, and, in particular, those to finance them. This paper focuses on these latter resources, which in our opinion, management literature has not stressed enough the central role that they play in the innovation process. We adopt a two-track approach to investigate this issue. First, the resource-based view (Wernefelt, 1984; Prahalad and Hamel, 1990; Grant, 1991; Peteraf, 1993) sheds light on the design of a firm's financial instruments that stimulate R&D investments. Second, the agency theory approach (Jensen and Meckling, 1976; Hart, 1995) focuses on the role of financial contracts as a mechanism to soften the manager-lender conflicts that R&D investment returns generate. These conflicts are relevant in these kinds of investments because they involve high information asymmetries, a feature that raises substantially the associated financing cost; hence, the level of a firm's R&D investment may suffer.

It is not surprising that R&D-intensive firms experience credit rationing (Guiso, 1998). One of the reasons for this phenomenon is that lenders generally provide external capital through debt contracts. But, this type of financial instrument is particularly unsuitable to finance these activities (Bradley *et al.*,

1984; Long and Malitz, 1985; Hall, 1992; Board *et al.*, 1993; Chiao, 2002). Resource-based theory together with transaction cost theory point to different reasons. Firstly, the rigid payment schemes for these contracts are not adequately matched with volatile returns that characterize R&D-intensive projects (Santarelli, 1991). Secondly, collateral needs of debt contracts are difficult to fulfill in a context of a high proportion of intangible and specific assets (Williamson, 1988). Thirdly, debt is a financial contract that does not involve any ownership transference. This impedes the solution of hold up problems that typically appear in R&D investments (Kulti and Takalo, 2000). And finally, there are tax advantages linked to R&D investments. These tax deductions diminish the relative value of those deductions by interest debt payments (De Angelo and Masulis, 1980).

The main theoretical contribution of our paper is to move a step beyond the resource-based view and integrate aspects that rely on the agency theory in order to analyze the strategic problems of R&D financing. We introduce as a novelty, the timing of generation of intangible returns from R&D activities in comparison with other tangible returns as the driving mechanism for the potential conflicts linked to R&D investments. Our theory shows that entrepreneurs have compelling incentives to cheat lenders over the tangible (monetary) R&D returns. The focus is that once R&D-intensive projects have begun to produce cash-flow, the firm would have already assimilated the intangible returns (knowledge, in a broad sense), which cannot be transferred to the lenders. Thus, the entrepreneur bears a lower cost if he under-reports the cash-flow, and lenders liquidate the project as a consequence. In this context, debt contracts exacerbate this behavior as they increase the benefits of misreporting, because they oblige the firm to fixed cash-flow payments regardless of the returns generated. Thus, it is important to recognize in the mechanisms that provide the firm's financing resources a role to soften entrepreneur-lender agency problems that emerge as an outcome of R&D investments. This, in terms of a firm's decision making, is to assume that a firm's R&D investment decision is, on the one hand, partly determined by its financing resources and, on the other hand, a major determinant of its financial structure. Thus, any correct methodology to estimate the firm levels of innovation should recognize the existence of an endogenous relationship with its financing resources. This is our main methodological contribution.

Furthermore, rapid generation of intangible returns in comparison to tangible returns has interesting consequences in a dynamic context. Innovative firms improve their efficiency with time, and they can offer an increased real collateral guarantee to potential lenders<sup>270</sup>. This should lead to give rise to increased leverage. But, at the same time, efficiency improvements are translated into higher productivity in

R&D activities (more intangible returns in a shorter time). This result will reduce leverage over time. To contrast empirically the relevance of this latter effect, directly linked to our theoretical contentions, we should observe a lower rate of growth in the leverage for those firms heavily involved in R&D activities, in contrast to their counterparts in less R&D-intensive sectors.

We use the database of Spanish manufacturing firms "Encuesta Sobre Estrategias Empresariales" for the 1991-99 period to carry out our empirical investigation. On one hand, we analyze how R&D expenses depend on the firm's resources (including financial) as well as other features like its diversification. On the other hand, we recognize that the firm leverage is endogenous and depends on its R&D investment as well as other characteristics. The results confirm our hypotheses. Firstly, we prove that leverage has a negative impact on R&D investments, while internal funds have a strong positive impact. Secondly, leverage is also influenced inversely by a firm's R&D investments. And finally, the rate of growth of leverage is smaller for those firms that belong to R&D-intensive sectors.

The rest of the paper is structured as follows: Section 2 defines the theoretical framework. In Section 3 the empirical analysis is carried out, while the results are presented in Section 4. The discussion is in Section 5. The paper concludes with some final remarks.

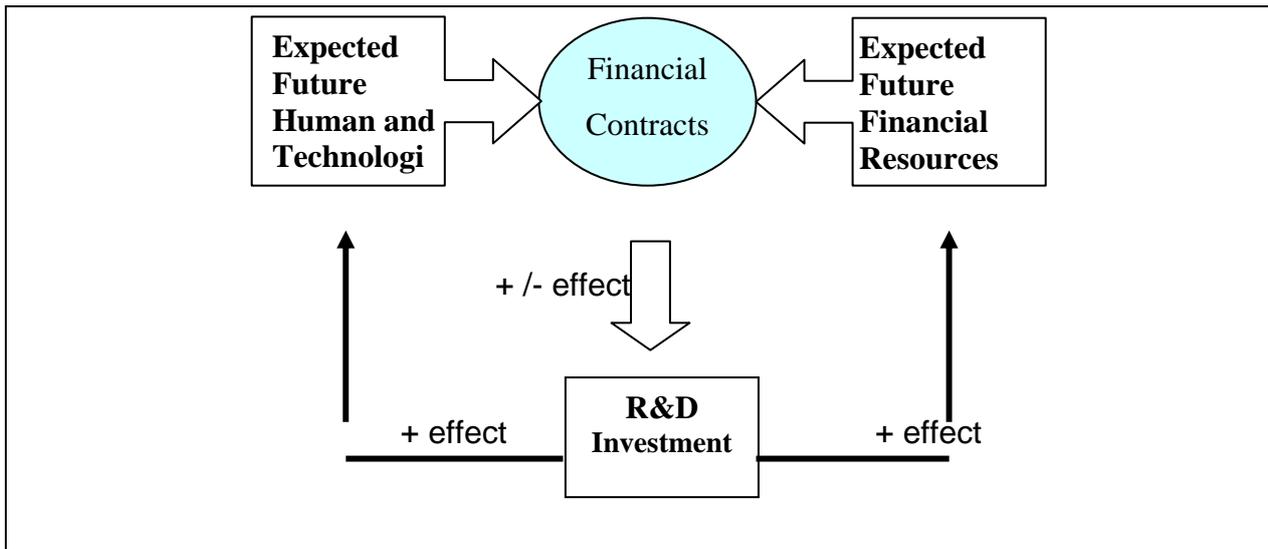
## 2. R&D activities and financing instruments

We can explain the strategy problems linked to R&D activities that confront firms by making use of two frameworks: the resource-based view to investigate the management of a firm's resources in order to undertake a successful innovation policy, and the agency cost theory to analyze the possible opportunistic behavior of entrepreneurs when choosing means of funding for innovation activities.

Galende and Suárez (1999) distinguish three types of resources to develop R&D activities: financial, physical and intangible resources. We focus on the financial endowments to develop our framework, and we recognize the determination jointly of the financial structure and the firm's R&D policy (Guerard and Bean, 1997). Our model complements the resource-based view to explain the firm's drivers of its R&D policy, with the agency theory to deal with the effect of its R&D investment on the conflicts of interest between entrepreneurs and lenders which can be ameliorated by making use of financial instruments. We think that this dual approach can provide a more complete insight into the relationship between financial structure (viewed as a resource and as an incentive mechanism to alleviate agency problems) and firm's strategic investments like R&D.

<sup>270</sup> We use the word debt-holder as equivalent to lender throughout the text.





External financial resources contribute to levels of innovation, but they are also the result of balancing the expected future conflicts that R&D activities generate. The obligations of the financial contracts that tie firms to lenders have a clear impact on investment and, specifically, on R&D investment. Financial structures with collateral requirements that demand rigid payments (debt) are not the best alternative to develop R&D projects that generate long-term volatile and mainly intangible returns. Lenders anticipate this feature and will push the cost of capital up and, consequently, R&D investment down. However, the description of this relationship does not complete the picture, because there is a feed back effect that moves in the other direction (from R&D investment to financial resources, see the scheme). The outcome of the innovation process affects human, technological and financial resources in the future. In the first place, much of these activities improve human capital because they involve some element of training. Next, by carrying out innovation in the production process and/or in the products, there is an improvement in technological resources. Thereafter, there is a tangible outcome (i.e. patents) that generates financial resources. The combination of these resources strongly influences the expected future collateral as well as the conflicts between managers and lenders. This determines the cost of raising external capital. Thus, a particular financial structure emerges to minimize the cost of capital that encompasses future agency conflicts between lenders and entrepreneurs derived from the resources that are the outcome of R&D investments.

To summarize, the scheme we propose links financial resources to R&D investments through the resource-based theories, and recognizes an endogeneity in the financial structure as a way of minimizing agency conflicts that R&D investment generates (agency theory).

The resource-based view highlights the firm's internal characteristics in order to explain why they

pursue different strategies with different outcomes (Wernefelt, 1984; Prahalad and Hamel, 1990; Grant, 1991; Peteraf, 1993). Companies are heterogeneous and each one combines tangible and intangible resources as well as capabilities to develop different types of projects that generate different results. Within this setting, R&D projects represent a strategic (long-term) combination of resources and capabilities that leads, through a sequence of results, to a competitive advantage.

We argue that R&D intensive projects generate returns, which are in essence: a) uncertain; b) long-term; c) intangible. This facilitates firms to take advantage of in-deep project knowledge (information asymmetries) and behave opportunistically when they borrow funds externally. Lenders anticipate this behavior and require a high financing premium. Thus, a natural way to prevent these outcomes is to accumulate a large amount of funds carried over from the previous years in order to develop these kinds of projects (to follow a deep pocket policy). This configures the first hypothesis to be tested:

*Hypothesis 1. Firms are more likely to develop R&D projects when they have access to internal funds instead of external financing.*

We have argued that among the external financial resources, equity financing provides more incentives to invest in R&D-intensive projects than debt financing does (Hall, 1992, Long and Ravenscraft, 1993, Chiao, 2002). Uncertain returns of R&D-intensive projects, makes debt instruments particularly unsuitable, due to their rigid payment scheme. The obligation imposed by this financial resource is at odds with the investment outcome. Moreover, firms engaging in R&D projects face serious problems in offering collateral to lenders because of the intangible assets that are associated with innovation activities. This hinders the development of these kinds of projects, as debt obligations cannot be made contingent on future, mainly intangible, project returns. A high cost of capital will result for debt-financed R&D projects, which will, in turn, lead to an

underinvestment outcome. This is also reflected in the lower incentives for a debt-financed firm's employees to invest in acquiring specific human capital (hold-up problem). This is so because the threat of being dismissed without obtaining any return of their human capital investment if the project is liquidated is more likely. This feature will have important negative effects on a firm's innovation outcome as studies like Souitaris (2002) show using a sample of Greek firms. A way to prevent this hold-up problem is by using financial contracts that involve ownership transference like equity contracts (Kulti and Takalo, 2000). Thus, we expect a negative effect of debt financing on a firm's R&D investments. This is the second hypothesis to test:

*Hypothesis 2. A company's leverage has a negative impact on R&D investments*

Risk attitudes play a crucial role in the development of innovation activities. The degree of diversification, especially if it is unrelated, is an accepted proxy of a firm's risk aversion. As innovation activities are considered risky investments, a negative relation between diversification and R&D investment is expected (Hoskisson and Hitt, 1988). However, diversified firms, generally have more tangible assets to offer as collateral to finance their R&D investments with debt. This would suggest a positive relation between diversification and R&D investments. Moreover, Anderson and Prezas (1999) highlight another effect, apart from collateral considerations, to justify the positive impact of diversification on R&D investments in leveraged firms. They explain that managers may decide to invest in R&D projects as an internal commitment device to ensure greater efforts in other projects (diversification). This effort is implemented in order to avoid a short-term bankruptcy that could eliminate all the profits that R&D projects might generate in the future. This would justify a positive impact of diversification on R&D investment through debt financial structure. The final outcome will be balanced by the previous three effects, (two positive and one negative). This leads us to suggest the following hypothesis:

*Hypothesis 3. There is a positive relationship between a firm's diversification and its R&D investments. And conversely, the more specialized a firm, the less incentives it has to invest in R&D.*

The returns from a firm's innovation activity can be classified as intangible and tangible. The first return is embedded in the skills and capabilities of individuals and the organization. It measures the benefits such as human and physical capital accumulation, which will become a firm's resources with an effect on eventual future investments. Some of these benefits are internalized within the firm, and the speed at which the organization assimilates them is an indicator of its management efficiency. The second return is cash-flow. Generally, these benefits emerge later and, in some cases, as the outcome of the human and technological resources developed within the R&D project. Interestingly enough, the sooner the intangible

resources are generated in comparison with the cash-flow, the more incentives there are for an entrepreneur to cheat the lenders. The reason is that managerial misbehavior will not result in lenders appropriating the already generated intangible resources, because they are not transferable. In that case, project liquidation has low short-term costs, which is the root of an entrepreneur's opportunistic behavior. Our assumption is that there is agency problems because of tangible returns (cash-flow) are the final output (i.e. patents) of intangible ones (Pearl, 2002)<sup>271</sup>. Thus, the optimal financial contract between the lenders and the firm has to tackle this agency problem. It has to balance two effects. The cost of an increase in the possibility of liquidation, which destroys value, as it precludes the firm from benefiting from future human and technological resources; versus the benefits of preventing the entrepreneur from "cheating" over cash-flow, which may raise the firm's cost of capital and lead to an underinvestment outcome.

Debt, in contrast to equity, is a financial instrument that promotes managerial cheating related to the cash-flow generated by the firm's innovation activity. The former instrument holds the firm to a rigid payment scheme coupled with an explicit threat of liquidation. This is in contrast to equity where there is no such liquidation, nor a compulsory payment scheme. As a result, the cost of capital under a debt-financing scheme will be higher than under an equity-financing one. This is because lenders will internalize the potential agency problems that each financing instrument promotes. In short, firms will avoid debt instruments as a means of financing their R&D investments. Along these lines, Rothwell (1992) describes different internal factors that affect the speed to market of a firm's innovation. One of these factors, flexibility, may be reduced if a firm is subject to a rigid debt repayment scheme. Thus, more indebted firms will show a longer period of generating cash-flows from their innovations. This, according to our model, will increase the aforementioned entrepreneur's opportunistic behavior of masking the real tangible returns. By avoiding the use of debt as a financial instrument we can get rid of this inefficiency.

There is another line of research that makes use of the market mechanism that supports the negative effect of innovation on leverage. These articles investigate how the markets react when R&D-intensive firms issue debt. Affleck-Graves and Spiess (1999) find that shares in small, young, and NASDAQ-listed firms, that are basically firms in technological sectors, experience a long-run underperformance after issuing debt. To summarize, debt instruments seem to be a bad alternative to finance innovation, (Hall, 1992). This is our fourth hypothesis:

*Hypothesis 4. Leverage must be lower in those firms that invest in R&D.*

<sup>271</sup> Venture Capital financing provides a good example (Gompers and Lerner, 1999). In the initial stages, start-up firms mainly produce intangible assets, while in the later stages, returns are more tangible.

In firms specialized in R&D investments the agency problem described previously is particularly important. This statement is based mainly on these firms' efficiency in generating non-monetary returns from their R&D activities and internalizing them in the short-term. This is confirmed by Rapoport (1971) among others, who finds that in R&D-intensive sectors, like electronics, the R&D gestation lag needed to incorporate R&D expenditures in knowledge production is 2.5 times lower than in less R&D-intensive sectors like machinery. As we have already mentioned, the rapid time schedule in generating intangible assets provides an incentive to an entrepreneur to behave opportunistically. Within this setting, the use of debt instruments can exacerbate agency problems. Thus, the degree of specialization in R&D investment should show a decreasing relationship with leverage (Goodacre and Tonks, 1995). Consistently with this idea, Gaver and Gaver (1993) show that growth firms (generally R&D specialized) have a lower debt level than non-growth ones. This is our last hypothesis:

*Hypothesis 5. Leverage should be lower in those firms specialized in R&D activities than in those that are not specialized in these investments.*

### 3. Empirical analysis

#### 3.1. Data

We use a database called "Encuesta Sobre Estrategias Empresariales" (ESEE) which includes information of the Spanish manufacturing industry and covers the period 1991-1999. The ESEE surveys approximately 3000 firms each year and accounts for differences in their size<sup>272</sup>. It contains information on sales, employment structure, technological behavior, and foreign activities as well as accounting information. After controlling for consistency problems and failures in some important variables we employ a sample of 3195 firms by year. The sample contains an incomplete panel for 9 consecutive years and 18 sectors, where there are 1360 of firms that invest in R&D (42.57% of the total).

#### 3.2 Variables Definition

We use as dependent variables to test hypotheses 1, 2 and 3, the RD EFFORT constructed as the ratio of R&D expenditure to sales. The question of measurement of R&D activity has been broadly discussed in the literature (Griliches, 1979, 1988). R&D inputs or R&D outputs are used as a measure of R&D depending on the availability of the data and the issue to be studied. In our approach we use the ratio of R&D expenditures to sales, because it is a better measure of the returns (tangible and intangible) that R&D activities generate. This measure fits better with

the arguments presented in the theoretical discussion, where it is essential to incorporate in the measurement those intangible returns. These could have been missed with a variable of R&D output, which basically accounts for tangible outcomes.

Explanatory variables:

DEBT: It is the ratio of DEBT to total assets<sup>273</sup>.

HIGH: The criteria we have chosen to distinguish between HIGH, and NON-HIGH (MEDIUM and LOW) sectors is based on two measures extracted from Segura et al. (1989). First, the Autonomy Technology Index (ATI), which is the ratio of R&D expenses to the sum of R&D expenses plus technology payments (i.e. patent royalties). Second, the Total Technological Effort Index (TTEI) is the ratio of the R&D expenses plus the technological payments to the added value.

- HIGH sectors are those where the AIT and the TTEI are higher than the mean for all sectors. This includes the chemical sector, electric and electronic material, office machines, computers, optical products, and transformation of plastic and rubber materials.

- MEDIUM sectors are those where the AIT or the TTEI, but not both, are higher than the mean for all sectors. This includes production and transformation of metal products, machinery, motors, vehicles and paper.

- LOW sectors are those where the AIT and the TTEI are lower than the mean for all sectors. This includes the food, beverages, tobacco, wood and leather sectors.

SPECIALIZATION: It is an inverted measure of the degree of a firm diversification. It is defined as the complement to a diversification index such that:

$$\text{SPECIALIZATION} = 1 - \text{DIVERSIFICATION} = \frac{\sum_i Q_i}{100 \sum_i Q_i}, \text{ where } Q_i \text{ is the percentage of firm's sales}$$

in product  $i$  with  $i=1, \dots, 10$  (we focus on the 10 main products)<sup>274</sup>. The diversification variable is basically an estimator of the degree of a firm's diversification. Note that, a firm focused on one activity ( $Q=100$  and  $i=1$ ) would have a zero value of DIVERSIFICATION (value of SPECIALIZATION equals one), and a firm equally diversified in ten activities would have a diversification value of 0.9 (0.1 of SPECIALIZATION). We will also use an interaction of specialization with the variable HIGH (HISPECIALIZATION) to control for those firms specialized in R&D activities.

INTERNAL FUNDS: It is a way of measuring the implementation of a deep-pocket policy. It is computed as the ratio of internal funds to total assets. In the estimations, we are going to use this variable lagged by one-period to better fit with the idea of a cash-flow

<sup>272</sup> See the empirical appendix for more details about the sectors that compose our database.

<sup>273</sup> We take this variable in intensive terms to avoid spurious size effects.

<sup>274</sup> As there are only 18 sectors, this measure is more related to an unrelated diversification than to a related one. Unrelated diversification fits better with the theoretical contentions that lead to hypothesis 3.

accumulation in the past to finance, among other things, a firm's R&D activities.

Control variables:

- Tangible resources:

**EMPLOYMENT:** It is measured using the total number of employees at the end of the year and it is constructed in logs to keep within the scale. It controls by size and it is also an indirect proxy of physical resources. Related to employment there are authors, as Cavanaugh and Garen (1997), who suggest the inclusion of the firm's level of unionization as a variable to interact with the R&D effort to explain the leverage. We have argued before that R&D investment is a mechanism to curb union power in leveraged firms. However, we have not included this variable because wages in Spain are fixed through collective industry agreements. Thus, we take indirectly into consideration such an effect by introducing industrial dummy variables in our estimations.

**TANGIBILITY** is the ratio of tangible assets to the sum of tangible and intangible assets. With this variable we try to reflect the availability of collateral in the firm, which is one of the driving determinants of the firm leverage. Also, this variable represents a physical resource that may have an influence on its R&D investment.

**CAPITAL EXPENDITURES:** It is constructed as the ratio of firm's investment to total assets. We include as investment: Hardware and software acquisitions, physical capital investment, portfolio investment, and investment in distribution.

**STOCK:** It is a dummy that equals 1 when the firm is listed in the stock market. This variable represents a first approximation to the existence of alternative financing resources to those provided internally or through debt contracts.

- Intangible resources:

**AGE** is the firm's age. This is a natural proxy of its reputation, which is a synthesis of intangible resources behind a brand name. This variable also reflects the availability of different financing channels and it is also a measure of the firm's bargaining power with regard to lenders.

**HUMAN CAPITAL:** It is the ratio of qualified employees (with a university degree) to the total number of employees.

- Other controls:

**FOREIGN CAPITAL:** It is a dummy that is equal to 1 when there is more than 50% of foreign capital in the firm's ownership, and 0 on the contrary. This is a proxy of managerial control, as foreign shareholders are less likely to collude with the management. Thus, it is inversely related to the existence of agency problems.

### 3.3. Methodology

We test the strategy decision to assign financial resources to innovate by recognizing the existence of an endogenous relationship that conditions a firm capital structure due to, among other things, the R&D investment policy. We suspect this is the case, as we

have already mentioned, because the resources that generate R&D investments may generate some agency problem that can be ameliorated by making use of financial instruments.

According to hypotheses 1, 2 and 3, the estimation strategy of the R&D effort has the following specification:

$$RD\ EFFORT = \begin{cases} \alpha_1 DEBT + \alpha_2 SPECIALIZATION + \alpha_3 INTERNAL\_FUNDS + \\ \alpha_4 EMPLOYMENT + \alpha_5 CAPITAL\_EXPENDITURES + \\ + \alpha_6 STOCK + \alpha_7 AGE + \alpha_8 HUMAN\ CAPITAL + \alpha_9 FOREIGN\ CAPITAL + \eta_i + \varepsilon_{it} \end{cases} \quad (1)$$

The error term  $\varepsilon_{it}$  follows a normal distribution with 0 mean and  $\sigma^2$  variance. Variable  $\eta_i$  accounts for the possible existence of fixed effects.

Two features that we would like to highlight:

1. There is a high percentage of firms that do not make R&D efforts (57,43%). This feature generates a non-continuous equation. We use the Tobit model to estimate it, where the latent dependent variable (the effort) follows this observability rule:

$$RDEFFORT^*_{it} = \begin{cases} RDEFFORT_{it} & \text{if } RDEFFORT^*_{it} > 0 \\ 0 & \text{Otherwise} \end{cases}$$

2. To obtain consistent estimators, as the financial structure is an endogenous variable, we use an instrument to overcome the problems of correlation between the error term and the leverage. Hence, we estimate an auxiliary equation for the firm leverage (DEBT). The comparative static results linked to that equation give us some insight into the R&D investment determinants of firm capital structure, which will allow testing of hypotheses 4 and 5. Besides, Himmelberg and Petersen (1994) emphasize the importance of controlling for unobserved fixed effects when one explains the capital structure of firms that devote resources to innovation. Under such evidence, we use the "within method" to obtain consistent estimators of the determinants of a firm leverage. In particular, the specification we propose is the following.

$$DEBT = \begin{cases} \beta_1 HIGH + \beta_2 HSPECIALIZATION + \beta_3 EMPLOYMENT + \\ + \beta_4 TANGIBILITY + \beta_5 STOCK + \beta_6 AGE + \eta_i + \varepsilon'_{it} \end{cases} \quad (2)$$

The error term  $\varepsilon'_{it}$  follows a normal distribution with 0 mean and  $\sigma^2$  variance. Variable  $\eta_i$  accounts for the possible existence of fixed effects.

It is important to stress that, consistent with our theoretical discussion, we have not considered a simultaneous equation model between R&D effort and financial structure. Our model relies on the resource-based framework to explain the determinants of R&D efforts, and applies agency theory in a complementary way to justify the adjustment in a firm financial structure by anticipating the future conflicts that R&D efforts may generate. This logic leads us to estimate a resource-to-investment equation and use an auxiliary leverage state equation to instrument the financial resources (equation 2).

### 4. Results

In Table 1, we present the estimation of the "auxiliary" equation for a firm leverage, which tests hypotheses 4

and 5. From this equation we are going to obtain the instrument of DEBT variable to estimate firm R&D investment. In the first row, we have conducted simple cross-section estimation without taking into consideration the panel structure of the data. In the second, we take advantage of the panel structure to control for the existence of fixed effects, which is confirmed by the Hausman Test.

INSERT TABLE 1 HERE

This table shows the importance of controlling for fixed effects, as the results change dramatically when it is implemented this control (last row). Firstly, competing in an R&D-intensive sector has a negative impact on the firm's leverage, as is predicted by hypothesis 4. As for R&D specialization, it also has a negative impact on leverage. This confirms Hypothesis 5. Control variables show that, unsurprisingly, asset tangibility, eventually offered as collateral, favors debt financing. Bigger firms use more debt as they have more collateral. Also, younger <sup>275</sup> firms are more leveraged because have limited internal funds and have no access to alternative financing channels like capital markets. These results are consistent with Acs and Isberg (1991).

Finally, Table 2 shows the main results of the paper, those corresponding to the determinants of R&D effort. In the first row, we conduct a Tobit specification without taking into consideration the endogeneity problem linked to the financial structure. The second row shows a Tobit estimation, making use of the predicted instrument obtained in the leverage estimation.

INSERT TABLE 2 HERE

Results show a negative relation between leverage and R&D investment once leverage endogeneity is taken into consideration. This fully supports Hypothesis 2. Hypothesis 1 is also confirmed as those firms that follow a deep pocket policy invest more in R&D. Concerning the diversification issue, the results also back hypothesis 3, as it is described a negative impact of specialization on R&D efforts <sup>276</sup>. Control variables show that bigger and younger firms <sup>277</sup> with high capital expenditures and more human capital make more R&D efforts. Finally, the external capital, which is a proxy of low probability of manager-ownership collusion, has a negative impact on these activities. The idea is that R&D investments are associated with high possibilities of managerial divestures due to the high information asymmetries associated. These actions will

<sup>275</sup> We have conducted a test to confirm the non-existence of multicollinearity between AGE and EMPLOYMENT.

<sup>276</sup> In terms of the diversification variable, the relation with a firm's R&D effort is positive, as expected.

<sup>277</sup> Pavitt *et al.* (1987) shows a U-shaped relationship between size and innovation. Small and R&D-specialized firms (eventually young firms), as well as big and diversified ones innovate more than their counterparts.

be more difficult to implement under a foreign ownership scheme. This is confirmed in other studies like Martínez-Ros (2000).

## 5. Discussion

From previous results, it is worth emphasizing the relevance in allowing for an endogenous determination of a firm leverage once its R&D effort is analyzed. To treat the problem in that way, as mentioned in the theoretical part, we are recognizing the dual nature of leverage. It is a financial resource that may contribute to R&D investment, but it is also a mechanism to deal with agency problems that emerge from the combination of tangible and intangible resources that R&D-intensive projects generate. In Table 2, when we do not tackle the endogeneity problem, and the leverage is only treated as a resource, a non-significant relation with a firm's R&D effort is obtained. Interestingly, once leverage is instrumented taking into account the endogeneity problem, the sign becomes the negative, which is fully consistent with our hypothesis 2.

A second comment is the positive effect on the firm's R&D efforts to implement a deep-pocket policy of internal funds accumulation. This strategy has a direct positive effect on these efforts as it gives the firm financial flexibility high enough to carry innovation activities (Teece and Pisano, 1994) and to deal with the long-term uncertain returns of R&D investments. Also, there is an indirect effect that moves in the same direction. With internal funds accumulation, there is less need of debt financing that hinders R&D investments. Hence the relevance to stress this strategy for those firms interested in developing a vigorous innovation policy.

A final important comment, which is an extension of the theory presented, concerns the dynamic evolution of leverage. We may argue that those firms that belong to R&D-intensive sectors are acquiring a superior expertise as time goes by, and, according to our theoretical discussion, this implies higher manager incentives to behave opportunistically. Thus, hypothesis 4 predicts a negative impact on the firm's leverage. On the other hand, these firms have also accumulated resources and reputation, as they become more efficient with time. This fact smoothes collateral requirements and facilitates debt financing. The interaction of both effects does not allow us to define whether the growth of leverage for R&D-intensive firms is positive or negative. In contrast, firms in less R&D-intensive sectors only show the second effect of this increased efficiency (an improvements in their resources and reputation). In this case, only the positive contribution prevails. Therefore, we expect a smaller growth rate in the leverage of those firms that belong to an R&D-intensive sector in comparison to those firms that do not. This is shown in the next table:

INSERT TABLE 3 HERE

Table 3 shows a mean analysis to test whether period-t leverage and that of period t-1 were equal or not for firms in an R&D-intensive sector and for firms in a non R&D-intensive sector. Additionally, in panel B, we compare leverage in period t with that in period t-2. Results show that when firms belong to R&D-intensive sectors, the difference between leverage and past leverage is significantly negative, while this difference is not significant or positive (panel B) for non R&D-intensive firms. This broadly confirms our hypotheses. Note that, just by making use of standard collateral arguments we cannot explain the different patterns in the temporal variation of leverage. Thus, the introduction of agency costs considerations on behalf of the managers of R&D-intensive firms can explain this different behavior.

## 6. Conclusions

In this paper we have presented a theory that recognizes the importance of treating financial resources for the implementation of R&D efforts not only as factors that condition these efforts, but also as mechanisms that can ameliorate agency problems that might emerge from the outcome of these efforts. R&D projects generate intangible and tangible returns. And, the former are the intermediate outcome of the process that leads to the latter. Thus, firms can benefit in the short-term (especially if they are specialist) from those intangible resources generated before the monetary returns from these R&D investments emerge. This gives the entrepreneur incentives to mislead the external lenders over the tangible returns generated as the firm has already benefited from the intangible ones. Moreover, debt financing can exacerbate this problem. In this case the entrepreneur will benefit from misleading lenders as the result to avoid fulfilling debt financial obligations. And, the threat of project liquidation associated with debt contracts is not very helpful, as lenders cannot appropriate the already internalized intangible resources within the firm. At the end, lenders anticipate this problem and demand high interest rates for the capital provided under debt instruments. This feature allows us to predict negative impact of a firm's leverage on its R&D investments.

Other results that configure our hypotheses to test are: Firstly, the degree of diversification and the amount of available internal funds have a positive impact on a firm's innovation investments. Secondly, sector innovation and the degree of a firm's R&D specialization have a negative impact on its leverage. Lastly, the rate of growth of a firm's leverage should be lower in innovative firms than in non-innovative ones.

We test these results by making use of a Spanish database of manufacturing firms. The outcome of this empirical estimation basically confirms our theoretical hypotheses. The availability of internal funds (implementation of a deep-pocket policy) positively influences a firm's R&D activities. But, the leverage as well as the specialization has a clear negative impact on R&D efforts. Moreover, firms that operate in R&D-

intensive sectors and/or that are specialized on innovation show a lower leverage than their counterparts. Finally, what is interesting in our model, is that we have observed that, on average, the growth of a firm's leverage is lower for firms in R&D-intensive sectors when compared with their counterparts in less innovative sectors. This is relevant, because neglecting the agency considerations mentioned in our theory, and using just standard collateral arguments, we should not find a different pattern in the leverage growth rate of those firms in R&D-intensive sectors in comparison with those others in non-R&D intensive sectors.

**Implications for managers.** In short, the main implication for a manager that can be extracted from our model is that the most powerful financing incentive mechanism to stimulate R&D effort is to follow a deep pocket policy of internal funds accumulation and avoid raising capital with debt instruments. This is to adopt a long-term view to anticipate in good time the financing necessary to implement a particular innovation policy. Note that these kinds of investments, as we have stressed throughout the paper are long-term. Consequently, the manager must apply the same long-term view.

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## Empirical Appendix

Our database is composed by 18 sectors based on a classification, CNAE, that has a correspondence with the NACE-CLIO classification. NACE is a general industrial classification of economic activities within the European Community and CLIO is the Classification and Nomenclature of Input-Output table. Both classifications are officially recognized by the Accounting Economic System.

Correspondence of the sample CNAE codes With NACE-CLIO codes		
	CNAE	NACE-CLIO
Chemical, plastic, rubber and metal products	1, 2, 3, 4	22, 24, 25, 31
Electric and electronic material	6, 7	33, 34, 35, 39
Machinery, motors and vehicles	5, 8, 9	32, 36, 37, 38
Food and beverages	10, 11, 12	41, 42
Leather, wooden and paper	3, 14, 15, 16, 17, 18	43, 44, 45, 46, 47, 48, 49

**Table 1.** Debt and R&D Intensity

<u>Dependent variable</u>	DEBT (Cross-Section) <sup>1</sup> , <sub>2</sub>	DEBT (Panel data with fixed effects) <sup>1,2</sup>
HIGH	0.020 (1.02)	-0.212 ** (1.83)
HISPECIALIZATION	-0.022 (1.46)	-0.045 ** (2.26)
EMPLOYMENT	-0.007 *** (4.20)	0.028 *** (5.28)
TANGIBILITY	0.113 *** (7.42)	0.033 *** (2.50)
STOCK	-0.026 (1.23)	-0.009 (0.69)
AGE	-0.001 *** (11.97)	-0.004 *** (5.01)
Number of observations	11,652	11,652
Log(likelihood)	771.922	9927.06
LR test [ $\chi^2$ ]	865.94 (0.000)	168.112 (0.000)
Hausman Test		98.23 (0.000)

<sup>1</sup> T-statistics in parenthesis.

<sup>2</sup> It includes temporal and industry dummy variables

\*\*\* 99% signif. \*\* 95% signif. \* 90% signif.

**Table 2.** Determinants of R&D effort

Dependent variable	R&D Effort (Tobit <sup>1,2,3</sup> )	R&D effort (Tobit <sup>1,2,3</sup> Instrumental variables)
DEBT	-0.341 (0.570)	
PREDICTED DEBT		-43.614 <sup>***</sup> (4.22)
SPECIALIZATION	-0.721 <sup>***</sup> (2.55)	-1.33 <sup>***</sup> (4.11)
INTERNAL FUNDS (-1) <sup>4</sup>	0.459 (0.79)	0.671 <sup>**</sup> (2.04)
EMPLOYMENT	1.025 <sup>***</sup> (15.41)	2.20 <sup>***</sup> (7.56)
CAPITAL EXPENDITURES	4.025 <sup>***</sup> (3.81)	4.20 <sup>***</sup> (3.97)
STOCK	-0.406 (1.10)	-0.790 <sup>**</sup> (2.09)
AGE	0.005 <sup>*</sup> (1.56)	-0.164 <sup>***</sup> (4.06)
HUMAN CAPITAL	11.790 <sup>***</sup> (9.80)	11.329 <sup>***</sup> (9.50)
FOREIGN CAPITAL	-0.741 <sup>***</sup> (3.92)	-0.707 <sup>***</sup> (3.79)
Number of observations	3,307	3,259
Log (likelihood)	1641.468	1661.902
LR test [ $\chi^2$ ]	1023.01 (0.000)	1026.03 (0.000)

<sup>1</sup> All the coefficients are multiplied by 100

<sup>2</sup> T-statistics in parenthesis.

<sup>3</sup> It includes temporal and industry dummy variables

<sup>4</sup> Internal funds variable is lagged one period.

\*\*\* 99% signif. \*\* 95% signif. \* 90 % signif.

**Table 3.** DEBT Variation in HIGH and non-HIGH Sectors

PANEL A			
Variables	DEBT	DEBT1 <sup>1</sup>	Test of Means <sup>2</sup>
In High intensive sectors	0.558 (0.226)	0.563 (0.225)	-1.786 (0.074)
In non-High intensive	0.577 (0.241)	0.576 (0.243)	0.934 (0.350)
PANEL B			
Variables	DEBT	DEBT2 <sup>3</sup>	Test of Means <sup>2</sup>
In High intensive sectors	0.551 (0.222)	0.560 (0.224)	-2.547 (0.011)
In non-High intensive sectors	0.573 (0.236)	0.569 (0.242)	1.950 (0.051)

<sup>1</sup> One-period lagged DEBT variable.  
<sup>2</sup> T-statistics in parenthesis.  
<sup>3</sup> Two-period lagged DEBT variable.

## MISES, ROTHBARD AND SALERNO ON COSTS

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### Abstract

This paper is an attempt to wrestle with the concepts of costs, causality, subjectivism, derived demand, inflation, supply and demand, and with the views of three Austrian economists on all of them: Mises, Rothbard and Salerno. In our view, in contradistinction to theirs, the choices of both buyer and sellers, in the consumer *and* producers goods markets, contribute to price determination. Our claim is that they give too short shrift to the latter markets.

**Keywords:** costs, causality, subjectivism, Austrian economics, derived demand, inflation

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### Introduction

“Thus when economists, business forecasters and Alan Greenspan scrutinize indexes of input prices such as the PPI or indexes of raw commodity prices, they do so because they incorrectly believe that changes in these indexes are harbingers of future changes in general consumer prices, as if input prices determined product prices rather than the other way around” (Salerno, 2003, p. 83).

“According to Austrian theory, the value of money, which is the inverse of overall consumer prices, is determined like the individual prices of its component consumer goods by supply and demand” (Salerno, 2003, p. 83).

Let us call the first of these two statements A, and the second, B.

Each of these has something to be said in its behalf.

### I. Statement A

There is a grain of truth in A. It stems from the insight of Rothbard (1970, 1993), to the effect that we value factors of production because they are necessary preconditions or causal agents, of the consumers' goods we value for their own sakes. The direction of causation of prices is, so to speak, all in a backward direction: from the final goods back to the factors of production. Or, to put this in another way, there is a *direct* demand for consumers' goods, but only a *derived* demand, from them, back to their causal agents, the factors of production.

However, Salerno goes too far. There is all the world of difference between saying two superficially similar things. First, correctly, that product prices are

the dog, and input prices only the tail, in that the former comes first in the causal-genetic sense, and the latter appears only secondly in time. We do not value diamonds because diamond mines and jewelers' labor are so expensive. Rather, the very opposite is the case: diamond mines and the labor of diamond refiners are very valuable because we set such great stock on diamonds

It cannot be denied that we value resources because we value the output they to the production of which they contribute. But it is an entirely different matter to say that, therefore the value of the output is the sole determinant of the value of the inputs. That would only be true if the owners of the resources themselves placed no value on the resources; i.e., if they had no reservation demand/price. Moreover, the greater the value placed on the resources by their owners, the higher will be their prices, *ceteris paribus*. So, we reiterate: diamond mines and the labor of diamond refiners are very valuable because we set such great stock on diamonds. However, even if the value placed on diamonds dropped a great deal, the resource prices would rise if the demand for them to be used to produce, say, gold jewelry went up sufficiently, or if the reservation value/price of the owners increased suitably. We need to distinguish between the sources of subjective value of goods and resources and objective exchange values; i.e., prices thereof. If, tomorrow, we determined that these baubles were the spawn of the devil, and renounced them utterly, the market price of raw diamonds and labor that serve as inputs into this consumer good would drop like a stone. On the other hand, if the day after that we decided that diamond mines and jewelers were evil personified, but still

valued diamonds (don't ask), the latter would still have great value.

Rothbard (1993, 118-133) articulates this perspective with a strange analysis. He shows that the price as determined by the intersection of the standard demand and supply curves is the same as that determined by the intersection of the *total* demand curve and the extant stock. The key here is that Rothbard adds the reservation demand<sup>1</sup> of the owners of the stock to the standard demand to arrive at the total demand.<sup>2</sup> Thus when he says that price is determined solely by demand, he is including the reservation demand as well. There is nothing (logically) wrong with such a stance; the difficulty lies in the fact that when words such as demand are used with subtly different definitions than usual, errors are likely to creep in unless extra care is taken. Gentle reader, please take another look at statement A. Surely that is not what Greenspan meant. It is no more correct to say that input prices determine output prices than it is to say that output prices determine input prices. Both are determined by their relative scarcities, in turn determined by the values of the relevant parties. The price of a final output is determined by the valuations placed on it by the marginal buyer and the marginal seller. The price of a resource is determined in precisely the same way: by the value placed on it by the marginal buyer and the marginal seller. In the case of an ongoing market for a flow, the seller of the output, "the firm," is also the buyer of the resources. In effect, the firm is a middleman, attempting to buy low in the relevant resource markets and sell high in the markets for its outputs. What determines the prices then are the valuations of the sellers of resources, the buyers of the outputs, and the middleman.

Consider the case, where, for whatever reason(s), the buyer(s) of a certain output value it more; i.e., the demand increases; i.e., shifts to the right. Its price will be bid up. As a result it will be more profitable to produce and sell more of that good. In turn, that will lead the firm(s) to place a greater value on the relevant resources; i.e., the demand for them also rises. The firm(s) will bid up their prices. In that case, the rise in the price of the output will lead to a move in the same direction in the price of the relevant resources. Note, however, that neither the augmentation in demand for the output nor for the resources is fully determinative of their prices; rather, in both cases the prices are

merely bid up from their prior levels. Both the prior output price and the prior resource prices were determined in part by the relevant supplies. And, how high the various prices will be bid up for any specific increase in valuation, and, therefore, increase in demand, by the buyers of output, will depend in part upon the relevant supply considerations; i.e., the valuations of the sellers. Thus we see that resource prices are not determined *solely* by the demand for outputs<sup>3</sup>. Moreover, if we consider the case where, for whatever reason(s) the seller(s) of a certain resource value it more; i.e., the supply decreases. Its price will be bid up. As a result it will be less profitable to use that resource in production and less will be sold. In turn that will lead the firm to place a greater value on the relevant output; i.e., the supply decreases. Its price will be bid up. In that case, the increase in the price of the resource will lead to a rise in the price of the relevant outputs. Note, however, that neither the decrease in supply of the resources nor the decrease in supply of the outputs is fully determinative of their prices; rather, in both cases the prices are bid up from their prior levels. However, both the prior output price and the prior resource prices were determined in part by the relevant demands. And, how high the various prices will be bid up for any specific increase in valuation, and, therefore, decrease in supply, by the sellers, will depend in part upon the relevant demand considerations; i.e., the valuations of the buyers. Thus we see that output prices are not determined solely by the supply of resources.<sup>4</sup>

## II. Statement B

Now let us consider B. This statement is completely acceptable to us. After all, it can hardly be denied that supply and demand, or rather the valuations upon which supply and demand are based, are necessary to an analysis of price.<sup>5</sup> It is not for nothing that if you teach a parrot to say "supply and demand" you will at one fell swoop given it a strong hint at solving virtually all economic problems. We mention B in conjunction with A not because we see anything wrong in the former. This is done, rather, in order to further impeach A.

<sup>1</sup> At any price, the reservation demand is the difference between the stock and the standard quantity supplied at that price.

<sup>2</sup> This is quite similar to standard "excess demand" analysis, where, at any price, the excess demand is the difference between the standard quantities demanded and supplied at that price. We have three cases, then. The standard case where the market price is that at which the standard demand and supply curves intersect. Rothbard's case, where the market price is that at which the total demand curve intersects the extant stock. And, the excess demand case, where the market price is that at which the excess demand curve intersects the vertical axis; i.e., at which quantity is zero.

<sup>3</sup> Had we considered the case in which the buyer(s) of a certain output value it less, the analysis would be analogous.

<sup>4</sup> Had we considered the case in which the seller(s) of a certain resource value it less, the analysis would be analogous.

<sup>5</sup> In a barter transaction there is neither supply nor demand in the usual meaning of these terms. Supply relates to the actions of the seller(s), who give up non-money goods in order to acquire money and demand relates to the actions of buyers who give up money in order to get non-money goods. The objective exchange ratios in such transactions are money prices. Money is the only good that has no (non-trivial) money price. As such there is no market for money. Rather, there are as many markets for money as there are non-money goods that people wish to exchange for money. Thus, in a real sense there is neither a demand for, nor a supply of, money; rather, in each market there is a demand for, and supply of, the non-money good

The first thing to note about these statements is that there is a tension between them, not to say a logical inconsistency. According to A, consumer-goods prices fully determine prices of the factors of production that go into their creation. However, based on B, the prices of *all* commercial items, whether consumers' goods or capital goods, including money, are determined by supply and demand. The difficulty, here, is that the supply of the consumption good is based on the supplies of the relevant inputs. Without the latter, there is none of the former. When the former decreases (increases), so does the latter.

Another problem is that A necessarily implies that if the price of a factor of production changed dramatically, it would have *zero* effect on the final good which eventually encompasses it. For example, suppose that a bomb destroyed half the oil capacity of the world, *ceteris paribus*. Is there any doubt that gasoline prices, a final consumers' good, would rise? Or, posit that a frost ruins half of the entire orange crop? Can it really be doubted that the price of orange juice would catapult upward? But if these deductions are true, it is difficult to credit Salerno's claim to the effect that "they incorrectly believe that changes in these [factor price] indexes are harbingers of future changes in general consumer prices..." (material in brackets supplied by present authors). The increased oil price, in this case *would* be a harbinger of later rises in the cost of gasoline. Similarly, the increase in the price of oranges *would* foreshadow subsequent boosts in orange juice prices. This is not to deny that if the initial price increase was that of gasoline or of orange juice, the subsequent increase in the price of crude oil or of oranges, respectively, would stand in relation to the prior increase in the consumers' goods as effect to cause. However, this is not at all the import of Salerno's statement A.

### III. Conclusion

We are in entire accord with Salerno's statement B. Indeed, enthusiastically so. Our problem is not with it, but rather with A. Nor do we deny there is a grain of truth in this problematic statement, as adumbrated by Rothbard. Our claim is that Salerno makes too much of a good thing, far too much, and is thus led into his error.

The point we are making in this article is akin to the one Rothbard (1993, 561) made against the term "consumers' sovereignty and Hutt (1940) and, who is credited with originating the term in 1934 (Rothbard, 1993, 903, n. 3). The latter talked in terms of "consumer sovereignty." Rothbard objected on the ground that this ignored the sovereignty of the producer. His "friendly amendment" to Hutt was to characterize what the latter was addressing as "individual sovereignty" not "consumer sovereignty." In like manner, we object to Salerno and Mises focusing on the consumer, only, at the expense of the producer, in general, or, in this case, the owners of the factors of production, in particular.

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