CHAPTER 6 CAPITAL MAINTENANCE

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6.1 Introduction

Capital maintenance is described in the Company Law Review's *Strategic Framework* document as,

> "[A] narrow .. and .. technical issue concerning the preservation of certain reserves which are currently designated as not normally distributable to members" [DTI (1999: 81)].

This chapter surveys economic and empirical literature relating to this topic.

It is possible to identify three potential economic rationales for aspects of the capital maintenance regime. The best-known of these suggests that capital maintenance rules serve to reduce financial agency costs, or in language more familiar to lawyers, "protect creditors". By restricting a debtor firm's ability to take value-reducing actions, the rules reduce the risk of default for creditors. This theory draws support from US studies of loan contracting, which show that covenants restricting the ability of corporate debtors to pay dividends are commonly demanded by large lenders. However, it has been criticised on the basis that the "terms" contained in a legal share capital restriction are set *historically*, and hence are unlikely to assist in reducing the risk of default for a creditor who lends money to a firm several years after it has been incorporated. A lack of convincing empirical evidence means that it is difficult to come to a firm conclusion in respect of this proposition.

An alternative rationale for capital maintenance rules is that they may assist managers of publicly traded firms to signal private information about their firm's future performance to investors. This theory receives empirical support from a study of share price reactions. A theoretical rationale also exists for rules which make it obligatory for a company to have a minimum share capital. These rules may be a legislative response to an externality problem created by limited liability. However, this chapter suggests that such an explanation is wholly unpersuasive.

This chapter is structured as follows. Section 2 provides an outline of the law relating to capital maintenance for readers unfamiliar with the technical niceties. Section 3 surveys the theoretical literature which advances and critiques economic rationales for capital maintenance rules. Section 4 surveys empirical findings which are relevant to the practical operation of the capital maintenance rules. Empirical work which directly addresses these rules is very sparse, so the net of "relevance" is cast somewhat widely. Section 5 concludes.

6.2 The law relating to capital maintenance

This section outlines the principal features of the law relating to capital maintenance, i.e. Part IV, V and VIII of the Companies Act 1985. It is intended to serve only as an

outline guide for the non-specialist. For more detailed treatment, the reader is referred to standard texts such as Davies (1997: 234-295) and Farrar and Hannigan (1998: 161-225), or to reference works such as Boyle *et al.* (1986-1999: 13.001-13.057). Manning (1981) gives an excellent account of the conceptual apparatus of share capital, albeit in a US context. For accounts of the historic development of the principles, see Yamey (1941) and French (1977).

6.2.1 What is share capital?

"Share capital" is used in many different senses in accounting and legal parlance [Chambers (1995: 448-454)]. First, it can be used to refer to the value of a company's *net worth*, i.e. the difference between the value of its assets and the quantum of its liabilities. This is a representation of how much the shareholders' stake in a company is worth at the time of the valuation. A second sense, which is now largely archaic, refers to the total value of a company's assets. These two colloquial senses should however be distinguished from the *legal* meanings of the term.

In company law, the generic term "share capital" refers to three related but distinct concepts: (i) authorised or stated capital; (ii) issued capital; and (iii) paid-up capital. A figure known as the company's *authorised* share capital must be stated in its memorandum.[1] This must further be divided into units representing individual shares. The unit of the capital which is notionally allocated to each share is known as the "par" value of the share. It should be made clear that the par value need bear no resemblance to the market value of a company's shares, which is the price they will trade for as between a willing buyer and a willing seller. The *issued* capital is determined by multiplying the number of shares which have been issued by the par value of the shares. Shares may not be issued beyond the value of a company's authorised share capital. Hence the authorised share capital represents an upper bound on a company's issued share capital. The term *paid-up* capital denotes that part of the par value of the issued shares which has been paid to the company by the allottees. Obviously, the issued share capital will form an upper bound on the value of the paid-up share capital. Hence,

$$\text{Authorised share capital} \geq \text{Issued share capital} \geq \text{Paid-up share capital}$$

The rules relating to share capital concentrate primarily on issued share capital. The majority of this section is devoted to describing the rules which restrict its increase and decrease. In contrast, it is relatively easy to alter authorised and paid-up capital, *to the extent that they differ from issued share capital*. Authorised share capital may be increased or reduced - so long as the reduction does not take it below the value of the issued share capital - by an ordinary resolution of a company's general meeting.[2] Paid-up share capital may be increased by shareholders paying over the unpaid part of the issue price for their shares to the company.

6.2.2 Minimum Share Capital

[1] Companies Act 1985 s 2(5)(a).
[2] *Ibid.* s 121.

Public companies must have a minimum issued share capital of £50,000.[3] This restriction was introduced by the Second EC Directive on Company Law.[4] Private companies are not subject to any such restriction.

6.2.3 Raising Share Capital

Share capital is said to be "raised" when a company issues shares. In return for an allotment of new shares, the purchaser promises to pay a stated consideration to the issuing company.[5] The value of the consideration is a matter for agreement between the company and the allottee, although its face value may not be lower than the par value of the shares which are issued to the allottee.[6] The issue price will normally be the market value of the shares, although where this is above the par value, a company is not legally obliged to demand the full market value for its shares, so long as the issue price is at least equal to the par value.[7]

Extra restrictions apply where the consideration provided by an allottee of shares in a public company does not take the form of cash.[8] For issues of shares by public companies, non-cash consideration must be valued by an independent expert in order to verify that its actual value conforms with its face value as stated in the issuing agreement.[9] Furthermore, an undertaking to provide services to the company, or any undertaking which may take more than five years to perform, is not capable of constituting consideration for an issue of shares by a public company.[10] Where private companies issue shares for non-cash consideration, the stated value of the consideration is generally taken to represent its actual value, unless the stated value is manifestly incorrect or fraud has been shown.[11]

When shares are issued in accordance with the foregoing rules, the company's accounts are altered to reflect an increase in the "issued capital". This is represented as a figure on the liabilities section of the balance sheet.[12] Where the face value of the consideration received by a company for an issue of shares is greater than the par value of the shares, the difference is known as a "premium". The sum of all the premia raised by a company's share issues is known as the "share premium account",

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[3] *Ibid.* ss 11, 117, 118.
[4] Second Council Directive of 13 December 1976 (77/91/EEC) [1977] OJ L26/1 (Formation of Public Companies and Maintenance and Alteration of Capital).
[5] A technical distinction exists between allotment and issue of shares. Shares are said to be "allotted" for the purposes of the Companies Act 1985 when the allottee gains an unconditional right to be included on the company's register as a member in respect of those shares (s 738(1)). "Issue" is not defined in the Act, but in a tax context it has been said that it does not occur until the purchaser's name has been entered on the register of members (*National Westminster Bank plc v IRC*[1995] 1 AC 119). This distinction is of no significance from the standpoint of capital maintenance.
[6] *Ooregum Gold Mining Co of India Ltd v Roper* [1892] AC 125; Companies Act 1985 s 100.
[7] *Hilder v Dexter* [1902] AC 474.
[8] "Cash" consideration is broadly defined to include (i) payment by cheque; (ii) the release of a liability of the company for a liquidated sum; and (iii) an undertaking to pay cash to the company at a future date (Companies Act 1985 s 738(2)).
[9] Companies Act 1985 ss 103, 108.
[10] *Ibid.* ss 99(2), 102.
[11] *Re Wragg* [1897] 1 Ch 796.
[12] See e.g., Companies Act 1985 Sch 4, para 8 (permitted balance sheet formats).

which is subject to the same restrictions on reduction as the issued capital.[13] This must also be accounted for on the liabilities section the balance sheet.[14]

6.2.4 Maintenance of share capital

To understand the concept of capital maintenance, it is important to appreciate the relationship between a company's accounts and its share capital. A corporate balance sheet shows the value of the company's assets and the quantum of its liabilities to creditors. The difference, which is often referred to as the value of the company's "net assets", is an indication of the value of the shareholders' stake in the company. It is denoted on the balance sheet as "capital and reserves", or sometimes as "shareholders' funds". This is sub-divided amongst the following: (i) issued share capital;[15] (ii) share premium account; (iii) capital redemption reserve; (iv) other reserves; (v) profit and loss account [see, e.g., Pendlebury and Groves (1999)]. Items (i) - (iii) are set by reference to statutory formulae, and may only be reduced in accordance with certain statutory procedures. Item (iv) (other reserves) is not regulated by the Companies Act, but may well be the subject of restrictions contained in a company's articles of association, or in generally accepted accounting practice. Because this paper concerns itself with the statutory rules applicable to share capital, category (iv) will not be discussed further, and a simplifying assumption will be made that such reserves are set at zero.

A company's profit and loss account (v) - as shown on its balance sheet - is therefore the difference between its "net assets", determined in accordance with accounting valuations, and its capital accounts (items (i) to (iii)), determined in accordance with law. The underlying idea of the maintenance of capital principle is that only *profits* may be distributed by a company to its shareholders whilst it is a going concern. This will "maintain" the capital in the sense that where a company's net assets are less than or equal to the amount of its capital accounts, a distribution to shareholders would deplete the assets which represent the value of the capital.[16] Hence distributions may not be made in these circumstances. The principle is really a negative one: distributions may not be made when net assets are less than the capital accounts. It does not amount to a positive obligation on shareholders to *contribute* fresh assets.

The maintenance of capital principle is implemented by restrictions on distributions to shareholders and restrictions on reduction of the share capital figures in the accounts. Part VIII of the Companies Act 1985 prohibits the making of "distributions"

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[13] *Ibid.* s 130(3).
[14] Companies Act 1985 s 130.
[15] This term is commonly used as described in the text. The Companies Act 1985 actually prescribes the term "called-up share capital" (e.g. Sch 4, para 8), which has a slightly different meaning. The technical distinction is as follows. Companies may elect to issue shares for which part or all of the issue price is deferred indefinitely. The company's board may elect to "call" upon shareholders to pay this at any time. "Uncalled" share capital is defined as being that part of a company's issued share capital which is (i) not yet paid; (ii) not agreed to be paid at a specific date; and (iii) not yet called. "Called-up" share capital is the issued share capital minus the uncalled share capital (Companies Act 1985 s. 737). Shares are almost universally issued fully paid-up, and so the distinction between issued, called-up and paid-up share capital will in most cases be irrelevant. The term "issued capital", used in many of the textbooks, is retained in the text for ease of exposition.
[16] See, e.g., *Re Exchange Banking Co, Flitcroft's Case*(1882) 21 ChD 518; *Guinness v Land Corporation of Ireland* (1882) 22 ChD 349.

otherwise then where the company has sufficient "distributable profits" to fund them.[17] Distributable profits, broadly speaking, are defined as cumulative net realised profits minus the sum of dividends paid plus losses written off in reductions of capital.[18] Hence dividends must always be paid for out of profits, and not out of assets which represent the value of the capital which was contributed to a company in consideration for its shares, except insofar as the capital has subsequently been reduced.

A company may not reduce the amount of the figures stated in its capital accounts without the consent of the court under section 135 of the Companies Act 1985. What must be done to secure the court's consent varies depending on whether assets are being transferred to shareholders as part of the process. If they are, then the court must be satisfied that the interests of creditors are adequately protected. The statute prescribes a lengthy procedure whereby creditors must be informed of the proposed reduction and either consent to it or be paid off.[19] However the court has a discretion to waive the procedure where satisfied that the "special circumstances of the case" demonstrate that the interests of creditors are otherwise protected.[20] It is possible for the company to satisfy the court in this fashion by obtaining a bank guarantee of all its outstanding debts.[21] This practice is almost universally followed so as to avoid the expense of the full procedure.[22] If no assets are being transferred to shareholders, then the court is not required to consider its impact on the position of creditors, but will in any case be concerned to ensure that the burden of the share cancellations falls fairly as between different classes of shareholder.[23]

Further restrictions exist on a company's purchase of its own shares.[24] Were this unregulated, then it would allow the capital maintenance provisions to be circumvented. Where shares are repurchased, assets are transferred from a company to its (former) shareholders. The Companies Act 1985 prescribes that in general any repurchases must be paid for out of distributable profits.[25] Secondly, shares which are repurchased are cancelled, resulting in a reduction of the amount of issued share capital. To prevent this affecting the amount of distributable profits, the Companies Act 1985 requires that it be accounted for as a "capital redemption reserve", which is treated in a similar way to the other capital accounts.[26] An exception to this procedure exists for private companies, which may repurchase their shares out of capital provided that the directors make a statutory declaration, supported by an auditor's report, that they have reasonable grounds for believing that the company will remain solvent for at least one year after the repurchase.[27]

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[17] Companies Act 1985 s 263.
[18] *Ibid.* s 263(3).
[19] Companies Act 1985 s 136.
[20] *Ibid.* s 136(6).
[21] See Atkin (1995: Vol 9, 204-205).
[22] Boyle *et al.* (1986-99: 13.012).
[23] Companies Act 1985 s 136(2); *Scottish Insurance Corpn Ltd v Wilsons & Clyde Coal Co Ltd*[1949] AC 462.
[24] The law is structured as a basic prohibition with exceptions. See Companies Act 1985 s 143.
[25] Companies Act 1985 s 160.
[26] *Ibid.* s 170.
[27] *Ibid.* ss 171-178. Creditors or members who object to a repurchase from capital may apply to the court for its cancellation (*ibid.* s 176).

The law also prohibits companies from giving any form of financial assistance to purchasers of their shares.[28] One rationale for this prohibition is to prevent the evasion, by indirect means, of the restrictions on repurchase of shares. There is an exception for private companies, which upon the making of a "statutory declaration of solvency" may give financial assistance for the purchase of their shares, but only from distributable profits.[29] There are other perceived rationales for these rules, including the prevention of the creation of a false market in a company's shares, as for example during a take-over bid. However, from the point of view of capital maintenance, there seems no clear reason why the restrictions on financial assistance should be more onerous than those on the repurchase of shares.

6.2.5 Capitalisation of profits

A company may, if authorised by its articles, also increase its share capital by "capitalising" its distributable profits or other reserves. This is done by issuing paid-up "bonus shares" to existing shareholders. The increase in the issued share capital is funded by a transfer from either the share premium account, the capital redemption reserve, or distributable profits.[30]

6.3 Economic Analysis of Share Capital Rules

The economic analysis of law is principally concerned with the consequences of legal rules from the viewpoint of efficiency. Underpinning this agenda is the theoretical result that in a "perfect" market system, all resources will be allocated to their highest-valued uses by the market. In other words, the results of market transactions will be allocatively efficient. Real markets suffer from a number of imperfections, such as information asymmetries and contracting costs, which mean that transactions between real parties do not utilise all of the potential gains from trade. In extreme cases these become "market failures", as in the well-known examples of monopoly, public goods and externalities. Much of the economic analysis of law is therefore informed by the idea that law may be able to enhance efficiency by reducing the costs of market interaction, and by directing outcomes where markets fail.

Theories about rules restricting distributions generally have their roots in the economic theory of "agency costs". In light of this, a brief overview of the economic theory of agency costs is given in section 3.1 for the benefit of readers unfamiliar with the terrain. The most common rationale is that the capital maintenance rules serve to reduce *financial* agency costs : the costs of conflicts of interest between shareholders and creditors. This rationale, which is set out in section 3.2, is in accordance with the traditional understanding of lawyers that the capital maintenance rules are to do with "creditor protection".[31] As an explanation of the current law relating to share capital, this rationale has come in for sustained criticism. Some scholars have argued, using the "hypothetical bargain" heuristic, that the current law does not accord with the likely terms which creditors would want. The implication is that the terms are therefore inefficient. This argument is set out in section 3.3.

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[28] *Ibid.* ss 151-154.
[29] *Ibid.* ss 155-158.
[30] *Ibid.* ss 130(2), 170(4), 263.
[31] See, e.g., *Trevor v Whitworth* (1887) 12 App Cas 409, 423-424 *per* Lord Watson.

An alternative agency cost rationale for capital maintenance rules has recently been put forward. It suggests that restrictions on distributions can assist in reducing *managerial* agency costs : the costs of conflicts of interest between outside investors and managers. It suggests that restrictions on distributions can be used by managers to send signals to investors about their private information as to firm prospects. This rationale has only recently been set out, and has not yet come in for critical appraisal. It is discussed in section 3.4.

If only for the sake of completeness, a possible rationale for minimum capital requirements is also discussed. This is of course different in its sphere of application to the first two previous accounts, which rationalise restrictions on distributions. It suggests that minimum capital requirements may be able to assist in reducing externality problems introduced by the institution of limited liability. The theory and its manifest failings are set out in section 3.5.

6.3.1 Agency Costs and Corporate Enterprise

A brief explanation of the economic theory of agency is appropriate at this point.[32] The theory was first developed to explain aspects of industrial organisation and corporate finance over twenty years ago [Alchian and Demsetz (1972); Jensen and Meckling (1976)] and has since been fleshed out to produce complete accounts of corporate law [Easterbrook and Fischel (1991); Klein and Coffee (1993); Cheffins (1997)]. It posits that business firms are fundamentally contractual in character, and seeks to explain their structure as an efficient contractual response to "agency costs". From this perspective, much of corporate law therefore consists of the provision of default terms into "corporate contracts" [Easterbrook and Fischel (1991)].

Agency costs are, in short, the costs of conflicts of interest between various participants in the corporate bargain [Cheffins (1997: 44-45)]. These costs arise wherever (i) rights to control income producing assets are separated - in whole or in part - from the rights to receive the returns, and (ii) it is costly for the party in whom the rights to return reside (the "principal") to observe the actions taken by the party in control (the "agent"). The problem is that the agent may exercise his or her control rights to serve his or her own self-interest at the expense of the principal. The primary agency relations in corporate finance are those between managers and outside investors and those between holders of equity and holders of debt [Jensen and Meckling (1976); Barnea *et al* (1985)]. These are sometimes referred to as "managerial" and "financial" agency costs respectively [e.g. Triantis (1994: 2158)]. Managerial agency costs arise because outside investors in a firm will usually be interested solely in financial returns, whereas the interests of managers can encompass a number of other subjective factors. These might include the personal satisfaction to be had from "building empires", riding in corporate jets, etc. Whilst these activities may enhance the managers' private welfare function, they may well detract from the investors' returns.

Financial agency costs arise from conflicts over the differing interests of shareholders and creditors. During a firm's solvency, shareholders have the right to appoint (and

[32] Those readers already familiar with the idea may wish to proceed directly to section 3.2.

sack) managers.[33] It seems reasonable to assume that managers will resolve conflicts between the interests of creditors and shareholders in favour of the latter. These conflicts of interest may impose costs on creditors. One well-known example concerns the riskiness of the firm's business activities. Creditors will set interest rates appropriate to the level of risk they expect to bear in lending to a particular firm. It is therefore possible for shareholders to expropriate creditors by borrowing and then substantially increasing the risk of their firm's activities. In effect, the creditors will have undercharged for their loans. [Jensen and Meckling (1976: 333-343)].

6.3.2 Capital Maintenance and the Reduction of Financial Agency Costs

The most commonly-advanced rationale for restrictions on distributions to shareholders is that they can assist in the reduction of financial agency costs [Myers (1977); Smith and Warner (1979); Kalay (1982)]. These papers have been driven by empirical findings that such restrictions are commonly found in lending agreements in the US.[34] Restrictions on distributions can reduce the likelihood of transactions which increase the risk of default on a firm's debt obligations.

An obvious potential problem for creditors is the so-called “liquidating dividend”. This involves shareholders procuring the firm to liquidate assets and to transfer the proceeds to themselves. Such a transfer reduces the pool of assets available to satisfy creditors’ claims.[35] We would expect rational creditors to anticipate such behaviour by shareholders, and incorporate the expected costs into the price of a loan. However, the risk-adjusted interest rate rapidly becomes prohibitively high unless some sort of restriction on the gratuitous transfer of assets to shareholders is imposed. Distribution restrictions can serve this function.

Another problem is referred to as “underinvestment” [Myers (1977); Barnea *et al* (1985)]. This refers to shareholders' reduced incentive to commit money to good investment projects when the firm has debt outstanding. An investment opportunity will be worth taking if it has a positive "net present value". In short, this means that on the basis of available information we would expect its costs to be less than its revenues, once all the values have been "discounted" to reflect the fact that the payments will be made in the future and the value of money reduces with time [see e.g., Brealey and Myers (1996: 12-17)]. Where the firm has debt outstanding, then increases in firm value will also increase the face value of the debt by lowering the probability of default. In short, the gains from the investment will be shared between the firm’s debt and equity holders. If the project has to be financed from a fresh issue of shares or cash already held by the firm, then the effective return *to shareholders* may be unattractively low, in which case the investment will not be made.

Restrictions on distributions are said to play a role in reducing underinvestment [Smith and Warner (1979: 131-135); Kalay (1982: 211-214)]. Underinvestment occurs where projects which have a positive net present value do not attract necessary investment from shareholders, because the gains must be shared with creditors. Shareholders could finance new investment by issuing fresh shares or from profits

[33] Companies Act 1985 s 303.
[34] The empirical findings are surveyed in section 4, *infra*.
[35] Where the company is insolvent when the transaction takes place, or becomes so as a consequence, the transferred assets may be recovered under Insolvency Act 1986 ss 238 or 423.

retained in the firm. The decision to reinvest profits is functionally equivalent to the decision to invest fresh money where the option of a dividend payment is open to shareholders. A dividend restriction removes that option where the constraint is binding, because it means that a certain amount of money must remain invested in the business. Hence the shareholders are bound to reinvest the cash in the firm [Myers (1977: 159-161)].

6.3.3 Critique of the Financial Agency Cost Rationale

The principal economic rationale for distribution restrictions suggests that these may under certain circumstances be able to reduce financial agency costs. However, this is a rather different proposition to saying that the rules found in the Companies Act 1985 are in fact an efficient implementation of these ideas. Cheffins (1997: 521-537) asks whether parties to a hypothetical bargain over the terms of a corporate contract would want to include the share capital rules. Whilst parties would no doubt be concerned about agency costs, Cheffins suggests that the share capital rules in the Companies Act 1985 are unlikely to be their chosen response to the problem. He and other authors suggest a number of reasons why creditors are unlikely to consider that the size of a company's share capital is a relevant factor in assessing the risk of default when lending to a particular firm. If this is so, then the implication is that the capital maintenance doctrines embodied in the Companies Act serve no useful purpose. To the extent that compliance with the law imposes costs on parties, the rules generate a net social loss. In other words, they are inefficient.

Why might creditors not be concerned with share capital? First, the share capital entries in a company's memorandum and accounts convey very little information to creditors. The concept of share capital is essentially *historic* [Manning (1981: 85); Cheffins (1997: 531)]. It is based on the price paid to the company for shares issued at some previous time. This money may no longer be represented by corporate assets. Indeed, where shares in private companies are issued for non-cash consideration, it is possible that the value of the assets transferred to the company was never as much as the share capital [Cheffins (1997: 532)]. Nor need the size of the share capital bear any resemblance to the success or otherwise of the company's business. To put the point another way, the theoretical models tend to assume only *one* creditor who contracts with a firm *on start-up*. Whilst restrictions on distributions may assist such a creditor, the terms of the original restriction are unlikely to be appropriate for the *n*th creditor who lends to a firm several years after start-up.

Second, if subsequent creditors want to have restrictions on distributions, then they are free to bargain for them by contract. Such contractually-agreed provisions are indeed commonly observed, and far more likely to be tailored to the needs of creditors than statutorily-imposed ones [Manning (1981: 85, 91-107); Cheffins (1997: 533-534; 69-82)]. Cheffins argues that creditors in a hypothetical bargaining situation would want the role of law to be restricted simply to a prohibition on making distributions to shareholders when the firm has become insolvent, or would do so as a result of the transaction – in effect the test embodied in s 238 of the Insolvency Act 1986 (p 536).

6.3.4 Alternative Rationale: Market Signalling

An alternative explanation of restrictions on distributions has recently appeared, based on managerial agency costs. This suggests that legal restrictions on distributions can enhance management's ability to signal to investors about the quality of their projects [Peterson and Hawker (1997)]. Managers are likely to have information about the quality of their firm's projects which investors do not have. Rational investors will discount the price they are willing to pay for securities to take account of the possibility of negative information which management have not yet disclosed. In such an environment, it will assist good firms to raise finance if their managers are able to *signal* positive information to investors. A signal is an action which costs more for a low-quality firm to take than for a high-quality firm. Hence it credibly conveys information to investors.

Peterson and Hawker develop a signalling theory based on managerial choice between stock splits and bonus shares. A stock split increases the number of shares by lowering their par value, but keeps the total share capital figure constant. On the other hand, a distribution of bonus shares increases the total share capital figure. In a legal environment which contains share capital rules, the choice will have implications for future dividends. Where a bonus share issue is "funded" by distributable profits, it will make it more difficult for the firm to pay dividends in the future, whereas a stock split or bonus shares funded from share premia, will not. A subsequent reduction in dividend payments will result in a drop in share price.[36] Managers will therefore not wish to make bonus issues from distributable profits unless they have private information indicating that the firm will make increased future profits and hence be able to maintain its dividend level notwithstanding the increased "hurdle" due to the restrictions on distributions (p 208).

6.3.5 A rationale for a minimum capital requirement?

It is also possible that rules requiring companies to carry a minimum capital may assist in correcting an externality resulting from limited shareholder liability. Externalities are costs which economic actors impose on others in such a way that those costs are not mediated by market processes. For example, a driver who speeds is not required to pay other road users in advance for the increased risks of harm which he or she imposes upon them by their activity. Some areas of law, for example tort or environmental regulation, can be viewed as systems which impose "prices" on activities that are socially harmful so as to encourage actors to internalise their social costs. In the corporate context, limited liability may result in corporate shareholders being able to avoid liability for torts and environmental damage committed by their company, and hence undermine the law's ability to correct these externalities [Hansmann and Kraakman (1991)].

[36] Although firms are not legally obliged to pay dividends, most firms in fact do so regularly. This has proved something of a puzzle in light of the fact that there may actually be tax disadvantages to doing so. The regnant theory suggests that managers use a regular dividend payment as a "signal" of the quality of their projects to investors. Management, by paying a regular dividend, demonstrate that assets are being used to generate wealth for shareholders and not to fund managerial "empire-building" projects. They are equally happy to return to the market for fresh funds (with associated scrutiny of their purposes) as to fund projects from retained earnings.

It is theoretically conceivable that rules mandating a minimum share capital can be seen as a response to this problem [Easterbrook and Fischel (1991: 60)]. By ensuring that firms have at least a certain minimum level of assets available to satisfy creditors, shareholders are prevented from undercapitalising firms and the law's ability to correct externalities is enhanced. However, a universal minimum capital requirement is unlikely to be efficient. It will tend to offer inadequate protection in high-risk industries, whilst creating an unnecessary barrier to entry in low-risk industries [Easterbrook and Fischel (1991); Prentice (1998)]. This suggests that a minimum capital requirement for public companies, as set out in the Second Company Law Directive, is likely to be inefficient in its operation.

6.3.6 Summary

The principal economic rationale for restrictions on distributions is that they may serve to reduce financial agency costs. This theory has been developed as a response to empirically observed contractual restrictions on distributions agreed to by corporate borrowers in the US. A criticism of attempts to modify the theory to generate a rationale for the capital maintenance provisions of the Companies Act 1985 is that it does not adequately take into account the impact of *time* on the relevance of the restrictions to the needs of creditors. An alternative rationale, based on market signalling, has also been advanced. It is relatively recent and has not as yet been subjected to critical appraisal. The empirical literature surveyed in the next section is of potential assistance in appraising the merits of these two rationales. A theoretic rationale for minimum capital requirements was also discussed, based on the correction of externalities. This appears however to be little more than a man of straw, offering no convincing rationale for such rules.

6.4 Empirical Work

Our understanding of the operation of share capital rules in practice is limited by the lack of academic attention which this area has received. No empirical work has directly investigated the operation of the UK law. Hence this survey considers a number of studies which are only of indirect relevance in an attempt to generate some sort of picture of the law's operation.

Sections 4.2 to 4.4 survey evidence relevant to the principal rationale for capital maintenance provisions, based on the reduction of financial agency costs. The literature can assist in answering a number of relevant questions. First, if this rationale is valid, we would expect that restrictions on distributions would in fact reduce the risk of default. One US study discussed in section 4.2 appears to confirm that this is the case. Second, the major criticism of this rationale is that restrictions set historically are likely to be irrelevant to most creditors. We would therefore expect creditors not to be interested in the size of a firm's share capital when lending to it. Section 4.3 surveys some rather equivocal empirical data which have a bearing on this question. Third, we would expect to find that creditors would want to include terms restricting distributions in their loan agreements. Section 4.4 surveys a number of studies which show that US creditors in large-scale transactions demand dividends restrictions, but UK creditors do not. One possible explanation for this disparity is that the legal rules in the UK, which are much more stringent than those in most US jurisdictions, serve to make such contractual restrictions unnecessary. Finally, section

4.5 describes empirical findings which appear to support the alternative market signalling rationale for capital maintenance rules.

6.4.1 Incidence of Share Capital

When shares are allotted, the Registrar of Companies must be informed of the number and nominal amount of shares issued, along with the amount of any premium paid.[37] Hence it is possible to determine the amount of capital carried by UK companies. As of 31 March 1998, 67.2% of all registered companies had an issued share capital of less than £100 [DTI (1998: Table A7)]). Of these, only 1% were public companies (Table A2), which would be subject to a minimum capital requirement. The percentage of new incorporations with issued share capital below £100 is even higher, in 1997-98 being 91% (Table B3). These data suggest that the maintenance of capital rules are of little significance for the majority of UK companies. However, the figures probably understate the impact of the law because they do not indicate the extent to which share premia or capital redemption reserves exist.

6.4.2 Capital Maintenance and Corporate Insolvency

The theory that restrictions on distributions reduce financial agency costs is dependent on the idea that such restrictions reduce the risk of default. If the rules are working well, we would therefore expect to see them prohibiting distributions by firms which are likely to become insolvent. One US study has attempted to measure the efficacy in this respect of the California Corporate Code's restrictions on distributions [Ben-Dror (1983)].

The California Code contains two *alternative* tests for use in determining whether a corporation may make a distribution to its shareholders.[38] One is a so-called "retained earnings" test, which is structurally similar to the distributable profits test used in the Companies Act 1985.[39] The study examined the financial statements of 100 US firms which became insolvent between 1970 and 1976. One year prior to insolvency, the retained earnings test would have prohibited 66 % of the sample from making distributions (pp 394-410). In contrast, for a control sample of solvent firms, the distributions would only have been prohibited for 2-8%.[40] The study is strongly suggestive that restrictions based on retained earnings do have some efficacy in preventing distressed firms from making matters worse for creditors by paying a dividend to shareholders. To be sure, the study is based on US firms, but there is no reason for thinking that results in respect of UK firms would be systematically different.

6.4.3 Do creditors investigate share capital?

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[37] Companies Act 1985 s 88.

[38] California Corporations Code § 500 [Eisenberg (1995: 511-512)].

[39] "Retained earnings" are not defined under the California Code, but are left to generally accepted accounting principles, which define them as cumulative net profits minus dividend payments [Ben-Dror (1983: 383 n. 46)].

[40] The alternative rule allows distributions to be made if a test based on the company's financial ratios is satisfied. The study showed that this achieved about the same level of efficacy as the retained earnings test, prohibiting distributions in 68% of the sample corporations which subsequently became insolvent, and preventing 9% of the control sample from making distributions.

If capital maintenance rules assist in reducing financial agency costs, we would expect to see creditors taking information about share capital into account when making lending decisions. The empirical evidence which exists is equivocal. Some recent studies have investigated lending decisions by UK banks. Berry *et al.* (1993) conducted a large number of interviews with bankers, asking them to discuss recent decisions about lending to small businesses and the reasoning underlying them. The borrowing company's financial stability was found to be a significant factor, alongside a number of others. However, share capital was not one of the variables which the lending officers took into account. Berry *et al.*'s findings were largely replicated in a later qualitative study by Deakins and Hussain (1994: 330). Considerable caution must be exercised in interpreting these findings in the context of this review, because the studies do not specifically investigate the role of capital maintenance. The studies apparently show that share capital is not a significant factor, but do not necessarily show it to be irrelevant. It may be that the loan transactions in question were of too small a value to make it worth the lender's while to take issues of share capital into account.

Discussions of credit risk in texts aimed at business lenders are a potential source of information about best practice, if not actual lender practice. The analysis of credit risk in Donaldson (1984: 252-267) does not mention share capital, instead focusing on net worth. On the other hand, Coleshaw (1989: 21) states,

> "The greater the share capital, the easier it is to borrow money, and to show the world that the owners are committed to the business."

However, "capital" is discussed at other points in the text using the colloquial sense of net assets (pp 69-70, 75-76).

These sources cannot be treated as conclusive. There is a need for further empirical work in order to understand the role, if any, played by share capital in lending decisions by UK creditors. In particular, attention should be paid to transactions in which large sums are at stake, or in which the borrower's credit rating is otherwise low. In such situations any role played by share capital would be most clearly identified. In studies of small-scale lending transactions, their role may tend to be "drowned out" by other factors to which the lender would devote a greater part of their investigation time.

6.4.4 Do creditors bargain for similar protection?

A "loan covenant" is a term in a loan agreement which is not related to the repayment of interest or capital, but rather relates to the borrower's conduct during the course of the loan. Studies show that such provisions are prevalent in corporate borrowing agreements both in the US [see, e.g., Smith and Warner (1979); Duke and Hunt (1990); Press and Weintrop (1990)] and the UK [see, e.g., Citron (1992a) and (1995); Day and Taylor (1995) and (1996)]. The larger the amount of the loan, the more loan covenants are likely to be used [Citron (1992a: 326) and Day and Taylor (1995: 397)]. This accords with the idea that parties will expend more on drafting and negotiation costs where more money is at stake.

Restrictions on the borrower's ability to pay dividends are commonly found amongst the covenants in US corporate loan agreements. Two US surveys using data on randomly-selected firms in 1985 found that such covenants had been made by 61% and 55.1% of the sample firms respectively [Press and Weintrop (1990: 74); Duke and Hunt (1990: 55-56)]. In both cases dividend restrictions were the most commonly-occurring covenant. Other US studies report an incidence of up to 100% in a randomly selected sample of firms [e.g. Kalay (1982: 214-216); see also Leuz *et al* (1998: 116)].

Studies also suggest that the terms used in the US dividend covenants bear a strong similarity to the distributable profits formula used in the Companies Act 1985. The precise terms of US dividend covenants were analysed in Kalay (1982). The majority of the dividend covenants in the sample conformed with the terms of the "boilerplate" provision found in the American Bar Foundation's *Commentaries on Indentures*.[41] This is similar in structure to the Companies Act 1985 provisions restricting distributions. First, both prohibit not only the payments of dividends, but also share repurchases and redemptions. Second, the prohibition is not absolute. Debtors are permitted to make distributions to the extent that they are financed out of a fund calculated by reference to a formula. The formula used under the ABA precedent defines the fund as the firm's cumulative net profits, minus cumulative dividends, plus the cumulative proceeds of fresh issues of shares plus some fixed amount (known as "the dip"). The cumulative totals are summed from the date of grant of the loan. Both this and the Companies Act formula can be expressed algebraically in a very similar way [Leuz *et al* (1998)], with the principal difference being that under the latter, profits and dividends are summed since the firm's formation rather than the date of the loan. However, Leuz *et al*. (p 126) demonstrate that this is same as saying that under the UK rule, the "dip" is the sum of distributable profits at the time a particular loan is advanced.

The pattern emerging from empirical research in the UK is rather different from that in the US. Covenants directly restricting dividend payments are something of a rarity. Citron (1992b: 24) found no dividend restrictions amongst a sample of 22 loan contracts. Bankers interviewed by Day and Taylor (1995: 398) stated that dividend restrictions were only used in their lending agreements where the loan was made to a private company or a MBO vehicle.[42] Of 44 corporate treasurers interviewed by Day and Taylor (1996: 321), only four (9%) stated that their loan contracts contained explicit dividend restrictions. Other studies suggest that direct dividend restrictions may be imposed, along with other measures such as demands for increased security, by lenders as a response to breach of a financial ratio covenant [Citron (1992a: 329-330)]. Consistent with this, such clauses are not discussed in practitioner journal articles outlining how to negotiate loan covenants [Isern-Feliu (1996); Wood (1996)], nor are they found in standard domestic precedents [see, e.g., Lingard (1993)].

Hence the empirical evidence seems to present us with a puzzle. Why do UK creditors not include covenants restricting dividends in the same way as their US counterparts? Leuz *et al* (1998) conjecture that the Companies Act 1985 provides the answer. It provides a set of direct dividend restrictions very similar to the provisions contracted-

[41] The relevant provision may be found in Eisenberg (1995: 782-786).
[42] Consistently with this, Citron *et al.* (1997: 283-284) found that direct dividend restrictions are used frequently in loans made to MBOs.

for by creditors in the US. Crucially, US law provides only a much weaker form of protection. Hence US loan contracts can be viewed as an indication of what UK creditors would contract for *if they did not have the benefit of the provisions of the Companies Act 1985*. This answer has a certain simple appeal, but as Leuz *et al* concede, it is no more than a conjecture.

6.4.5 Evidence relevant to the market signalling rationale

Peterson and Hawker (1997) draw support for their signalling hypothesis from an empirical study of stock market responses to issues of bonus shares by firms incorporated in different US states. They compare firms in jurisdictions which impose restrictions on distributions with those that do not, and find that the market response is significantly more positive in the former. On the basis of this evidence, they conclude that the "received wisdom" that share capital rules serve no useful purpose may be misconceived. This conclusion should, however, be put in context. It does not follow from a demonstration that restrictions on distributions can affect managers' ability to convey information to investors that such restrictions are efficient. The costs of engaging in the signalling activity must be weighed up against the social benefits, which are increased informational efficiency in capital markets.

6.4.6 Summary

There are many gaps in our understanding of how the share capital rules operate in practice. Such empirical evidence as exists is only indirect, in the sense that the studies in address slightly different questions to the ones for which answers are sought in this review. Nonetheless, it is worth drawing together a few tentative propositions to summarise what we know about capital maintenance in practice.

(1) The rules appear to be irrelevant for the vast majority of UK companies, which peg their share capital at such low levels that the law is likely not to place any restriction on their dealings.
(2) Evidence from the US suggests that tests based on accumulated net profits are reasonably successful in prohibiting firms which are likely to become insolvent from exacerbating matters by paying dividends.
(3) The role played by share capital in lending decisions is inconclusive. It is not a factor of primary importance to creditors, but that is not to say that it is wholly irrelevant.
(4) US creditors habitually include loan covenants in large-scale lending agreements which restrict the payment of dividends. The commonly-used restrictions are structurally similar to the distributable profits test found in the Companies Act 1985. UK creditors do not use such restrictions. One possible explanation for this difference is the much more stringent legal regime in the UK.
(5) It is possible that managers of publicly-traded firms may use bonus share issues which capitalise profits as a means of signalling that they have private information that future profits will be larger than expected.

6.5 Conclusions: theories and evidence

The following conclusions may be drawn about the capital maintenance rules on the basis of the literature surveyed in this chapter:

(1) It seems tolerably clear that restrictions on the distributions which a company can make to its shareholders can reduce financial agency costs, or to put the matter in a way more familiar to lawyers, protect creditors. The most compelling evidence for this is the prevalence of such restrictions in lending agreements in the US.

(2) However, it is a big step from this to assert that the capital maintenance rules, as set out in the Companies Act 1985, are able to reduce the expected agency costs experienced by *any* creditor who lends money to a company. The interposition of time between the setting of the firm's capital "yardstick" and the lending of money means that the "terms" of the restriction may no longer be what the creditor would want.

(3) The empirical evidence on creditor lending practices in the UK is not inconsistent with proposition (2).

(4) An alternative proposition is that the capital maintenance rules in the Companies Act serve as "implied terms" which save UK creditors the cost of agreeing express provisions.

(5) The empirical evidence indicates that (i) the dividend covenants demanded by US creditors are very similar in structure to the distributable profits test in the Companies Act 1985; and (ii) that UK creditors rarely demand dividend covenants. This is not inconsistent with proposition (4). Further research is required in order to distinguish between proposition (2) and proposition (4).

(6) It is possible that capital maintenance rules can assist managers of publicly-traded firms to signal private information about future expected profits to investors. Further research is required in order to investigate the degree to which this theory is consistent with managerial behaviour in the UK.

(7) It is not clear that rules requiring companies to carry a minimum capital have any basis in efficiency.

References

Alchian, Armen A., and Demsetz, Harold (1972), "Production, Information Costs, and Economic Organization", 62 *American Economic Review* 777-795.

Atkin, James Richard, *et al.* (1995), *Atkin's Encyclopaedia of Court Forms*, 2nd ed. (London: Butterworths), Vol 9

Barnea, Amir; Haugen, Robert A., and Senbet, Lemma W. (1985), *Agency Problems and Financial Contracting* (Englewood Cliffs, NJ: Prentice-Hall)

Ben-Dror, Yoav (1983), "An Empirical Study of Distribution Rules Under California Corporations Code § 500: Are Creditors Adequately Protected?", 16 *University of California Davis Law Review* 375-418

Berry, A.J., Faulkner, S., Hughes, M., and Jarvis, R. (1993), "Financial Information, the Banker and the Small Business", 25 *British Accounting Review* 131-150

Boyle, A.J., Sykes, Richard, and Sealy, Leonard S. (eds.) (1986-1999), *Gore-Browne on Companies*, 44th ed., supp. 31 (Bristol: Jordans)

Brealey, Richard A., and Myers, Stewart C. (1996), *Principles of Corporate Finance* (5th ed., New York, NY: McGraw-Hill)

Chambers, R.J. (1995), *An Accounting Thesaurus* (London: Pergamon Press)

Cheffins, Brian R. (1997), *Company Law: Theory, Structure and Operation* (Oxford: Oxford University Press)

Citron, David (1992a), "Financial Ratio Covenants in UK Bank Loan Contracts and Accounting Policy Choice", 22 *Accounting and Business Research* 322-336

— (1992b), "Accounting Measurement Rules in UK Bank Loan Contracts", 23 *Accounting and Business Research* 21-30

— (1995), "The Incidence of Accounting-based Covenants in UK Public Debt Contracts: An Empirical Analysis", 25 *Accounting and Business Research* 139-150

— , Robbie, Ken and Wright, Mike (1997), "Loan Covenants and Relationship Banking in MBOs", 27(4) *Accounting and Business Research* 277-294.

Coleshaw, John (1989), *Credit Analysis* (Cambridge: Woodhead-Faulkner)

Davies, Paul L. (1997), *Gower's Principles of Modern Company Law*, 6th ed. (London: Sweet & Maxwell)

Day, Judy F.S., and Taylor, Peter J. (1995), "Evidence on the Practice of UK Bankers in Contracting for Medium-term Debt", *Journal of International Banking Law* (9), 394-401

— and — (1996), "Loan Contracting by UK Corporate Borrowers", *Journal of International Banking Law* (8), 318-325

Deakins, David, and Hussain, Graham (1994), "Financial Information, the Banker and the Small Business: A Comment", 26 *British Accounting Review* 323-335

Department of Trade and Industry ("DTI") (1998), *Companies in 1997-98* (London : HMSO).

— (1999), *Modern Company Law for a Competitive Economy: The Strategic Framework* (London: HMSO).

Donaldson, T.H. (1984), *Understanding Corporate Credit* (London: Macmillan)

Duke, Joanne C., and Hunt, Herbert G., III (1990), "An Empirical Examination of Debt Covenant Restrictions and Accounting-Related Debt Proxies", 12 *Journal of Accounting and Economics* 45-63.

Easterbrook, Frank H., and Fischel, Daniel R. (1991), *The Economic Structure of Corporate Law* (Boston: Harvard University Press)

Eisenberg, Melvin A. (ed.)(1995), *Corporations and Business Associations: Statutes, Rules, Materials, and Forms : 1995 Edition* (Westbury, NY: Foundation Press).

Farrar, John H., and Hannigan, Brenda M. (1998), *Farrar's Company Law*, 4th ed. (London: Butterworths).

French, E.A. (1977), "The Evolution of the Dividend Law of England", in Baxter, W.T. and Davidson, Sidney, *Studies in Accounting* (3rd ed., London: ICAEW).

Hansmann, Henry B., and Kraakman, Reinier A. (1991), "Towards Unlimited Shareholder Liability for Corporate Torts", 100 *Yale Law Journal* 1879

Isern-Feliu, Santiago (1996), "Loan Covenants: Negotiation and Compliance" 5(6) *Practical Law for Companies* 13-18

Jensen, Michael C., and Meckling, William H. (1976), "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure", 3 *Journal of Financial Economics* 305-360

Kalay, A. (1982), "Stockholder-Bondholder Conflict and Dividend Constraints", 10 *Journal of Financial Economics*, 211-233.

Klein, William A., and Coffee, John C. (1993), *Business Organisation and Finance: Legal and Economic Principles* (5th ed., Westbury, NY: Foundation Press)

Leuz, Christian; Deller, Dominic and Stubenrath, Michael (1998), "An International Comparison of Accounting-Based Payout Restrictions in the United States, United Kingdom and Germany", 28(2) *Accounting and Business Research*, 111-129.

Lingard, J.R. (1993), *Bank Security Documents*, (3rd ed., London: Butterworths)

Manning, Bayless (1981), *A Concise Textbook on Legal Capital* (2nd ed., Mineola NY: Foundation Press)

Myers, Stewart C. (1977), "Determinants of Corporate Borrowing", 5 *Journal of Financial Economics* 147-175.

Pendlebury, Maurice, and Groves, Roger (1999), *Company Accounts: Analysis, Interpretation and Understanding* (4th ed., London: International Thomson Business Press)

Peterson, Craig A., and Hawker, Norman W. (1997), "Does Corporate Law Matter? Legal Capital Restrictions on Stock Distributions", 31 *Akron Law Review* 175-227

Prentice, Dan D. (1998), "Corporate Personality, Limited Liability and the Protection of Creditors", in Grantham, Ross and Ricketts, Charles (eds.), *Corporate Personality in the 20th Century* (Oxford: Hart Publishing), 99-125.

Press, Eric G., and Weintrop, Joseph B., "Accounting-Based Constraints in Public and Private Debt Agreements", 12 *Journal of Accounting and Economics* 65-95.

Smith, Jr., Clifford W., and Warner, Jerold B. (1979), "On Financial Contracting: An Analysis of Bond Covenants", 7 *Journal of Financial Economics* 117-161.

Triantis, George G. (1994), "A Free-Cash-Flow Theory of Secured Debt and Creditor Priorities", 80 *Virginia Law Review* 2155

Wood, Philip R. (1996), "Term Loan Agreements: A Guide to Basics: Part 2", *Commercial Lawyer* 1(7) 54-55.

Yamey, Basil S. (1941), "Aspects of the Law Relating to Company Dividends", 4 *Modern Law Review* 273-298.