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**Risk-based equity requirements: how equity rules for the financial  
sector can be applied to the real economy**

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## Working Paper:

“Risk-based equity requirements: How Equity rules for the financial sector can be applied to the real economy”

By Lukas Handschin\*

*(this working paper has been revised and published in JCLS 12 (2012), pp. 255 et seq.)*

### **Abstract:**

It is undisputed that rules are necessary to cope with the risks of failing financial institutions in the financial sector. These rules link the risk profile of a financial institution to the quantitative and qualitative properties of its capital. In the real economy the discussion proceeds from the opposite direction, putting the necessity of a minimal capital and its regulation into question. This essay shows however, that even for the real economy, rules are in place which require the board of a company to adjust the risk profile to the level and structure of the company’s equity and vice versa. The relationship between risk-bearing ability and equity leads to a set of principles and rules on how to determine the correct amount of equity. The essay describes these rules and their procedural enforcement based on company and accounting law rules.

### **Key Words:**

Equity, Basel III, equity-requirements, company-risks, real economy, risk-bearing ability

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## 1. Equity

### 1.1 Equity as risk reserve

Equity is the difference-amount between the debts and the assets of the company. If the company were to sell all assets and pay back all liabilities, the remaining value<sup>1</sup> would belong to the shareholders. The function of equity is thus to provide<sup>2</sup> a buffer or a reserve to cope with corporate risks; essentially safeguarding creditors' claims<sup>2</sup>. Therefore, the term 'risk reserve'<sup>3</sup> is an appropriate and preferable description of the function of equity. Equity is the amount which the company should not distribute to the shareholders in view of the risk that the claims of creditors are not safeguarded.<sup>4</sup> The primary risk that can be controlled by equity is the risk of asset reduction. The reduction of assets and increase of liabilities can result for numerous reasons: cash-drain, new liabilities and the revaluation of assets and liabilities. The revaluation of assets can become necessary to compensate for their aging (and corresponding loss of value),<sup>5</sup> a sudden loss in value due to a damage or destruction of the asset; bankruptcy or bankruptcy-risk of creditors; or changed market conditions.

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<sup>1</sup> Stephen A. Ross, Randolph Westerfield, Bradford D. Jordan, *Fundamentals of Corporate Finance*, 9<sup>th</sup> edn. (New York, McGraw-Hill/Irwin 2010) at p. 23. Due to this systematic risk investors in shares require a return equivalent to the risk free rate with an additional premium, see Glen Arnold, *Handbook of Corporate Finance, A business companion to financial markets, decisions and techniques*, 2<sup>nd</sup> edn. (New York, Prentice Hall 2010) at pp. 246 et seq.

<sup>2</sup> Jonathan Rickford (ed.), 'Reforming Capital, Report of the Interdisciplinary Group on Capital Maintenance', 15 *EBLR* (2004) at p. 928 [Rickford Report]; also Wolfgang Schön, 'The Future of Legal Capital', 5 *EBOR* (2004) pp. 429 et seq at p. 440; Second Council Directive 77/91/EEC Preamble: 'provisions should be adopted for maintaining the capital, which constitutes the creditors' security'.

<sup>3</sup> Lukas Handschin, 'Eigenkapital als Risikoreserve', in Peter V. Kunz, Dorothea Herren and Thomas Cottier (eds.), *Wirtschaftsrecht in Theorie und Praxis, Festschrift für Roland von Büren* (Basel, Helbing Lichtenhahn 2009) at pp. 69 et seq.

<sup>4</sup> John Armour, 'Legal Capital: An Outdated Concept?', 7 *EBOR* (2006) at p. 10: 'there may clearly be benefits to imposing dividend constraints based on net asset values', i.e. on real equity; Rickford Report (fn. 2) at p. 44: 'in what conditions is it legitimate, in the cause of creditor protection, to restrict a company's freedom to pay a return to its shareholders?'. Also see European Court of Justice [ECJ], Case 212/97 *Centros Ltd v. Erhvervs-og Selskabsstyrelsen* [1999] 2 CMLR 551, at pp. 586 et seq.

<sup>5</sup> 'Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.' (IAS 16.6, 38.8). 'An entity shall assess at each reporting date whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset.' (IAS 36.9). 'Depreciation is a systematic and rational process of distributing the cost of tangible assets over the life of assets.' (US GAAP Accounting Research Bulletin [ARB] No. 43, chapter 9C para. 5).

## 1.2 Real equity and nominal equity

Assets and liabilities always have two values: a book value and a real value. The real value of assets and liabilities may deviate from their book value due to accounting rules; due to changes which lead to a reassessment of the company's assets; or because the company has made a mistake when assessing the value of the said asset.<sup>6</sup> The equity which is derived from book values can be called the nominal equity. It can be directly taken from the balance sheet and consists of the statutory or legal capital, the free, accounting and legal reserves and accrued profits. The nominal equity is the sum resulting from the deduction of the nominal value of the liabilities from the nominal value of the assets of a company.<sup>7</sup> Similarly, the equity which is derived from real values can be called the real equity. Consequently, the real equity is the sum resulting from the deduction of the real value of the liabilities from the real value of the assets of a company.

If we relate these definitions to the function of equity as a reserve to account for the company's financial risks, it is apparent that as much as liabilities and risks are real, not nominal, the relevant figure must be the real equity, not the nominal equity. Therefore, to define the equity related to the risk bearing ability of a company we have to refer to the real value of assets and liabilities, not to their book value.<sup>8</sup>

### 1.2.1 Overvalued assets and their impact on equity

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<sup>6</sup> Ross, Westerfield, Jordan (fn. 1) at pp. 23 et seq.

<sup>7</sup> See also Armour (fn.4) at p. 10: 'there may clearly be benefits to imposing dividend constraints based on net asset values', i.e. on real equity.

<sup>8</sup> Cf. Rickford Report (fn. 2) at p. 943: the Rickford Report questions the concept of equity in principle, based on the (correct) assessment that nominal equity alone cannot safeguard the rights of creditors.

If the book value of the assets exceeds the real value, the real equity is reduced. In these situations the real equity is smaller than the nominal equity. If the nominal equity is smaller than the difference between the real value of the liabilities and the real value of the assets of a company, the real equity is no longer sufficient to cover the liabilities.

As a consequence the nominal equity should be determined in such a way that the real equity remains sufficient to cover liabilities and risks. The gap between nominal and real equity depends on the reliability of the valuation of assets and liabilities; that is precisely on the risk that assets are valued too high and liabilities too low. There is a correlation between the valuation risk and equity; the larger the risk of false valuations (overvaluation in case of assets; undervaluation in case of liabilities), the more nominal equity is needed to close the gap between the nominal equity and the real equity.

One of the functions of nominal equity is thus to close this gap. It is imperative that the nominal equity is sufficient to cover the liabilities of the company, even if it turns out that the valuation of assets and liabilities was too high or too low, respectively. Where the reliability of the asset valuation is questionable, the nominal equity must exceed the (assumed) real equity to cover the revaluation risk.

### **1.2.2 Hidden reserves and revaluation reserves (valuation surplus) and their impact on equity**

In part, these (undervaluation-) risks are covered by accounting rules. In civil law accounting and to a certain extent in US GAAP the risk of asset revaluation is reduced by valuation rules which focus on prudence, rather than on a true and fair valuation. For instance, according to

the rules of the commercial codes of most civil law countries and under US GAAP<sup>9</sup> (also as an option in IFRS<sup>10</sup>), fixed assets can only be valued at their production or purchase value after the necessary depreciations have been made. Value increases of fixed assets after the purchase are, as a rule, not possible. If assets valued at production or purchase value actually increase in value over subsequent years (as could be the case with real estate for example) the real value of the asset will be higher than its book value. This difference in amount (spread) are ‘hidden reserves’. Hidden reserves reduce the (nominal) amount of assets, consequently lessening the risk of value reductions. In the legal doctrine of civil law countries hidden reserves are justified as a possibility to reduce the revaluation risk.<sup>11</sup>

If a company holds assets with a book value above the real value (overvalued assets) and other assets with a real value which is higher than the book value (hidden reserves), hidden reserves can compensate for overvalued assets. This shows that hidden reserves reduce the effect of overvalued assets; they are – in fact – equity.<sup>12</sup>

True and fair accounting rules make more use of the full valuation potential of assets and allow a revaluation of assets, where an asset has increased in value. Some accounting rules demand that the difference between the initial and the new value of the asset is not booked as profit, but instead must be allocated to a specific revaluation reserve or surplus. This is re-

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<sup>9</sup> Under US GAAP the upward revaluation of assets generally is not allowed. FAS 121.11; U.S. GAAP Codification of Accounting Standards [ASC] 360 <<http://accountinginfo.com/financial-accounting-standards/asc-codification-index.htm>>.

<sup>10</sup> IFRS 16.29; IFRS 30.

<sup>11</sup> Peter Böckli, *Schweizer Aktienrecht*, 4<sup>th</sup> edn. (Zürich, Basel, Geneva, Schulthess 2009) at p. 905; Frank Vischer, Fritz Rapp, *Zur Neugestaltung des Schweizerischen Aktienrechts* (Bern, Staempfli 1972) at pp. 30 et seq.

<sup>12</sup> Hidden reserves are resources not listed on a balance sheet, such as land or a building shown at a value less than its market value. This valuation difference is a hidden element of a company’s equity. Lukas Handschin, ‘Corporate Risks, Risk Bearing Ability and Equity’, 22 *EBLR* (2011) at p. 205.

quired by the IFRS and partly under US GAAP for certain assets, for example: property, plant and equipment,<sup>13</sup> intangible assets,<sup>14</sup> investment property,<sup>15</sup> available for sale securities<sup>16, 17</sup>.

As a result, the (hidden) equity (of civil law accounting), arising from the undervalued asset, is made transparent (by true and fair accounting rules) by increasing both the value of the asset *and* the (nominal) equity (revaluation surplus) in order to cover the valuation risk. Revaluation reserves are accounting reserves designed to cover the revaluation risk of an asset. These rules specify and confirm the general principle that valuation risks have to be covered by increased equity.<sup>18</sup>

### 1.3 Equity and asset revaluation risks

True and fair accounting valuations have increased the vulnerability of the valuation of assets.

This is the case as in many situations they allow the value of an asset to be based on capital-

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<sup>13</sup> 'If an asset's carrying amount is increased as a result of a revaluation, the increase shall be credited directly to equity under the heading of revaluation surplus. However, the increase shall be recognized in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognized in profit or loss.' (IAS 16.39).

<sup>14</sup> 'If an intangible asset's carrying amount is increased as a result of a revaluation, the increase shall be credited directly to equity under the heading of revaluation surplus. However, the increase shall be recognized in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognized in profit or loss.' (IAS 38.85). Under US GAAP 'reversal' of impairment is generally not allowed (for goodwill ASC 350-20-35-13; for other intangible assets ASC 350-30-35-14, 350-30-35-20).

<sup>15</sup> '[A]ny remaining part of the increase is credited directly to equity in revaluation surplus.' (IAS 40.62). Under US GAAP impairment of 'long-lived assets held for sale' are not 'reversed' when there is a subsequent increase in value (ASC 360).

<sup>16</sup> 'Investments not classified as trading securities (nor as held-to maturity securities) shall be classified as available-for-sale securities.' (FAS 115.12b). 'Unrealized holding gains and losses for available-for-sale securities (including those classified as current assets) shall be excluded from earnings and reported in other comprehensive income until realized except as indicated in the following sentence. All or a portion of the unrealized holding gain and loss of an available-for sale security that is designated as being hedged in a fair value hedge shall be recognized in earnings during the period of the hedge, pursuant to paragraph 22 of Statement 133. Paragraph 36 of FASB Statement No. 109, Accounting for Income Taxes, provides guidance on reporting the tax effects of unrealized holding gains and losses reported in other comprehensive income.' (FAS 115.13); under the US GAAP changes in fair value of trading securities are recognized in earnings, those available for sale securities are recognized for comprehensive income, but earnings and changes in fair value for held to maturity securities are not recognized (ASC 320).

<sup>17</sup> Also see Fourth Company Law Directive, Fourth Council Directive 78/660/EEC, Art. 33 (2): if a Member State deviates from the general valuation principle at purchase or production price set forth in Art. 32, revaluation reserves for the value superseding the purchase or production price 'must be entered in the revaluation reserve under "Liabilities".'

<sup>18</sup> Handschin (fn. 12) at p. 200 et seq.

ized income value or future cash flows and not on the asset's substance value or production cost. True and fair rules assess the value of an asset by looking into the future, in particular by estimating the future income the asset can generate. It is self-evident that the risk of valuation errors is higher, when basing the valuation on future expectations, rather than on established figures of the past such as production costs etc. Further, true and fair valuated assets are more vulnerable to changed conditions, when prospects for the future take a downwards turn, requiring a reassessment of the profit and cash flow potentials. In fact, an insignificant worsening of these future potentials can lead to a considerable revaluation of the asset, and consequently, to losses. In a time of crisis not only is the positive future potential eliminated from the valuation, but also pessimistic future prospects have to be included. This results in a double correction of the values and, therefore, leads to a consolidation of the correction effect.

A primary purpose of equity is to control valuation errors and changes in valuation. Some valuation risks are covered by accounting rules (hidden reserves, valuation surplus<sup>19</sup>). Others have to be covered by additional equity. As a first intermediate result we may conclude that equity is a valuation reserve. Based on this principle, financial market regulations have set up rules which link the necessary equity-backing to the valuation risk of the asset.<sup>20</sup>

#### **1.4 Equity and Liquidity risks**

A second company risk is the liquidity risk, meaning, that the company is unable to balance cash income and cash expenses. The larger the gap between liquidity income and liquidity expenses, the greater the necessity for the company to be able to make use of additional liquidity. Essentially, the liquidity risk arises out of unsynchronized due dates of claims and

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<sup>19</sup> Supra 1.2.2.

<sup>20</sup> See infra 2.3.

debts.<sup>21</sup> The liquidity risk is the risk that for the satisfaction of a certain obligation the therefore needed asset is not at hand. In such a case the needed asset must be replaced by the liquidation of held assets or by an increase in debt.<sup>22</sup>

In precise terms, the liquidity risk is the risk of a negative free cash flow. If a company has a negative free cash flow it has neither the operative potential nor the assets to catch up the outflow of funds through operative and investive (or rather divestive) cash flows, for example by selling fixed assets. In this situation the company depends on financing. A company with high equity in relation to the risk profile can realize this financing by itself; a company with low equity does not have this possibility. If no additional funds can be made available from the shareholders (not required by most legislations<sup>23</sup>), the potential to provide for new liquidity depends entirely on the company's ability to increase debt. The ability of the company to increase debt depends on the structure and amount of pre-existing debt and assets<sup>24</sup>. If the asset structure is such, that it can generate liquidity easily, for example if the assets are cash itself or can be used as a collateral, the equity which is needed is different from the situation where assets cannot be converted to cash easily, for example activated research costs or any other assets without a specific market value.

To determine the necessary equity related to the liquidity risk of the company, the company first has to determine the size of the gap, or potential gap, between cash income and cash expenses. Second, it must assess the quality of the assets to determine their liquidity. If, for ex-

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<sup>21</sup> Ross, Westerfield, Jordan (fn. 1) at p. 22.

<sup>22</sup> Ross, Westerfield, Jordan (fn. 1) at p. 22: 'Liquidity refers to the speed and ease with which an asset can be converted to cash.' 'Any asset can be converted to cash quickly if we cut the price enough. A highly liquid asset is therefore one that can be quickly sold without significant loss of value. An illiquid asset is one that cannot be quickly converted to cash without a substantial price reduction.'

<sup>23</sup> E.g. Switzerland: Swiss Code of Obligations [Obligationenrecht, OR] Arts. 620 (2) and 680 (1); Germany: German Stock Companies Act [Aktiengesetz, AktG] §55 (only possible in the case of shares with restricted transferability). United Kingdom: Companies Act 2006 Section 561 (1) (a). Shareholders have a right but usually no duty to fund additional equity.

<sup>24</sup> Handschin (fn. 12) at pp. 193 et seq. with numerical examples.

ample, a specific liquidity risk of 1,000 is covered by assets, which are cash itself, then the equity could be 1,000 as well. If on the other hand the liquidity risk of 1,000 is covered by assets which can be used as collateral but only up to 50 per cent of their value, the equity to control this liquidity risk would have to be 2,000.

### **1.5 Equity as a reference figure for (the overall financial) risk bearing ability**

In the economic literature, financial corporate risks are usually defined by a reason (external, operational, strategic) and not so much based on their implications for the balance sheets and of the amount of equity.<sup>25</sup> This does not change the fact that there is a direct link between equity and corporate risks. All corporate risks can be specified as either a valuations risk or a liquidity/outflow of cash risk. For example the reputation risk can only create a problem because it leads to a decrease in customers, and therefore, a decrease in incoming cash and subsequently to additional liquidity risks. The risk that the company is threatened by a lawsuit bears the risk, that the liabilities will have to be increased; and the risk that a planned technology does not work leads to the risk that activated research costs will have to be impaired.

The more questionable the valuations of assets and debts, the higher the valuation risks are, and the larger the equity should be. A company, whose assets consist of activated research costs, or, a company which takes risks which may lead to unexpected debts, needs more equity than a company which does not take any risks and whose assets consist of stable government bonds. So we can conclude that equity is the risk reserve of a company. It also follows that the universal applicability of equity as a reference figure for the overall financial risk

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<sup>25</sup> Arnold (fn. 1) at pp. 544 et seq.; Ross, Westerfield, Jordan (fn. 1) at pp. 401 et seq.

bearing ability shows the superior function of equity in corporate law.<sup>26</sup> This general principle is true in both the financial and the non-financial sectors.

## **2. Rules on equity in the financial sector**

### **2.1 Substantive rules (equity requirements)**

Financial market rules regarding the necessary equity-backing regulate respective equity requirements and define specific asset categories based on their inherent revaluation risk.<sup>27</sup> This equity regulation is eased in the financial sector due to the fact that the financial sector is, in comparison to the non-financial sector, much more homogenous in regard to the assets held – the financial risks and the balance sheets are similar among all banks and insurance companies.

### **2.2 Basel III**

Since the financial crisis of 2008/9 the Basel Committee has developed the concept of stronger capital buffers for banks to ensure the stability of the financial system. This will in turn improve the banking sector's ability to absorb shocks from financial and economic stress, and therefore, reduce the risk of a spill over from the financial sector into the real economy.<sup>28</sup> In the view of the Basel Committee on Banking Supervision one of the main reasons for the recent financial crisis was the excessive leverage built up by banks combined with an erosion of

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<sup>26</sup> Handschin (fn. 12) at p. 194.

<sup>27</sup> Peter O. Mühlert, 'Corporate Governance of Banks', *10 EBOR (2009)*, pp. 411 et seq. at pp. 412, 422.

<sup>28</sup> Basel Committee on Banking Supervision, 'Basel III: A global regulatory framework for more resilient banks and banking systems', December 2010 at p. 1 <<http://bis.org/publ/bcbs189.pdf>> [Regulatory Framework].

the level and quality of the capital base<sup>29</sup> – in simpler terms not enough equity. “[T]he global banking system entered the crisis with an insufficient level of capital and not enough high-quality capital.”<sup>30</sup> As a consequence Basel III<sup>31</sup> defines the common equity more precisely, narrows the qualification of first-tier capital,<sup>32</sup> brings in prudential filters, and enhances disclosure requirements.<sup>33</sup>

Both, the increase in quantity and the increase in quality of the prescribed first-tier capital constrains approaches that banks may take to their asset structure and their risk behaviour. As a consequence banks will be forced to lower their all over risk exposure. This can be achieved by adapting the risk structure of the held assets or by building up first-tier capital.<sup>34</sup>

The superior function of equity (in the financial sector) is acknowledged. The scepticism regarding an increase of capital requirements which suggests that “capital is more expensive

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<sup>29</sup> Regulatory Framework (fn. 28) at p. 1 n. 3. By an increase in leverage both, potential rewards as well as potential losses are increased. Leverage increases the overall risk exposure. Ross, Westerfield, Jordan (fn. 1) at p. 23.

<sup>30</sup> Hervé Hannoun, ‘Towards a Global Financial Stability Framework’, International Bank of Settlements Publication, at p. 10 <<http://www.bis.org/speeches/sp100303.pdf>>.

<sup>31</sup> For the phasing in of the requirements see Basel III Compliance Professional Association, The Basel III Accord <<http://www.basel-iii-accord.com>>. For a comparison of Basel II and III regulation requirements see Marianne Ojo, ‘Basel III and Responding to the recent Financial Crisis: Progress made by the Basel Committee in relation to the Need for Increased Bank Capital and Increased Quality of Loss Absorbing Capital’, 22 September 2010, at p. 4 et seq. <<http://ssrn.com/abstract=1680886>>. Basel III increases the quantitative requirements of core first-tier capital to 4.5%. Additionally the banks will be required to build a ‘Capital Conservation Buffer’ of an additional 2.5%, leading to a core capital of 7%. The ‘Capital Conservation Buffer’ may be undercut in times of distress. Further a ‘Countercyclical Buffer’ between 0 and 2.5% shall cope with specific risks arising from national markets in which the respective bank operates. The first-tier core capital will be steadily built up through a transition period until 2015, the ‘Capital Conservation Buffer’ until 2019 and the overall first-tier capital must reach a level of 6% by 2015. Furthermore, second-tier capital instruments are harmonized and the third-tier capital is eliminated. Regulatory Framework (fn. 28) at p. 17 n. 57 et seq.

<sup>32</sup> Basel Committee on Banking Supervision, ‘Strengthening the resilience of the banking sector’, Consultative Document, Bank for International Settlements Publication, December 2009, at p. 1 et seq. <<http://www.bis.org/publ/bcbs164.pdf>>. Under a stronger consideration of the risk exposure in combination with additional leverage ratio restrictions, restrictions on dividend distributions and the promotion of countercyclical buffers. Core first-tier capital must consist of common shares and retained earnings. For the rare case of non-joint stock bank companies a set of principles leads to comparable levels of first-tier capital. Regulatory Framework (fn. 28) at p. 13 n. 53. Forms of hybrid capitals are still admissible up to 15% as first-tier capital, but will eventually be phased out. Regulatory Framework (fn. 28) at p. 2 and p. 13 n. 59, for a definition of the ‘common shares’ see p. 13 n. 53.

<sup>33</sup> Hannoun (fn. 30) at p. 11.

<sup>34</sup> Handschin (fn. 12) at pp. 201 et seq.; also *supra* I.3.4.

than other forms of funding”<sup>35</sup> can be rebutted.<sup>36</sup> Even significantly higher equity requirements for banks entail no additional costs, except those ‘externally’ caused by (wrong) tax<sup>37</sup> incentives, implementation and supervision.<sup>38</sup> Furthermore, calculations in regard to costs caused by the implementation of increased capital requirements should only be considered along with the thereby created value in the long run – costs are more easily calculated than benefits<sup>39</sup> and might therefore provide for a bias in favour of over-leveraging.

Basel III implements a set of rules that promote stability in the financial sector by linking quantitative equity requirements to qualitative equity requirements, i.e. the equity is linked to the risk structure of the held assets.<sup>40</sup> Other instruments such as stress-testing<sup>41</sup>, limitations to the leverage ratio<sup>42</sup> and the countercyclical buffer<sup>43</sup> relate the adequateness of equity to the

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<sup>35</sup> Basel Committee on Banking Supervision, ‘Countercyclical capital buffer proposal’, Consultative Document, July 2010 at p. 2 <<http://www.bis.org>>; also Anat R. Admati et al., ‘Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is *Not* Expensive’, The Rock Center for Corporate Governance at Stanford University Working Paper Series No. 86, Stanford GSB Research Paper No. 2063, Draft, 20 October 2010, at pp. 8 et seq.

<sup>36</sup> ‘The important issue is at what point does the probability of financial distress so increase the cost of equity and debt that it outweighs the benefit of the tax relief on debt?’ Arnold (fn. 1) at pp. 569 and 578. For the function of the overall cost of capital a U-shaped relation for the equity/debt rate is postulated. However a best debt/equity ratio cannot scientifically be established.

<sup>37</sup> Such as capital tax or tax on profits. In Switzerland realized capital profits from the sale of shares are exempt from the income tax at the level of a natural person (Art. 16 (3) DBG); this might have a positive effect on the equity level. For findings of effects of countercyclical fiscal policies see Philippe Aghion, David Hemous and Enisse Kharroubi, ‘Cyclical Fiscal Policy, Credit Constraints, and Industry Growth’, BIS Working Paper No. 340, February 2011, at p. 31 <[www.bis.org](http://www.bis.org)>.

<sup>38</sup> Admati et al. (fn. 35) at p. 1 et seq.: the authors are skeptical whether the prescribed level of equity is sufficient. It is argued that an even significantly higher equity requirement would only limit a bank’s risk structure. These findings may also hold true in the non-financial sector. However, if research would show that in fact equity is more expensive in that sense in the non-financial sector, one reason might be that companies are able to externalize some of the risk to creditors that are unable to negotiate conditions, and therefore are unable to consider the counterparties risk bearing ability.

<sup>39</sup> See P. Angelini et al., ‘Basel III : Long-term impact on economic performance and fluctuations’, BIS Working Paper No. 338, at pp. 19 et seq. <[www.bis.org](http://www.bis.org)>.

<sup>40</sup> Basel Committee on Banking Supervision, ‘Calculation of minimum capital requirements and capital buffers: a top-down Approach’, Bank for International Settlements, October 2010 at p. et seq. <[www.bis.org](http://www.bis.org)>.

<sup>41</sup> The stress-testing controls risks arising from the banking and the trading book. In order to comply, the value-at-risk must withhold a simulated a one year period of continued significant financial stress. Regulatory Framework (fn. 28) at p. 3 n. 12. For implementation in the EU see Directive 2010/76/EU.

<sup>42</sup> Regulatory Framework (fn. 28) at p. 3 n. 12, 16.

<sup>43</sup> The countercyclical buffer controls valuation risks arising from changing economic cycles. Regulatory Framework (fn. 28) at p. 5 n. 19; for more forward looking provisions (replacement of IAS 39) at p. 6 n. 23.

exposed risks. They are tools to detect further off-balance sheet risks,<sup>44</sup> and thus help to make revaluation risks<sup>45</sup> controllable.

“Liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses.”<sup>46</sup> To strengthen the liquidity, the regulation requires sufficient high-quality liquidity resources for both a one month-<sup>47</sup> as well as for a one year-period, based on respective stress scenarios.<sup>48</sup> High-quality resources are held assets that are either liquid or can be made liquid at anytime without unacceptable losses. Therefore, sufficient assets with low revaluation risks must be held in relation to outstanding obligations. This has the effect that a strong liquidity regime also leads to a strong equity to asset risk-relationship. These safeguards, like the minimal capital requirements, are required to ensure liquidity; they are, in fact, two sides of the same coin.

### **2.3 Summary, preliminary conclusions**

The aims and solutions of Basel III show and prove the relationship between equity and financial risks. The aim of the rules is to reduce the risk of a failure of a bank. The solution found is to define specific requirements regarding the quantity (percentage of balance sheet

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<sup>44</sup> ‘One of the most procyclical dynamics has been the failure of risk management and capital frameworks to capture key exposures – such as complex trading activities, resecuritisations and exposures to off-balance sheet vehicles’. Regulatory Framework (fn. 28) at p. 4 n. 20.

<sup>45</sup> A main problem arose from the pro cyclical effects of the Basel II internal credit risk models used. European Central Bank, Financial Stability Review, December 2009, at p. 149 et seq. <<http://www.ecb.int/pub/fsr/html/index.en.html>>; Ojo (fn. 31) at p. 3. The tendency of market participants to behave in a pro cyclical manner was amongst other reasons induced by the used accounting standards for market-to-market assets and held-to-maturity loans. Regulatory Framework (fn. 28) at p. 5 n. 18.

<sup>46</sup> Basel Committee on Banking Supervision, ‘Principles for Sound Liquidity Risk Management and Supervision’, September 2008 at p. 1 <<http://www.bis.org>>.

<sup>47</sup> The controlling instrument is the ‘Liquidity Coverage Ratio’. Basel Committee on Banking Supervision, ‘Basel III: International framework for liquidity risk measurements, standards and monitoring’, December 2010 at p. 3 et seq. <<http://www.bis.org>> [Framework for Liquidity Risk].

<sup>48</sup> ‘Net Stable Funding Ratio’. Framework for Liquidity Risk (fn. 47) at pp. 25 n. 119 et seq.

total) and quality of equity by using rules which require a diligent asset management and the control of risks (which relate to higher profitability) through additional equity.<sup>49</sup>

Some national legislations have even gone beyond the Basle III equity-requirements (in some legislation primarily targeted at banks considered as too big to fail<sup>50</sup>). The clear object of this move is to create a competitive advantage for their own financial market by requiring the banks to further enhance their risk bearing ability.

The quantitative and qualitative rules on equity for the financial market are very specific and refer to bank-specific risks, assets and liabilities. Such specific rules like these are possible, because the balance sheets of banks and insurance companies are similar; they are comparable and all structured in the same way.

#### **2.4 The procedural rules, regulatory enforcement**

The enforcement of substantive rules of the Basel III regulation requires close monitoring. To improve market discipline, disclosure requirements will be tightened with respect to all elements of the capital.<sup>51</sup> The European Central Bank has highlighted the importance of increased transparency of the financial institution's asset exposure for further financial stability.<sup>52</sup> For the purpose of supervision the Basel Committee introduces monitoring tools to be

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<sup>49</sup> Also see Mülbart (fn. 27) at pp. 433 et seq.

<sup>50</sup> For Switzerland: Commission of Experts for limiting the economic risks posed by large companies, 'Final report of the "too big to fail" commission of experts', 30 September 2010 <<http://www.sif.admin.ch/dokumentation/00514/00519/00592/index.html?lang=en>>. 'The new regulations set out under Basel III are intended as minimum standards. They are binding on all banks and are therefore designed to apply to all international financial institutions, irrespective of their systemic importance. The calibration is geared to the average, and fails to address the TBTF problem effectively. Moreover, the calibration does not take into account the special situation in Switzerland.'

<sup>51</sup> Regulatory Framework (fn. 28) at p. 2 n. 8 and p. 27 n. 91.

<sup>52</sup> European Central Bank, 'Financial Stability Review, Summary', December 2010 <<http://www.ecb.int/pub/fsr/html/summary201012.en.html>>; also see Mülbart (fn. 27) at p. 431: 'know-your-structure'.

used by the national supervisors in order to assess the liquidity risk of their banks. As specific liquidity risks may arise from different jurisdictions national supervisors will need to develop additional tools that cope with those risks.<sup>53</sup> These additional regulatory requirements demonstrate the link between substantive rules (on equity) and regulatory enforcement in the financial sector.<sup>54</sup>

Regulatory enforcement of substantive rules in the financial sector was first implemented in the 1930s when the focus was on national activities.<sup>55</sup> Subsequently this was extended into the international dimension, first limited to international cash flows<sup>56</sup> and, then after the introduction of the current-account convertibility in the 1960s extended towards a comprehensive global financial regulation.<sup>57</sup> Although there was a broad international consensus that free markets are beneficial for economic growth and that free capital markets lead to a more efficient allocation of capital, the ambiguity of this relationship<sup>58</sup> and the danger of pushing markets to poorly regulated offshore centres showed the necessity for additional regulation. This was implemented by the Basel accords, standards and guidelines, which are legally non-

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<sup>53</sup> Framework for Liquidity Risk (fn. 47) at p. 31 n. 138.

<sup>54</sup> National supervisors reliance on external auditors' expertise has increased. As most supervisors increasingly rely on audit to complement supervisory processes, the issue of transparency at the level of the audited banks and the audit firms, is of significant concern for effective supervision. Furthermore, high standards in audit enhance market confidence, particularly in times of financial distress. Other concerns arise at the level of the audit firms. Major audit firms have globalized, resulting in complex firm structures and a lack of transparency at the level of the audit firms. Basel Committee on Banking Supervision, 'External audit quality and banking supervision, Bank for International Settlements', 8 December 2008 at pp. 4 et seq. <<http://www.bis.org>>.

<sup>55</sup> Piet Clement, 'The Missing Link: International Banking Supervision in the Archives of the BIS', in Stefano Battilossi, Jaime Reis (eds.), *State and Financial Systems in Europe and the USA* (Farnham, Ashgate 2010) at pp. 167, 170.

<sup>56</sup> Maurice Obsterfeld, Alan M. Taylor, *Global Capital Markets. Integration, Crisis, and Growth* (Cambridge 2004) at pp. 126 et seq.; Cathrine R. Schenk, 'The Regulation of International Financial Markets from the 1950s to the 1990s', in Stefano Battilossi, Jaime Reis (eds.), *State and Financial Systems in Europe and the USA* (Farnham, Ashgate 2010) at pp. 149 et seq. and 150.

<sup>57</sup> Clement (fn. 55) at pp. 168 et seq.

<sup>58</sup> '[There is] no evidence that abolishing capital controls per se leads to higher growth... but ... quite good reason to believe that financial liberalization significantly increases the risk of a subsequent financial/currency crisis.' Nicolas Crafts, *Globalization and Growth in the Twentieth Century*, IMF Working Papers WP/00/44, 2000 at p. 51; Nicolas Crafts, 'Globalisation and Economic Growth. A Historical Perspective', *27 World Economy* (2004) at pp. 45 et seq.

binding, but acknowledged by the central bankers and are thus ‘as good as law’.<sup>59</sup> Today the Basel rules are integrated into EU-law<sup>60</sup> and have become international law through various formal and informal accords.<sup>61</sup> Even in countries which emphasize the free market such as the United States, the United Kingdom and also Switzerland, the need for strict banking regulations are undisputed given the specific risks arising from the financial sector to the general economy.

### **3. Rules on equity in the non-financial sector (in selected legislations)**

#### **3.1 Minimal Capital requirements**

Most continental European jurisdictions require a certain minimal amount of equity as a minimal legal capital when setting up a corporation (Germany: 50,000 Euro;<sup>62</sup> Switzerland: 100,000 CHF;<sup>63</sup> France: 225,000 Euro for listed public companies and 37,000 Euro for other public companies<sup>64</sup>; the Second Company Law Directive foresees a minimum share capital of 25,000 Euro<sup>65</sup>). Over time political factors in all jurisdictions have lead to a reduction of the legal capital in order to achieve a low entry level to establish corporations, with the declared

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<sup>59</sup> Steven Solomon, *The Confidence Game. How Unelected Central Bankers Are Governing the Changed Global Economy* (New York and London, Simon & Schuster 1995) at p. 435.

<sup>60</sup> Capital Requirements Directive 2006/48/EC and 2006/49/EC. For the implementation of the Basel III accord amendments will be made after a public consultation phase. See <[http://ec.europa.eu/internal\\_market/bank/regcapital/index\\_en.htm](http://ec.europa.eu/internal_market/bank/regcapital/index_en.htm)>. Also see Iain MacNeil, ‘The Trajectory of Regulatory Reform in the UK in the Wake of the Financial Crisis’, *11 EBOR (2010)*, pp. 483 et seq. at pp. 509 et seq.

<sup>61</sup> The G20 reached an agreement on the implementation of the Basel III rules at the Korea summit on the 11 and 12 November 2010. <[http://www.g20.org/Documents2010/11/seoulsummit\\_declaration.pdf](http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf)>. Decisions by the G20 are not legally binding.

<sup>62</sup> AktG § 7.

<sup>63</sup> OR Art. 621.

<sup>64</sup> French Commercial Code [CCom.] Art. L-224-2.

<sup>65</sup> Second Council Directive 77/91/EEC, Art. 6 (1), paid up to at least one fourth, Art. 9 (1). For the European Private Company (SPE) see Mathias M. Siems, Leif Herzog and Erik Rosenhäger, ‘The Protection of Creditors of a European Private Company (SPE)’, *12 EBOR (2011)*, pp. 148 et seq. at pp. 156 et seq.

purpose to stimulate economic activity.<sup>66</sup> In many common law jurisdictions legal capital rules have fallen out of favour as an instrument to protect creditors.<sup>67</sup> In many states within the US, legal capital rules have been abolished, and in others withered.<sup>68</sup> Nevertheless, provisions on equity cushions and distribution limits based on prudent accounting can often be found in credit contracts under US law.<sup>69</sup> Many Europeans chose to incorporate their business in the United Kingdom, where the capital rules are relatively permissive.<sup>70</sup> This triggered a debate over the benefit and usefulness of legal capital rules in Europe.<sup>71</sup>

### 3.2 Provisions for future risks?

In traditional civil law bookkeeping it is permissible to create provisions for future risks and in contemplation of future investments. Such provisions are hidden reserves and therefore, not compliant with true and fair bookkeeping according to IFRS standards. According to true and fair bookkeeping rules provisions can only be formed for uncertain future asset-reductions resulting from past events though not for future risks and investments.<sup>72</sup> Similar rules allowing provisions for future risks exist under US GAAP.<sup>73</sup> In part these rules compensate impairment rules which allow a revaluation of assets only if the loss is not recoverable. This broader understanding of provisions in civil law bookkeeping and US GAAP is consistent

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<sup>66</sup> Whether the legal capital of, eg Euro 37,000 for other public companies (France, CCom. Art. L-224-2) or Euro 50,000 (Germany, AktG § 7) is an entry barrier to an own company respectively a negative economic stimulant is to be challenged. The reduction of tax and bureaucratic hurdles related to the set-up and the operation of a company would probably be more effectual.

<sup>67</sup> Armour (fn. 4) at p. 2.

<sup>68</sup> Bayless Manning, James Hanks, *Legal Capital*, 3<sup>rd</sup> edn. (New York, Foundation Press 1990) at pp. 30 et seq.

<sup>69</sup> Wolfgang Schön (fn. 2) at p. 440; John Armour, 'Share Capital and Creditor Protection: Efficient Rules for a Modern Copany Law', 63 *Modern Law Review* (2000) at p. 355 et seq.

<sup>70</sup> John Armour, 'Who Should Make Corporate Law: EC Legislation versus Regulatory Competition', 48 *Current Legal Problems* (2005) at p. 369. For a further discussion on legal capital requirements and the Second Company Law Directive within the EU see Horst Heidenmüller, Barbara Gruenewald, Ulrich Noack, 'Minimum Capital in the System of Legal Capital', in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006) at pp. 17 et seq.

<sup>71</sup> Armour (fn. 4) at p. 3.

<sup>72</sup> IAS 37.

<sup>73</sup> For Asset Retirements and Environmental Obligation (ASC 410). Exit or Disposal Cost Obligations ASC 420.

with the concept of equity as risk reserve, as it creates equity with regard to future financial risks.

### **3.3 Valuation rules; creation of additional equity if going concern ability is in peril**

Accounting valuation rules allow for the valuing of assets and liabilities based on the going concern assumption. “Under the going concern assumption, an entity is viewed as continuing in business for the foreseeable future. General purpose financial statements are prepared on a going concern basis, unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.”<sup>74</sup> This means that assets will have to be re-valued at their liquidation value, and additional liabilities (reserves) might have to be created to cover the additional risks deriving from the endangered going concern ability. Provisions to cover liquidation costs have to be made, etc.

The reduction of the value of assets to the liquidation value has the same effect on the balance sheet and the nominal equity as is seen by the creation of hidden reserves. First, this reduces the distributable profit and creates additional real equity to cover the risks related to the endangered going concern ability. In a well-capitalized company this reduces the potential to distribute profits, but creates no risks for the creditors. In a weakly capitalized company this reduction of the nominal equity (by the allocation of real equity to cover the risks deriving from the endangered going concern ability) forces the company to change its risk behaviour to the new situation and necessitates additional equity which would have to be provided for by the shareholders. If they refuse to recapitalize the company and the remaining equity is insufficient to continue the operations, the management has to try to liquidate the company before

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<sup>74</sup> ‘Going Concern Assumption’ IAS 570.

creditors are harmed. The rules regarding the valuation of assets and liabilities if the going concern ability is in peril are rules, which, in a specific risk situation, require additional equity or a new risk profile.

### 3.4 Second Company Law Directive

The Second Company Law Directive requires a minimum capital of 25,000 Euros.<sup>75</sup> The distribution regime is limited to a mere balance sheet test in combination with a partial earned surplus test.<sup>76</sup> The Second Directive does not require additional first-tier capital such as non-distributable legal reserves or statutory reserves.<sup>77</sup> Therefore, in the absence of further national requirements only the subscribed capital must be taken into account for the purpose of dividend distribution under Art. 15 (1) of the Directive. Alteration of the subscribed capital is subject to a decision of the general assembly of the company.<sup>78</sup> An indirect reduction of the subscribed capital through the purchase of own shares without a resolution of the general assembly may, as an exception, be permitted by national law under Art. 19(2) “where the acquisition of a company's own shares is necessary to prevent serious and imminent harm to

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<sup>75</sup> Art. 6 (1) of the Second Council Directive 77/91/EEC of 13 December 1976; for admissive reduction below that amount see Art. 34 (capital reduction below the minimal capital requirement followed by a subsequent capital increase).

<sup>76</sup> Art. 15 (1).

<sup>77</sup> With the exception of reserves formed under Art. 22 (1) (b) of the Directive for the purchase of own shares, this reserve is non-distributable.

<sup>78</sup> For capital increase Art. 25 (1); for capital reduction Art. 30.

the company.” If own shares are purchased, an non-distributable reserve must be formed; the purchase of own shares cannot increase distributable profits.<sup>79</sup>

Where there is a reduction of the subscribed capital creditors may have the possibility to invoke the safeguards under Art. 32 of the Directive. The protection of this article is available if the assets of the company, are considered insufficient in the circumstances or the creditor does not have other adequate safeguards.<sup>80</sup>

Distributions may therefore be made under the Second Directive provided that post distribution the company’s assets equal all liabilities, and provided the amount of the distribution does not exceed the amount of the profits of the last financial year plus “any profits brought forward and sums drawn from reserves available for this purpose, less any losses brought forward and sums placed to reserve in accordance with the law or the statutes.”<sup>81</sup>

### **3.5 Rickford Report**

The concept of a static and formalistic equity requirement for corporation has to be questioned given its inflexibility and also due to the fact that reality is much too complex for such

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<sup>79</sup> Art. 22 (1) (b).

<sup>80</sup> Art. 32 (1) as amended by Directive 2006/68/EC: ‘In the event of a reduction in the subscribed capital, at least the creditors whose claims antedate the publication of the decision on the reduction shall at least have the right to obtain security for claims which have not fallen due by the date of that publication. Member States may not set aside such a right unless the creditor has adequate safeguards, or unless such safeguards are not necessary having regard to the assets of the company. Member States shall lay down the conditions for the exercise of the right provided for in the first subparagraph. In any event, Member States shall ensure that the creditors are authorised to apply to the appropriate administrative or judicial authority for adequate safeguards provided that they can credibly demonstrate that due to the reduction in the subscribed capital the satisfaction of their claims is at stake, and that no adequate safeguards have been obtained from the company.’ Art. 32 (2) ‘The laws of the Member States shall also stipulate at least that the reduction shall be void or that no payment may be made for the benefit of the shareholders, until the creditors have obtained satisfaction or a court has decided that their application should not be acceded to.’ Art. 32 (3) ‘This Article shall apply where the reduction in the subscribed capital is brought about by the total or partial waiving of the payment of the balance of the shareholders’ contributions.’

<sup>81</sup> ‘Earned surplus test’ under Art. 15 (1) (c).

simplistically structured rules. It is said, that these rules cannot satisfy the purpose of the protection of shareholders, creditors and the company<sup>82</sup> and instead a scheme is suggested that allows payments to shareholders whenever a balance sheet test shows no over indebtedness and a solvency test the going concern ability of the company.<sup>83</sup>

The solvency test requires a procedure to affirm that distributions to shareholders do not further the risk of insolvency. The solvency-test in the United Kingdom allows the distribution of dividends as long as the solvency (with reasonable *ex ante* sight) seems given for another year.<sup>84</sup> The New Zealand approach differs somewhat. There, the solvency test is “whether the company is able to pay its debts as they become due in the normal course of business; and the value of the company's assets is greater than the value of its liabilities, including contingent liabilities.”<sup>85</sup> Furthermore directors are required to “sign a certificate stating that, in their opinion, the company will, immediately after the distribution, satisfy the solvency test and the grounds for that opinion.”<sup>86</sup>

The weakness of the solvency test is that it focuses on liquidity and that the asset valuation risks are addressed only indirectly.<sup>87</sup> A solvency test relies on the board's subjective assessment of future outlooks, and therefore, cannot assure objective values of the underlying valuations.<sup>88</sup> As the solvency test relies more on the capacity of the company to pay its debts, and not on a balance-sheet over indebtedness, future income can be considered in this test, in the

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<sup>82</sup> Paolo Santella, Riccardo Turrini, ‘Capital Maintenance in the EU: Is the Second Company Law Directive Really That Restrictive?’, 9 *EBOR* (2008) at pp. 341 et seq. and at p. 460; Rickford Report (fn. 2) at pp. 943 et seq.; Eva Micheler, ‘England’, in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006) at pp. 414 et seq.

<sup>83</sup> Rickford Report (fn. 2) at p. 971 et seq.

<sup>84</sup> British Companies Act 2006, s 643 (1) (b) (ii): ‘has also formed the opinion ... that the company will be able to pay (or otherwise discharge) its debts as they fall due during the year immediately following that date.’

<sup>85</sup> New Zealand Companies Act s 4 (1).

<sup>86</sup> New Zealand Companies Act s 52 (2).

<sup>87</sup> Also see Wolfgang Schön (fn. 2) at pp. 440 et seq.: ‘The argument that such creditors [unable to adjust] are only interested in the present liquidity is unconvincing’.

<sup>88</sup> Also see Wolfgang Schön (fn. 2) at p. 445.

same way it is included in a liquidity test.<sup>89</sup> For this reason the Rickford Report proposes as second test, a bare balance sheet net asset test, which focuses on the balance sheet, not on solvency, but without any equity-barriers regarding distributions to shareholders.<sup>90</sup> However, one of the main weaknesses of the balance sheet test is that it lacks the ability to detect off balance sheet liabilities. As the assets shown on the balance sheet are book values and not real values it is reasoned that the application of any balance sheet test should not be too rigid.<sup>91</sup> Distributions made on the basis of a balance sheet test alone or in combination with a solvency test thus fail to preserve the needed equity in relation to the risk bearing ability of the company. The more the book value diverges from the real value of an asset, the lower the protection of adequate equity by a balance sheet test becomes.

### **3.6 Critical remarks**

The concepts described in the Rickford Report imply a perfectly correct valuation of assets. They ignore the risk of false valuations and the risk (even if all valuations were correct) that the valuation basis may change, as well as the fact that the accounting-valuation rules do not cover these risks. As a minimum those risks, which the accounting rules do not cover, should be controlled by equity.

A system which protects only the diligent and ‘market-mighty’ creditors cannot be justified and is naive.<sup>92</sup> These are the very creditors who are in a position to calculate their own investment risk<sup>93</sup> and behave accordingly (for example, by only giving credit against collateral).

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<sup>89</sup> Rickford Report (fn. 2) at p. 975: ‘any more that that (the result of the bare bet asset test) is the maximum which it would be prudent to distribute.’

<sup>90</sup> Rickford Report (fn. 2) at pp. 975 et seq.

<sup>91</sup> Rickford Report (fn. 2) at p. 976.

<sup>92</sup> Schön (fn. 2) at p. 440. For concerns regarding the shareholders right to approve reduction of capital see Micheler (fn. 82) at pp. 425 et seq.

<sup>93</sup> Rickford Report (fn. 2) at 919.

Such creditors are, in fact, not in need of protection at all. A system of that kind protects the interests of these groups at the cost of weaker and less professional creditors, such as trade creditors and small subcontractors, who lack bargaining and informational resources<sup>94</sup> Furthermore it is at the expense of tort creditors,<sup>95</sup> who by definition do not negotiate collateral before ‘giving credit’ to the tortfeasor.

### 3.7 Duties of the board of directors regarding the financial risk bearing ability

The relationship between equity and risk bearing ability is accepted in the legislation of many jurisdictions. These equity related rules are – however – not set up to define the necessary amount of equity. They are embedded in the general liability rules for the board of directors<sup>96</sup> and are applied if the risk behaviour of the board is not in line with the equity-driven risk bearing ability of the company.<sup>97</sup>

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<sup>94</sup> Holger Fleischer, ‘Legal Capital: A Navigation System for Corporate Law Scholarship’ 7 *EBOR* (2006) at p. 30; Armour (fn. 4) at p. 6.

<sup>95</sup> Schön (fn. 2) at p. 441 et seq.: legal capital as collective contractual offer that particularly protects involuntary creditors, creditors unable to adjust and lowers transaction costs for all creditors.

<sup>96</sup> Switzerland: OR Arts. 717 and 754; Germany: AktG § 93 (1); France: Ccom. Arts. L 225-251 and L 225-257; United Kingdom: under Section 172 (1) (a) of the Companies Act 2006 a director must not take from his subjective point of view risks that endanger the company’s long-term success; Geoffrey Morse et al. (eds.), *Palmer’s Company Law: Annotated Guide to the Companies Act 2006* (reprint, Sweet & Maxwell 2008) at p. 167: ‘The directors must make decisions that are calculated to be for the long-term benefit of the members [of the company] as a whole.’ Paul L. Davies, Sarah Worthington, Eva Micheler, *Gower and Davies’ Principles of Modern Company Law*, 8<sup>th</sup> edn. (London, Sweet & Maxwell 2008) at 11-5. Rolf Watter and Katja Roth Pellanda, ‘Art. 717’, in Heinrich Honsell, Nedim P. Vogt, Rolf Watter (eds.), *Basler Kommentar, Obligationenrecht II, Art. 530-1186 OR*, 3<sup>rd</sup> edn. (Basel, Helbing Lichtenhahn 2008) at n. 10 and 13; Eric Homburger, ‘Art. 707-726’, in Peter Gauch, Jörg Schmid (eds.), *Zürcher Kommentar zum Obligationenrecht* (Zurich, Schulthess 1996) at n. 816. Böckli (fn. 11) at § 13 n. 563 et seq. and § 14 n. 253.

<sup>97</sup> However, these duties can be understood as duties owed to the shareholders, creditors or the corporation itself. Switzerland: OR Art. 756 (1); Germany: AktG § 93 (2); France: CCom. Art. L 225-251; United Kingdom: Company Act, s 170 (1); *Multinational Gas and Petrochemical Co v Multinational Gas and Petrochemical Services Ltd* [1983] Ch 258 CA; *Peskin v. Anderson* [2001] 1 BCLC 372 CA; Derek French, Stephen W. Mayson and Christopher L. Ryan, *French & Ryan on Company Law* (Oxford University Press 2009) at 16.3.3; only the company itself can bring in an action for a breach of duty; Geoffrey Morse, *Charlesworth’s Company Law*, 17<sup>th</sup> edn. (London, Sweet & Maxwell 2005) at pp. 164 and 298 et seq.: only under special circumstances fiduciary duties arise which place directors in a fiduciary capacity towards shareholders or creditors.

In the legislation of both civil and common law jurisdictions there is broad agreement that rules are necessary in order to maintain a sufficient equity level, be this by way of a liquidity or solvency-test, a balance sheet test, or through rules on capital protection. Only under “laboratory conditions” in a perfectly functioning market, where every participant is perfectly informed and in a position to freely adjust, are no rules for capital maintenance needed whatsoever. In the real world we must assume that some creditors have neither the information nor the ability to adjust, and are therefore exposed to the externalisation of risks and costs by companies and certain creditors.<sup>98</sup> Further creditors capable of adjusting often subject their loan to conditions that impede the company’s ability to engage in transactions that would increase the risk for the creditor, therefore “there are potentially significant savings to be made through company law providing ‘creditor terms’ which restrict such transactions.”<sup>99</sup>

In jurisdictions which follow the English lead, the *West Mercia* line of cases requires directors to consider the risk of insolvency at any given time. Where a threat of insolvency is significant, directors are bound to make greater provisions in order to protect creditors at the expense of shareholders. The protection required varies in relation to the severity of the threat.<sup>100</sup> In the United Kingdom, as well as in the United States, the majority holds as a consequence of the prevailing shareholderism,<sup>101</sup> that such a fiduciary duty exists only in regard

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<sup>98</sup> Henry Hansmann, Reinier Kraakman, ‘The End of History for Corporate Law’, Yale International Centre for Finance etc., Working Paper No. 00-99, January 2000 at p. 10 <[http://www.law.harvard.edu/programs/olin\\_center/corporate\\_governance/papers.shtml](http://www.law.harvard.edu/programs/olin_center/corporate_governance/papers.shtml)>: ‘The reason for these rules, however, is that there are unique problems of creditor contracting that are integral to the corporate form, owing principally to the presence of limited liabilities as a structural characteristic of that form.’

<sup>99</sup> Armour (fn. 4) at p. 9.

<sup>100</sup> *West Mercia Safetywear Ltd v Dodd* (1988) 4 BCC 30 (CA UK) and *Nicholson v Permakraft (NZ) Ltd* (in liq) [1985] 1 NZLR 242 (CA NZ); see Rickford Report (fn. 2) at p. 985.

<sup>101</sup> Andrew Keay, ‘Moving Towards Stakeholderism? Constituency Statutes, Enlightened Shareholder Value, and More: Much Ado About Little?’, 22 *EBLR* (2011) at pp. 1 et seq., for a discussion of the stakeholder-friendly terminology of Section 172 (2) of the Companies Act 2006; Modern Company Law Review: Competing the Structure, a Consultation Document from the Company Law Review Steering Group, November 2000, Chapter 3 Section 3.5.; Hansmann, Kraakman (fn. 98) at p. 7. For the ‘enlightened shareholder value’ also see Levinus Timmerman, ‘Principles of Prevailing Dutch Company Law’, 11 *EBOR* (2010), pp. 609 et seq. at p. 615 et seq.; Douglas Braid, Todd Henderson, ‘Other People’s Money’, 60 *Stanford Law Review* (2009), pp. 1309 at pp. 1323 et seq.

to the company and not in regard to the creditors themselves. It is argued that the wrongful trading provision<sup>102</sup> addresses the issue of creditor protection, and thus, there is no need to treat creditors ‘as if they were shareholders’<sup>103</sup>. In continental Europe a more pluralistic, or better, consolidated approach is widely accepted.<sup>104</sup> As the board forms the will of the company as a legal entity and acts on behalf of the company, it is obliged to safeguard the interests arising out of contractual relationships between the company and third parties as well as those arising out of tort.

In US case law and doctrine it has also been upheld that there is a duty of the directors towards creditors in the vicinity of insolvency.<sup>105</sup> Among others Lipson<sup>106</sup> states that (on the one side) there is in general no duty of directors towards creditors but that (on the other side): “The corollary, however, is that duty should fill gaps to remedy inequitable conduct when there is no meaningful remedy at law.”<sup>107</sup> This is especially the case when involuntary creditors such as tort creditors<sup>108</sup> or creditors unable to adjust are involved. With this statement Lipson opens the door to a civil law type creditor protection, that includes the duty to safeguard the interests of all creditors: if there is in certain circumstances a duty of care towards tort creditors or non-adjustable creditors (which prevents for example the board from taking excessive financial risks), then such duty of care will protect not only privileged creditors, but, in fact all creditors. A systematically correct differentiation regarding the protection of creditors starts with a general rule, which includes a duty of care regarding all creditors. It,

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<sup>102</sup> UK: Insolvency Act 1986 Section 214; for US Fraudulent Transfer Law see Andreas Engert, ‘Life Without Legal Capital: Lessons from American Law’, in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006) at pp. 669 et seq.

<sup>103</sup> Jonathan C. Lipson, ‘The Expressive Function of Directors’ Duties to Creditors’, 12 *Stanford Journal of Law, Business & Finance* (2007) at p. 224.

<sup>104</sup> As well as Japan and other East-Asian jurisdictions. Keay (fn. 101) at pp. 6 et seq.; also see Mülbart (fn. 27) at p. 428.

<sup>105</sup> For an oversight of the respective case law see Lipson (fn. 103) at p. 224 et seq.

<sup>106</sup> Lipson (fn. 103) at p. 280. For an ‘enlightened shareholderism’ see Keay (fn. 101) at p. 2.

<sup>107</sup> Lipson (fn. 103) at p. 281.

<sup>108</sup> Jonathan C. Lipson, ‘Directors Duties to Creditors: Power Imbalance and the Financially Distressed Company’, 50 *UCLA Law Review* (2003) at p. 1189.

however, combines this with restrictions regarding those adjustable creditors who rely on that duty, where the damage arising out of a breach of such duty would have been avoidable by the adjustable creditor.

The wrongful trading provision sets specific rules regarding the duty of directors.<sup>109</sup> If assets are transferred in the vicinity of insolvency in a way that make creditors as a group worse off, this is considered to be a fraudulent transfer of assets.<sup>110</sup> Wrongful trading copes with a violation of the capital regime in circumstances where the risk induced through wrongful trading materializes, and thus, might provide for an *ex ante* protection similar to the corresponding civil law provisions of the *lex pauliana*.<sup>111</sup> The entry of business failure or bankruptcy depends on a subjective detection of a lost going concern ability. Although for the British wrongful trading provision case law does not require company directors to respond to a crisis before the onset of insolvency<sup>112</sup> it is held that the broad language of the respective section<sup>113</sup> allows for such interpretation.<sup>114</sup> In Germany<sup>115</sup> for example the *lex pauliana* rules take effect when the directors realize that there is an excess of liabilities over assets.<sup>116</sup> If we relate the wrongful trading provisions and the *pauliana* rules to the duties of the board of directors we see that they require the diligent application of accounting rules and risk management. Addi-

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<sup>109</sup> UK Insolvency Act 1986, Section 214 (2) (b): ‘at some time before the commencement of the winding up of the company, that person knew or ought to have concluded that there was no reasonable prospect that the company would avoid going into insolvent liquidation’. For an analysis of these duties under British and German fraudulent transfer law see Thomas Bachner, ‘Wrongful Trading – A New European Model for Creditor Protection’, 5 *EBOR* (2005) at pp. 297 et seq.; Engert (fn. 102) at pp. 669 et seq.; Gerhard Wagner, ‘Distributions to Shareholders and Fraudulent Transfer Law’, 7 *EBOR* (2006), pp. 217 et seq. at p. 219 et seq.

<sup>110</sup> Douglas G. Braid, ‘Legal Approaches to Restricting Distributions to Shareholders: The Role of Fraudulent Transfer Law’, 7 *EBOR* (2006), pp. 199 et seq. at p. 203.

<sup>111</sup> Both stem from the roman *actio pauliana*. Engert (fn. 102) at p. 669. For Europe see Christopher G. Paulus, ‘Claw-back Rules and Creditors’ Protection’, in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006), at pp. 325 et seq.

<sup>112</sup> Bachner (fn. 109) at p. 318.

<sup>113</sup> UK Insolvency Act 1986 Section 214 (2) (b).

<sup>114</sup> Bachner (fn. 109) at p. 302: ‘the responsibility of directors, as described in *Re Continental Assurance*, does not go beyond a continuous and careful monitoring of whether the company is still solvent’; Ian F. Flecher, *The Law of Insolvency*, 3<sup>rd</sup> edn. (London, Sweet & Maxwell 2002) para. 27-019: Professor Fletcher even considers that the mere probability of insolvency could trigger director’s liability towards creditors under the respective provision.

<sup>115</sup> For private limited companies § 64 (1) GmbHG; for public limited companies § 92 (2) AktG.

<sup>116</sup> Also Bachner (fn. 109) at p. 299; with a translation of the respective German rule.

tionally the *lex pauliana* and the wrongful trading provision (under admissible possible interpretation) imply the duty of the board to constantly assess the going concern ability and the risk exposure of the company at any point in time, and furthermore to act accordingly.

In a very general way we can therefore conclude that certainly in civil law jurisdictions, and (at least) arguably in the common law environment, there is a general duty of the board of directors to respect the financial risk bearing ability of the company. This financial risk bearing ability means that the company should only take on risks which it can bear based on its financial structure: that the necessary funds are at hand to execute the planned activities, and, in particular, the necessary liquidity is available to meet due obligations. The financial risk ability is related to the equity of the company. A company with a low equity may not have the risk bearing ability to conduct a specific business where there is a risk money may be lost. It is also worth noting that the structure of assets in a company with low equity is less flexible. As a general rule it can be said that the higher the risks taken, the greater the equity required.<sup>117</sup> The board of directors is obliged to assess the risks of planned and effected operation (risk assessment) and act accordingly (risk management)<sup>118</sup> and not permit the engaging in any business, if it is thought that the company lacks the financial resources to conduct such business.<sup>119</sup>

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<sup>117</sup> Also see David Kershaw, 'Involuntary Creditors and the Case of Accounting-based Distribution Regulation' 140 *Journal of Business Law* (2009) at p. 144; Davies, Worthington, Micheler (fn. 96) at 11-15; Lukas Glanzmann, 'Die Pflicht zur angemessenen Kapitalausstattung der Aktiengesellschaft', 1 *Aktuelle Juristische Praxis* (1997), pp. 51 et seq. at p. 52 et seq.; also supra 1.3.4 and 2.3.

<sup>118</sup> 'Among the duties defined by the business judgment rule is the rule that no excessive risks can be taken.' Gerd Krieger and Viola Sailer in Karsten Schmidt and Marcus Lutter (eds), *Aktiengesetz: Kommentar; [AktG]* (Cologne, O Schmidt 2008) at p. 1061.

<sup>119</sup> 'One of the fundamental obligations of the management board is to file a petition for the commencement of insolvency proceedings if the corporation becomes insolvent or in the event of overindebtedness, i.e. if the asset of the company no longer cover the liabilities.' Frank Dornseifer, *Corporate business forms in Europe: A compendium of public and private limited companies in Europe* (Staempfli, Bern 2005) at p. 252. Susanne Kalss, Nikolaus Adensamer, Janine Oelkers, 'Director's Duties in the Vicinity of Insolvency – a comparative analysis with reports from Germany, Austria, Belgium, Denmark, England, Finland, France, Italy, the Netherlands, Norway, Spain and Sweden' in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006) at p. 142: from the comparative analysis the conclusion is drawn that the duties that arise in these legislations in the vicinity of insolvency 'are measures that are designed to be taken before it is too late, i.e. before the company is insolvent.' Hence, these duties also imply a duty to monitor the risk bearing ability.

Both elements of this rule (risk profile and financial resources/equity<sup>120</sup>) are adjustable: if the equity is too low for aspired risk profile, either the equity or the risk profile has to be adjusted. For this reason, the rules regarding the financial risk bearing ability of the board are rules on equity.<sup>121</sup>

#### **4. Different legislative approaches to equity regulation in the financial and non-financial sectors, reasons**

##### **4.1 Practical reasons; non-financial market sector is too heterogeneous**

The most important reason for different legislative approaches to equity regulation in the financial and non-financial sectors is a practical reason: the non-financial sector is comparatively much more complex. This statement may come as a surprise as bank balance sheets are “notoriously more opaque than those of generic firms”.<sup>122</sup> In the case of banks the valuation of each asset is more difficult, e.g. the valuation of a credit requires the analysis of the respective creditor etc.<sup>123</sup> So, a bank’s balance sheet is difficult to evaluate, but its easy to regulate, since we have a defined catalogue of asset categories. The opposite holds true in the real economy: Even if specific assets might be easier to value,<sup>124</sup> the balance sheet structure of each company in the real economy is unique. It is not possible to define groups of specific companies and asset categories, and to then determine specific asset requirements and equity backing rules.<sup>125</sup> For private equity companies, trading companies, production companies,

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<sup>120</sup> To the interdependence of financial resources and equity, see *supra* 1.3.3.

<sup>121</sup> How these rules help to define the correct amount of equity, see *supra* 1.3.4, 6.

<sup>122</sup> Mülbert (fn. 27) at p. 420.

<sup>123</sup> Mülbert (fn. 27) at p. 420.

<sup>124</sup> In particular physical assets such as production plants, machinery, raw materials etc.

<sup>125</sup> Schön (fn. 2) at p. 437.

companies operating out of own or out of leased premises, companies which outsource certain functions and companies which do not, etc. different rules must apply. Both assets and liabilities are too heterogeneous – ranging from fixed assets such as real estate and activated research costs to current assets such as trade creditors with different credit rankings. The broad range of commercial activities in the real economy leads to countless risks which have to be assessed individually in view of the definition of provisions. In contrast, the balance sheets of different banks and different insurance companies are comparable and similarly structured, which makes it easier to define equity-related rules for specifically defined asset categories and the equivalent equity backing. This is simply not possible in the non-financial sector.

The regulations on capital in the financial sector are rules which need to be enforced by governmental financial market supervision.<sup>126</sup> These rules need a regulator who supervises the market and who reacts quickly if rules are broken. A financial market type set of rules regarding capital for the non-financial market sector would not only be much more complex due to the heterogeneity of the real economy but would be impossible to enforce unless society would be ready and willing to impose a financial market regulator to the rest of the economy. This is not an option. Therefore, we – firstly – can conclude, that the different legislative approach to equity or capital regulation in the financial and non-financial sector can be explained by practical reasons. A financial market-type equity regulation for the rest of the economy is unthinkable.<sup>127</sup>

## **4.2 Bank Failures damage the economy**

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<sup>126</sup> *Supra* 2.4.

<sup>127</sup> Mülbart (fn. 27) at p. 436: ‘banking regulation ... produces ever more regulation ... to the lawyer’s full employment act, one may greatly doubt whether banks’ corporate governance should indeed map the way forward for corporate governance in general’.

It is said that the collapse of a bank causes larger collateral damage to the rest of the economy than the bankruptcy of an enterprise operating in the non-financial market.<sup>128</sup> In general terms, this increased importance of the financial sector, as it relates to the overall economy, is correct. The bankruptcy of a bank does cause more damage to the economy than the bankruptcy of a production company or another non-financial market company of the same size.<sup>129</sup> Nevertheless, the recent past has shown, that there are also non-financial sector companies that are deemed by their governments as too big to fail<sup>130</sup> – and which were consequently supported by the respective governments. The too big to fail argument therefore does not alone justify different equity regulation in the financial market.<sup>131</sup>

## **5. How to regulate equity in the non-financial sector?**

### **5.1 Equity discussion focuses on the legal capital**

The academic discussion in Europe regarding equity largely concerns capital protection or distribution restrictions<sup>132</sup> and whether minimal capital requirements should be made for the legal capital.<sup>133</sup> The problem with this discussion is that it relates the concept of equity to

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<sup>128</sup> Cf. Mülbart (fn. 27) at p. 420.

<sup>129</sup> Dysfunctional credit and money market pose a threat to the whole economy. *Supra* at fn. 40.

<sup>130</sup> Firms outside of the banking sector can be of systemic importance as well, and therefore, the systemic importance criterion fails to explain why ‘banks should be subject to a unique legal regime’. Mülbart (fn. 27) at pp. 434.

<sup>131</sup> Commission of Experts for limiting the economic risks posed by large companies (fn. 50) at p. 3. Also see Mülbart (fn. 27) at p. 434.

<sup>132</sup> John Armour, Gerard Hertig and Hideki Kanda, ‘Transactions with Creditors’, in Kraakman et al (eds.), *The Anatomy of Corporate Law, A Comparative and Functional Approach*, 2<sup>nd</sup> edn. (Oxford University Press 2009) pp. 115 et seq. at p. 132.

<sup>133</sup> Siems, Herzog and Rosenhäger (fn. 65) at pp. 156 et seq.; Klaus J. Hopt, ‘The European Company Law Action Plan Revisited: An Introduction’. Law Working Paper No. 140/2010, February 2010; available at <<http://ssrn.com/abstract=1554662>>, at p. 6; Fritz Ewang, ‘EU Minimum Capitalisation Requirement, An Analysis and Critique of the EU’s Minimum Capitalisation Requirement’, Charles Sturt University, 21 September 2007, available at <<http://ssrn.com/abstract=1015708>>, at pp. 2 et seq.; Gordon Y. M. Chan, ‘Why does China not abolish the minimum capital requirement for limited liability companies?’, The Chinese University of Hong Kong, available at <<http://ssrn.com/abstract=1442791>>, at pp. 1 et seq.; Fleischer (fn. 94) at pp. 31 et seq.

rules on minimal capital requirements.<sup>134</sup> It is indeed easy to attack the concept of equity under this premise, since the formal rules regarding the minimal capital allow for grossly undercapitalized companies, in which the formal capital- and creditor-protection rules just do not work. Statements such as ‘[l]egal capital rules are a form of primitive regulatory technology’<sup>135</sup> as they are linked to minimal non flexible capital requirements are the result of this shortcoming.<sup>136</sup> On the other hand, we see the Rickford-concept, which works in a world of perfect accounting and perfectly adjustable creditors.<sup>137</sup> It looks like a conflict between the Anglo-Saxon ideas of self-responsibility and the German virtues of cooperation.<sup>138</sup> The discussion seems to have come to a halt; the term “battle line” when used to describe the current status of this discussion is to the point and illustrates the impasse: “In the legal capital discussion, there are good points on both sides; ... But if this is so, why should the member states be forced to use the same legal capital standard? If there is reasonable disagreement on the pros and cons, why should a country not be allowed to have its own way and experiment with it”.<sup>139</sup>

## **5.2 “Real-economy”- analogous rules on the equity requirements in the financial sector**

The first question we have to look at is whether the rules on legal capital are analogous in their function to the quantitative and qualitative rules on equity in the financial sector.<sup>140</sup> This is to be rejected as the legal-capital rules do not relate to the financial resources needed for a specific company. “Legal capital and the maintenance of capital have been falsely assumed to

<sup>134</sup> Cf. Armour (fn. 4) at pp. 16 et seq.

<sup>135</sup> Armour (fn. 4) at p. 27.

<sup>136</sup> Paul Davies, ‘Directors’ Creditor-Regarding Duties in Respect of Trading Decisions Taken in the Vicinity of Insolvency’, 7 *EBOR* (2006), pp. 301 et seq. at pp. 309 seq.; Armour (fn. 4) at p. 17; Armour, Hertig, Kanda (fn. 132) at pp. 130 et seq.; Chan (fn. 133) at pp. 9 et seq.

<sup>137</sup> See supra 3.5.

<sup>138</sup> Fleischer (fn. 94) at p. 37

<sup>139</sup> Hopt (fn. 133) at p. 6.

<sup>140</sup> Supra at 2.

be analogous to the function of the capital adequacy rules imposed to the banks and other financial intermediaries.”<sup>141</sup> The unique quality of the equity-rules for the financial sector is that they relate to the size and the risk-structure of the company,<sup>142</sup> which is not the case with rules on legal capital. So, if the rules on the minimal legal-capital are not the “real-economy”-analogous to the equity requirements in the financial sector, which rules are?

If we analyse the rules on capital requirements in the financial sector we can see that these rules apply a more general principle – that principle being that the determination of the quantitative and qualitative amount of equity should be based on the risks of asset valuation and the liquidity risks.<sup>143</sup> Or, in other words, that the assets of a bank need to be of a quantity and a quality which would be sufficient to pay back the debts, in particular the deposits. Equity-rules in the financial sector thus also address the amount and the quality of the assets held.<sup>144</sup> “Real-economy” rules, analogous to the equity requirements in the financial sector, should do the same: address the quantity and quality of the assets in view of the risk profile of the company.<sup>145</sup>

The complexity and the heterogeneity of the assets held by companies of the real economy do not allow a direct analogy of financial sector type equity rules.<sup>146</sup> This means that substantive rules on equity requirements for the real economy should be general, not specific. They should apply the principle that the assets of a company need to be of a quantity and a quality which would be sufficient to pay back the debts in consideration of the specific risk-profile of the company. Therefore the answer to the question of whether the rules on equity of the financial sector can be applied in the real economy depends on the action taken: the answer is

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<sup>141</sup> Cf. Ewang (fn. 133) at p. 20.

<sup>142</sup> Mülbart (fn. 27) at p. 412; also see supra 2.

<sup>143</sup> Supra at 2.3.

<sup>144</sup> Supra at 2.2; See also Chan (fn. 133) at p. 16.

<sup>145</sup> Also see Mülbart (fn. 27) at pp. 413, 434.

<sup>146</sup> Armour (fn. 4) at p. 18 and supra at 4.1

yes if we reduce the rules to the general principle (relation between company risk and equity); but no, if we try to apply them directly. As a next step, the application of this principle of equity as a risk reserve to the real economy must be considered.

### **5.3 Equity (Assets) and its relation to the risk-behaviour of a company**

Equity is the difference-amount between the debts and the assets of the company. It includes not only the legal capital of the company but also the legal and the accounting reserves, the hidden reserves<sup>147</sup> and the accrued profits and the free reserves which can be distributed to shareholders.<sup>148</sup> Therefore the quality of the equity is also defined by the quality of the assets held. Further, there is a link between the quantity and the quality of the assets and the risk-bearing ability of the company. The risk-behaviour has the potential to reduce the assets; if the venture in which the assets were invested fails, more assets are needed to allow the company to fulfill its obligations.

The relation between the assets of a company and its risk-bearing ability is widely acknowledged: “[T]he amount necessary to capitalise a business adequately so as to internalise the risks of hazardous activities will depend on the nature of the business.”<sup>149</sup> “[A] method of protecting creditors can consist in ensuring that a company operates only with an appropriate level of assets, so as to increase the chances that it will be able to meet the claims of its creditors.”<sup>150</sup> An increase in the risk-exposure of a company downgrades the value of its

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<sup>147</sup> Supra at 1.2.2.

<sup>148</sup> Supra at 1.

<sup>149</sup> Armour (fn.4) at p. 19.

<sup>150</sup> Davies, Worthington, Micheler (fn.96) at 11-1; also supra at 5.

debts<sup>151</sup> because this leads to an increase in default risk. “In theory, such rules [on legal capital] could reinforce the credibility of legal capital as a financial cushion for creditors by acting as capital adequacy provisions similar to those governing financial institutions.”<sup>152</sup> Consequently, companies are only permitted to make payments to shareholders out of funds that are not needed to satisfy the claims of creditors.<sup>153</sup> To safeguard the assets of the company is an efficient way of creditor-protection.<sup>154</sup>

#### **5.4 Self-regulated or binding rules on equity**

It is argued, that it is up to the private sector to regulate its risks and to act accordingly and that it is not the concern of governments to control equity in the non-financial sector – there is no respective public interest and private creditors should take responsibility.<sup>155</sup> For this reason there is no justification for strict financial-market type equity rules. But even those who plead for self-responsibility accept a liability of directors if these violate rules regarding the protection of creditors in the vicinity of a bankruptcy.<sup>156</sup> The absence of a state regulatory enforcement system on equity does not mean the absence of rules.

#### **5.5 Equity rules in connection with the duty of directors**

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<sup>151</sup> Mülbert (fn. 27) at p. 13: ‘With respect to the shareholders, the lack of personal liability of the corporation’s debts (limited liability) will serve as a powerful incentive to cause the company to act opportunistically, either in the form of a subsequent distribution of assets to its shareholders or by taking on riskier business projects, i.e. projects with more volatile earnings prospects’.

<sup>152</sup> Armour, Hertig, Kanda (fn. 132) at p. 133.

<sup>153</sup> Eva Micheler, ‘Disguised Returns of Capital – An Arm’s Length Approach’, *69 Cambridge Law Journal 2010*, pp. 151 et seq. at p. 184; Braid (fn. 110) at p. 200; Wagner (fn. 109) at p. 227: ‘The *protective function* aims at avoiding the externalisation of risk to the detriment of outside creditors. One important element of this function is to prohibit the distribution of such assets of the limited liability company which are necessary to cover the claims of outside creditors’.

<sup>154</sup> Siems, Herzog, Rosenhäger (fn. 65) at p. 152.

<sup>155</sup> Rickford Report (fn. 2) at p. 967; Mülbert (fn. 27) at p. 422: Banks are different in regard to their systemic risk and in regard to their vulnerability to bank runs. See also *supra* at 4.2.

<sup>156</sup> *Supra* at 3.7.

Further, discussions in the literature on the relation between the equity and the risk-behavior of a company also concern the rules regarding the duties of the board of directors.<sup>157</sup> These rules relate the risk bearing ability of the company (also) to the financial risk bearing ability, and thus to the equity of the company: “As far as strategic business decisions are concerned, therefore, creditors are de facto protected by the directors’ shareholder-regarding duties, so long as the company has significant shareholder funds.”<sup>158</sup> Davies, in particular, emphasizes this relation when he relates the duties of the board of directors to the equity of the company, by saying that rules on the duties of directors in the vicinity of a bankruptcy may reduce shareholders incentives to incorporate with inadequate capital, even if the formal legal capital requirements are met.<sup>159</sup> “Among the duties defined by the business judgment rule is the rule that no excessive risks can be taken.”<sup>160</sup> “The duty requires directors, at a time when the company is in some form of financial distress, to take account the interests of the company’s creditors.”<sup>161</sup>

These quotes show that there is a legally relevant relation between the financial risk bearing ability and the equity of the company<sup>162</sup>: Be it as a general duty of directors<sup>163</sup> or as a specific duty of directors towards creditors in the vicinity of insolvency<sup>164</sup>, under both systems directors are obliged to monitor the risk bearing ability of the company and to act accordingly. In a next step this principle has to be applied to define a set of rules regarding the equity requirements in the real economy.

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<sup>157</sup> Supra at 3.7.

<sup>158</sup> Davies (fn. 136) at p. 304.

<sup>159</sup> Davies (fn. 136) at p. 310.

<sup>160</sup> Krieger, Sailer (fn. 118) at p. 1061.

<sup>161</sup> Andrew Key, ‘Directors’s Duties to Creditors: Contractarian Concerns Relating to Efficiency and Over-Protection of Creditors’, *5 Modern Law Review* (2003), pp. 665 et seq. at p. 668.

<sup>162</sup> Supra at 3.7.

<sup>163</sup> In civil law under the premise of stakeholdersim, under common law arguably under an ‘enlightened shareholderism’. Supra at 3.7; also see Key (fn. 101) at pp. 2 et seq.

<sup>164</sup> Under fraudulent transfer law. Supra at 3.7.

## **6. Rules on equity for the real economy**

### **6.1 Relationship between risk bearing ability and equity, risk assessment**

It has been shown that due to the heterogeneity of the real economy specific rules for asset-backing by the nature of each individual asset are not practicable.<sup>165</sup> Additionally, non-flexible static rules on capital only produce results during the formation of the company phase. Such static rules represent an entry-barrier or a proof for the seriousness of the entrepreneurs<sup>166</sup>, but fail to set equity requirements related to the risk bearing ability of the company. It follows therefore, that what amounts of adequate equity is to be determined by reference to the aspired risk profile of the company.<sup>167</sup>

The board of directors is required to conduct a risk assessment when following the ISA 315<sup>168</sup> rules, but such a requirement can also be based on general rules regarding the duties of the board of directors.<sup>169</sup> This risk assessment is particularly significant as it not only defines the risks but also values them. As a consequence risk assessments should address the probability and the effect of each risk and define a figure which qualifies the consolidated risk: for functional risk management the board or the management must identify business risks, estimate

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<sup>165</sup> Supra at 5.2.

<sup>166</sup> Armour, Hertig, Kanda (fn. 132) at p. 131.

<sup>167</sup> Handschin (fn. 12) at pp. 200 et seq.

<sup>168</sup> ISA 315 <<http://web.ifac.org/clarity-center/isa-315>>.

<sup>169</sup> Keay (fn. 161) at pp. 683, 699, 686: 'directors must be informed so that they can ensure that their company is not engaging in wrongful trading'. Also see supra 3.7.

the significance of these risks, assesses the likelihood of their occurrence and decide on action to address those risk.<sup>170</sup>

## 6.2 Accounting-rules relevant risks: reserves, depreciation, provisions

The risk assessment may reveal risks which may then require direct revaluations, the impairment of assets and the formation of reserves and provisions based on applicable accounting rules. For example, if the management realizes that the risk factor in a DCF valued asset no longer depicts the risks properly, the risk factor would have to be increased which would in turn lead to a devaluation of that asset.<sup>171</sup> This reduces the nominal equity. Often the revaluation due to its lower valuation also reduces the revaluation risk. Ideally the reduction of the book value and the reduction of the valuation risk are parallel. If the accounting rules allow, the devaluation could go beyond the present value, thus creating hidden reserves.<sup>172</sup> Some of the risks addressed in the risk assessment concern risks deriving from past events which may lead to future liabilities. IAS 37.10 defines a ‘provision’<sup>173</sup> as a liability of uncertain timing or uncertain amount. Such provisions must be made if the obligation has arisen due to a past event, if the probability of payment is more than 50 per cent and the amount can be estimated

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<sup>170</sup> Also cf. ISA 315.15 a-c. ‘If the entity has established such a process (referred to hereafter as the “entity’s risk assessment process”), the auditor shall obtain an understanding of it, and the results thereof. If the auditor identifies risks of material misstatement that management failed to identify, the auditor shall evaluate whether there was an underlying risk of a kind that the auditor expects would have been identified by the entity’s risk assessment process. If there is such a risk, the auditor shall obtain an understanding of why that process failed to identify it, and evaluate whether the process is appropriate to its circumstances or determine if there is a significant deficiency in internal control with regard to the entity’s risk assessment process.’ (ISA 315.16) ‘If the entity has not established such a process or has an ad hoc process, the auditor shall discuss with management whether business risks relevant to financial reporting objectives have been identified and how they have been addressed. The auditor shall evaluate whether the absence of a documented risk assessment process is appropriate in the circumstances, or determine whether it represents a significant deficiency in internal control.’ (ISA 315.17).

<sup>171</sup> Arnold (fn. 1) at pp. 114 et seq.: however, ‘[t]he risk-adjusted discount rate method relies on an accurate assessment of the riskiness of a project. Risk perception and judgment are bound to be, to some extent, subjective and susceptible to personal bias.’

<sup>172</sup> *Supra* I.2.2.

<sup>173</sup> E.g. Switzerland: OR Arts. 675 (2) and 671; Germany: AktG §§ 58 (4), 150, German Commercial Code [Handelsgesetzbuch, HGB] § 272 (2). IAS 37.14: ‘A provision shall be recognized when: (a) an enterprise has a present obligation (legal or constructive) as a result of a past event (45); (b) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and (c) a reliable estimate can be made of the amount of the obligation. If these conditions are not met, no provision should be recognized.’

reliably.<sup>174</sup> Provisions for one-off events (e.g. a law suit) are measured at the most likely amount,<sup>175</sup> provisions for large populations of events (e.g. warranties) are measured at a probability-weighted expected value<sup>176</sup>.

### **6.3 Revaluation surpluses combine true and fair accounting and the prudence principle?**

Many accounting rules and the Fourth European Company Law Directive for private companies<sup>177</sup> require the creation of a specific revaluation surplus as additional (first tier) equity whenever assets are valued above their purchase price or production costs.<sup>178</sup> Consequently the revaluation of the asset does not increase the distributable profit.<sup>179</sup> The revaluation surplus has the same function as hidden reserves. The creation of revaluation surplus increases first-tier equity and leaves the accrued profit unchanged. A revaluation surplus can only be dissolved if the respective assets are devalued or sold. If high revaluation surpluses lead to first-tier equity exceeding the equity-requirements, the dissolution of the revaluation reserve is not possible, but the statutory capital can be decreased following the respective rules. The revaluation surplus can be a very powerful tool to combine transparency-driven true and fair accounting rules with the requirements of the prudence principle and the maintenance of the company's equity. The scepticism regarding true and fair accounting in the aftermath of the 2008 crisis<sup>180</sup> can be addressed if true and fair valuations would, as a rule, be combined with the creation of revaluation reserves. This would show the true and fair value of the assets correctly, but would also prevent the distribution of profits which are a result of such revalua-

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<sup>174</sup> IAS 37.14.

<sup>175</sup> IAS 37.40.

<sup>176</sup> IAS 37.39.

<sup>177</sup> Fourth Council Directive 78/660/EEC, Art. 33 (2).

<sup>178</sup> *Supra fn. 2.1.* Admissible deviation from the purchase and production price valuation method set forth in Art. 32 of the Fourth Company Law Directive.

<sup>179</sup> More liabilities means less distributable profit. Fourth Council Directive 78/660/EEC, Art. 33 (2) (a).

<sup>180</sup> Cf. Santella, Turrini (fn. 82) at pp. 440 et seq.

tions. Legislative reaction to the 2008/09 crises should consider developing this concept further.

#### **6.4 Further risks which are not controlled by accounting rules**

Other risks which cannot be controlled by accounting rules<sup>181</sup> have to be controlled by equity. The procedure to define the equity is a combination of risk assessment and the application of accounting rules. Financial risks which do not lead to accounting consequences, such as changed valuations or additional reserves, show the necessity of additional equity. For example, if the valuation of an asset or liability is uncertain, it can either be impaired, or additional equity to control the impairment risk has to be created. Whether the one (impairment) or the other (additional equity) is required depends on whether accounting rules cover all revaluation risks. Often valuation risks are covered by both accounting rules and equity, but with different thresholds. For example the threshold to impair assets is not the same as the observable threshold when defining the equity to cover the asset valuation risks. A 20 per cent chance that an asset with a nominal value of 2,000 has in fact a value of 1,000 may not necessitate a revaluation, but may create the need for additional equity.<sup>182</sup> Therefore the risk assessment serves two functions: to adjust the nominal equity based on applicable accounting rules; and, secondly, to define the necessary equity to close the gap between the risks covered by accounting rules and the 'real risks'.

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<sup>181</sup> Cf. Jonathan Rickford, 'Legal Approaches to Restriction Distributions to Shareholders: Balance Sheet Tests and Solvency Tests', 7 *EBOR* (2006) at p. 172.

<sup>182</sup> *Supra* 1.3.2.

## 6.5 Corporate Governance rules and the determination of equity, role of the shareholder

Equity can be defined as the shareholders stake in the company.<sup>183</sup> Equity comprises the funds which the principal entrusted to the agent.<sup>184</sup> It is the shareholder's decision as to how much equity it wants to entrust to the company. This means that the shareholder has the competence to define the two factors which relate directly to equity: first, the amount and structure of the equity itself; and second, the risk bearing profile of the company. This separation of power between the shareholders (in the assembly of shareholders) and the board can also be derived from the more general principal agent rule: the principal gives funds to the agent and defines the risk behaviour related to the management of these funds. Outside of corporate law, this division of power between principal and agent is undisputed (e.g. it is up to the bank-customer to define the risk profile of its financial investment).

For these reasons it is the shareholders who are the competent body within the company to define the equity and risk profile. They act either in reaction to motions of the board (regarding capital increases and decreases; distribution of dividends) or as founders of the company. If the shareholders refuse to agree to the equity which the board needs in order to take the aspired risks, they are also, effectively, taking a decision regarding the (reduced) risk bearing ability of the company. As a consequence of this decision the company will not have the risk bearing ability needed to execute the aspired business. The board is therefore forced to adjust its risk profile or behaviour to the company's risk bearing ability. The competence of the

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<sup>183</sup> Supra at *fn. 3* and *fn. 4*.

<sup>184</sup> For the concept within corporate law: Davies, Worthington, Micheler (fn. 96) at 7-1 et seq.: 'More complicated principal-agent problems arise when not only is the principal unable to monitor the agent, but also the agent possesses information about his environment ... which the principal does not.' Sanford J. Grossmann, Oliver D. Hart, 'An Analysis of the Principal Agent-Problem', *51 Econometrica* (1983) at p. 43. Further, a capital regime as proposed by the Rickford Report might inflict with the right of shareholders to approve reductions of capital. Micheler (fn. 82) at p. 426.

shareholders to define the amount of equity means as a result that the shareholders are also competent to define the risk profile of the company – the two elements, equity and risk bearing ability, behave synchronously and are two sides of the same coin.

## **6.6 Distribution restrictions: Legal capital or other equity?**

The protection of the legal capital and reserves (first-tier equity) is stronger than the protection of the second-tier equity.<sup>185</sup> Legal reserves cannot be paid back to shareholders; the rules regarding the repayment of legal capital to shareholders are more formalized and require a specific procedure to ensure that the claims of the creditors remain covered by assets.<sup>186</sup> The equity protection of the second-tier equity (accrued profits and free reserves) is less formalized. In certain situations (even in civil law countries, for example through the purchase of own shares<sup>187</sup>) equity can be distributed to the shareholders without the necessity of a shareholder-resolution.<sup>188</sup> This raises the question, whether the equity requirements which derive from the risk assessment should be satisfied through first-tier equity such as legal capital or through equity in a broader sense, including first- and second-tier equity.<sup>189</sup>

In the interests of the creditor and the financial stability of the company, the creation of first-tier equity seems to be favoured. First-tier equity relies on formalized figures and not so much

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<sup>185</sup> Surpa at *I.I.*

<sup>186</sup> Also the preamble of the Second Council Directive 77/91/EEC states: ‘Whereas Community provisions should be adopted for maintaining the capital, which constitutes the creditors’ security, in particular by prohibiting any reduction thereof by distribution to shareholders where the latter are not entitled to it and by imposing limits on the company’s right to acquire its own shares’.

<sup>187</sup> See the amendments to the Second Council Directive 77/91/EEC set forth in Directive 2006/68/EC, (4): ‘Public limited liability companies should be allowed to acquire their own shares up to the limit of the company’s distributable reserves’. Second Council Directive 77/99/EEC Art. 19 (1) (c).

<sup>188</sup> According to Second Company Law Directive 77/99/EEC Art. 19 (2) ‘where the acquisition of a company’s own shares is necessary to prevent serious and imminent harm to the company’. See also New Zealand Companies Act 1993, Section 52 (1), which allows the board to authorize distributions if the liquidity test permits so.

<sup>189</sup> Handschin (fn. 12) at pp. 208 et seq.

on the discretion of the board. Further, the reduction of first-tier equity requires a resolution of the shareholders and, in most pieces of legislation, a special audit report.<sup>190</sup> On the other hand, as long as the funds remain in the company and are not distributed to shareholders, it does not matter whether the accrued profits are high and the legal capital is low or the other way round.<sup>191</sup> To require the creation of first-tier equity only to cover all company risks would certainly reduce the flexibility of the board in the structuring the financing of the company. If the board would be required to create first-tier equity (e.g. legal capital) in the amount of the necessary risk-reserve, a default in complying with the rule would lead to a breach of duty by the board, even though there was only hypothetical damage. The time gap between the breach of duty and the occurrence of the damage can be lengthy, leading to the risk of a claim being time-barred, as well as making it difficult to provide evidence for the causality between the breach of duty and the damage.<sup>192</sup> Accordingly, the risk-based equity requirements can correctly be satisfied by both first- and second-tier equity equally. For creditors, the additional value of legal rules which would require the company to create first-tier equity based on the risk profile of the company is not sufficiently significant to compensate for the disadvantages of such a rule. Therefore the decision to form its risk-reserve with first or second tier capital should be left to the company.

## **6.7 Duties of the Board of Directors: to align equity and risk behavior**

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<sup>190</sup> However, the Second Company Law Directive leaves it to the Member States to determine which reserves are distributable. For the requirement of auditing, Fourth Council Directive 78/660/EEC, Art. 51 (1) (a): 'Companies must have their annual account audited by one or more persons authorized by national law to audit accounts. (b) The person or persons responsible for auditing the accounts must also verify that the annual report is consistent with the annual accounts for the same financial year.'

<sup>191</sup> Handschin (fn. 12) at p. 209.

<sup>192</sup> Handschin (fn. 12) at p. 209.

There is a general duty of the board of directors to respect the financial risk bearing ability of the company.<sup>193</sup> Therefore, the management and the board have to understand the valuation rules which have been applied,<sup>194</sup> and that the valuation of the assets depends on the assumed future prospects. As a general rule it can be said that the equity must be higher the more risks a company is taking.<sup>195</sup> It can only allow the business to proceed when the company has the financial resources to conduct such business. The board has to analyse the structure of the assets and determine whether the valuations are still correct considering new technical developments, changed market requirements and conditions, or financially unstable debtors who necessitate reserves for their possible bankruptcy. In as far as future cash and other income potentials are part of a true and fair valuation, the board and management have to assess if these assumptions regarding the future prospects are still accurate or if they have to be adjusted.

Further, financial control means that the board of directors and the management have to control the liquidity risk of the company. Similar to the banking sector,<sup>196</sup> a solvency-test can be used to verify the correctness of the real equity. Such an additional test can be especially helpful to the transparency of off-balance sheet risks, in particular the liquidity risk, and thus help to define the level of equity.<sup>197</sup> In this sense solvency-testing should not be used as a single regime in combination with a balance-sheet test to provide for creditor protection, but should rather be considered as an instrument to help to determine the adequate corporate equity in

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<sup>193</sup> *Supra* at 3.7 and 5.

<sup>194</sup> Böckli (fn. 11) at pp. 1545 and 1619; Holger Fleischer in Gerald Spindler and Eberhard Stilz (eds.), *Kommentar zum Aktiengesetz* (Munich, CH Beck 2007) at p. 906.

<sup>195</sup> See *supra* at 1.3.4, 2.3 and 5.

<sup>196</sup> *Supra* at 2.2.

<sup>197</sup> Rickford Report (fn. 2) at p. 974 fn. 191: '[For a solvency-test] even a short term asset surplus requirement is too rigid for a company which is able to borrow.' A company is solvent when it holds sufficient high quality equity that can be turned into liquidity at any given time without suffering inadequate losses and can actually do so without exceeding its risk bearing ability.

relation to the company's risk structure. Thus the 'solvency test'<sup>198</sup> is not solely relied upon but rather forms part of a greater consolidated assessment process used to define the equity requirements of the company.

If the board realises that the equity is insufficient in relation to the risk profile, or aspired risk ability of the company, it has to try to bring the 'equity' and 'risk profile' in line.<sup>199</sup> This can be done in two ways: first, by trying to convince shareholders to increase the equity; or (if the shareholders refuse to increase equity) second, to change the risk profile of the company. In its motion to the shareholders regarding dividends, the board of directors may not propose a dividend which would reduce the equity to a level which is too low. The board has to assess, if sufficient equity will remain after the distribution of the dividend based on the risk bearing ability of the company. If the shareholders decide on dividends which go beyond the motion of the board or if they refuse to an increase of the capital, they are also effectively deciding on the risk profile of the company, and the board has to change the risk behaviour. Similarly a decision by the shareholders to reduce the equity can also be a decision to change the risk profile of the company when the reduced equity is then insufficient to continue with the previous risk policy.

## **6.8 Role of the auditor: to testify that remaining equity is sufficient?**

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<sup>198</sup> Cf. supra at 3.4.; however, the solvency test should be applied as an additional tool to adjust equity to an adequate level, like a simple version of the Basel III liquidity test. See supra *text to fn. 58 et seq.*

<sup>199</sup> ISA 1.25-26 requires the management to assess the entity's ability to continue as a going concern. ISA 570.3-7: 'detailed requirements regarding management's responsibility to assess the entity's ability to continue as a going concern and related financial statement disclosures may also be set out in law or regulation' (ISA 570.1). 'In other financial reporting frameworks, there may be no explicit requirement for management to make a specific assessment of the entity's ability to continue as a going concern. Nevertheless, since the going concern assumption is a fundamental principle in the preparation of financial statements as discussed in paragraph 2, the preparation of the financial statements requires management to assess the entity's ability to continue as a going concern even if the financial reporting framework does not include an explicit requirement to do so' (ISA 570.4).

All risks covered by accounting rules<sup>200</sup> are relevant not only the board of directors but also the auditor; where the company is obliged to have its books audited. The auditor has to state whether the valuation of assets and liabilities is correct.<sup>201</sup> Further, the auditor has to assess the going concern ability of the company.<sup>202</sup> As noted above the going concern ability means that the entity is able to continue its business for the foreseeable future.<sup>203</sup> In some legislation this period is defined to be a period of one year after the balance sheet day.<sup>204</sup> Consequently the auditor has to assess the liquidity risk of the company and determine if there is sufficient equity to bear that risk. Further, the auditor has to assess potential valuation risks, even if these valuation risks do not require a revaluation in the books.

According to Art. 728a of the Swiss Code of Obligations, the auditor not only examines whether the annual accounts comply with the law and the articles of association, but also whether “the motion made by the board of directors to the general meeting on the allocation of the balance sheet profit complies with the statutory provisions and the articles of association” (para. 2). This additional test goes beyond a formal check of whether or not the amount of the dividend proposal exceeds the accrued profits. If, for example, the board plans to distribute all liquid assets to the shareholders, the auditor cannot testify to compliance even if the amount of the proposed dividend is lower than the accrued profits.<sup>205</sup> Equally, it can be questioned whether the auditor or, if there is no auditor, the management or the board, could be

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<sup>200</sup> *Supra* at 6.3.

<sup>201</sup> Fourth Council Directive 78/660/EEC, Art. 51 (1) (a): Companies (listed under Art. 1) must have their annual accounts audited. Also see Armour, Hertig, Kanda (fn. 132) at pp. 128 et seq.

<sup>202</sup> ISA 570.6, 7. However, there are limitations on the auditor’s ability to detect misstatements in regard to future events that may endanger an entity’s going concern ability, and therefore, the ‘auditor’s report cannot be viewed as a guarantee as to the entity’s ability to continue as a going concern’ (ISA 570.7).

<sup>203</sup> ISA 570.2.

<sup>204</sup> ‘Going concern ability’ ISA 570.2.

<sup>205</sup> See also ISA, 570.6: ‘The auditor’s responsibility is to obtain sufficient appropriate audit evidence about the appropriateness of management’s use of the going concern assumption in the preparation of the financial statements and to conclude whether there is a material uncertainty about the entity’s ability to continue as a going concern.’

required to testify<sup>206</sup> that the equity which remains after the proposed dividend payment is still sufficient in view of the company's risk profile. Such an additional test has the potential to replace formal minimal-capital and formal capital protection rules.<sup>207</sup>

## **6.9 Enforcement of the rules on equity for the real economy**

The sanction system for the non-compliance with equity requirements for the non-financial sector must take into account that the rules are more general, that a financial market type regulatory sanction system would be too complex and that the smaller impact of a company's failure to the general economy justifies a less extensive sanction system. The argument that there is no public interest in a system to control the equity of companies of the non-financial market sector<sup>208</sup> is correct. But the absence of a state regulatory enforcement system does not mean the absence of rules. As is the case with many other sectors, a sanction system has to be applied by private initiative. The same should apply if general rules on equity are violated. The sanction system is a combination of liability and corporate governance rules with the possibility to litigate if somebody, for example a creditor in case of a bankruptcy suffers damage by the violation of rules.

In most jurisdictions liability rules are already in place if the company causes damage by pursuing excessive risks<sup>209</sup>. These management liability rules regulate not only the liability-consequences of a specific risk behaviour but also the aspired risk behaviour/profile and equity. In this sense they also define equity requirements for the non-financial sector. The norms are less precise as this is the case with the equity requirements for banks and for insurance

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<sup>206</sup> See Rickford Report (fn. 2) at pp. 974 seq.; also see Rüdiger Veil, 'The regime of the Capital Directive versus Alternative Systems', in Marcus Lutter (ed.), *Legal Capital in Europe* (Berlin, de Gruyter 2006), at pp. 84 et seq.; for the director's certificate see Section 52 (2) of the New Zealand Companies Act 1993.

<sup>207</sup> See supra at fn. 5.

<sup>208</sup> Supra at 5.4.

<sup>209</sup> Supra at 3.6 and 6.8.

companies but also more flexible and in particular they consider the various and heterogeneous situations in the real economy. They are not executed through regulatory execution by a public office but, indirectly, through the liability of the board who violates the equity-driven risk bearing ability of its company.

**7. Conclusion: flexible rules on equity are to be preferred to strict rules on legal capital**

It has been shown that the rules regarding the quantitative and qualitative capital-requirements for the financial sector cannot be simply transferred to the real economy. Financial market type capital regulation is not possible due to the heterogeneity of the real economy, and furthermore because there is no public interest in a financial-market type regulatory system. At last, one has to admit, that in the real economy formal rules on legal capital cannot compensate for financial market type capital regulation, because they do neither relate to the size nor to the risk-structure of the company.<sup>210</sup> They – at best – serve as an entry-barrier but cannot prevent grossly undercapitalized companies and thus damage to the creditors.

Yet as long as the funds remain in the company and are not distributed to shareholders, it does not matter whether the accrued profits are high and the legal capital is low or the other way round.<sup>211</sup> In both the financial sector and the real economy the important thing is equity, not so much the legal capital. For this reason, what is needed are not formal rules on legal capital, but flexible and self dependent rules on equity. If (only) the principles of capital regulation for the financial market are applied (and not the regulatory transformation) we come to rules which require equity levels to be set according to the risk profile of the company and the di-

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<sup>210</sup> Supra at 5.1.

<sup>211</sup> Supra at 6.6

rectors to act accordingly. Solvency- and balance-sheet-testing are important tools to monitor the adequate level of equity. In order to formalize these tools, it could be worthwhile to discuss whether the management or auditor could be required to testify that the equity which remains after the proposed dividend payment is still sufficient in view of the company's risk profile.<sup>212</sup>

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<sup>212</sup> Supra at 6.8.