Martin Hellwig
University of Mannheim

Corporate Governance and the Financing of Investment for Structural Change[1]

1 The Corporation as a Financial Institution

Discussions of financial systems tend to identify banks (financial intermediaries) and markets as the major institutions determining the workings of the financial system as it guides the flow of funds from the household sector to the production sector of the economy. The contrast of "bank-dominated" and "market-oriented" financial systems has for a long time occupied centre stage of the literature on financial institutions. The present paper leaves this concern with banks and markets aside and instead proposes to focus attention on the industrial corporation as a financial institution in its own right. Corporate managers have significant discretion in the use of corporate funds. As these funds are used, they fulfil a financing role of their own.

In contrast to the traditional view of the financial system guiding funds from households to firms, the view presented here considers the firm with free cash flow as an independent source of funds. This leads to a reassessment of (i) the relation between the corporation and the rest of the financial system and (ii) the overall role of the financial system in the allocation of resources for investment. The change in perspective is particularly remarkable in situations when firms with free cash flow are financing new activities so at least some of the structural change in the economy occurs in incumbent firms rather than new ones.

The following examples may serve to indicate the types of phenomena for which the discussion is relevant.

- In the late seventies and early eighties, US oil companies used cash flow from known wells to finance exploration activities; average returns to these activities did not cover the opportunity costs of the funds used.
- For quite some time after the initial public offering, the typical "new economy" company on NASDAQ will not pay dividends but reinvest earnings to finance its own further expansion.
- In the eighties Daimler-Benz used the financial resources it had obtained from large profits in automobiles (due in part to an overvalued dollar) in order to acquire and fund a "technologies

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conglomerate" involving electrical appliances (AEG), airplanes and armaments (Dornier, MBB, Fokker).

- In the nineties, Mannesmann, a former steel producer turned engineering conglomerate, transformed itself into a telecommunications company. The high price paid in the recent takeover by Vodafone was largely based on the value attributed to Mannesmann's stake in this new line of business.

In each of the given examples firms use earnings from profitable activities to finance new investments, sometimes also to balance losses from other activities that may or may not merit the denomination "investment" - see, e.g., the experience of Daimler with DASA, the aerospace subsidiary formed from the acquisitions named above. Retained earnings are often referred to as "internal finance". This denomination is misleading: What is internal to the corporation may still be external to the line of business that is being funded. For example, if Mannesmann has used earnings from engineering subsidiaries to fund its investments in telecommunications, from the perspective of the telecommunications sector of the economy the funds are "external" in the sense that they come from outside the sector. For the economy as a whole this is important because it indicates that a preponderance of "internal finance" is not necessarily cementing the sectoral structure of the economy. For the economic theorist this poses the question what are the respective advantages and disadvantages of having investment in a new sector financed by incumbents from other sectors as opposed to banks or organized markets, more precisely the various participants in these markets.

As usual in economics, analysis of this question must focus on allocation mechanisms, incentives, and sources of bias in decision making. This will lead to an understanding of what are the right questions to ask the data in assessing the role of corporations as financial institutions. Empirical "analysis" at the level of examples without theory is bound to remain anecdotal. Indeed the above examples were chosen to indicate the heterogeneity of outcomes one can observe in reality. Next to the oil industry example of malperformance due to excessive continuation of past and current activities, we have the "new economy" example where continuation of past and current activities is exactly what is called for. Next to the Daimler-Benz example of malperformance due to wasteful diversification into "new (?) industries", we have the Mannesmann example of extremely successful performance due to profitable diversification into new industries. The latter two examples illustrate the point that an incumbent corporation is not limited to their own sector and may serve as a vehicle for structural change; having these two examples side by side shows that diversification into new sectors cannot be judged on a priori grounds to be either useful or harmful. At this point, we cannot even say that decision making at Mannesmann was of higher quality than at Daimler-Benz; the difference in outcomes may simply be the difference between good luck and bad.

The question is what are the allocative implications of prevailing arrangements for corporate governance. If corporate governance were arranged in such a way that it does not make a difference whether funds are retained and reinvested by corporations or whether funds are distributed and reinvested by outside investors, either directly or indirectly, through the intervention of financial intermediaries, we should be justified in neglecting the notion that industrial corporations have a financing role of their own. This is the point of the Modigliani-Miller (1958, 1961) propositions on the irrelevance of the firm's financial policy.

However, for several reasons, such an equivalence is not to be expected in practice. First, corporate managers have different investment opportunities and different fields of expertise than outside investors. As discussed by Myers and Majluf (1984), the information advantage of corporate managers may imply that internal finance has lower agency costs than external finance. Secondly, corporate also have different interests than outside investors. If they use their discretion over internal funds to further their own interests, this may give rise to additional agency costs in the corporation's relations with outside investors.

From the outside investor's perspective, one may think about funding decisions of corporate managers in similar terms as one thinks about funding decisions of bankers, investment fund managers, or venture capitalists. Corporate managers, bankers, investment fund managers, and venture capitalists all may be seen as providing portfolio management services to outside investors. For the outside investors delegation of portfolio management to such agents may be advantageous because it relieves them from the need to collect information about each investment opportunity. More precisely, it exploits the economies of scale inherent in the fact that monitoring and control of a given project may be cheaper and perhaps more effective as well when performed by one agent rather than many (Diamond, 1984; Hellwig, 1991). However the delegation itself involves agency costs (Diamond, 1984).

Delegated portfolio management by corporate managers involves different agency problems from delegated portfolio management by bankers or fund managers. On the one hand, the greater illiquidity of industrial as opposed to financial assets reduces the possibility of embezzlement based on fraud, which is endemic to certain financial operations. On the other hand, the greater specificity of industrial assets provides more scope for management entrenchment, as investment choices based on complementarities between real assets and management-specific human capital can be used to protect managerial rents. Given these agency problems, mechanisms of corporate governance are of major importance for the questions raised in this paper about the role of corporate cash flow as a source of funds for new investments. In particular it matters a great deal to what extent outside investors have a say in company affairs and to what extent governance mechanisms serve to limit management's ability to retain earnings and reinvest inside the firm as opposed to distributing earnings and leaving reinvestment decisions to final investors (Shleifer and Vishny, 1997).

The importance of these considerations for the allocation of resources for investment can hardly be overestimated. In many countries, for many companies, funds generated within the company are a major source of investment finance. The prominence of internal finance has been well-documented in macroeconomic studies based on flow-of-funds data, see, e.g., Mayer (1988, 1990), Corbett and Jenkinson (1996, 1997), Hackethal and Schmidt (1999). As discussed by Wenger (1996) or Hackethal and Schmidt (1999), in some of these studies the role of internal finance may be exaggerated because of the way depreciation is treated, but even when this is corrected, internal finance plays a dominant role. Thus Hackethal and Schmidt (1999) find that over the period 1970 - 1996, internal finance accounts for 88% of gross real investment in Germany, as opposed to 73% for bank loans and 92% for external finance as a whole. For the United States over the same period, they also have internal finance ahead (89%), with bank loans (65%) as the second most important source of funds, but, with additional funds from securities markets, external funds altogether account for 163% of gross real investment.

To some extent these numbers underestimate the role of internal finance. Sometimes internal finance takes the form of profits in one division subsidizing expenses in another that correspond to investments without being accounted as such.

At the microeconomic level, the role of internal finance underlies the sensitivity of observed investment spending to cash flow, which has been amply reported on in the literature, see e.g. Fazzari et al. (1988) for the United States, Elston (1997) for Germany, or Hoshi et al. (1991) as well as Hall and Weinstein (1996) for Japan. Jensen (1993) shows that investment spending by General Motors or IBM in the eighties exceeded the aggregate of investment finance by the entire US venture capital industry.

Even where external finance in the usual sense of the word is used, this tends to enhance the role of large incumbent corporations. Cash flow sensitivity of investment spending tends to be the more pronounced the smaller the company is (Fazzari et al., 1988; Elston 1997). This reflects the ability of large companies to smooth over bad times through bank loans and other forms of credit. Indeed there is a widespread notion that, e.g. in cyclical downturns, banks are happy to fund large corporations' inventory buildups as this provides them with an opportunity to substitute higher-graded claims on these companies for the riskier claims they get from lending to smaller companies. The resulting queeze on bank lending available to smaller companies is deemed to be a major force underlying the procyclical behaviour of investment spending (Bernanke et al., 1996; Gertler and Gilchrist, 1994). To the extent that cash flows of large and small companies are correlated through the cycle, the very use of bank lending to reduce cash flow sensitivity of large firms' investments will enhance the cash flow sensitivity of small firms' investments.

In Germany the enhancement of incumbency by external finance is reinforced by the widespread use of collateral as a conditio sine qua non for banks loans (Edwards and Fischer, 1994; Harhoff and Körting, 1998; Machauer and Weber, 1998). From the banks' perspective, collateral is a cheap substitute for creditworthiness assessments and surveillance: According to systematic surveys conducted in the late seventies in preparation for a possible reform of the bankruptcy code (which came twenty years later), banks on average collect some 80 % of their claims on collateralized loans in bankruptcy, which contrasts with 60 % for other secured loans and 3-5 % for unprotected claims (Gessner et al., 1978). Leaving aside the microstructure of the bank-firm relation, for the discussion here it is significant to observe that banks' reliance on collateral ties the ability to obtain loans, i.e., the most important source of external funds, to the availability of assets, presumably the result of past activity and past success. Characteristically, collateral requirements may be foregone when the borrower is a large, "well known" corporation (Edwards and Fischer, 1994). To the extent that such "trustworthy" borrowers have discretion over the use of the funds they borrow, we may again think of the borrowing company as a kind of financial intermediary, taking funds in and then allocating them to different investments.

The large industrial corporation taking on the role of a financial institution is to be found in many countries, almost regardless of other institutional features of their financial systems. This similarity across countries contrasts with, e.g., the sharp differences in the roles of banks as we go, e.g., from the United States to Germany or Japan (Mayer, 1988; Roe, 1994; Shleifer and Vishny, 1997; Becht and Mayer, 2000). This reflects certain aspects of the functioning of a company, which affect corporate governance in all countries alike:

- Modes of cross-subsidization between activities arise as a matter of course in the pursuit of ordinary day-to-day business. Given that management is responsible for the ordinary day-to-day business, decisions on such cross-subsidization will automatically be in the hands of management. However the transition from a firm pursuing different but complementary activities in a given line of business to a firm diversifying across sectors is a gradual one. Rarely are diversification choices taken as consciously as in the Daimler-Benz and Mannesmann examples mentioned above. The governance of such fundamental reorientations of the corporation is therefore quite often the same as the governance of day-to-day business, based on the discretion of management to manage.
- Corporations, like other institutions, rest on a certain fiction of permanence. If the people in charge of the institution see a given line of activity coming to an end, loyalty to "the institution" - and to their own jobs - will lead them to look for new fields of activity enabling the institution to survive even as its original area of competence and expertise becomes moot. For chief executives of US oil companies in the late seventies it would have been quite outlandish to accept the fact that (i) new explorations were on average not covering the opportunity costs of funds, (ii) their own expertise did not exactly provide them with a comparative advantage for investing in non-oil-related areas, and therefore (iii) it might be best to just distribute cash flows to shareholders - not ruling out the ultimate perspective that the company might some day be wound down.

Analysis of the industrial corporation as a financial institution must start from the observation that control of the insiders in charge by outsiders tends to be weak. The management of existing corporations usually has significant leeway to map out their companies' futures without interference from outside shareholders. To some extent this is a consequence of the fact that the very task of managing puts a lot of discretion and initiative into the domain of management. To some extent the weakness of outside control is also a consequence of the free-rider problem involved in any one outside shareholder's taking upon himself the cost of (i) working out an alternative view of what the company might be doing and (ii) organizing a majority of shareholders on his side, presumably in opposition to incumbent management (Grossman and Hart, 1980). Finally, and perhaps most importantly, the weakness of outside control is a consequence of management going out of its way to develop defensive devices against unwanted interference. Whereas in principle the free-rider problem might be overcome through, e.g., the takeover mechanism, in practice we find that various devices have been installed to make sure that takeovers can only occur with the consent of management. The development of mechanisms reducing or eliminating the possibility of interference from outside is a common phenomenon in the history of relations governing corporate control in practically all countries (Hellwig, 2000). Even the United States, which emphasize the notion of fiduciary duty of management to shareholders, is the country of the poison pill as well the hostile takeover (Roe, 1994). In countries like Germany or Switzerland, which emphasize management's responsibility to "the coporation" as an entity of its own, the autonomy of corporate management is stronger yet. Not so long ago, the management of a Swiss insurance company used its discretionary right to approve or disapprove the registration of new holders of name shares in order to decide the outcome of a takeover contest in favour of the contender they had called in as a "white knight"; this contender was offering a price that was about 15 % below the competing offer, but the company's management argued that this contender's offer "was better for the company and therefore also better for the shareholders".

In assessing corporate governance and its implications for the allocation of investment funds through retained earnings, one must take account of players outside the individual corporation. These involve executives of other corporations including banks as well as the government. Both contribute to protecting incumbent management against outsiders. Executives of other corporations do so through their participation in networks of mutual protection and surveillance, in Germany on the basis of cross-holdings of shares (Adams, 1994; Wenger, 1996), in other countries, e.g., Switzerland through interlocking directorates.

Political systems contribute through basic regulation of corporate governance mechanisms as well as informal intervention. Thus the end of the wave of hostile takeovers in the United States around 1989 was at least partly due to anti-takeover legislation and jurisdiction in various states (Jensen, 1991; Roe, 1994). In Germany, voting-rights restrictions, multiple voting rights and other devices protecting management from outsider interference have been used for a long time with support from legislature and judiciary; recent abolition of some of these devices has largely been imposed by Brussels. So is the introduction of a new takeover code, due to be passed later this year; as late as 1997 interference by the political system, supported by all parties, was instrumental in thwarting a hostile takeover that would have involved a large cash disbursement in payment to shareholders.

2 The Economics of Internal Finance

In this section, I consider the implications of the preceding considerations for the allocation of funds for investment. Following Jensen (1986), I will assume that incumbent management of industrial corporations has full discretion over the use of free cash flow and that outside shareholders have no direct influence over the choices that are actually taken. This assumption is extreme, but it serves to focus attention on some of the key issues that arise.

The view of management having discretion over the use of free cash flow turns the traditional agency approach to corporate finance and corporate governance on its head: In its most extreme form it suggests that outside shareholders have effectively been expropriated, except perhaps for a fairly constant dividend payment the regularity of which is not far from the regularity of debt service owed to creditors. Given this effective "expropriation", management is free to pursue its own path. The literature on governance mechanisms in different countries suggests that this view may not be far from the truth, see, e.g., Jensen (1991, 1993), Roe (1994) for the United States, Adams (1994), Wenger (1996) for Germany. Prima facie empirical evidence is provided by the huge discrepancies that are regularly found between the valuations of firms provided by accountants and the valuations of the same firms in the markets. If companies like the energy providers Veba and Viag in Germany are worried because their market valuations are so much below their "true" values as found by the accountants (37 bn. Euro as opposed to 72 bn. Euro for both companies together, see FAZ, March 7, 2000), one reason for the discrepancy may be precisely that shareholders, i.e., those people who determine the companies' market values, are expecting that a significant portion of the companies' assets will be used for purposes other than providing benefits to shareholders.

To the extent that effective expropriation of outside shareholders through management discretion over the use of retained earnings is a serious prospect, we should expect to see rationing of access to outside equity finance. Even where less than total expropriation is to be feared, outside equity finance may be unattractive because prices of shares incorporate anticipations of management abuse of discretionary power and hence are low relative to the values of assets in place. This view is supported by the empirical finding that countries like Germany or Italy with relatively weak shareholder protection have traditionally had low stock market capitalizations relative to GDP and long lags before companies could go public at all (Prowse, 1994; Wenger, 1996; La Porta et al., 1997, 1998).

In a seminal paper, Myers and Majluf (1984) have pointed to the "pecking order" of first internal finance, then external loan finance, and last external equity finance as one of the key empirical phenomena which any theory of corporate finance must come to terms with. Using a model, in which potential conflict between management and outside shareholders played no role, they suggested that this pecking order reflects differences in agency costs arguing in particular that internal finance has the lowest agency cost overall. The discussion here suggests another interpretation, namely (i) in a world in which there is potential conflict between management and outside financiers, internal finance is attractive because it is the form of finance where management has the least bother explaining and justifying what it wants to do and (ii) outsiders are prefer to provide external funds in the form of loans with hard claims as opposed to shares with no specified claims at all. In this view, the agency costs of internal finance are nonnegligible because the prospect uncontrolled exertion of discretion by management over the use of "free cash flow" makes it hard to issue outside equity in the first place (Jensen, 1986; Shleifer and Vishny, 1997).

The impairment of outside equity finance does not imply that corporate investment as a whole suffers from a scarcity of funds. The prominence of internal finance is sometimes seen as indicating a "rationing" of funds resulting in underinvestment, the idea being that firms are restricted to undertaking the projects that they can fund internally. Findings of cash flow sensitivity of investment spending are usually interpreted in these terms, see, e.g., Fazzari et al. (1988), Hoshi et al. (1991), Gerke et al. (1995). However, cash flow sensitivity of investment spending indicates only a correlation. This may reflect overinvestment as well as underinvestment. Overinvestment would occur if a company with large cash flows pursued investment projects that did not recover the opportunity cost of funds. The example of the US oil industry continuing to pursue exploration activities after these had been recognized - even by outsiders - as being unprofitable provides a case in point. According to Blanchard et al. (1994), another example is provided by US corporations that received large cash windfalls from legal settlements and reinvested them not altogether wisely. Jensen (1986) has argued that any free cash flow will be reinvested even if this results in waste. Regardless of whether or this assessment is appropriate, this "free cash flow hypothesis" shows very clearly that the prominence of internal finance and the sensitivity of investment spending to cash flow should not be treated as prima facie evidence of rationing and underinvestment.

In an economy with weak protection of outside shareholders we should expect to see new companies having difficulties in obtaining outside equity finance as well as old companies wondering how to reinvest their earnings. This leads me to conlude that for mature economies, the structure of investment may be a more serious issue than the overall level of investment. For a developing economy, the overall level of investment is an important issue: When there are too few established companies, a scarcity of funds for new companies leads to a low overall level of investment. For mature economies, we should expect the rate of return on capital to exceed the overall rate of growth, and hence the level of income from capital to exceed the level of investment. To the extent that income from capital takes the form of cash flow of corporations that can be reinvested, the question is what types of investments will be financed.

From this perspective, the task of the financial system is not so much to bring funds from households as final investors to firms as the final users, but to bring funds from firms with positive cash flows to firms with significant investment opportunities. If the investment opportunities are just where the cash flow arises, this is not much of a task at all. One is tempted to believe that the success of postwar recovery in Germany and Japan was at least partly due to the fact that in a stable environment characterized by various scarcities due to wartime destruction, high current returns were good indicators of future prospects, and therefore an system based on retentions did not pose much of a problem. In times of structural change however the investment opportunities are not where the cash flow arises. Then the question is what mechanisms there are to channel funds to where they are needed.

This brings us back to Jensen's "free cash flow" hypothesis. A naive form of the hypothesis would suggest that firms with "excessive" cash flow will simply reinvest in their own sectors because they lack the imagination to do anything else. The Daimler-Benz and Mannesmann examples cited above suggest that this view is too simple. Even if funding is altogether limited to what can be raised by incumbent corporations, this does not mean that the economy is unable to cope with structure change; it just means that incumbent corporations are the main players in the process of adaptation. The question then is what drives their decisions.

Jensen's notion that management is willing to waste funds is not entirely convincing, at least in the absence of additional arguments. Jensen bases this notion on the hypothesis that the returns to investment accrue at least partly to shareholders, so a manager reinvesting funds may neglect the external effects that his choices have on the return prospects of shareholders. However, if management is deemed to have discretion over the use of "free cash flow" today, why should it not have discretion over the use of "free cash flow" tomorrow or whenever the returns from current investments come due? To the extent that the returns from current investments are added to the manoeuvering mass that management has as it disposes of "free cash flow", presumably management has an incentive to invest funds efficiently. In a world in which management has discretion over the use of "free cash flow", management is in fact a kind of "residual claimant" on the firm's returns; as such it would seem to have an incentive to invest efficiently, i.e., to avoid the kind of waste that Jensen names as the major harm from management discretion over "free cash flow".

Above it was suggested that if management was a residual claimant to free cash flow, it would have an incentive to pursue efficient strategies, i.e., not to waste free cash flow. This suggestion was not entirely serious; its purpose was mainly to undermine the presumption of inefficiency based on concern for externalities towards shareholders. To assess the mechanisms guiding the reinvestment of free cash flow, one must look in more detail at those aspects that make for a difference between the position of management in a corporation and a residual claimant in the conventional sense of the term. Three points seem important:

- Cash flow in the company till is not the same as cash in one's own pockets.
- Management is not just one person; strategy choices depend on internal coordination and allocation mechanisms.
- To the extent that management is not entirely secure, the involvement of outside players, politicians, judges, union representatives, journalists, even university professors, may play a role.

I consider these points one by one. The distinction between cash in the company and cash in one's own pockets matters for two reasons: First, cash in one's pockets can be used for whatever purposes one likes, cash in the company cannot. Suppose for example that we consider continued unprofitable oil exploration activities as a form of consumption on the job, providing managers with the satisfaction of living up to the image of a "genuine" oil executive (rather than one who reaps cash flow from existing wells). It is difficult to put monetary values to such forms of "consumption" relating to self-image, power, and prestige, but one may wonder whether the people concerned would have spent the money in the same way if this had been money in their own pockets rather than money in the company till (Jensen, 1986). Second, cash in one's pockets can be taken away when one retires, cash in the company till cannot. Indeed the mechanisms determining CEO succession in corporations do not seem to provide for payment of departing CEOs on the basis of the values they leave to their successors. Given that CEOs tend to be within a decade of retirement, this may create a serious bias towards strategies that will do well within the remaining time span, but may have poor long-term prospects (Noll and Bachmann, 1988).

Concern for the distinction between cash in the company and cash in one's pockets may be relevant for the assessment of management compensation in mergers and takeovers. One view of developments on the United States from the eighties to the nineties is that in the late eighties management succeeded in getting rid of hostile takeovers through various devices, from antitakeover laws to poison pill provisions, that in the nineties the takeover market was revived as management arranged for payments in the wake of takeover to compensate for the loss of incumbency. One interpretation would be that these payments provide precisely for the cash in one's pockets and therefore the prospect of such payments may actually enhance efficiency while confirming at least some shareholder expropriation. This may explain the seeming paradox that the nineties are a time when managers talked about "shareholder value" even as they made sure that governance mechanisms protected them better than ever against shareholder interference (Useem, 1993).

The fact that management consists of more than one person requires us to take account of internal control mechanisms and internal politicking. On the positive side internal control mechanisms provide some substitute for monitoring and control as devices against management laziness; the Jensen and Meckling (1976) vision of managers indulging in insufficient effort because the marginal returns to effort are shared with equity holders is hardly appropriate to describe the behaviour of people vying for advancement when each of them knows that his rivals are just waiting to exploit the slightest indication of carelessness. On the negative side, internal control and allocation mechanisms may be driven by considerations of personal relations, power and prestige.

In particular, they do not allow for much questioning of a CEO bent on pursuing a given strategy, sending his critics to Coventry and promoting supporters of his plans.

To be sure, at some level, internal promotion, allocation and control mechanisms depend on performance. However this is not the same as a dependence on prices and opportunity costs. Reliance on past performance may provide a check on outright politicking, but (i) it tends to put weight on the past rather than the future, and (ii) it tends to abstract from considerations of risk. As a case in point consider the process of structural change at two major Swiss banks as presented by Schütz (1998): One bank had suffered large loan losses in the late eighties. As a result of these the loans department had lost political influence, which permitted the person in charge of investments to call for the imposition of modern risk management techniques on the entire organization, including the loans department, and in the process rise to the top. At the other bank, there had not been comparable loan losses in the late eighties, so the loans department was still strong, and the person in charge of investments had to show trading profits to be a credible contender for the top position. These he got from risky positions in derivatives, largely without any effective risk management. Results provided a measure of achievement, without concern for the risks that had been taken. Whether it was desirable to introduce modern risk management methods should presumably have been independent of whether the loans department in the past had been successful - capable or lucky - to avoid credit risk. It should also have been independent of who was in the race for the top job, but in either case, it was not.

A major source of distortion in internal allocation mechanisms is the power of incumbents. This power arises from the simple fact that they are there and have been there, presumably in strong positions, for quite a while. Outsiders, representatives of new ventures representing new ideas tend not to be in the inner councils of existing corporations. Examples of mistaken decisions arising from this incumbency bias are plentiful. Perhaps most famous is the example of IBM in the early eighties following the advice of the mainframe engineers and deciding against a shift from mainframes to personal computers (Jensen, 1993). Another example, which is relevant for comparisons between continental Europe and the United States, concerns the development of biotechnology. The large chemical and pharmaceutical corporations of continental Europe were very slow to discover the potential of biotechnology. One of the reasons given for this delay is the dominant position of traditional chemists and their failure to acknowledge or even recognize the shift of paradigm away from the development of new chemical entities towards a focus on biomolecular processes, in particular genetically determined processes. Whether they simply had limited vision or whether they were concerned for their turf, does not really matter; what matters is that it took the success of outsiders, i.e., the new biotechnical companies in the United States and the United Kingdom, to alert these institutions to the potential of the new approach. Given that they are the major investors in R&D in chemicals and pharmaceuticals, this kind of closedness to a new approach is highly significant.

The Daimler-Benz example mentioned in the introduction may look like a counterexample to the forces of incumbency bias. However, a closer look suggests the opposite: The strategy of transforming Daimler-Benz into a technologies conglomerate focussed on existing companies rather than new developments; in particular AEG (electrical appliances) and MBB (airplanes and armaments) had been around and visible for decades. Furthermore, all of the acquired companies were problems in search of money rather than ideas in search of money; indeed in some cases the initiative came from the acquired happy to have found someone with excess cash flow rather than the acquirer. Significantly, some of the problems, in particular in the case of AEG, had to do with decline in past activities and a failure to adapt to such decline in time. In the case of MBB, the German government was not unhappy to use the opportunity to "privatize" the ongoing losses of the airbus and get the costs of this form of misguided industrial policy off the public budget.

The problem of incumbency bias tends to be reinforced when players outside the corporation are taken into account. As mentioned above, political systems tend to support corporate management against the claims of outside shareholders. One reason for doing so is that the existing corporation provides a shell for subsidizing activities that the political system finds it convenient to see subsidized. When we are talking about structural change, we have to consider not just the problem of financing new activities, but also the problem of adjustment for people involved with the old activities. Keeping cash in the corporation and having structural change occur within the corporation provides resources for smoothing the downsizing of outgoing activities, sometimes even for maintaining outgoing activities that would not be viable on their own. As discussed by Roe (1994), company "stakeholders", from employees to local authorities and suppliers are usually quite good at mobilizing political support against an adjustment that might otherwise be quite radical.

Nor are these concerns altogether unjustified. As discussed by Shleifer and Summers (1988), the radical changes imposed in the course of corporate takeovers may amount to "breaches of trust". To see the issue recall the unrest in the printing industry in the late seventies when traditional methods of typesetting were replaced by photomechanical procedures. For centuries typesetters had been among the best-paid workers because they had a fairly high level of education, i.e., investment in human capital. Who is to bear the risk that such human capital investments might have to be written off because of new technological developments? The standard view in the theory of labour contracts would be that even though we do not have any explicit risk sharing agreements, there is an implicit understanding that such risks are by and large borne by employers providing a certain amount of job and wage security. Such implicit contracts are advantageous as they enhance people's willingness to make such risky investment and, more importantly, employers are presumably more able to bear those risks than employees. However as emphasized by Shleifer and Summers, structural change without compensation would eliminate such implicit risk sharing, with adverse consequences for the overall allocation of resources (including people's willingness to invest in firm-specific, technology-specific human capital).

The difficulty here as before is that the allocation mechanisms used to adjudicate such conflicts involve politicking rather than a concern for costs and benefits. A proper concern for justified stakeholder interests would require that at some point these interests are set off against other concerns. This tends to be done on the basis of political voice rather than economic or even social significance. Most importantly, considerations of opportunity costs play no role. When Shleifer and Summers (1988) include in their accounts of stakeholders of a corporation the shopkeepers who will loose business if the company closes down a factory, they neglect to talk about the shopkeepers who might gain business if funds are devoted to a new factory elsewhere. This neglect is typical for the mode of political discourse about the "economic responsibility" of a corporation to the polity in which it resides. It contributes to the incumbency bias that affects large corporations anyway.

3 What Makes for the Differences Between Countries?

So far I have by and large neglected cross-country differences, arguing that in all countries large corporations play the role of financial institution. Even so there are differences which matter. As a case in point, consider Mannesmann and Vodafone, parties of the recent takeover battle, one the result of an old industrial giant turning to telecommunications, the other a telecommunications company that has made it on its own, relying on the ability to issue shares in a system of organized markets - and on its own success. In the United States, the growth of NASDAQ from its beginnings in the seventies to the dominant position it holds today bears witness to the availability of funds for outsiders wanting to make their own way without regard to existing corporate structures. In Germany prior to the institution of the Neuer Markt in 1997, there was nothing like NASDAQ, and even today, the financing role of the Neuer Markt is significantly less important than that of NASDAQ. For the present discussion, this observation of cross-country differences in the availability of external finance, in particular external share finance to outsiders raises two questions, namely (i) what precisely are the reasons for the differences, and (ii) how is one to assess the differences from the perspective of allocation theory?

As discussed by La Porta et al. (1997), differences in legal environments explain a large part of the differences in the availability of stock markets for external finance, in particular, external finance of relatively new companies. In particular, the United States and the United Kingdom have stronger protection of outside shareholders. This involves (i) the role of the judiciary ensuring that "fiduciary duty" is regarded as a duty towards shareholders, to be obeyed, e.g., in the context of a takeover battle, (ii) a regulatory tradition imposing fewer impediments on shareholders wanting to organize in opposition to management, and finally (iii) a less strong system of protection against takeovers involving the disbursement of cash to shareholders. In this context it is of interest to note that many of the regulations in continental Europe which are ostensibly designed to protect small shareholders from being taken advantage of by larger shareholders, e.g., voting rights restrictions on large shareholders, are in the American legal tradition deemed to be pro-management/anti-shareholder pure and simple no matter what the official reasoning in Continental Europe may be.

The differences between legal systems that are documented and analysed by La Porta et al. (1997, 1998) do not necessarily contradict the view of corporate management vying for autonomy from its shareholders and being supported by political systems everywhere. In the American system of corporate governance, the ability to take recourse to the stock market is itself a tool of management autonomy in that it reduces the scope for interference by banks and other large financial institutions. As documented by Bhide (1993) and Roe (1994), many American regulations concerning trading and investment in the stock market effectively ensure that financial institutions are unable or unwilling to put themselves into a position where they can have a say in determining company strategy. For instance, an investment fund bent on maintaining the liquidity of its portfolio will refrain from active involvement that would lead to its being classified as an insider, subject to restrictions on insider trading. In the categories of Hirschman (1970), American financial institutions limit themselves to using exit or the threat of exit as instruments of influence, but in contrast to the legendary "main bank" of Japan or Germany they do not use voice. According to this view, the American regulatory regime reflects the desire of corporations to be independent of financial institutions asking for a direct say in company affairs. The stronger shareholder protection might then be regarded as a mechanisms of commitment that helps to maintain the availability of the market as an alternative to bank finance.

Whatever the explanation, greater shareholder protection must reduce the wedge between the value of assets in place and the value that the market assigns to the company. Going back to the discrepancy between the 74.2 bn. Euro assessed by the accountants and the 37 bn. Euro assessed by the market for Veba and Viag earlier this spring, to the extent that this discrepancy reflects the shareholders' inability to get at the 74.2 bn. Euro in assets, now or ever, a change in regulations that would strengthen their position would reduce the wedge. This is where the availability of the takeover mechanism makes a difference. One possibility is that companies simply pursue more generous dividend policies as a way of raising stock prices and reducing the profit margin of potential raiders. Another possibility is that a takeover itself leads to a huge delayed "dividend distribution" in the form of the takeover premium; to the extent that this possibility is anticipated with some probability, this in turn will support stock prices and reduce the wedge between the value of the assets in place and the market value of the stock.

These considerations immediately affect the attractiveness of using the market in the first place. As is well known, initial public offerings involve significant underpricing in the form of a difference between share prices on the first day of trade and share prices at the offering (Ibbotson et al. (1988), Wasserfallen and Wittleder (1994)). To the extent that there is an additional wedge between the value of assets in place and the market value of the stock, this adds to the dilution of the previous owners' positions as the company goes on the market. Therefore whatever serves to reduce the wedge, will make it more likely that the surpluses available from having access to the market will outweigh the costs of diluting the previous equity stakes.

The significance of these considerations extends to the availability of finance even before companies go to the market. For a long time a common complaint in Germany has been that there is insufficient outside finance for recently founded enterprises. In particular, complaints concerned the insufficiency of venture capital and the insufficiency of bank lending for such firms. Both are easily explained by (i) the absence of collateralizable assets and (ii) the peculiar distribution of returns for new companies, namely most of them just fail, a few do middling well, and exceptional cases do exceptionally well. A loan with a return-independent repayment obligation would involve the lender with the failures, but not with the excess returns on the exceptional successes; this explains the paucity of bank loans for such purposes. A share contract would in principle allow the financier to participate in exceptional successes, but then the very exceptionality of success may be the source of moral hazard, namely, once it becomes clear how great the success is, the incentive to try and have it all for oneself is quite strong. Moreover this conflict is difficult to resolve by contractual means: Any provision which strengthens the protection of the financier must raise the entrepreneur's fears that in the very instance where it matters, he will be taken advantage of, and vice versa.

In this constellation, the ready availability of a market like NASDAQ provides a deus ex machina to resolve the conflict. Most importantly it permits the venture capitalist to get out after a few years and get into new projects. This is important because it introduces the possibility of relying on reputation mechanisms. The financier who is repeatedly in the business of providing venture capital and contributing to the development of a firm until it goes public wants to maintain a reputation of not abusing his partners. His partners may therefore be less fearful of contractual provisions providing a lot of leeway to the financier; even though in principle such provisions might give him the power to shift the distribution of spoils in his favour, concern for reputation may prevent him from doing so. At the same time, the benefits from going public themselves may be sufficiently large to ensure that neither party wants to rock the boat at such a critical time.

The different features of the American and English financial systems should be seen as being complementary to each other. Stronger shareholder protection reduces the agency cost of management discretion over the use of internal funds; this in turn reduces the dilution of equity positions from going public. The greater availability and greater attractiveness of the recourse to organized markets spills over into the availability and attractiveness of outside share finance even at the pre-market stage. To the extent that higher distributions - through higher dividends or through takeover premia - contribute to the funds available for investment in new companies, this would make for additional complementarity. In terms of the task of channelling funds from firms with excess cash flow to firms with promising investment opportunities, these financial systems seem to be able to complement the incumbency approach of established corporations retaining earnings and reinvesting according to management preferences by an approach that allows for greater openness towards outsiders, having funds distributed to final investors and having reinvestments guided through financial intermediaries and markets. In any given year this complement to the incumbency approach may not be doing very much - recall that investment of a typical large US corporation exceeds aggregate venture capital finance; over a longer time span though, the greater openness that results is rather evident from the changes taking place in the list of top 100 or top 50 US companies, which do not have a counterpart in countries where the protection of incumbent insiders, from industry or finance, is more effective yet.

From the perspective of allocation theory, the relative assessment of the different systems is a matter of judgment. On the one hand one may complain that a system which pays too much attention to "shareholder value", i.e., to the opportunities and the pressures provided by the market, may neglect legitimate interests of "stakeholders", i.e., third parties affected by firms' choices of investment strategies. On the other hand one may complain that a system that neglects shareholder protection altogether is subject to the risk of incumbency bias causing the economy to miss important new opportunities. The conflict between these two positions can perhaps be reduced if we acknowledge the possibility that, whereas the contractual rights of shareholders are limited to the right to vote at shareholders' meetings (likely to be useless unless one has at least a blocking minority), some of the major stakeholders, in particular workers, can be and are in fact protected through explicit contracts and regulations. Given the existential risks for any society in closing itself to new developments, more precisely, in having development strategies determined by a closed circle of a few hundred people, this suggests that some opennes of the financial system along Anglo-Saxon lines should be preferred.

Recent developments in continental European countries suggest that perhaps the route in this direction has been taken, see., e.g., the success of the Neuer Markt. As yet I am not convinced that the conclusion can be taken for granted. First, the question is how robust these new developments will to adverse market movements. Times of stock market booms have always been times of active stock emissions, sometimes followed by decades of doldrums. Second, it is not yet clear that there has been any significant change in governance mechanisms. Political reaction to the

Mannesmann - Vodafone affair suggests that at least some parties are still thinking mainly in terms of protection of incumbency. This impression is reinforced by the observation that German tax policy is based on the notion that earnings that are reinvested within the given corporate shells should be taxed rather more lightly earnings that are distributed to owners (on tax policy in Germany, see Chirinko, 2000). The notion that reinvestments of distributions through the market provides a substitute for reinvestments within given corporate shells has not yet affected thinking about tax policy.

The question is how will the financial system react when people appreciate that perhaps the few changes in regulations that have been implemented so far have not really overturned the previously prevailing system of governance. In this context, the internationalization of large corporations may be of major importance. In Mannesmann - Vodafone affair, some 60% of shareholders were not German, so the CEO of Mannesmann went out of his way to tell German politicians that this was none of their business. (Ironically, the critical comments of German politicians may have helped Vodafone as these comments seem to have contributed to the decline of the Euro, thus serving to make the Vodafone offer more attractive.) Indeed over the last decade a substantial number of major corporations of continental Europe have internationalized their shareholder populations. This turns the regulation of corporate governance from a matter of national politics into one that involves international complications, even without interference from the European Union. This may effectively limit the scope for stakeholders at the national level to establish their interests in regulations concerning company - shareholder relations, governance, takeover procedures and the like; presumably the reduction of shareholder rights and powers is a more sensitive matter when the shareholders are institutional investors abroad with the political clout to make their interests the subject of international diplomacy if necessary. It will be interesting to see whether this will indeed be enough to move the financial systems of continental Europe towards a system involving more distributions of returns to shareholders and more investment finance from outside, including the finance of outsiders to the established system.

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