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Working Paper

Credit default swaps and the empty creditor hypothesis – if it ain't broke, don't fix it*

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This article argues that the current debate is fundamentally misguided – that empty creditors are in fact not a problem. The article presents a theoretical argument suggesting that empty creditors are unlikely to be a widespread phenomenon. Further, the article argues that the law has never made the assumption that legal rights are held in proportion to economic exposure; in fact, taking economic exposure into account when allocating legal rights to investors is contrary to fundamental principles of corporate law.

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Key words: empty creditors, empty creditor hypothesis, derivatives, credit default swaps, CDS, corporate law framework

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1. Introduction

Derivatives have gone from relative obscurity – mainly of interest mainly to financial practitioners, regulators and academics – to something that has captured the public imagination. Credit Default Swaps (CDS) in particular have acquired the image of not just being "financial weapons of mass destruction"², but of being the ultimate in overblown financial wizardry deprived of any social utility. From magazines like The Economist³ to investors like George Soros⁴ and comedians like Jon Stewart⁵, the great and the good have been criticising CDSs, sometimes regarding them as little more than legalised fraud⁶. An interesting argument in the CDS debate is the so-called empty creditor hypothesis (ECH), put forward by professors Henry T.C. Hu and Bernard Black.⁷ At a very general level, the ECH states that derivative transactions, notably CDS, can lead to a decoupling

of economic rights (to receive payment of principal and interest); contractual control rights (to enforce, waive, or modify the terms of the debt contract); other legal rights (including rights to participate in bankruptcy proceedings and to sue company directors and officers under securities and other laws)⁸

One of the problems associated with this decoupling is that it can lead to a situation where creditors may take an unnecessarily tough stance against borrowers. If a creditor has a CDS written on the debt she is owed then she might be indifferent as to whether she receives payment from the borrower or from the CDS-seller. For creditors, bankruptcy is costly and creditors usually receive less than the outstanding amount. Therefore, the law, so the argument goes, assumes that creditors have an incentive to work with borrowers to avoid bankruptcy. However, with the advent of CDSs, this assumption may no longer be justified. When a borrower gets into financial difficulties and a creditor is fully protected through CDS, the creditor might well chose to put the borrower into insolvency (thereby triggering the CDS) rather than work with the borrower constructively – the creditor has become an *empty creditor* (a creditor with all the legal rights but no economic exposure to the borrower).

² Chairman's Letter - Berkshire Hathaway, Inc. 2002, http://www.berkshirehathaway.com/letters/2002pdf.pdf (last visited 31 March 2015)

³ The Economist, "CDSs and bankruptcy - No empty threat" 2009 http://www.economist.com/node/13871164 (last visited 31 March 2015)

⁴ George Soros, "One Way to Stop Bear Raids - Credit default swaps need much stricter regulation" Wall Street Journal, 2009 http://www.wsj.com/articles/SB123785310594719693 (accessed 31 March 2015)

⁵ See http://thedailyshow.cc.com/videos/0g8sum/blackstone---codere (last visited 1/22/2015)

⁶ Harry Markopolos "CDS Fraud Will Make Madoff Look "Small-Time" Business Insider 2009 Read more: http://www.businessinsider.com/harry-markopolos-cds-fraud-will-make-madoff-look-small-time-2009-8#ixzz3VxCbxtLb (last visited 1/22/2015)

⁷ See for instance Henry T. C. Hu, Bernard Black Equity and Debt decoupling and empty voting II: Importance and extension available at http://ssrn.com/abstract=1030721 (Hu and Black 2008a); and Henry T. C. Hu, Bernard Black, Debt, Equity and Hybrid Decoupling: Governance and Systemic Risk Implications European Financial Management, Vol. 14, No. 4, 2008 (Hu and Black 2008b);

⁸ Ibid. Hu and Black 2008b page 664

Proponents of the ECH claim that empty creditors are a major concern, and some are asking for immediate policy action⁹. This article, on the other hand, will argue that empty creditor are not a significant issue. One of the major problem with the current ECH debate, is that it confuses two distinct issues – the economic problem and the legal problem:

- i. **The economic problem** the claim that the decoupling of economic and legal ownership provides the wrong incentives to creditors (i.e. making creditors indifferent towards the borrower's fate or even turning her 'against' the borrower). Essentially, the economic problem deals with the issue that CDSs may lead to inefficiencies because incentives are distorted e.g. fundamentally healthy companies may be put into bankruptcy, although, from economic point of view, it would be more beneficial if they would survive.
- ii. **The legal problem** the claim that the current legal and regulatory regime is based on the assumption of unity between economic and legal ownership, and, decoupling of the two may lead to a misfit of law and commercial practice. The legal problem essentially deals with the issue that CDSs may lead to suboptimal outcomes because the law assumes that creditor will act one way when in fact they act in another way.

Some of the literature on this topic only deals with the economic problem and some only deals with the legal aspects of it.¹⁰ However, both of these approaches are grouped together as the ECH.¹¹ Having the same name for two distinct problems is not in itself an issue as long as it is recognised that the two are different. This is especially important in order to avoid the fallacy of claiming that because one problem is true / false this makes the other problem true / false. Of course, there might be overlaps between the two, however, conceptually it is important to keep them apart. With regards to the economic problem this paper will argue that once the interactions between creditors, borrowers and CDS-seller, is taken into account it is unlikely that empty creditors are a significant issue. With regards to the legal problem, this paper will suggest that empty creditors do not violate any of the background assumptions on which corporate law is built. This article will make the case that voting rights are justified solely by reference to the contribution made by an investor to the company. The reasons for making the investment or the incentive of an investor are irrelevant, therefore is also irrelevant if their incentives are changed due to derivatives. Thus, contrary to what Professors Hu and Black and other proponents of ECH claim, empty creditors are not a significant problem. Basing shareholders and creditors voting rights

⁹ See for instance Marinucci: "As Congress considers ways to increase the efficacy of Dodd-Frank, it should recognize that and adjustment to the regulation of the credit-default-swap market to include a protection against empty creditor syndrome would be valuable for our economy" in Dante A. Marinucci, "Comment – Empty Creditor Syndrome and Vivisepulture: Preventing Credit-Default-Holders from pushing Companies into Premature Graves by refusing to negotiate restructurings" Case Western Reserve Law Review; Summer2012, Vol. 62 Issue 4, p1285; page 1313

¹⁰ For instance Patrick Bolton and Martin Oehmke "Credit Default Swaps and the Empty Creditor Problem" Review of Financial Studies / v 24 n8 2011 only deals with the economic problem, whereas Yesha Yadav, "Insider Trading in Derivatives Market" Georgetown Law Journal, 103 Geo. L.J. 381, January, 2015, deals with the legal problem

¹¹ For instance Hu and Black seem to group both problems as one: "Both law and contracting practice assume that the elements of this package are generally bundled together. It is assumed in particular that creditors are normally interested in keeping a solvent firm out of bankruptcy and (intercreditor conflicts aside) in maximising the value of an insolvent firm." In Hu and Black 2008b page 664

(shareholders have voting rights in 'normal' times, and creditors have voting rights in times of financial distress) purely on the benefit provided to the company is in stark contrast to other commonly proposed approaches. For instance, Easterbrook and Fischel¹²claim that shareholders have voting rights because they are the recipients of the residual income of the company, and as such have the right incentives, as it was claimed by or Thompson and Edelman¹³ argue that voting rights are based on the propensity of shareholders to make the right decision.

A word of caution, however. This paper only deals with the ECH and not with any of the other issues surrounding derivatives. In particular, this paper does not deal with, what can be considered, the macro aspects of derivatives (e.g. systemic risk). Therefore, the arguments in this article should not be taken to suggest that there are no good reasons for regulating derivatives, merely that whilst there may or may not be such reasons, the ECH is not one of them. Also this paper focuses exclusively on the US and the UK and no other jurisdictions.

This paper is structured as follows: Section 2 will introduce the ECH generally, and give an overview of the current debate. Section 3 will argue that the current debate is confused because it does not draw a clear enough distinction between the economic problem and the legal problem. Section 4 will discuss the economic problem associated with the ECH, arguing that if the ECH is put into a general framework, taking into account the interactions between borrowers, lenders, CDS-sellers and CDS buyers, it turns out that it is unlikely that empty creditors are a significant problem. Section 5 will analyse the ECH legal problems, suggesting that is based on a misunderstanding of corporate law and insolvency law Section 6 will analyse some examples in which empty creditors allegedly cause a problem. Section 7 will summarize the findings.

2. The empty creditor hypothesis (ECH)

Professors Hu and Black's original analysis of decoupling was conducted in the context of shareholders, and subsequently they extended it to creditors.¹⁴ However, this does not add much complexity to the debate because the principles behind empty creditors and empty voting are the same. As, many of the arguments in relations to shareholders can be applied directly to creditors. As Hu and Black write:

Just as the conventional understanding of share ownership assumes the bundling of a standard set of rights and obligations, so too a traditional conception of debt ownership includes a standard package of economic rights (principally principal and interest payments), control rights, default rights, and other rights and obligations under contractual covenants, federal

¹² Frank H. Easterbrook and Daniel R. Fischel, "The Economic Structure of Corporate Law", Harvard University Press, 1991 pages 63 - 89

¹³ They write: "Shareholders are the appropriate group to monitor the board and correct errors because they are uniquely sensitive to the principal signal indicating a deviation of the board from its duty to the corporation: the market price of the corporation's stock." Robert B. Thompson and Paul H. Edelman Vanderbilt Law Review, Vol. 62, p. 129, 2009, page 149

¹⁴ See for instance Hu and Black 2008a supra note 7 pages 728 – 735 and Hu and Black 2008b supra note 7 pages 679 - 686

bankruptcy law, and, to a limited extent, state corporate law [...] Just as shareholders can be empty voters, so too we can have 'empty creditors.

To address the problem posed by empty creditors Hu and Black do not propose to ban CDS, but rather they advocate a regime where CDS positions need to be disclosed¹⁵ and potentially a system in which investor voting rights are adjusted on the basis of their derivatives position¹⁶, changing share lending regulation¹⁷ and changing the mechanisms of shareholder voting¹⁸. Disclosure would allow companies to accurately ascertain who holds their debt and equity. Voting rights based on economic interest would ensure that only persons who have an interests in enhancing the value of the company would be allowed to vote. In a similar spirit, Martin and Partnoy argue that "regulators should strongly consider taking away the votes of options buyers and sellers"¹⁹. Baird and Rasmussen argue for specific amendments to the US bankruptcy code.²⁰ Hemelt argues that disclosure and changing voting rights would not adequately address the problems posed by empty creditors.²¹ He therefore calls for the amendment of the definition of credit event in the ISDA Master Agreement²² to include voluntary re-structuring.²³ Marinucci points out that it is unlikely that such a change would happen voluntarily and calls for legislation to effect such a change.²⁴ Yadav focuses specifically on the role CDS plays in circumventing existing legislation, claiming that CDS are a particularly useful tool for insider dealing.

On the other hand ISDA argued that "[a]lthough appealing on the surface, the empty creditor hypothesis is not consistent with either way credit default swaps works not with observed behaviour in the debt market."²⁵ Among other things, ISDA points out that some claims in connection with how empty creditors behave in bankruptcy proceedings are wrong because they do not take into account the mechanism of settling CDSs (especially with regards to cash-settled CDSs)²⁶. Lumsden and Fridman, argue that, at least within the context of Australian law, no legislative change is required²⁷. Dombalagian sees positive elements in decoupling of economic and legal ownership, arguing that it can lead to better

²³ Hemelt 2010 supra note 21 pages 167 - 169

¹⁵ See for instance Hu and Black 2008a supra note 7 pages 682 - 694

¹⁶ Hu and Black 2008a supra note 7 page 696

¹⁷ Ibid page 696

¹⁸ Ibid pages 696 - 697

¹⁹ Shaun P. Martin and Frank Partnoy, "Encumbered Shares" Legal Studies Research Paper Series Research Paper No. 05-23 October 2004 page 19

²⁰ See for instance Douglas Baird and Robert K. Rasmssuen "Anti-Bankruptcy" University of Southern California Law, Law and Economics Research Paper Series USC CLEO Research Paper No. C09-8 page 51:

²¹ Daniel Hemelt "Comment: Empty Creditors and Debt Exchanges", Yale Journal on Regulation, Vol. 27, No. 1, Winter 2010 pages 165 - 167

²² Most CDS are governed by the ISDA master agreement, therefore, a change in the definition of credit event could be achieved relatively easily by amending the ISDA master agreement

²⁴ Marinucci 2012 supra note 10

²⁵ David Mengle, ISDA Head of Research "ISDA® Research Notes - The Empty Creditor Hypothesis"

Number 3, 2009, page 13

²⁶ Ibid page 12

²⁷ Andrew Lumsden and Saul Fridman "Proxy voting and vote selling" July 1, 2009 Keeping Good Companies Journal of Chartered Secretaries Australia Ltd, Vol.61, No.6, p. 332, July 2009 page 332

corporate governance in the long run²⁸. In a similar vein, Yadav argues that taking into account the actions of CDS sellers, credit protection can be positive.²⁹

Within the more finance orientated literature Danis ³⁰ and Subrahmanyam, Tang andWang ³¹ find empirical evidence to support the ECH. Aspeli and Iden, find no such evidence.³² Bolton and Oehmke present a theoretical model that suggest that CDSs can be welfare enhancing but in equilibrium lenders may over-hedge.³³ Ashcraft and Santos find no evidence that CDSs lowers the cost of debt financing for average borrowers, however, there is a small positive effects for "transparent and safe firms". In another paper Bolton and Oehmke argue that the introduction of CDSs raises bond prices only if there is a large difference in liquidity and between CDSs and the underlying bonds.³⁴ However, Darst and Refayet find that covered CDS lower borrowing costs for companies, whereas naked CDS raise borrowing costs.³⁵

3. The two limbs of the ECH

The first thing that needs to be established is that the ECH does indeed consist of two distinct claims. The two limbs can be summarized as follows:

- i) **The economic problem**: "An empty creditor may prefer to force the company into bankruptcy, rather than agree to a restructuring, because the bankruptcy filing will trigger a contractual payoff on its swap position"³⁶
- ii) **The legal problem**: "Both loan contracts and the Bankruptcy Code are premised on the assumption that creditors are averse to downside risk, but otherwise have an economic interest in the company's success and will behave accordingly."³⁷

²⁸ Onnig H. Dombalagian "Can Borrowing Shares Vindicate Shareholder Primacy?" UC Davis Law Review, (Forthcoming) Tulane Public Law Research Paper No. 08-10 page 1236

²⁹ Yesha Yadav, "The Case for a Market in Debt Governance" Vanderbilt Law Review April, 2014, 67 VNLR 771, abstract

³⁰ Andras Danis "Do Empty Creditors Matter? Evidence from Distressed Exchange Offers" December 2, 2013, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2001467&download=yes (last visited 1 April 2015)

³¹ Marti G. Subrahmanyam, Dragon Yongjun Tang, Sarah Qian Wang "Does the Tail Wag the Dog? The Effect of Credit Default Swaps on Credit Risk", 2012, HKIMR Working Paper No.29/2012, available at

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2192351 (last visited 9 April 2015)

³² Nils Henrik Gjøstøl Aspeli and Kristoffer Riis Iden "The Empty Creditor Hypothesis - An empirical study of the effects of credit insurance on the choice between bankruptcy and private restructuring" Bergen, spring 2010 Master Thesis in Financial Economics, available from http://brage.bibsys.no/xmlui/handle/11250/168457 (last visited 1 April 2015)

³³ Bolton and Martin Oehmke 2011, supra note 11

³⁴ Bolton and Martin Oehmke "Synthetic or Real? The Equilibrium Effects of Credit Default Swaps on Bond Markets" 2014 available at

https://www0.gsb.columbia.edu/faculty/moehmke/papers/OehmkeZawadowskiCDSvsBonds.pdf (last visited 8 April 2014)

³⁵ Matthew Darst and Ehraz Refayet, "The Impact of CDS on Firm Financing and Investment: Borrowing Costs, Spillovers, and Default Risk" available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2271685 (last visited 8 April 2015)

³⁶ Hu and Black 2008b supra note 7 page 682

³⁷ Ibid page 683

That the two claims are different seems rather self-evident. However, some commentators, Professors Hu and Black included, appear to not always to appreciate the difference between the two. For instance, Hu and Black mix examples of creditors complaining that valuation of bankruptcy assets is too high (the economic problem)³⁸, with examples of how within an M&A transaction a target company's management used stock lending to gain voting rights (the legal problem)³⁹. As mentioned in the introduction, in principle there is nothing wrong with having the same name for both issues, as long as there is no confusion between them. However, this does not always seem to be the case. For instance ISDA defines the ECH as the claim that "creditors who hedge their exposure [to a firm] will be indifferent to [the] firm's survival"⁴⁰. This definition only covers the economic problem, completely bypassing the legal problem. Even if ISDA's intention was to focus solely on the economic problem, there should have been at least an acknowledgment that there are two limbs to the having ECH. Another example is Bolton and Oehmke.⁴¹ Their article deals only with the economic aspects of ECH, without acknowledging that their discussion is limited to only one part of the ECH. Even in their policy discussion, there is no mention of the legal problem. The problem with doing this is that one may draw the erroneous conclusion that because one has solved one limb of the ECH that the other one is not a problem either. However, it is perfectly possible for the economic problem of the ECH to be an issue but the legal problem not to be or vice versa.

One may be tempted to argue that the two limbs of the ECH are not really distinct – that the economic problem is merely a special case of the legal problem i.e. it is only because the insolvency rules are based on the wrong assumption that it allows creditors to exploit CDS to the detriment of the borrower. However, this argument conflates the issues of changing incentives and how the law should deal with changing incentives. There is, of course, overlap between the two, however, making the distinction is simply a helpful conceptual tool, nothing more and nothing less.

4. The ECH as an economic problem

The ECH economic problem is that CDSs create the 'wrong' incentives for creditors. Empty creditors are indifferent towards lenders in a socially sub-optimal way e.g. putting healthy companies into bankruptcy, or during bankruptcy voting for actions that minimise rather than maximise the value of a company. In the extreme, creditors may not only be indifferent towards a company but may actually benefit from the company losing value. In totality this could be socially inefficient because i) bankruptcy proceedings are costly (therefore, from a societal point of view it should only be used if it cannot be avoided), ii) minimising rather than maximising the value of a company (in the worst case destroying a company) is inefficient because society as a whole has an interest in maximising the value of all companies. To analyse the economic problem more effectively, it is useful to sub-divide them into the following claims: i) ECH pre-bankruptcy: describing how creditors behave during

³⁸ Hu and Black 2008a supra note 7 page 733

³⁹ Ibid page 647

⁴⁰ ISDA 2009 supra note 27 page 1

⁴¹ Bolton and Martin Oehmke 2011, supra note 11

bankruptcy.⁴² The ECH in-bankruptcy is rather implausible because it fails to take into account how CDSs are settled. According to ISDA:

Once a firm files for bankruptcy, a credit event has occurred and the credit default swap settlement process begins. [...] Under cash settlement, which is now the standard method of credit default swap settlement, protection sellers pay the loss amount to buyers. The loss amount is the par value of the defaulted bonds minus the value of the bonds determined from a settlement auction. [...] The auction procedure includes safeguards, [...] to deter aggressive bidding to manipulate the auction results. [...] There is no requirement for delivery of the defaulted bond. Once settlement occurs, the credit default swaps on the defaulted bonds terminate so there is no further possibility of compensation under the contracts.⁴³

Therefore, it seems very unlikely that the ECH in-bankruptcy is a widespread problem because after a default is called the incentives that create empty creditors disappear. As it was pointed out by Baird and Rasmussen, "[c]redit default swaps create a moral hazard problem only before Chapter 11 begins and then in its immediate aftermath." ⁴⁴ ECH prebankruptcy on the other hand has some intuitive appeal. It seems obvious that creditors who are fully protected through CDSs behaves differently than creditors who are not. On the other hand, a similar argument could be made for many other financial products, e.g. insurance. In the insurance world it is a common phenomenon that insurance changes the behaviour of the insured. However, the insurance industry has developed ways to either address this problem, price it in the policy, or simply refuse to offer that product.⁴⁵ It seems counter-intuitive, or at least a bit surprising, that the CDS industry an industry that in 2007 had "gross notional amounts outstanding [of] USD 60 trillion"⁴⁶, would be completely oblivious to this problem.

A. Theoretical evidence

In situations of conflicting intuitions it is sometimes helpful to use a formal model. A very natural objections to the ECH is to argue that it should be the case CDSs which would turn a creditor into an empty creditor to be priced so highly that it is not profitable for a lender to buy such CDSs. It seems irrational for a CDS seller to sell a CDS under which he is almost certain to having to pay-out. However, Bolton and Oehmke present a model in which empty creditors may happen in equilibrium.⁴⁷ What follows is a short description of their model, however, for more details the reader is invited to consult their original article. The key feature of their model is that CDSs act as a commitment device by the lender not to accept a

⁴² A similar classification was also made by ISDA 2009 supra note 27. One could make the further distinction to separate empty creditors who are merely indifferent towards the fate of a company from creditors who benefit from a company losing value. This article will however group them together as one category ⁴³ ISDA 2009 supra note 27 page 12

 ⁴⁴ Baird, and Rasmussen 2010 supra note 20 in Bolton and Martin Oehmke 2011 page 2647, supra note 11
 ⁴⁵ Some insurance products that are thought of as benign nowadays faced a similar criticism as CDSs do today. See for instance in the case life insurance Geoffrey Wilson Clark, "Betting on Lives: The Culture of Life Insurance in England, 1695-1775" page 15)

 ⁴⁶ Deutsche Bank Research "Credit default swaps Heading towards a more stable system" 21 Dec 2009 page 1
 ⁴⁷ Bolton and Martin Oehmke 2011, supra note 11

low amount in debt restructuring negotiations. This results into CDSs having a welfare enhancing effects because they increase companies' pledgeable income. However, in equilibrium over-hedging by lenders will occur. Thus, the overall welfare effect is ambiguous.⁴⁸ The crucial insight for the purpose of this article is that the breakdown of negotiations between lender and borrower may occur in equilibrium. In their model the CDS buyer either choses a CDS pay-out (π) of either high ($\pi = C^H$) or a low ($\pi = C^L$). Debt renegotiations between lender and borrower brake down when the lender has chosen C^{H} . however, the cash-flow (F) generated by the borrower is low but still positive i.e. $C^H > F >$ 0. In this situation it would be socially beneficial if lender and borrower would renegotiate a debt restructuring (because F > 0), however the lender will receive a higher pay-out by not restructuring the debt and the negotiations brake-down. In the Bolton and Oehmke model under certain circumstance it is rational for the CDS buyer to chose C^{H} (this is the case even if the CDS is priced in an actuarial accurate way i.e. the seller factors into the CDS premium that C^H will increase the likelihood of debt re-negotiations to brake-down. However, the Bolton and Oehmke model makes the crucial assumption that CDS sellers remain passive throughout. When the negotiations between the lender and the company are about to break down, the CDS seller has two options. The CDS seller can either i) make up the difference i.e. provide the borrower with the necessary funds to cover $C^H - F$ or ii) the CDS seller can buy the underlying debt from the borrower. To buy the debt the CDS seller must offer at least C^{H} to the lender. In the subsequent debt renegotiations the CDS seller will be able to recover $q_{CDS} F^L$, (where q_{CDS} represents the bargaining power of the CDS seller), giving the CDS seller a net position of $C^H - q_{CDS} F^L$. Thus, as long as $q_{CDS} F^L > 0$, this is a profitable strategy. However, there is a lack of real world examples of CDS seller actually engage in the buying of the debt⁴⁹. Bolton and Oehmke offer the possibility that transaction costs might be too high, they state:

It is an open question whether this [CDS sellers buying the underlying debt] is the case because protection sellers are not taking a sufficiently active role to avoid inefficient defaults due to empty creditors, or whether there are other difficulties, such as locating the holders of the debt, that prevent this intervention in practice.⁵⁰

However, transaction costs are unlikely to offer a satisfactory explanation. After all the CDS buyer needs to contact the CDS seller to get a pay-out, thus, the reverse should also be possible. CDS seller know who the CDS buyers are when the contract is entered into, and it does not seem too costly for the CDS seller to maintain a register with the contact details of the CDS buyer. The CDS seller could also insist on a clause in the contract that the CDS buyer must inform the CDS seller when debt negotiations are started and the CDS buyer must offer the CDS seller the option to buy the debt before she can get a pay-out C^H . These provisions could be implemented relatively easily, however, the fact that they are not common place suggest that something else is going on. The problem with Bolton and Oehmke's model is that they assume that setting the CDS pay-out to C^H is credible. However, in situations in which the CDS sellers buys the underlying debt, the borrower knows that she will *de-facto* never negotiate with the lender but with the CDS seller instead. Therefore, the highest possible CDS pay-out is $C^H = q_{CDS} F^L$, which means that C^H –

⁴⁸ Bolton and Martin Oehmke 2011, supra note 11

⁴⁹ Ibid page 2649

⁵⁰ Ibid page 2649

 $q_{CDS} F^L = 0$. This result has two implications. First, it suggests why there is a lack of real world examples of CDS seller buying the underlying debt. In equilibrium the CDS seller will be indifferent between buying the debt and paying out under the CDS. If one assumes that there are small costs involved in buying the debt the CDS seller is better of pay-out under the CDS. More importantly for the purpose of this article debt-renegotiations do not brake down in equilibrium. As $C^H = q_{CDS} F^L$ the borrower has enough cash to pay the lender even in case the cash flow is low. In this analysis, CDSs the raison d'être is not so much to act as a commitment device but to enable a low bargaining power lender to use the bargaining strength of a high bargaining power entity. In this analysis CDSs are nothing else but a put option on the debt (which is, of course, not a novel idea)⁵¹. However, CDSs' derive their value (or social purpose) not only from their risk mitigating function or ability to lower transaction costs but because they allow the 'renting' of bargaining power.

There are at least two possible objections to this analysis: i) One could argue that if this analysis was true than it is potentially more profitable for the high bargaining strength institution to invest in the debt in the first place rather than writing CDSs and ii) It is implausible to assume that CDS seller have a higher bargaining strength than CDS buyer, especially if one considers that the largest group of buyers and sellers of CDSs are the same type of institutions i.e. banks⁵². It seems more plausible to assume that on average all banks have similar bargaining strength. Also it would appear impossible for an institution to be a buyer and seller of CDS at the same time. Regarding the first objection. There are numerous advantages for the high bargaining strength institution selling the CDSs rather than buying the debt. These are for instances that no capital has to be advanced to the borrower⁵³, no costs are incurred for originating the loan, no costs are incurred for making the loan etc. The point is that CDSs allow an institution to use its bargaining strength without having to make a loan. Regarding the second objection. The analysis does not assume that the banks cannot have on average the same bargaining strength. As one bank can have a high bargaining strength vis-à-vis one lender but a low bargaining strength vis-à-vis another lender. For instance a bank might find it difficult to take a tough line against certain lenders (e.g. lenders that give a lot of other business to the bank and can threaten to take that business away) but easy to be tough with lenders which have no other connection to the bank. This also means that it is possible for a bank to be simultaneously a buyer and seller for CDS.

Another thing to note about this analysis is that the welfare enhancing effect of CDS, i.e increasing a company's pledgeable income, still persists, however, arguably to a lessor extend. In Bolton and Oehmke's model it is possible for the lender the chose the CDS payout of $\pi = C^{H}$. However, according to this article the highest pay-out is $\pi = q_{CDS} F^{L}$. Potentially welfare could be enhanced if it was possible to set to $\pi = C^{H}$. This opens up the possibility for regulatory intervention. However, this is just a possibility it needs to be shown that it is actually worth-while.

Bolton and Oehmke model also has the weakness of being restricted to only 2 time periods. This is a potential issue because it could be the case that certain lenders are concerned about not developing a reputation of behaving like empty creditors. If one

http://www.risklatte.com/Articles/QuantitativeFinance/QF100.php (last visited 9 April 2015)

⁵² David Mengle, Head of Research International Swaps and Derivatives Association "Credit Derivatives: An Overview" 2007 Financial Markets Conference, Federal Reserve Bank of Atlanta, May 15, 2007 page 45

⁵¹ For a quick overview of a similar treatment see for instance Rahul Bhattacharya, "A Credit Default Swap (CDS) is a proxy for a Put Option on the Assets of a Firm",

⁵³ However, if the CDS seller is a bank than presumably it must hold capital against the CDS

consider what type of institutions buys CDS this claim gains plausibility. According to the British Bankers Association in 2006 percentage distribution of CDS by institution were as follows:⁵⁴

Institution	2000	2002	2004	2006
Banks*	81%	73%	67%	59%
Insurers	7%	6%	7%	6%
Hedge funds	3%	12%	16%	28%
Pension funds	1%	1%	3%	2%
Mutual funds	1%	2%	3%	2%
Corporates	6%	4%	3%	2%
Other	1%	2%	1%	1%

*includes securities firm

Although the share of hedge funds is buyers of CDS is clearly increasing banks remain the dominant buyers. Banks are also in the business of originating loans. If they take an unreasonably hard line against borrowers banks would find it increasingly difficult to originate loans. This provides a natural incentive for banks not to behave like empty creditors.

It is important, however, to point out that the sole purpose of CDS cannot be to increase the bargaining strength of the lender. If that was the case, CDS which do not include voluntary restructuring as a credit event, could never exist. Although such CDSs are less common they do exist.⁵⁵ Therefore, other explanations for the existence of CDS e.g. to reduce transaction costs, or to preserve the relationships between lender and borrower, may also apply. Lastly, Bolton and Oehmke model does not deal with naked CDSs and it would a topic for further research to analyse how naked and covered CDSs interact in their model. Furthermore, some caution is in order. At the heart of the ECH is the notion that CDSs are essentially something that lenders and borrowers cannot contract one i.e. the lender cannot commit that she will not enter into a CDS written on the borrower. This seems to be a clear case of potential inefficiency e.g. a borrower may not want the lender to enter into a CDS for whatever reason and be willing to pay the lender for not entering into the CDS, however it is impossible for the lender to commit to this. This article is not denying that there is the potential for inefficiency, however, the argument is that this potential inefficiency is unlikely to be significant enough to justify regulatory intervention. After all there are all sorts of products that the market does not offer⁵⁶, however, only in a few instances is it deemed necessary to intervene.

B. Empirical evidence

Theoretical models, as per previous section, always face the problem of being just that -a theoretical possibility rather than an actual description of reality. Thus, it is important to

⁵⁴ Mengle 2007, supra note 60, page 45

⁵⁵ Antje Berndt, Robert A. Jarrow and Choong Oh Kang, "Restructuring Risk in Credit Default Swaps: An Empirical Analysis", 2006, Carnegie Mellon University, Research Showcase @ CMU, available at http://repository.cmu.edu/cgi/viewcontent.cgi?article=1044&context=tepper (last visited 07 April 2015)
⁵⁶ For instance, the market does not offer an insurance product that covers that costs of bringing up a child in case of unwanted pregnancy. Although, arguably there could be demand for it.

analyse the empirical evidence for empty creditors. Unfortunately, there is no straightforward empirical method of testing the ECH. Hu and Black acknowledge that rather than relying on thorough empirical analysis they "rely instead – less satisfactorily – on possibilities, rumours, practitioner articles (which often don't name particular instances), and conversations with bankruptcy lawyers, bankruptcy judges, and other knowledgeable market participants"⁵⁷. One of the difficulty of testing ECH empirically is that historically there was no general obligation to CDSs⁵⁸. This makes it difficult to ascertain which creditor has CDS protection of which creditor does not. Therefore, one cannot simply compare a sample of creditors with CDS protection to creditors without CDS protection, and observe differences. This point was noted by Danis:

[a]s econometricians, we only observe if a firm has CDS contracts traded on its debt [the problem is that] some CDS investors might not be among the bondholders of the firm. In order to test ECH one needs to rely on proxies, which make the analysis inherently noise.⁵⁹

ISDA argues that if ECH is true "one would expect that, the correlation between number of defaults and restructurings as a percent of defaults should be lower when credit default swaps are available than when they are not"⁶⁰. However, ISDA finds that in their entire sample period the correlation is 9%, however after 2003 (when according to ISDA the speriod of liquid CDS started) the correlation jumps to 90%, which is the exact opposite of what one would expect if ECH were true⁶¹. However, ISDA itself points out that their data set is rather small⁶² and "omits any other factors that may explain the results"⁶³. Nevertheless, although ISDA's analysis is certainly not without shortcomings, it lends support to the notion that ECH is false.

Danis conducted an empirical study of the ECH and found evidence supporting it⁶⁴, whereas Aspeli and Iden's empirical study found none⁶⁵. Danis considers a sample of "80 exchange offers, with data on 210 involved bonds"⁶⁶. This analysis is based on two important assumptions. First, it assumes that "the amount of CDS protection held by bondholders is exogenous"⁶⁷. Second, it assumes "that the CDS dummy is a good proxy variable for the CDS insurance ratio of bondholders"⁶⁸. Even Danis admits that this result is only of limited use because of the exogeneity assumption.⁶⁹ To relax this assumption Danis

 $^{^{\}rm 57}$ Hu and Black 2008b supra note 7 page 679

⁵⁸ However, this is likely to change with the implementation of Dodd-Frank Title VII in the US and EMIR and to a lessor extend MiFID II in Europe

⁵⁹ Danis 2013 supra note 32, page 5

⁶⁰ ISDA 2009, supra note 27, page 8

⁶¹ Ibid page 8

⁶² Ibid pag.e9

⁶³ Aspeli and Iden, 2010, supra note 33, pag 6

⁶⁴ Danis, 2013 supra note 32

⁶⁵ Aspeli and Iden, 2010, supra note 33

⁶⁶ Danis, 2013, supra note 32, page 3

⁶⁷ Ibid page 15

⁶⁸ Ibid page 16

⁶⁹ Ibid page 21"[t]he previous section assumes that the cross-sectional variation in the CDS dummy is exogenous. This might be violated if there are omitted variables that explain participation rates in distressed exchange offers and are correlated with the CDS dummy."

uses "the introduction of the Big Bang protocol in April 2009 as a natural experiment"⁷⁰ and compares the periods before and after April 2009. Before April 2009, depending on the choices made by the parties, an out-of court voluntary restructuring could have been included in the definition of credit event in the contract governing the CDSs. After April 2009, restructuring was not a credit event any more under the ISDA Master Agreement for Standard North American Corporate transactions. Therefore, if the ECH is true one would expect that after April 2009 empty creditors be a more severe problem than before and this is exactly what Danis has found⁷¹. Thus, *prima facie*, this seems to support ECH. However, implicit in Danis analysis is the assumption that restructuring before April 2009 was not only a theoretical possibility of triggering CDS but was a realistic way to trigger the CDS. However, this was not the case. According to ISDA the scenario was as follows:

Although restructuring was a standard credit event for credit default swaps in North America until April 2009 (Mahadevan 2009)[⁷²] and still is in most other markets, out-of-court restructurings as discussed here have not triggered credit default swaps. The primary reason is that the ISDA documentation provides that a restructuring credit event must bind all holders; the terms of the restructurings mentioned in this article, in contrast, were binding only on those investors that accepted the terms.⁷³

Danis' analysis seems to conflate two distinct concepts, namely the existence of clause in a contract and the effect of the clause. He writes that there are "empirical observations that many CDS contracts used the Modified Restructuring clause prior to April 2009"⁷⁴, however, the only evidence he shows in his paper is that, "[a]ccording to estimates by Markit, when the Big Bang protocol was introduced, 68.5% of North American contracts contained the 'Modified Restructuring' clause (restructurings are credit events), while 27.1% contained the 'No Restructuring' clause."⁷⁵ What Danis means by 'CDS contracts used the Modified Restructuring clause⁷⁶ is that contracts contained the clause rather than the clause can was actually used.⁷⁷ If ISDA is right then restructuring was not really a credit event, even before April 2009. Therefore, using the change in the definition of credit event as a natural experiment to test ECH, the way Danis has done, does not work.

Aspeli and Iden test a sample of 218 distressed debt restructurings in the U.S. between 1995 and 2010 218 using Gilson's⁷⁸ sampling methodology by identifying financially distressed firms by their poor stock price performance.⁷⁹ Their conclusion is that

⁷⁰ Ibid page 4

⁷¹ Ibid page 27

⁷² Mahadevan, Sivan. 2009 "CDS Sea Change." Credit Derivatives Insights, Morgan Stanley, March 6.

⁷³ ISDA 2009, supra note 27, page 7

⁷⁴Danis 2013, supra note 32, page 26

⁷⁵ Ibid page 24

⁷⁶ Ibid page 24

⁷⁷ Rather than only focusing how many contracts contained a restructuring clause, the empirical analysis should have used the number of occasions in which restructuring trigger a CDS.

⁷⁸ Gilson, S.C., John, K., and Lang, L.H.P., 1990. "Troubled Debt Restructurings: An Empirical Study of Private Reorganization of Firms in Default", Journal of Financial Economics, Vol. 27, No. 2,

⁷⁹ Aspeli and Iden, 2010, supra note 33, page 7

[f]irst and foremost, we find no evidence for [the] hypothesis [...] that the presence of credit default swaps on a firm's debt reduces the likelihood of a successful private restructuring. The effect of credit insurance is insignificant in all our regressions⁸⁰

Aspeli and Iden methodology has its shortcomings as they are ready to admit. For instance, they use a dummy variable, which takes the value 1 if the company is a CDS reference entity and 0 if it is not. The problem is '[t]he dummy variable that [they] employ in [their] regressions may simply be too broad a measure to pick up any effect that credit insurance has on the negotiations between creditors and debtors'.⁸¹ The other problem is similar to the one faced by Danis and is the endogeneity of the variables. To test for this they use a two-stage instrumental variable (IV) estimator and they conclude that 'any (potential) endogeneity problems inherent in our analysis remain unsolved'⁸².

Subrahmanyam, Tang and Wang also test for the ECH and find evidence for it arguing that "finding is robust to controlling"⁸³. They "construct a model to predict CDS trading for individual firms. This model allows us to measure the treatment effect of CDS inception using an instrumental variable (IV) approach, run a propensity score matching analysis for firms with and without CDS trading, and conduct a difference-indifference estimation [finding a] positive relationship between CDS trading and bankruptcy risk remains significant, even after controlling for the selection and endogeneity of CDS trading."⁸⁴ Their methodology is quite sophisticated, however their conclusion is not as clear cut as it may seem. They find that a company's "leverage increases significantly after CDS trading begins"⁸⁵. This is consistent with the hypothesis CDSs increase the pledgeable income of a company. They control for the increased leverage, however, they appear not to take account of the possibility that some risky projects could not be undertaken without CDSs. Thus, simply controlling for leverage might not be sufficient to ensure the robustness of the results. They also assume that "[t]he market practice in CDS changed significantly in April 2009 due to the "Big Bang" implemented by ISDA, including for example the removal of restructuring as a standard credit event"⁸⁶. As argued above this assumption may not be warranted. Further, their methodology generally seems to equate the appearance of a term in a contract with that term actually providing a realistic option.⁸⁷ On accession their reasoning appears circular. They write:

Our data do not reveal the identity of individual CDS traders. Hence, we cannot directly observe the presence of individual empty creditors or their portfolio positions. Consequently, we have to make do with aggregate proxies for the inception of CDS trading as a (noisy) proxy for the potential influence of empty creditors. If we make the assumption that the presence of CDS

⁸⁶ Ibid page 10

⁸⁰ Ibid page 54

⁸¹ Ibid page 54

⁸² Ibid page 60

⁸³ Supra note 31,

⁸⁴ Ibid page 3

⁸⁵ Ibid page 4

⁸⁷ They plot the number of different restructuring clauses used in CDS contracts between the years 1997 and 2009 (see ibid page 39). However, as discussed in relation to the Big Bang protocol this does not take into account how these clauses were actually used in practice.

implies a higher probability of empty creditors than among non-CDS firms, then our baseline finding is consistent with the empty creditor prediction.⁸⁸

This assumption is obviously not helpful if one denies that empty creditors exist. The conclusion they reach is that CDS lead to more bankruptcies through what in their terminology they describe as the 'leverage', 'tough creditor' and 'coordination failure' channels. As discussed the higher leverage is also consistent with no the hypothesis that CDS allow more leveraged projects to be undertaken. 'Tougher creditors' is also consistent with the hypothesis that CDS allow a low barging strength lender to 'rent' the high barging strength of another institution.⁸⁹ 'Coordination failure' is at best an indirect consequence of CDSs. The point to note is that even if it could be established that there is a causal link between CDS and bankruptcy, it does not necessarily follow that empty creditors are a problem. If certain projects can only be financed if CDS exist then it to somehow miss the point to classify this as empty creditors. Empty creditors are a problem if the dialogue between lenders and borrowers brakes down in circumstances where it should not have broken down.

In conclusion, the empirical evidence for the ECH is inconclusive. However, one can expect that with introduction of derivatives reporting requirements (as for instance contained in Dodd Frank Title VII in the US and the European Market Infrastructure Directive in Europe) data on CDSs will become more readily available, which should lead to more advances of the econometric analysis of the ECH. However, one should not necessarily conclude that derivatives reporting requirements will settle all questions regarding the ECH. For instance, Bolton and Oehmke model, discussed above, suggests that in certain circumstances CDS can be welfare enhancing even if they lead to the break-down of negotiations between borrower and lender. A statistical analysis that simply considers whether creditors with CDS protection favour bankruptcy over out-of-court debt restructuring would fail to capture the ex-ante efficiency improvement due the CDS. However, It is very likely that there will be significantly improved statistical analysis of CDSs and the ECH available in the near to mid future, however, one should not necessarily count on all questions being answered.

On a purely intuitive level, it is also important to keep in mind the size of the CDS market. As noted by Deutsche Bank '[b]etween 2002 and 2007, gross notional amounts outstanding grew from below USD 2 trillion to nearly USD 60 trillion' ⁹⁰. In comparison the value of the world's financial stock (was USD 212 trillion (USD 54 trillion equity and USD 158 trillion debt) in 2011.⁹¹The important point to note is that the CDS market is rather sizable in comparison to financial markets in general. This probably remains true, even if one takes into account that that multiple CDS contract cover the same reference entity⁹², therefore there may be some double counting in USD 60 trillion figure. Nevertheless, if empty creditors are indeed such a significant problem as Hu and Black claim than one would expect more evidence for it. If the ECH was true than the 30 fold increase in CDS notional

⁸⁸ Ibid page 24

⁸⁹ One can add high bargaining strength institution need to be able to signal that they are tough

⁹⁰ Deutsche Bank Research 2009, supra note 50, page 1

⁹¹ McKinsey Global Institute, "Mapping global capital markets", 2011, page 1

⁹² Lynn A. Stout, Jean Helwege Peter J. Wallison Craig Pirrong, "Regulate OTC Derivatives by Deregulating them – Comment" 2009, Regulation, Vol. 32, No. 3, pp. 30-41, Fall 2009 UCLA School of Law, Law-Econ Research Paper No. 09-22, page 37

between 2002 and 2007 to a level at which total CDS notional is larger than global equities would be akin to a giant meteor hitting the markets. With a giant meteor like one would expect clear evidence of the impact.⁹³

5. The ECH as a legal problem

As mentioned in the introduction even if the economic problem of the ECH is not significant it does not necessarily follow that legal problem is not significant. If it is true that current law and regulation is based on the assumption of unity of legal and economic rights, there may be a mismatch between the law and commercial practice, and this may produce suboptimal outcomes. This seems to be the opinion of Hu and Black, who write:

decoupling is occurring against the background of a corporate governance paradigm, contractual arrangements, equity and debt governance regimes, and legal rules which largely assume that shareholders and creditors hold bundled packages of rights and obligations. ⁹⁴

This section will refer to the above as the *unity assumption*: the idea that equity and debt governance is based on the assumption of unity of legal and economic rights. This article makes two claims challenging the significance of the legal problem:

- i) The "background of a corporate governance paradigm, [...], equity and debt governance regimes, and legal rules"⁹⁵ is not based on the unity assumption. In actuality, the corporate governance paradigm is to treat shareholders and creditors like a 'black box' giving shareholders and creditors rights (and obligations) irrespective of their idiosyncratic characteristics, including their economic exposure to a company. This is because the rights the law gives to investors vis-à-vis a company are exclusively a function of the *benefits* which the investor provides to the company, not of the *loss* suffered by investors for providing this benefit.⁹⁶
- ii) The law does not assume that investors in a company use their legal rights (e.g. voting rights) to maximise the value of the company, in fact the law makes no assumption at all how investors use their legal rights.⁹⁷ In the rest of this article the assumption that investors vote to maximise the value of the company will be referred to as the 'value maximising assumption'.

Contrary to what Hu and Black claim, CDSs do not undermine the background assumptions of corporate law. Rather, it would be contrary to the background assumptions of cooperate

⁹³ This is, of course, not to be taken as thorough analysis of CDSs, it is more an appeal to intuition

⁹⁴ Hu and Black 2008 A, supra at note 3, page 739

⁹⁵ Ibid. page 739

⁹⁶ For instance the law gives same rights to investors investing \$1,000 in a company, regardless of being a billionaire with a well-diversified portfolio, or an investor whose sole asset is the £1,000 in such company ⁹⁷ The law does forbid certain people from voting (e.g. a company voting its own shares held in treasury) and also may put certain obligations on some shareholders (e.g. fiduciary duty for majority shareholders). However, this is quite different from making a general assumption how shareholders should vote

law to take an investor's derivative position into account when assessing what rights she should have in the company. It is important to realise what the argument in this section is and what it is not: The argument is not that law should or should not change because of CDS⁹⁸ the argument is solely that decoupling of legal and economic interests does not violates the background assumption of corporate law.

Hu and Black do not state exactly on what basis they claim that the law assume unity of legal and economic interest, rather they seem to treat it as self-evident. However, one can certainly not find an explicit statement in a piece of legislation to that effect (and Hu and Black do not make the claim that such a statement can be found). Further, it would be futile to analyse every single piece of corporate or financial law and check on what assumptions it is based. However, Hu and Black probably had something different in mind when they talk about the background assumption of corporate law. They probably were thinking something along the lines of a 'framework' of corporate law i.e. a set of assumptions or premises that allows one to explain or derive most (if not all) corporate law. Therefore, the strategy this article peruses is to analyse a suitable framework of corporate law, this will reveal the following:

- i) There was never a time when investors held legal rights in the same proportion as their economic exposure. This will not prove that law could not make this assumption, but will make it less likely that corporate law as based on the unity assumption.⁹⁹
- ii) The concept of 'economic interest' is too vague to constitute a useful concept for the law. This compounds the unlikeliness that the law ever assumed it as the basis of corporate governance.
- iii) A framework in which all the rights and obligations investors have are exclusively a function of the benefit they provide to the company, enabling law to treat each investor like a 'black box' (this will be referred to as the 'black box theory') does a superior job in explaining existing equity and debt governance than other frameworks. If this is true than this means that the unity assumption and value maximising assumption were never part of the background assumption of corporate law. This in turn would mean that CDS do not violate the background assumptions.

Two issues must be clarified before analysing these claims. Firstly, there may be general objection that there no such thing as a framework for corporate law; that corporate law is a hotchpotch of rules, not based on any coherent underlying assumptions (and one could add it is a splatter-gun outcome of lobbying efforts by interest groups). However, this article does not claim that the background assumption can explain every aspect of corporate law, only that the can explain key features of it. More importantly, if it is true that there are no background assumptions, then it automatically follows that Hu and Black's claim that CDSs violate the background assumptions is false, as there are no assumptions that CDSs can violate. Secondly, it should be noted that a substantial part of the discussion in this section will be based on shareholders rather than creditors. This is purely because the literature in this area largely focuses on shareholders. This focus on shareholders, however, does not

⁹⁸ Such claims are discussed in the first part of this article

⁹⁹ This is the case because if investor indeed held their economic rights in proportion to their legal rights then it would be reasonable to assume that the law assumed as much.

pose any special problems for this article as the principles are the same for shareholders and creditors. As a shorthand, sometimes the discussion will only refer the shareholder rights, thus, when the subsequent discussion makes reference to voting rights this means either voting for shareholders or voting rights for creditors in relation to financial restructuring or insolvency proceeding. The relevant principles are the same for both (if the principles diverge this will explicitly stated).

A. Was there ever unity between legal and economic rights?

Hu and Black seem to take it for granted that in the past investors held economic rights in proportion to the legal rights and it is only due to derivatives that nowadays this might not be the case anymore.¹⁰⁰ Before delving into an analysis of the true historical position of legal and economic rights, it is useful to define what these rights are. Hu and Black do not provide a clear definition. They do, however, state that "[s]ome rights [shareholders have in a company] are not purely monetary, including voting rights, director fiduciary duties, rights to bring suits and inspect corporate records, access to corporate proxy machinery, and so on"¹⁰¹. These rights can be thought of as legal rights. Within economic rights, Hu and Black include the following "dividend, liquidation, and appraisal rights under corporate law"¹⁰². Although not precise definitions, these provide a good indication of what legal and economic rights are, and the differences between them. Yet, it is quite clear that when Hu and Black talk about dividends as an economic right, they means something wider than just receiving dividends. For instance, if investor A is under an obligation to pass on all dividends he receives from a company to investor B, then Hu and Black would probably argue that A does not have an economic interest in the company anymore. Thus, economic interest seems to be more like the general benefit or value that investor derives from her investment in the company. This is not a precise definition, however for the purpose of this article it is a good enough approximation.

The position of this article is that there never was a time when shareholders held economic rights in the same proportion as their legal rights.¹⁰³ To understand this, one needs to recognise that:

- i) an investor can change her economic interest in a company while holding her legal interest constant by many other means than through derivatives;
- ii) the value that an investors derives from her investment will depend on her legal rights in the company as well as her own idiosyncratic circumstances.¹⁰⁴ More importantly, investors value their investments within the context of their portfolio, and not in isolation. Both observations mean that different investors will have different legal interest, despite them having the same legal interest.

¹⁰⁰ See for instance Hu and Black 2008b supra at note 3 page 664 "These assumptions [i.e. the unity assumption] can no longer be relied on". This strongly indicates, that Hu and Black think that in the past the unity assumption could be relied on, most likely because shareholders' economic interest was proportionate to their legal interest.

¹⁰¹ Hu and Black 2008b supra at note 3, page 666

¹⁰² Hu and Black 2008b supra at note 3, page 666

¹⁰³ It is possible for an investor to hold legal and economic interest in the same proportion, however, if that happens it is pure coincidence.

¹⁰⁴ Idiosyncratic circumstance would include thing like tax position, liabilities, liquidity needs, risk tolerance, investment horizon etc.

The first claim is relatively straightforward to see. An investor who has two different financial instruments whose returns exhibit any kind of correlation, has a different economic interest in each instruments than another investor who only holds one of these instruments. Hu and Black appear to operate under the assumption that the only way an investor can change her economic exposure to a company is through derivatives. However, any financial instrument that exhibits some form of correlation with the fortune of the company will change the investor's economic exposure. If this was not true an investor who holds positions in two companies which have returns that are perfectly negatively correlated, would have unity of legal and economic rights, but an investor who has all her savings in one company but also has small derivatives position to protect her from downside risk violates the unity assumption. This appears to be an absurd conclusion. One may counter this argument by claiming that investors usually invest in only one company, therefore portfolio construction is not an issue for most investors. However, apart from it being probably factually wrong, this overlooks the fact that diversification is a fundamental aspect of investing.¹⁰⁵ Even if one disagrees that the value of an investment to an investor depends on things like tax, liquidity needs, age (in case of a natural person), to value an investment. It is very difficult to argue that the value of an investment is independent from other investments held, and most investors prefer a diversified portfolio to holding a single investment. However, diversification is really just a different way of 'hedging' individual investments.¹⁰⁶ Hu and Black believe that before the advent of derivatives there was perfect (or at least very close) correspondence between legal and economic interests before derivatives. Yet even without derivatives the unity assumption would not be satisfied. This observation also suggests why the proposal of allocating voting rights according to economic interest is problematic¹⁰⁷. This allocation would require a determination of each investors' economic interest. Hu and Black seem to think that this is easy because they probably assume that it is just a matter of netting out long and short positions. In reality, even restricted to the relatively simple analysis of an investor's portfolio, determining an investor's economic interest can be very difficult. One issue is ascertaining how two positions are correlated and to what extent they provide a hedge for each other. Consider the case of an investor who invests in company A, an oil exploration company, and company B, a renewable energy company. These two positions could exhibit some negative correlation and provide a hedge for another. Thus, if voting rights are based on economic interest the investor should have less voting rights in company B. However, how the investors voting rights should be reduced would depend on a complex (and probably subjective) calculation about the return correlation between company A and B. The example could be further complicated if, for instance, the investors is based in France, the oil exploration company operates in the US and the renewable energy company in Germany; and the investor's

¹⁰⁵ See for instance SEC, "Beginners' Guide to Asset Allocation, Diversification, and Rebalancing" http://www.sec.gov/investor/pubs/assetallocation.htm (last visited 23 Mar 2015)

¹⁰⁶ For instance, an investor may invest in an oil exploration company and a renewable energy company to hedge the position.

¹⁰⁷ See for instance Martin and Frank Partnoy 2004 supra note 20 page 19; or Hu and Black 2008a supra note 3, page 735: "Beyond disclosure, debt contracts may need to adjust to the new world of hedged interests, voting rights in bankruptcy may need to be based on net economic ownership instead of gross ownership of debt, and the extra complexities in devising sensible voting rules may provide support for proposals to rely more on auctions." However, it is important to point out that Hu and Black generally prefer a disclosure based solution to the empty creditor problem (see for instance Hu and Black 2008a supra note 3 page 734), and seem to advocate changing in voting rights only in extreme circumstances.

intention was to hedge his Euro exposure by investing in company *A*, which operates in US dollars. It would be very difficult to objectively ascertain the exposure the investor has to company *A* and the voting rights to which the investor is entitled. Simply netting long and short derivatives positions ignores the many different ways in which hedging can be achieved. This means that basing voting rights on economic exposure would be a very complex undertaking to the extent that it would, probably be unworkable.

However, it may be the case that Hu and Black never meant to argue that in the real world the unity assumption was ever satisfied but rather that it was a useful legal fiction. One could for instance argue allowing the following lines: Ideally, the law would provide rights to investor according to their economic exposure, because this will ensure that the voting rights will be exercised most efficiently. However, due to the reasons pointed out in the previous paragraph this would be highly impractical. Therefore, to improve efficiency, the law invented the fiction that legal and economic interests coincide. This was the right assumption to make notwithstanding investors used to hedge their positions because the hedging did not dramatically change the economic position of an investor e.g. with a diversified portfolio the individual economic exposure is only slightly different however, with CDSs it is radically different. However, this argument in favour of using the unity assumption as a legal fiction is not particularly strong. First, it is open empirical questions how dramatically derivatives have changed the behaviour of investor. Second, it does not explain what the benefits of making the unity assumptions are, and more importantly, it does not explain why the law had to assume anything at all. Third, arguing that the law used the unity assumption as a fiction (i.e. using it as if it was true although it clearly was not), could lead one to the conclusion that decoupling is not a problem for the law because the law simply assumed unity but never expected it to apply to reality. In fact such a position is similar to one proposed by this article (i.e. the law allocates legal rights to investors regardless of their economic rights). The only difference would be that in the latter case the law acknowledges that it does not inquire into an investor's economic interests, whereas in the former case the law says that it does make this inquire, however, using a fiction.

In conclusion, this section suggests that the unity assumption has never been satisfied, even in absence of derivatives. Furthermore, there are no other good reasons that the law should use the unity assumption as a legal fiction. It follows that it is unlikely that the law ever made the unity assumption.

B. Investor rights are based on the benefits received by the company

The above section, suggests that awarding legal rights in proportion to economic interest is undesirable because it is impractical¹⁰⁸. Nevertheless, basing rights on economic exposure is not only wrong for practical reasons it is wrong in principle. Investor rights are based on the benefit they provide to the company, not the loss investors incurred by providing that benefit. Based on this principle, follows that the law treats shareholder's like a black box, and thus, it would be contrary to fundamental assumptions of corporate law if the law were to take into account an investors economic interest, and therefore, it is irrelevant if economic interest is changed either through derivatives or otherwise.

To make this claim this article will use a contractual approach to corporate law, following the same methodology as used by judge Frank H. Easterbrook and Prof Daniel R.

¹⁰⁸ Essentially because the law cannot directly observe an investor's economic interest

Fischel in their seminal work "The Economic Structure of Corporate Law"¹⁰⁹. This article merely assumes that the contractual approach is appropriate, and does not delve into the rationale as to why. As a brief indication the appropriateness of this approach, however, one can appeal to efficiency, by arguing that that given otherwise equal options the law will chose the more efficient option¹¹⁰. Applying this reasoning to the background assumptions of corporate law this means that the law would not chose one set of assumptions if they lead less efficiency than another set. This sentiment is also echoed by Easterbrook and Fischel.¹¹¹

To assess the efficiency of the background assumption it is useful to consider which principles would have been chosen in a hypothetical bargaining situation. From hypothetical bargaining situation it seems to follow that the rights an investor¹¹² has vis-à-vis a company are a solely function of the benefits the company receives from that investor. Assume a group of people G with 0 capital who aim to raise money for a project which costs \$X to implement, generating a net discounted cash flow of Y and X < Y - prima facie theproject is worthwhile to undertake. In order to attract investments, G needs to offer something in return. To raise \$X efficiently G will offer more to an investor from whom they receive more than from an investor from whom they receive less. Although this is a trivial observation, the important point is that the reward that G will offer will be based on the capital provided towards the project, not on how much it costs the investor to provide the capital. G would not care if an investor has to re-mortgage his house to raise the money, or if an investor is a billionaire with a large well-diversified portfolio, if they invest the same amount. All that G cares about is raising \$X. One investor may invest all his assets into the project, another investor may only invest a fraction of her wealth. However, the amount invested relative to total assets of the investor is irrelevant, the only relevant amount is the actual amount invested. It would therefore be inefficient to distribute rights in the company according to how much it costs an investor to make the investment rather than the benefit the company receives. Any such rule advocating this would potentially require G to give more rights to an investor who invested all his assets in the company than to the billionaire investor's investment, even if the latter's investment is larger than the former. The only efficient rule, therefore, is a rule that distributes rights solely on the basis of the benefit received by the company.

This may seem like a rather trivial observation and most commentators would agree that this observation explains why investors usually receive income (be in the form of dividends, interest or capital appreciation) in proportion to capital contributed. However, more importantly, this also explains why most companies distribute voting rights according to capital contributed (i.e. the one share one vote rule)¹¹³. The one share one vote rule ensures that a larger shareholder is more likely to have a company implement her

¹⁰⁹ Frank H. Easterbrook and Prof Daniel R. Fischel, "The Economic Structure of Corporate Law", Harvard University Press, 1991 page 34

¹¹⁰ There is no need at this point to define precisely what efficiency means, however it is something along the lines of Pareto efficiency i.e. no one can be made better off without making somebody else worse off.

¹¹¹ "The role of corporate law here, as elsewhere, is to adopt a background term that prevails unless varied by contract. And the background term should be the one that is either picked by contract expressly when people get around to it or is the operational assumption of successful firms" in Easterbrook and Fischel 1991, supra note 39 page 36

¹¹² For the purpose of this paper it is not necessary to define exactly what an *investor* is, however, this article uses the term investor similar to stakeholder e.g. shareholders, creditors, employees, suppliers, customer etc. ¹¹³ In many jurisdiction the one share one vote rule is not mandatory (this article will explain later on why this is the case). However, the one share one vote rule is widely used. See for instance Renee Adams and Daniel Ferreira, 2007 "One Share-One Vote: The Empirical Evidence" ECGI - Finance Working Paper No. 177/2007

preferences, than a smaller investor. For instance, assume a risk averse investor A with a portfolio heavily exposed to the US market. A invested in company Z, which faces a decision between two projects, a low risk project in China (that would provide a natural hedge for the US market) and a high risk project in the US. More voting rights for investor A makes it more likely that the Chinese project will be adopted, giving investor A more incentive to invest in the company in the first place. Thus, it is not only efficient to distribute the income of the capital according to capital contributed by the investors, it is also efficient to do the same for voting rights. Voting rights, are merely an additional mechanism to induce investments. This also explains why corporate law protects minority shareholders (e.g. fraud on the minority type rules in the UK¹¹⁴, or fiduciary type obligations on major shareholders in the US¹¹⁵). A company will usually try to raise money not only from large investor but also from small investors¹¹⁶. If a company offers all rights in the company to a large investor, small investors would be very unlikely to invest in the company. Therefore, rules that award large shareholders more rights while at the same time protecting small shareholders (especially from their funds simply being appropriated by large shareholders or managers) are efficient. The important thing to note is that *large* and *small* shareholders is purely determined by the amount contributed to the company not by the loss incurred by the investor. The one thing the company will not do is to reward investors on the basis of their economic interest in the company.

One may object to this analysis by arguing that is mischaracterises the nature of a company by focusing exclusively at the initial fundraising stage; that company is usually a long term enterprise and the key point of corporate law is the long term management of funds entrusted by investors to the company. Therefore, our company G will not only be interested in raising funds, but will also be interested in other characteristics of the investor that make such investor a good 'match' for G. If a potential investor A mortgaged her house to buy the shares, she might be required to make monthly repayments. If there are two projects X and Y. Project X pays out a regular monthly income stream. Project Y pays out after 10 years. A may well prefer X to Y although Y has a higher discounted cash flow. Whereas the other investors may well prefer Y to X, and may be inclined to turn down A as an investor. CDSs can be viewed in a similar way. The fact that a potential investor is fullyhedged may or may not be attractive to a company, depending on such company's individual circumstances. Therefore, according to this argument it is wrong to state that a rule that bases investor rights on capital invested as well as economic exposure is always inefficient.

There are, however, a few counterarguments to this objection. Most importantly this argument confuses the distinction between rules that should be enforced by law and rules that should be left to investors to agree amongst themselves. It is important to recognise that the rights the investor receives in the company are still ultimately based on the benefit the investor provides to the company. If an investor's preferences are less compatible with the preferences of the other investors then that investor simply provides the same benefits to the

¹¹⁴ See for instance Fan, Chunyan "Challenging Controlling Shareholders in UK Courts: The Substantive Standard of Review" 2008 http://irs.ub.rug.nl/dbi/486398e905325 (accessed 26 Mar 2015), referring to *Foss* v. *Harbottle* (1843) 2 Hare 461; *Prudential* v. *Newman Industries* (No.2)[1982] Ch. 204, 210-11, Victor Joffe, "Minority Shareholders: Law, Practice and Procedure, Butterworth", 2004, pages 2-3.

¹¹⁵ See for instance, Keith H. Berk, Scott A. Josephson and Miriam Volchenboum "Fiduciary duties of shareholders of closely held corporations" 2010, referring to, *Hagsbenas* v *Gaylord*, 199 Ill App 3d 60, 557 NE2d 316 (2d D 1990); In re Joy Recovery Tech Corp, 257 BR 253 (Bankr ND Ill 2001); and *Rexford Rand Corp* v *Ancel*, 58 F3d 1215 (7th Cir 1995).

¹¹⁶ Please note that, as used herein, large and small shareholders is purely determined by the amount contributed to the company not by the loss incurred by the investor.

company at a higher price. Thus, an investor's economic exposure is only relevant to a company in as far as it impacts the benefit the investor provides to the company. This may seem like a tautology, however, if one sees corporate law as the outcome of adversarial bargaining then the relevant point of view is the one of 'the benefit provided to the company' rather than 'the costs incurred by the company'. The question then becomes where the dividing line is between rules prescribed by law and rules which investors can agree amongst themselves. This answer has been given by Easterbrook and Fischel in the idea that corporate law is an 'economizing device'

Why don't law firms or corporate service bureaus or investment banks compile sets of terms on which corporations may be constructed? They can peddle these terms and recover the cost of working through all of the problems. Yet it is costly for the parties (or any private supplier of rules) to ponder unusual situations and dicker for the adoption of terms. Parties or their surrogates must identify problems and then transact in sufficient detail to solve them. [...] Court systems have a comparative advantage in supplying answers to questions that do not occur in time to be resolved ex ante. Common law systems need not answer questions unless they occur. *This is an economizing device*¹¹⁷ (emphasis added)

Therefore, the relevant question is which corporate contractual terms are more efficiently supplied by the law and which by the parties themselves. The law could, of course, provide highly complex prescriptive terms incorporating the economic exposure of each investor, or alternatively provide high level principles that deal with the economic exposure of each investor. The first approach would be very complex yielding highly intricate rules, and it is highly unlikely that rules made by judges or legislator would be a good substitute for the actual bargain among people. The other extreme of broad legal principles would yield very abstract rules, and it is not clear how this would enhance efficiency. Therefore, if the role of corporate law is indeed to produce standard terms, then it seems clear what the law should do. The law is able to produce simple standard terms by focusing exclusively on the benefits provided by each investor, and by ignoring the costs to the investors. If corporate law takes into account an investor's economic interest then the law would produce rules which are so complex and tailored to specific situations that they would no longer be standard. Alternatively if the law produces high level abstract rules, they would no longer be efficient. Both alternatives would defeat the main purpose of corporate law. Thus, corporate law focuses on producing rules common to all corporate ventures (i.e. pooling of capital), all other idiosyncrasies are left the discretion of the parties involved.

An additional reason why the law focuses on capital invested as the determining factor for investor rights is fungibility and transferability of shares and bonds. Fungibility in relation to shares means each "shares of stock [...] are considered fungible in that each share represents the same economic interest in the issuer as any other share"¹¹⁸. This means that in order to be fungible the same share (or any other financial instrument) must have the same rights attached regardless of who holds it¹¹⁹. Furthermore, transferability of shares would

¹¹⁷ Easterbrook and Fischel 1991, supra note 39 page 35

¹¹⁸Jack Samet "Concept of Fungibility in Securities Laws" (1971-1972) I. 27 Bus. Law 383

¹¹⁹ The terminology here might be slightly confusing because Samet also uses the term "economic interest", however, he uses it in a different way than this article uses it.

probably be restricted if the rights attached to them would vary depending on the holder of the shares.¹²⁰ Fungibility and transferability appear to be fundamental principles of corporate law, intrinsically linked to the idea that the only thing that matters in the determination of the legal rights an investor has vis-à-vis a company is the benefit that investor provides to the company.

To conclude this section the following can be stated. Corporate law treats investors in a company like a black box. It gives them rights and obligations vis-à-vis a company solely based on the benefit provided, which will usually take the form of capital¹²¹ invested, not by the cost to the investor, unless there is specific legal rule that says otherwise¹²². The purpose of this discussion was to counter the argument that corporate law is based on the claim that the law assumes shareholders or creditors in a company hold economic rights in proportion to legal rights. Therefore, Hu and Black are wrong in their claim¹²³ that decoupling of legal and economic rights violates a basic assumption of corporate law.

C. Which theory fits the facts better?

The previous gives abstract reasons for a theory that precludes corporate law from inquiring into the economic interest of investors. Apart from theoretical reasons one should also try to ascertain if a theory has explanatory power. In order to do that this section will compare the black box theory to another theory of corporate law, which would allow the law to inquire into the economic interest of investors. This theory is the one put forward by Easterbrook and Fischel in 'The Economic Structure of Corporate Law'¹²⁴. Easterbrook and Fischel's theory was chosen because this article uses the same methodology as Easterbrook and Fischel's ideas, although not without their critics, have achieved 'largely canonical'¹²⁵ status. Lastly, and most importantly, Easterbrook and Fischel's theory supports the ECH is a very sophisticated and well thought-out manner. Thus, arguably, if the flaws in their theory are highlighted then other theories should be relatively easy to deal with.

Easterbrook and Fischel argue that shareholders, or rather the group that receives the residual income of the firm, should have voting rights because receiving residual income provides the right incentive for voting.¹²⁶ From this it seems to follow that they should not have voting rights anymore if their incentives change, for instance through derivatives.

¹²⁰ Although this seems an intuitive outcome Peter Z Grossman "The market for shares of companies with unlimited liability: the case of American Express" 1995 The Journal of Legal Studies, Volume 24, Issue 1. However, see also Paul Halpern, Michael Trebilcock and Stuart Turnbull 1980"An Economic Analysis of Limited Liability in Corporation Law, 30 U. Toronto L. J. 117 for what Grossman calls "traditional" perspective" and See Susan E. Woodward "Limited Liability in the Theory of the Firm", 141 J. 1985 Inst. & Theoretical Econ. 601, "who argued [...] unlimited liability would impair the transferability of shares generally" (Grossman at page 68 footnote 18). The discussion in these articles is about unlimited vs. limited liability, however, the relevant principles can easily be extended to a general discussion of transferability of shares

¹²¹ Capital is to be understood broadly encompassing financial capital as well as other forms of capital for instance the provisions of services or labor

¹²² For instance competition law may intervene and stop a shareholder from enjoying certain rights ¹²³ Hu and Black 2008 A, supra at note 3, page 739

¹²⁴ Supra note 39

¹²⁵ Shaun P. Martin and Frank Partnoy, "Encumbered Shares" Legal Studies Research Paper Series Research Paper No. 05-23 October 2004 page 4

¹²⁶ Easterbrook and Fischel 1991 supra note 39 page 68

Easterbrook and Fischel's theory, like the black box theory, has adversarial bargaining as its starting point. However, from that starting point they get to a position where votes are distributed according what group has the right incentives, by assuming that shareholders (and by extension creditors) are a homogenous group 127 (referred to herein as the 'homogeneity assumption'). Through the homogeneity assumption all conflicts among shareholders disappear and the only relevant left are conflicts between different groups of stakeholders (e.g. shareholders, creditors, employees, managers etc). In addition, the homogeneity assumption means that the only differentiating factors among all stakeholders in a company (e.g. shareholders, creditors, managers, employees, etc.) are how they relate to the company. It is only by assuming that that the only difference between for instance a shareholder and a creditor is that the former receives the residual income of the company and the latter has a fixed claim, that one can derive at the conclusion that voting rights are based voting rights are based on whatever group has the best incentives for voting, as well claiming that the law requires firms to maximize profits (besides their contrary claims earlier in their book)¹²⁸. The difference between the black box theory and Easterbrook and Fischel's theory is that according to the former there is no direct¹²⁹ connection between incentives and voting rights, and according to the latter voting rights are given to the group of persons with the right incentives. From the former, follows that a change in incentives (for instance by entering into a derivatives position) does not have impact on voting rights, or any other rights. From the latter, a change in incentives can potentially change the allocation of legal rights. Conversely, apart from the homogeneity assumption the black box theory is identical to Easterbrook and Fischel's theory. In an adversarial bargaining, if all shareholders are identical they will not care about the distribution of voting rights because all shareholders would expect¹³⁰ their votes to be exercised in the same way. Therefore, the outcome is the same according to the black box theory or Easterbrook and Fischel's theory.

¹²⁷ "The preferences of one class of participants are likely to be similar if not identical. This is true of shareholders especially, for people buy and sell in the market so that the shareholders of a given firm at a given time are a reasonably homogeneous group with respect to their desires for the firm [...] So firms with single classes of voters are likely to be firms with single objectives, and single-objective firms are likely to prosper relative to others. This suggests not only why only one class holds the controlling votes at a time but also why the law makes no effort to require firms to adhere to any objective other than profit maximization (as constrained by particular legal rules)." Ibid page 70

¹²⁸ They write: "An approach that emphasizes the contractual nature of a corporation removes from the field of interesting questions one that has plagued many writers: what is the goal of the corporation? Is it profit, and for whom? Our response to such questions is: who cares?" Easterbrook and Fischel 1991 supra note 39 page 36 ¹²⁹ Incentives have an indirect effect because they will determine the amount a person invests and the 'amount of rights' a company needs to give up in order to get the investments. However, the crucial difference is that in the black box theory all preferences are revealed in the amount invested, therefore, subsequent changes in the shareholder's incentives do not change voting rights (or any other rights).

¹³⁰ The word *expected* is important here, because it is reasonable suppose that what Easterbrook and Fischel meant by homogeneity of shareholders was homogeneity of preferences only and not homogeneity in how much information shareholders have. Otherwise, they could not explain why shareholders would not vote the same way every single time. However, if one assumes that all shareholders have the same preferences, are equally rationally but have different access to information and the access to information being not stable and randomly distributed among shareholders, then it would follow that shareholders do not vote the same way every time, nevertheless they expect to vote the same way.

D. The homogeneity assumption

Thus, the crucial distinguishing factor is the homogeneity assumption. In short, if the homogeneity assumption is correct, Easterbrook and Fischel are right, from which it follows that the ECH's legal problem are potentially an issue. If homogeneity goes out the window, Easterbrook and Fischel are wrong and the ECH legal problem is probably not an issue. The centrality of the homogeneity assumption was also noted by Martin and Partnoy¹³¹, and by Easterbrook and Fischel's own admission, without the homogeneity assumption their arguments does not work. They write: "It is well known, however, that when voters hold dissimilar preferences it is not possible to aggregate their preferences into a consistent system of choices"¹³². The homogeneity assumption is not only central to Easterbrook and Fischel's theory, but, as was pointed out by Hayden and Bodie, it is the basis of most theories that justify the one vote one share rule.¹³³

Before addressing the shortcomings of the homogeneity assumption, it is important to emphasise that Easterbrook and Fischel did not adopt this assumption because of a simplistic view that shareholders usually prefer more money to less. Although this claim is not an unreasonable assumption, the problem is that it says nothing about shareholders' risk attitude and time preferences. Easterbrook and Fischel do provide good theoretical reasons for why this is not a problem from the homogeneity assumption, and that is diversification.¹³⁴ Diversification allows an investor to invest in all securities and, therefore, the only thing that the investor is interested in is to maximise the overall value of all companies. However, this position does not address the issue of divergent risk attitudes among investors, as although all investors may desire that all companies to do well, some investors might be willing to take more risk than others; however, this issue, though not explicitly discussed by Easterbrook and Fischel, can easily be addressed with the help of

¹³¹ Shaun P. Martin and Frank Partnoy 2004 supra note 35

¹³² Easterbrook and Fischel 1991 supra note 39 pages 69 -70

¹³³ "Critical to the success of [the one share one vote] theory, however, is the notion that all shareholders have the same interest—namely, maximizing the residual value of the corporation. Shareholder primacy theory maintains that all shareholders have homogeneity of interest. Indeed, it is seen as a necessary aspect of the theory. If the purpose of the corporation is to maximize the residual, then the shareholders must all agree with this purpose. Otherwise, shareholders may elect directors who will pursue interests apart from residual wealth maximization. Thus, corporate law theorists have repeatedly emphasized the homogeneity of shareholder interests as a critical assumption of the model." Grant M. Hayden and Matthew T. Bodie, "One share, one vote and the false promise of shareholder homogeneity" Cardozo Law Review, Vol. 30, 2008 ¹³⁴ See for instance Easterbrook and Fischel 1991 supra note 39 pages 29 -30 : "We shall nonetheless largely ignore risk aversion with respect to public corporations. [...] Our rationale is simple: diversification. Investors who dislike risk can get rid of risk easily. They may hold low-risk instruments (high grade bonds and Treasury obligations). Investors hold equity if and only if the expected value of these investments beats the return available from other sources. Holding a basket of equities enables the investors to realize these expected returns, free from firm specific risk (whether risk of the firm's business ventures or risk of managers' dishonesty). Those who hold equity instruments may diversify through mutual funds or by selecting some other broad basket. A diversified portfolio will not get rid of risk that goes with the market. It will, however, essentially eliminate the risk that goes with conflicts among firms and scraps over the allocation of gains and losses. A person who holds a diversified portfolio has an investment in the economy as a whole and therefore wants whatever social or private governance rules maximize the value of all firms put together. He is not interested in maximizing one firm's value if it comes out of the hide of another corporation [...] the only reason to care about diversification is that people who are risk averse might want a rule maximizing the lower bound of returns rather than maximizing the expected return, and thus social wealth. If the people who do not like risk can look after themselves at low cost, then there is no remaining reason not to select whatever rule maximizes

value. And for what it is worth, the vast majority of investments are held by people with diversified portfolios."

Modern Portfolio Theory (MPT)¹³⁵. MPT argues that all investors, regardless of risk appetite should invest in the same risky portfolio¹³⁶ and then adjust the riskiness of the portfolio by investing in a risk-free asset (or by borrowing at the risk-free rate).¹³⁷ Thus, MPT seems to supports the assumption that all investors are homogeneous. However, if one analyses the arguments it turns out: Either MPT does not save the homogeneity assumption or if it does, it means that the ECH is not a problem. The first problem with MPT is that it is not clear to what extent MPT was ever meant to be a description of reality, as it proved rather difficult to use it for actual investment decisions.¹³⁸ Others have gone even further and argued that not only does MPT not really match reality, MPT fails to model important aspects of how investors behave.¹³⁹Others have questioned the merits of MPT because it is based on the normal (i.e. Gaussian) distribution. Nassim Nicholas Taleb argued that:

"After the stock market crash (in 1987), they rewarded two theoreticians, Harry Markowitz and William Sharpe, who built beautifully Platonic models on a Gaussian base, contributing to what is called Modern Portfolio Theory. Simply, if you remove their Gaussian assumptions and treat prices as scalable, you are left with hot air. The Nobel Committee could have tested the Sharpe and Markowitz models—they work like quack remedies sold on the Internet—but nobody in Stockholm seems to have thought about it."¹⁴⁰

For the purpose of this article it is not important to analyse what the merits of MPT are. The important point is that it seems unlikely that corporate law would base one of its central assumptions on highly abstract financial theory, which is not generally accepted to reflect reality¹⁴¹. Further, one could argue that if investors would behave according to the postulates of MPT then empty creditors or empty shareholders would not be a problem, as MPT can be extended to incorporate short sales.¹⁴² Investors would still invest in the optimum risky portfolio, and, therefore, investors could still be assumed to maximise the

¹³⁵ See for instance Harry Markowitz, "Portfolio Selection" The Journal of Finance, Vol. 7, No. 1. (Mar., 1952), pp. 77-91

¹³⁶ i.e. the optimal risky portfolio, which is the portfolio with the highest Sharpe ratio

¹³⁷ MPT does not explicitly address the problem of diverging time preferences among investor (i.e. investors having different discount rates). However, one can speculate that MPT would allow one to derive a portfolio similar to the optimal risky portfolio but for discount rates, where very investor has the same discount rate.
¹³⁸ Brodie, De Mol, Daubechies, Giannone and Loris "Sparse and stable Markowitz portfolios" 2009. Taken from Wikipedia "Modern portfolio theory" http://en.wikipedia.org/wiki/Modern_portfolio_theory#cite_note-12 (last visited 27 March 2015)

¹³⁹ "In MPT, there is no attempt to explain an underlying structure to price changes. Various outcomes are simply given probabilities. And, unlike the [probabilistic risk assessment], if there is no history of a particular system-level event like a liquidity crisis, there is no way to compute the odds of it Douglas W. Hubbard, 'The Failure of Risk Management', p. 67, John Wiley & Sons, 2009. ISBN 978-0-470-38795-5. Taken from Wikipedia "Modern portfolio theory" http://en.wikipedia.org/wiki/Modern_portfolio_theory#cite_note-12 (last visited 27 March 2015)

¹⁴⁰ Nicholas Nassim Taleb, "The Black Swan: The Impact of the Highly Improbable, 2007, Random House, ISBN 978-1-4000-6351-2. Taken from Wikipedia "Modern portfolio theory"

http://en.wikipedia.org/wiki/Modern_portfolio_theory#cite_note-12 (last visited 27 March 2015)¹⁴¹Further, Markowitz published his seminal paper on MPT in 1952 and corporate law predates this date by quite a bit. Thus corporate law must have somehow 'known' about MPT before the theory was actually articulated, which is not impossible but somewhat unlikely.

¹⁴² See for instance "Introduction to Portfolio Theory" page 16

http://faculty.washington.edu/ezivot/econ424/introductionPortfolioTheory.pdf (last visited 27 March 2015)

value of all companies. Therefore if MPT is true then, regardless of short-selling or the availability of derivatives, investors would all still invest in the same portfolio (and adjust the risk by investing in a risk-free asset). Thus, investor would still want that value of all companies in the economy to be maximised, which would mean that empty creditors would not violate a basic assumption of corporate law.

Apart from the implausibility that the homogeneity assumption can be justified on theoretical grounds Easterbrook and Fischel own theory becomes inconsistent if one assumes homogeneity. Martin and Partnoy observed that:

Moreover, the empirical fact that shares with stronger voting rights are more valuable is inconsistent with assumed homogeneity. If shareholders had uniform, expectations, they would (correctly) assume that their colleagues would vote the same way they would, and hence votes would have little or no value. [...] Easterbrook & Fischel [note a] difference of two to four percent in value.¹⁴³

Easterbrook and Fischel cannot explain why shares without voting rights usually trade at a discount to shares with voting rights. If investors were homogeneous and the purpose of voting rights were to monitor the company, then monitoring would provide a benefit for all shareholders in proportion to their shareholding. Thus, non-voting shares would trade at the same price as voting shares, however, the overall price of the shares would be reduced. As stated above, this is not what happens in reality, non-voting shares usually trade at a discount. This suggests that voting provides a benefit to shareholders vis-à-vis other shareholders in the company), which is impossible according to Easterbrook and Fischel.

Following Easterbrook and Fischel's theory leads to other implausible results too. Easterbrook and Fische write:

The most basic statutory rule of voting is [...] [a]ll common shares vote, all votes have the same weight, and no other participant in the venture votes, unless there is some express agreement to the contrary. [...] The presumptively equal voting right attached to shares is, however, a logical consequence of the function of voting we have discussed above.¹⁴⁴

If their theory is correct it would be more likely that the one share one vote rule were a mandatory rule, rather than the default rule. If the one share one vote rule exists because shareholders have the right incentives, this would be true for all companies, and one would expect that the law would require it (and make it mandatory) for all companies. On the other hand, if voting rights are understood as just another way to attract investments, having one share one vote as the default rule rather than a mandatory rule is highly plausible. Many companies struggle to attract investments, therefore, they must provide potential investors with as many incentives as possible (which the one share one vote rules does). There are some instances where these incentives are not needed – the company may be attractive enough without the voting incentive. Therefore, the law allows for the flexibility to alter the one share one vote rule.

¹⁴³ Martin and Partnoy 2004 supra note 55 page 13

¹⁴⁴ Easterbrook and Fischel 1991 supra note 39 page 72

Further, Easterbrook and Fischel's theory *prima facie* seems to support the rule of one shareholder one vote, rather than one share one vote. If all shareholders have the same interest, they would all vote the same way. This conclusion, however, is avoided by the introduction of monitoring costs:

"[I]f the owner of 20 percent of the residual claims acquires all of the votes, his incentives to take steps to improve the firm (or just to make discretionary decisions) is only one-fifth of the value of the decisions. The holder of the votes will invest too little. And he will also have an incentive to consume excessive leisure and prerequisites and to engage in other behaviour that does not maximise profits."¹⁴⁵

Easterbrook and Fischel seem to suggest that shareholders would invest further resources into monitoring the company until the marginal gain from monitoring is equal to the costs. As large shareholders receive more in dividends from the company, one would expect them to do more of the monitoring. However, the shareholder activism¹⁴⁶ suggests as well corporate governance literature¹⁴⁷ that large shareholders are rather bad at monitoring management, whereas small determined shareholders can be quite good at it. A theory that sees voting rights as just another way to induce investments allows for small investors to be better at monitoring a company than large investors.

Furthermore, theories that base voting rights on the idea of shareholders monitoring management, fails to recognise that there are other (possible better) ways to monitor managers and align their interest with that of the company. Incentive schemes are often used to motivate managers. Arguably, it is only in rare and extreme cases that managers are voted out of office, and what motivates them more is a pay-package tied to the company's performance. An argument for voting requirements is that an incentive scheme would not prevent managers from fraudulently appropriating company property, but this does not explain why shareholders could not simply sue such managers in breach of their fiduciary duty. At the very least it is not clear why voting rights are necessary for the preventions of breach of fiduciary duties¹⁴⁸. Another argument is that the reason why an incentive scheme for managers is in place is because of shareholder voting rights – without the threat of being voted out of office directors or managers would pay themselves over-generously rather than having remuneration based on the performance of the company. However, this argument overlooks investor choice, investors can chose whether or not to invest in a company based on the payment policy of directors.

The previous arguments do not deny the role of shareholders in monitoring managers or in corporate governance in general. The view that voting rights are an outcome of

Third Point Management or David Webb, to mention just a few

¹⁴⁵ Actually on page 73 Easterbrook and Fischel's seem to suggest that their theory works even without the introducing costs: "Voting flows with the residual interest in the firm, and unless each element of the residual interest carries an equal voting right, there will be a needless agency cost of management. Those with disproportionate voting power will not receive shares of the residual gains or losses from new endeavors and arrangements commensurate with their control; as a result they will not make optimal decisions." However, it is quite clear that this is not the case, unless the idea of costs are introduced.
¹⁴⁶ See for instance the investment strategies of The Children's Investment Fund Management, Carl Ichan,

¹⁴⁷ Sir David Walker, A Review of Corporate Governance in UK Banks and Other Financial Industry Entities 62, 68 (2009)

¹⁴⁸ A parallel can be found in the realm of trust law, where beneficiaries of a trust normally do not vote for the trustees, nevertheless, the law does not see this as an obstacle of imposing fiduciary duties.

adversarial bargaining is perfectly compatible with the view that voting rights should be held by the claimants of the residual income of the company. In fact it is quite likely that this would be the case. Claimants to the residual income of a company have the most to gain from voting rights. Therefore, providing this group with voting rights is the most efficient way for the company to allocate voting rights¹⁴⁹. Easterbrook and Fischel were right to point out that voting rights usually follow the residual income. However, they got it wrong because they regard it as a cornerstone of voting rights, whereas in reality it is just one facet of a more general theory that shareholders are in conflict with one another the same way they are in conflict with other stakeholders of a company.

The difference between the ideas proposed in this paper and Easterbrook and Fischel theory should not be overstated. The starting point of both theories is Adam Smith's insight that the "extended conflict among selfish people produces prices that allocate resources to their best uses"¹⁵⁰ The only difference is that the theory put forward in this article states that there is "extended conflict" among shareholders and the best way for the law to deal with this conflict is by not getting involved. Easterbrook and Fischel believe that it can be assumed that there is no conflict between shareholders, which allows them argue that the law is justified in assuming that all of them work for the greater good of all shareholders. Further, the theory put forward in this article and Easterbrook and Fischel's theory agree that the law does allocate rights and obligations to shareholders primarily on the basis of how much they invest in the company, ignoring the individual 'costs' incurred by the investors when making the investment. Easterbrook and Fischel achieve this outcome by arguing that all shareholder are the same, therefore their costs are proportionate to their investments. The black box theory on the other hand argues that the law simply refuses to investigate the individual circumstances of each investor regardless of whether they can be presumed to have similar interest or not. The outcome of both theories will be the same in many (if not most circumstances). However, one occasion where they will differ is that Easterbrook and Fischel open the door for the law to refuse to treat investors as having the same interest if it can be shown that they do not have the same interest, for instance in the case of CDS. The theory put forward put forward in this paper, on the other hand, argues that it is basic assumption of the law not to take into account anything beyond the investment itself. The law can, of course, change and start to take into account things like the CDSs positions of an investor. However, people who argue for this change need to acknowledge that this would constitute a significant departure from standard assumptions of corporate law.

There is one caveat in the above discussion that needs to be addressed and is that in many jurisdictions it is prohibited for shareholders to sell their voting rights without selling their shares. *Prima facie* this seems to favour Easterbrook and Fischel's theory because the black box theory does not provide a good reason for why vote selling should be illegal. Although this argument has some force, it is not as strong as it appears. The landmark Delaware case of *Schreiber* v. *Carney*¹⁵¹, casts some doubt on idea how strongly the prohibition of vote selling was actually enshrined in the law. The court held:

Given the holdings in Ringling and Oceanic it is clear that Delaware has discarded the presumptions against voting agreements. Thus, under our

¹⁴⁹ *Ceteris paribus*, providing a shareholder with voting rights will induce that shareholder to contribute more capital to the firm than an equivalent creditor, as voting rights for shareholders will improve the earning potential of a company more than voting rights for creditor

¹⁵⁰ Easterbrook and Fischel 1991 supra note 8

¹⁵¹ Schreiber v. Carney 447 A.2d 17, 26 (Del. Ch. 1982)

present law, an agreement involving the transfer of stock voting rights without the transfer of ownership is not necessarily illegal and each arrangement must be examined in light of its object or purpose. To hold otherwise would be to exalt form over substance. As indicated in Oceanic more than the mere form of an agreement relating to voting must be considered and voting agreements in whatever form, therefore, should not be considered to be illegal per se unless the object or purpose is to defraud or in some way disenfranchise the other stockholders. This is not to say, however, that vote-buying accomplished for some laudible purpose is automatically free from challenge. Because vote-buying is so easily susceptible of abuse it must be viewed as a voidable transaction subject to a test for intrinsic fairness.

In their analysis of Schreiber, Hayden and Bodie 2008 conclude:

[The Delaware Chancery Court] recognized two principles behind the general prohibition against vote buying: (1) protecting shareholders against fraud and deceit, and (2) requiring shareholders to exercise their own independent judgment. [...] As for the independent judgment principle, its traditional justification was that "by requiring each stockholder to exercise his individual judgment as to all matters presented, [t]he security of the small stockholders is found in the natural disposition of each stockholder to promote the best interests of all, in order to promote his individual interests." However, the court found that this rationale was "obsolete because it is both impracticable and impossible of application to modern corporations with many widely scattered stockholders." Instead, the court held the loan transaction to a standard of entire fairness.¹⁵²

It appears that vote selling is a prohibition against unfairness, rather than an absolute prohibition. Such a prohibition can be explained by the black box theory. As mentioned above investments need not only be attracted from large investors but also from small investors and minority voting rights exist to provide for this. Therefore, rules like prohibition of fraud on the minority (in the UK), fiduciary type obligations on major shareholders, or fairness standard make sense. In a time when decoupling of economic and legal interest in a company was less common than it is now, it could be the case that vote selling was primarily a tool for fraud. Arguably this is no longer case. A word of caution is in order, however. Some commentators viewed *Schreiber* rather negatively¹⁵³ and it may be premature to argue that the prohibition on vote selling is dead. However, *Schreiber* does indicate that the vote selling prohibition is not as firmly entrenched in the law as one might think.

E. Normative arguments against the homogeneity assumption

Even if it is granted that the black box theory is correct, one may ask the additional question why the law chose to adopt this framework, or put differently, why did the law's evolution

¹⁵² Hayden and Bodie 2008 supra at note 135 page 483

¹⁵³ See for instance Thompson and Edelman 2009 supra note 5, pages 164 - 165

not involve an analysis of an investor's wider circumstances? To give a (very) brief answer, this article departs from its purely factual analysis to give some normative reasons. First, as previously argued, treating investors like a black box is important to achieve fungibility and tradability of financial instruments¹⁵⁴. Another (and maybe more important) reason is that by not inquiring into the motives of investor the law enables companies to become more of a facilitating device¹⁵⁵. Companies are legal devices that can be used for many endeavours. If the law would tell shareholders what to do with a company (e.g. by requiring that shareholders must vote to maximize the value of the company) this multiplicity would be lost. Easterbrook and Fischel initially seem to agree that the law should leave investors alone to decide what to do with their company.¹⁵⁶ However, the homogeneity assumption allows them advocate a system where investor are *de-facto* forced to maximise wealth (according to a very limiting definition of what constitutes wealth). However, for a theory that purports to follow Adam Smith this puts the cart before the horse. According to Adam Smith when economic actors behave in a self-interested manner then they maximise overall welfare as a side product. However, Easterbrook and Fischel theory allows the law to 'force' investors to behave in a certain way, with the justification that this is will result in wealth maximisation. Some commentators seem confused and treat value maximisation by a company as equivalent as shareholders following their own preferences. For instance, Schouten attempts to combine the insights from Friedrich Hayek that the market is a system for information aggregation¹⁵⁷ with Condorcet's Jury Theorem¹⁵⁸, applying it to voting by shareholders and arguing as follows:

Moving to legal constraints, we have already seen that courts are suspicious of conventional vote buying because it is susceptible of abuse. This suspicion is also warranted with respect to the new vote buying [i.e. decoupling of legal and economic rights]. In the extreme case where a shareholder uses derivatives to build a net short position, his interests clearly conflict with those of other shareholders, as he will prefer an outcome (share price decrease) that is the opposite from that preferred by

¹⁵⁴ However, it is important to point out that a number of other theories, including Easterbrook and Fischel's theory, also achieve fungibility

¹⁵⁵ One can draw an analogy to the law of trusts. James Penner in relation to trusts writes: "The law of trusts is a pre-eminent example of the law's facilitative function: the law of trusts has provided different facilities to its users over the course of legal history, to allow individuals to leave property otherwise than by the law of primogeniture, to avoid irksome feudal incidents, to avoid taxes, to set up business ventures, and much else, but the principal core function is to arrange for the structuring of beneficial interests in property in creative ways not permitted at common law." James Penner, "An Untheory of the Law of Trusts, or Some Notes Towards Understanding the Structure of Trusts Law Doctrine" (2010) 63 Current Legal Problems 653-675, page 665

¹⁵⁶ See for instances Easterbrook and Fischel 1991 supra note 36 "An approach that emphasizes the contractual nature of a corporation removes from the field of interesting questions one that has plagued many writers: what is the goal of the corporation? Is it profit (and for whom)? Social welfare more broadly defined? Is there anything wrong with corporate charity? Should corporations try to maximize profit over the long run or the short run? Our response to such questions is: "Who Cares?""

¹⁵⁷ F. A. Hayek "The Use of Knowledge in Society" 1945 The American Economic Review, Vol. 35, No. 4. pp. 519-530.

¹⁵⁸ For a discussion of the Jury Theorem see for instance Krishna K. Ladha 1992. "The Condorcet Jury Theorem, Free Speech, and Correlated Votes". American Journal of Political Science

other shareholders (share price increase). The conflicted shareholder will, to use our terminology, vote insincerely.¹⁵⁹

However, Schouten's argument appears to be oblivious to the fact that Hayek's notion of the market as a giant information aggregation machine only works if the price signal is based on the preferences of individuals. As soon as people are required to make their choices not on what they want but in order to maximise the greater good (be it the greater good of the nation, class, or company) prices lose their information conveying ability. Again this is not to say that Hayek was right or wrong. It is only supposed to show that requiring investors in a company to vote such as to maximise the value of the company departs significantly from the idea that investors should be allowed to vote according to their own interest.

Easterbrook and Fischel justify the one share one vote rule by claiming it is efficient because it results in shareholders monitoring a company until the marginal costs are equal to marginal benefit. However, in order to get shareholder voting within a neat *marginal cost* = *marginal benefit* framework they have to make some very heroic assumptions. In the black box theory efficiency is not so much achieved by equating marginal costs to marginal benefit but by the assumption that under normal circumstances economic actors if left to their own devices will produce the socially optimal outcome. In this respect it is much closer to Adam Smith's ideas.

F. Does corporate law assume that investors vote to maximize the value of a company?

Another prominent argument by proponents of the ECH is that corporate and insolvency law assumes that investors vote to maximise the value of the company. Decoupling of economic and legal interest is therefore bad because it makes this assumption invalid. The argument against this notion is similar to the argument against basing voting rights on net economic exposure, namely that the law never made this assumption because the idea of 'maximising the value of the company' is poorly defined. One might argue that maximising the value of a company simply means maximising the present value of the future income stream of the company. For example: if project *A* has a discounted future cash flow of *Y* and project *B* has a discounted cash flow of *Z* and Y > Z, then the shareholders or creditors would have a duty to vote for this project. However, again this fails to take into account of the fact shareholders as well as creditors will assess their holdings within the context of their portfolio.

Haydon and Bodie made a similar point in a more extreme form¹⁶⁰ arguing that the director's duty to maximise the value of a company needs to be reconsidered. They are correct in their premise that investors do not necessarily prefer a company to maximise its

¹⁵⁹ Michael C. Schouten "The Mechanisms of Voting Efficiency" Centre for Business Research, University of Cambridge, Working Paper No. 411 2010 Harvard/Stanford International Junior Faculty Forum Pages 48 to 49 available at https://www.sec.gov/comments/s7-14-10/s71410-198a.pdf (last visited 4 Aug 2015)

¹⁶⁰ They write: "The notion of maximization of portfolio value strikes at the heart of the shareholder primacy norm. Under this theory, social wealth will not be maximized if each firm seeks to maximize returns for its own shareholders. Instead, social wealth depends not on the actions of individual companies, but on the actions of all companies in the economy. What this means is that in some instances, it would be more efficient (on a societal level) for a company to do something that decreased its own shareholders' wealth. Yet directors would be violating their fiduciary duties if they went forward with the transaction, since it would harm the company's shareholders. This example demonstrates yet another axis on which shareholders split into different groups based on different interests." Haydon and Bodie 2008 supra at note 69 page 494

future income stream¹⁶¹, however, this does not necessarily commit one to the view the rule requiring directors to maximise the value of the company ignoring shareholders should be abandoned (herein, referred to as the 'simple wealth maximising rule'). First, directors will not have all the information on the portfolios of each investor. Therefore, it would be extremely difficult for them to assess what the optimal risk-return pay offs are. Second, shareholders can select their optimal investment mix through diversification, which is probably better done at investment-level rather than company-level. Third, directors would still need a way of aggregating competing preferences. If they simply follow the majority shareholders' preference, then minority investors might be put off. Although, there may be a superior rule than the simple wealth maximising rule for a specific transaction, a case-specific determination is quite difficult and may open the door for the exploitation of one group of investors by another. As such, the simple wealth maximising rule may be a good compromise. However, small closely-held private companies may be an exception to this, where the principle should be applied differently.

Hu and Black themselves acknowledge that the law does not generally require voting based on wealth maximisation: "Shareholders can vote based on their private interests, even if those diverge from corporate interests [...] The freedom to vote to favor one's private interests is largely taken for granted, rather than seen as needing justification."¹⁶² Thus, it may be tempting to conclude that neither shareholders nor creditors have a general duty to vote in the best interest of the company, and can vote any way they please, provided there is no fraud on the minority. Yet some judicial authority suggests otherwise. The Delaware Supreme Court held in *Kurz* v. *Holbrook*¹⁶³ as follows:

What legitimizes the stockholder vote as a decision-making mechanism is the premise that stockholders with economic ownership are expressing their collective view as to whether a particular course of action serves the corporate goal of stockholder wealth maximization.

This appears to conflict directly with the idea that shareholders generally do not have a duty to vote to maximise the value of the company, and the Delaware Supreme Court did not see a conflict:

These principles also do not conflict with the venerable maxim that stockholders can choose freely whether and how to vote, and may do so for any reason including "for personal profit, or determined by whims or caprice". Ringling Bros.-Barnum & Bailey Combined Shows v. Ringling, 53 A.2d 441, 447 (Del.1947). The premise underlying that freedom is the alignment of economic interests and voting rights. The Ringling court ruled at a time when economic interests and voting rights were inextricably linked.

However, there are possible objections to the reasoning in Kurz:

¹⁶¹ On a very basic level investors will differ in their risk appetite, and a statement like maximizing future income streams is meaningless if one does not either assume a world without risk or specifics the risk appetite of the investor

 $^{^{\}rm 162}$ Hu and Black 2008a supra note 3, page 701

¹⁶³ Kurz v. Holbrook 989 A.2d 140 Del.Ch., 2010

- 1. The expression "for personal profit, or determined by whims or caprice" seems to imply that shareholders are genuinely free to vote any way the please, rather than there being an obligation to maximise the value of the company.
- 2. The judgement fails to define what wealth maximization means. The judgement seems to equate wealth maximization to maximising the share value. However, this does not provide guidance on how a shareholder should decide between a high risk high pay-out strategy and a low risk low pay-out strategy, or between a high share price now and a low share price in the future or *vice versa*. It could be argued here that wealth maximization rather than a unique course of action requirement, defines a set of actions or voting options for a shareholder. However, a shareholders risk attitude will probably depend, on her portfolio, among other things. As discussed, a well-diversified portfolio is a portfolio with assets that exhibit some degree of negative correlation essentially a hedge.
- 3. The judgement acknowledges that agreements to vote are permissible. However, the difference between a voting trust and the decoupling of legal and economic rights seems to be more a matter of degree rather than principle. If a shareholder enters into a voting agreement he transfers some or all of his legal rights to another, but not the economic rights i.e. legal and economic rights are being separated. It is not clear why this form of decoupling is acceptable but decoupling through CDSs is not.

Nevertheless, *Kurz*, without a doubt supports Hu and Black's argument. There are also other cases (for instance Hu discusses the Canadian TELUS case¹⁶⁴) which make expect or implicit reference to the decoupling framework. However, there is also judicial support for the arguments put forward by this article (see *CSX Corporation* v. *The Children's Investment Fund Management (UK) LLP*¹⁶⁵ discussed below). Nevertheless, it seems to be the case that the ECH has found some resonance within the judiciary and it might well be the case that the law will develop in such a way as to incorporate the ECH. The law is currently at a pivotal moment. All that this article is saying is that the law does not have to develop in a way as to incorporate the ECH (and that it would be better if it would not), however, this article does not make a prediction how the law will actually develop.

6. Examples of empty creditors and regulatory developments

Some readers may not take easily to the idea that empty creditors are not a significant problem. Potentially this may be not so much because they disagree with the arguments above, but because they feel there are simply too many real life examples where empty creditors have been an issue - there is simply too much smoke for there to be no fire. The problem with this argument is that many of the examples given to support the ECH have very little to do with empty creditors. There may be small number of cases where decoupling of economic and legal interest cause a problem. However, far from being a large-scale problem that requires large-scale action, empty creditors are an isolated problem that requires incremental action, if any.

¹⁶⁴ Henry T. C. Hu, "Financial Innovation and Governance Mechanisms: The Evolution of Decoupling and Transparency" Business Lawyer, Vol. 70, No. 2, 2015, pages 375 - 381

¹⁶⁵ United States Court of Appeals for the second circuit, 654 F.3d 276; 2011 U.S. App. LEXIS 14653

Hu and Black attribute many of the current economic ills to the decoupling of economic and legal interests. However, most of the examples they give are not related to the decoupling of economic and legal interest. For instance, they argue that decoupling contributed to housing crisis of 2008 by making negotiations between homeowners and lending institutions more difficult, particularly because homeowners could no longer negotiate directly with the lenders, as original lender no longer held their interest.¹⁶⁶ In many instances, the lender even knew who held their debt (and in many instances a debt was held by multiple parties). However, apart from the question whether this description is accurate, it is not an example of decoupling of legal and economic interest causing a problem but an example of problems caused by dispersed holdings of debt securities. The problem of dispersed holding of debt is a problem very familiar to issuers of publicly traded debt.) Even without decoupling it is possible to divide a loan into multiple slices and sell each slice with full legal and economic rights, creating dispersed ownership and making negotiations difficult.¹⁶⁷ Arguably, if the originator of the loan had retained legal interest and only transferred economic interest, it would have been easier for borrowers to renegotiate; as the originator would have had legal power to change the loan's terms.

Further, Hu and Black argue that decoupling is a source of systemic risk for the financial system¹⁶⁸. They quote Duffie by stating:

Duffie (2007) offers the judgment that '[e]ven specialists in [CDOs] are currently ill equipped to measure the risks and fair valuation of tranches that are sensitive to default correlation' and discusses how this might contribute to liquidity shocks.¹⁶⁹

Duffie might well be correct in her claim regarding CDOs (collateralized debt obligations). However Hu and Black fail to explain what sensitivity to default correlation has to do with decoupling. Debt can be securitized without decoupling – it may be that CDOs were at the heart of the financial crisis (although the author of this article does not agree with this). However, apart from synthetic CDOs, securitisation does not depend on decoupling of economic and legal interest.

¹⁶⁶ "The current housing finance crisis highlights some of the issues arising from debt decoupling. In the past, a homeowner facing financial difficulty could try to negotiate directly with his lender for waivers and loan modifications. This is harder today. Many home mortgage loans are resold by the initial lender, securitised, or both. If a loan has been securitised, the effective holder of the lender's contractual rights – the servicing agent for the loan that deals with the homeowner – may have limited authority to make accommodations - or too little economic ownership to want to do so. The economic interest will often be spread among a wide range of investors, potentially around the world. Even if these investors had congruent interests and often they do not because of the way the underlying obligations were divided into tranches-the transaction costs simply to find them would be prohibitive. Sometimes it can be unclear who holds the right to foreclose." Hu and Black 2008 supra note 3 pages 729 - 730

¹⁶⁷ In fact, negotiations might be easier if the legal ownership is retained by one person and only the economic ownership is sold. That way the owner may have to negotiate only with the holder of the legal interest

¹⁶⁸ "Decoupling can foster other potential sources of systemic risk. Some reflect the ways in which financial innovations in general can contribute to systemic risk (Hu, 1993). These include: modelling errors (including underweighting low probability, large loss ('tail') risks, such as the loss of liquidity in times of market stress); buyer and seller failures to understand complex financial products; and new types of agency costs, both within financial institutions and between these institutions and their customers." Hu and Black 2008a supra note 3 page 691

¹⁶⁹ Ibid page 691

A. Stock lending

Apart from the general examples discussed above, Hu and Black posit a number of more concrete examples. An individual dissection of each example would prove too timely for the purposes of this article, however, many examples mentioned are based on stock lending. Therefore, it is worthwhile to spend some time on Hu and Black's analysis of stock lending / share borrowing:

An alternate empty voting strategy is known as record date capture. [...] This strategy involves borrowing shares in the stock loan market just before the record date and returning the shares immediately afterwards. Under standard borrowing arrangements, the borrower has no economic exposure to the company. The borrower contracts with the share lender to (1) return the shares to the lender at any time at the election of either side, and (2) pay the lender an amount equal to any dividends or other distributions the borrower receives on the shares. Taxes aside, this loan agreement (a 'coupled asset' in our framework) leaves the borrower holding votes without economic ownership, while the lender has economic ownership without votes. [...] A subtle vet central aspect of these empty voting strategies is that they do not directly require market trading of shares. Thus, they can often be carried out, rapidly and on a large scale, with little impact on share price. Consider the share borrowing strategy. The empty voter borrows shares, and votes simply move from the share lender to the empty voter. No shares are bought or sold.¹⁷⁰

First, a small clarification, Hu and Black wrongly characterise how stock lending works by claiming that legally it does not involves a sale of shares. In fact, from a legal point of view securities lending does entail the buying and selling of securities:

Securities lending describes the common market practice by which securities are transferred temporarily from one party (the lender) to another (the borrower) with the borrower obliged to return them (or equivalent securities) either on demand or at the end of any agreed term. However, the word 'lending' is in some ways misleading. Under English [and Australian] law, the transaction is in fact an absolute transfer of title (as in a sale) against an undertaking to return equivalent securities.¹⁷¹

More importantly, the issues that Hu and Black try to highlight have nothing to do with decoupling but only how one should legally define the relationship between lender and borrower in a stock lending transaction. The relevant legal issue here is not the decoupling of legal and economic interest. Instead, the relevant question is at what point does a party not permitted to vote as a shareholder, have so much control over the party that is permitted to vote such that the former as ought to be regarded as having acquired voting rights from the latter. Hu and Black address this under the heading of soft parking, arguing:

¹⁷⁰ Ibid page 641

¹⁷¹ Australian Securities Lending Association Limited (commissioned by) "An Introduction to Securities Lending (Australia)" Mallesons Stephen Jaques, 2005 page 8

Firms themselves can use decoupling techniques to provide insiders or other friendly third parties with votes on the firm's own shares, yet little or no economic exposure. In doing so, firms are effectively voting their own shares. This vote parking is often 'soft' and based on informal expectations about how the shares will be voted. Company insiders arrange for voting ownership to be held by someone else, and ensure that the someone [sic.] else has incentives to vote pro-management. Usually, the voteholder is not formally obliged to vote as management directs-that would invite disallowance of the votes under corporate law. Incentives and informal understandings do the work instead. [...] One strategy involves the corporation acquiring economic ownership of its shares through an equity swap or other equity derivative, contract with a derivatives dealer or other professional friend. In substance, the corporation has repurchased its own shares.¹⁷²

It is clearly a problem when a company votes its own shares, as this is illegal in many jurisdictions. However, the relevant issue here is not decoupling of economic and legal ownership, it is that the company is able to influence another to vote according to its wishes. Hu and Black admit the company only ensures "that the someone [sic] else has incentives to vote pro-management"¹⁷³. These incentives that are key issue, not decoupling. If the company were party to a soft park arrangement, but had no way of influencing the legal interest holders, then the company could not influence the vote. A company, who is party to a soft parking arrangement (or rather the directors or managers of such company) is usually not interested in economic ownership of the shares as such (i.e. the company does not seek to profit from the derivatives position). What management wants are the legal rights associated with the shares; precisely those rights which a soft parking arrangement does not provide. Influence is key, however, decoupling itself, does not provide that influence. Hu and Black agree with this when they write that the "dealer [i.e. the person who holds the voting rights] wants to stay on good terms with this client and preserve a reputation for treating clients well"¹⁷⁴ and that is the reason why a dealer would vote the shares according to the wishes of the company. Regardless of whether this is true or not, the point is that the dealer wants to stay on good terms with the company, regardless of whether the shares are soft parked or if the dealers owns the legal and economic interest in the company. The primary purpose of decoupling in a soft parking arrangement, as described by Hu and Black,¹⁷⁵ is to (slightly) lower the costs to the person holding the shares by isolating that person from economic exposure to the shares. This means that the incentives inducing that person to vote pro-management are lower. In that sense, decoupling does contribute to the problem. The legally relevant issue, however, is conflict of interest. For instance, if a company gives a lot of work to an investment bank (and pays a lot of fees) and the investment bank also happens to own shares in that company, in a hostile take-over situation the bank might well have an incentive to vote for the incumbent management, regardless of whether the bank owns the economic and the legal rights or solely the legal rights. The relevant legal issue is to determine when a shareholders is an interested party or not, an issue

¹⁷² Hu and Black 2008b supra note 3 page 643

¹⁷³ Ibid page 643

¹⁷⁴ Ibid page 644

¹⁷⁵ However, there might be whole range of other reasons why parties may engage in soft parking

the law routinely deals with. This issues was discussed in *CSX Corporation* v. *The Children's Investment Fund Management (UK)* LLP^{176} . Although the case was decided on other grounds, in an *obiter dicta* statement circuit judge Ralph K. Winter held as follows:

In my view, without an agreement between the long and short parties permitting the long party ultimately to acquire the hedge stock or to control the short party's voting of it, such swaps are not a means of indirectly facilitating a control transaction. [...] In my view, cash-settled total-return equity swaps do not, without more, render the long party a "beneficial owner" of such shares with a potential disclosure obligation under Section 13(d). [...] The issue here is not fact specific. Total-return cash-settled swap agreements can be expected to cause some party to purchase the referenced shares as a hedge. No one questions that any understanding between long and short parties regarding the purchase, sale, retention, or voting of shares renders them a group -- including the long party -- deemed to be the beneficial owner of the referenced shares purchased as a hedge and any other shares held by the group. Whether, absent any such understanding, total-return cash-settled swaps render a long party the beneficial owner of referenced shares bought as a hedge by the immediate short [...] party or some other party down the line is a question of law not fact.¹⁷⁷

This analysis is correct, absent an agreement or understanding being party to decoupling of legal and economic rights does not in itself mean that one party has an incentive to act in the interest of the other party. It might be argued, however, that this is only true on a theoretical level, that in practice dealers usually vote to please their clients. This is an empirical questions, which can only be settled by further research. However, evidence presented by the FSA (now FCA) and PwC in the UK suggests otherwise.¹⁷⁸ There are of course instances where disclosure of economic interest is desirable. In bankruptcy proceedings creditors are often grouped together if they share certain characteristics. In this instance it makes sense to base the group on economic ownership because creditors in the same group are likely to have similar interests. However, it is worth remembering that the grouping of creditors is essentially a time saving device. Likewise, if creditors serve on creditor committees it is useful to know about their economic interests. This is because these creditors are intended to represent other creditors. As is usual in agency situations, conflicts of interests need to be addressed. However, the general point remains that empty creditors do not pose a special problem and in cases where there should be disclosure, the law already demands such disclosure.

B. The Blackstone Codere CDS

The case of the Blackstone Group, the US private equity firm, and Codere, a Spanish gaming company, is not discussed by Hu and Black. Yet, it is arguably one of the most well-known cases in relation to the ECH; particularly because it was parodied by the prominent

¹⁷⁶ United States Court of Appeals for the second circuit 654 F.3d 276; 2011 U.S. App. LEXIS 14653 ¹⁷⁷ Ibid page 11 and subsequent

¹⁷⁸ Financial Services Authority, "Disclosure of Contracts for Difference - Consultation and draft Handbook text" 07/20, page 6 http://www.betterregulation.com/external/cp07_20.pdf (accessed 31 March 2015)

US comedian Jon Stewart.¹⁷⁹ Although the case did not generate much academic interest, its prominence in the main stream media merits a brief discussion.

According the Bloomberg Business¹⁸⁰, GSO Capital Partners LP ("GSO"), a unit of the Blackstone Group, bought bonds issued by Codere worth $\notin 25 - \notin 30$ million and CDSs written on these bonds. Later, GSO acquired a $\notin 100m$ revolving loan facility to which Codere was party. Thereafter, GSO agreed to roll over the loan facility under the condition that Codere would pay the coupon on its bonds late thereby triggering the CDS. Codere agreed, and paid the coupon two days after the 30 day grace period stipulated by ISDA, which resulted "in a \$197 million payment to holders of the swaps. Based on a value of 54.5 cents on the dollar for the bonds set at [...] to determine the swaps payout, GSO would have made from 11.4 million euros to as much as 13.7 million"¹⁸¹. For some this transaction was nothing short of legalised fraud¹⁸², and, it seemed a clear case of empty creditors¹⁸³. Actual data on the transaction is hard to come by, therefore, analysis must be done on an abstract level. According to Blackstone, it actually helped Codere. In response to the satire by Jon Stewart, Blackstone responded:

We love Jon Stewart and he continues to be one of the funniest people on TV. But the somewhat boring truth is that we cooperated with Codere and its advisors to save it from bankruptcy or liquidation. We provided capital when no one else would, which allowed the Company to live and fight another day.¹⁸⁴

It is difficult to ascertain if it is true that "no one else" would have provided capital to Codere. However, the fact remains that Blackstone did roll-over the loan, (i.e. it provided a substantial amount of capital to a company in deep financial distress). Further, the profit figure of $\notin 11.4 - \notin 13.7$ million is the gross profit, not the net profit, as it was pointed out by Felix Salmon¹⁸⁵. Blackstone in all likelihood did not get the CDS for free, but had to pay for it (In fact, it seems likely that Blackstone must have paid quite a lot for the CDS due to Codere's difficult financial situation.). This would have reduced Blackstone profit on the CDS leg of the transaction quite substantially. Even assuming the trade was profitable for Blackstone, it certainly was not risk-free. The transaction could only be implemented by Blackstone "taking a huge direct exposure to Codere on the other side of its trade"¹⁸⁶ (i.e. rolling over the loan). Furthermore, the interesting aspect of the transaction was, as it was

http://blogs.wsj.com/moneybeat/2013/12/05/recent-blackstone-deal-in-focus-on-the-daily-show/

¹⁸⁵ Reuters, The truth about Blackstone and Codere, http://blogs.reuters.com/felix-salmon/2013/12/06/the-truth-about-blackstone-and-cordere/ (last visited 24 March 2015)

¹⁷⁹ Supra note 2

¹⁸⁰ Bloomberg Business, "Blackstone Unit Wins in No-Lose Codere Trade: Corporate Finance" http://www.bloomberg.com/news/articles/2013-10-22/blackstone-unit-wins-in-no-lose-codere-trade-corporatefinance (last visited 24 March 2015)

¹⁸¹ Ibid

¹⁸² See for instance, "How to Make \$15.6 Million, Risk-Free", http://www.caseyresearch.com/cdd/how-to-make-15.6-million-risk-free (last visited 24 March 2015)

¹⁸³Although as far as the authors no commentators actually apply the label empty creditors to this case¹⁸⁴ WSJ, "Recent Blackstone Deal in Focus on the Daily Show",

¹⁸⁶ Ibid

pointed out by Matt Levine, that Blackstone found a way to turn the market view of Codere's default risk into cash¹⁸⁷. As he explains:

"The credit-default swaps market is a way to express in terms of money the market's estimate of a company's chance of default -- real default, not missing a payment by two days -- in the future. Blackstone found a way to turn that expression in terms of money into money. One day it had a CDS contract with a mark-to-market value of 11 million euros or whatever; the next day it had 11 million euros. One day the banks were taking risk on Codere's credit that had gone against them to the tune of 11 million euros; the next day they had no risk and 11 million fewer euros. The risk that they got rid of was still worth about 11 million euros."¹⁸⁸

All this makes it more likely that the true motivation behind the transaction was not to destroy Codere in order to profit from the CDS but to restructure the debt. The reason Codere needed to be put into bankruptcy was to deal with hold-out creditors¹⁸⁹. The financial journalist Felix Salmon argued that rather than being to the detriment of Codere, Blackstone gave the company a second chance, stating that"[f]or a piece of clever financial engineering, that's an uncommonly positive societal outcome.¹⁹⁰ Another aspects of the transaction is that depending which law applies to the contract the creditors who were paid late may had a claim against Blackstone under the doctrine of tortious interference¹⁹¹. After all Blackstone induced Codere to breach its contract with a third party and Blackstone had actual knowledge of the contract.

C. Regulatory developments

Notwithstanding the above discussion, superficially it may appear that regulatory develop seem to suggest that at least regulators take the ECH seriously. For instance, since June 2009 the UK's Disclosure Rules and Transparency Rules sourcebook (DTR) require that the disclosure of financial instruments which have a similar economic effect to qualifying financial instruments¹⁹². Essentially, DTR 5.3.1(b) aims to catch contract for differences (CfDs) and other derivatives instruments that provide the same economic exposure as shares. However, in the relevant consultation the FSA wrote:

[T]he key question is whether CfDs are in effect a substitute for shares so that disclosure of CfD positions would bring the same benefits to price

¹⁸⁷ Bloomberg View, "Blackstone Made Money on Credit-Default Swaps With This One Weird Trick" http://www.bloombergview.com/articles/2013-12-05/blackstone-made-money-on-credit-default-swaps-with-this-one-weird-trick

¹⁸⁸ Ibid

¹⁸⁹ See for instance http://www.virmmac.com/blackstone-responds-to-jon-stewart/ (accessed 24 March 2015) ¹⁹⁰Felix Salmon: "Add it all up, and I really don't think that what Blackstone did was particularly egregious; there's certainly no reason to believe that it should be illegal. [...] Blackstone's actions were a large part of the reason why Codere managed to survive. Far from being a pile of ashes, Codere now has a real chance of avoiding liquidation. For a piece of clever financial engineering, that's an uncommonly positive societal outcome. " Supra note 42

¹⁹¹ See for instance Lumley v Gye [1853] EWHC QB J73 i

¹⁹² Pursuant to DTR 5.3.1(b)

formation, takeover situations and market confidence as MSN disclosures. This would be the case where:

- CfD positions are closed out with the underlying stock;
- and/or CfD writers vote on behalf of CfD holders where they hedge their positions with the underlying stock

[...] The survey carried out for us by PwC suggests that the policies and practices of investment banks writing CfDs do not generally operate in these ways. But it also demonstrates that despite the stated – and implemented - policies of investment banks, holders of CfDs do sometimes approach the writers seeking to exert influence on an undisclosed basis over voting rights attached to stock held as hedge against those contracts (it should be noted that the general policy of investment banks is not to vote shares in accordance with CfD holders' wishes).

There are two things to note about this statement. First, according to the survey CfDs are not generally used to exercise influence. Second, the FSA (now FCA) chose to ignore this finding of the survey in favour of anecdotal evidence.¹⁹³ However, disclosure of CfDs is not necessarily contrary to the arguments in this article because disclosing CfDs position means the market is provided with more information, which should contribute to better price discovery.

Further, disclosure obligation in post-financial crisis regulation like Dodd-Frank Title VII in the US, or the EMIR or MiFID II in Europe are aimed to improve transparency not to address the empty creditor problem but to address counterparty risk.¹⁹⁴ Likewise the EU Regulation on Short Selling and Certain Aspects of Credit Default Swaps (EU) No 236/2012 is not a piece of legislation to address empty creditors. However, the regulation seems to be less concerned with empty creditors and more with market stability. For instance, this can be seen from the dual regimes of disclosure (i.e. net short position of >0.2% in eligible shares need to be disclosed 'privately' to the competent authorities) and the prohibition on naked short-selling. Such a prohibition makes most sense if one is concerned with the market impact when the position is closed out, rather than with empty creditors. Further, the Short Selling Regulation contains an exemption for market makers. If the issues, raised by Hu and Black, were part of the motivation behind the Short Selling Regulation one would not expect such an exemption to exist (As discussed above Hu and Black are concerned how dealers which are parties to short positions behave in the market, and the same reasoning applies to market makers as well). Thus, in conclusion, it can be stated that, besides the first glance appearance, there is no broad regulatory trend to regard empty creditors or empty shareholders are a significant problem.

7. Conclusion

This paper tried to show three things. First, it showed that the ECH consists of two distinct issues i.e. the economic and the legal problem. Second, the economic problem is unlikely to

 ¹⁹³ Among other things this raises the question why the FSA hired PwC to conduct the survey in the first place.
 ¹⁹⁴ See for instance paragraph (4) recitals for EMIR http://eur-

lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:201:0001:0059:EN:PDF (last visited 23 March 2015)

be significant issues because CDS seller have an incentive to buy the underlying debt. However, more research is necessary to get a more comprehensive understanding. The introduction of reporting requirements for most derivatives is likely to be of great help for this research. Regarding the legal problem this article argued that it is based on a misunderstanding of what the underlying assumption of corporate law are. According to this article all rights investors have in a company are solely based on the amount they invested. It is therefore irrelevant whether an investor has a CDS position or not, and as such CDS do not violate the background assumptions of corporate or insolvency law. This does not mean that one can be certain that no law or regulation anywhere is affected by empty creditors, only that, generally speaking, empty creditors are not contrary do the background assumption of corporate law. All of this suggests that the best policy response to empty creditors is to do nothing. If any policy action is needed it is probably enough to rely on the disclosure requirements for derivatives.