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The Value of Financial Market Insolvency Safe Harbours

Philipp Paech[*]

Abstract – 'Safe harbour' is shorthand for a bundle of privileges in insolvency which are typically afforded to financial institutions. They are remotely comparable to security interests as they provide a financial institution with a considerably better position as compared to other creditors should one of its counterparties fail or become insolvent. Safe harbours have been and continue to be introduced widely in financial markets. The common rationale for such safe harbours is that the protection they offer against the fallout of the counterparty's insolvency contributes to systemic stability, as the dreaded 'domino effect' of insolvencies is not triggered from the outset. However, safe harbours also come in for criticism, being accused of accelerating contagion in the financial market in times of crisis and making the market more risky. This paper submits that the more important argument for the existence of safe harbours is liquidity in the financial market. Safe harbour rules do away with a number of legal concepts, notably those attached to traditional security, and thereby allow for the exponentiation of liquidity. Normative decisions of the legislator sanction safe harbours as modern markets could not exist without these high levels of liquidity. To the extent that safe harbours accelerate contagion in terms of crisis, which in principle is a valid argument, specific regulation is well suited to correct this situation, whereas to repeal or significantly restrict the safe harbours would be counterproductive.

Keywords: Insolvency, financial institutions, collateral, close-out netting, liquidity, systemic risk

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1. *Introduction*

In the aftermath of the global financial crisis of 2008, the financial industry was proud that its standard contracts, the so-called 'master agreements', documenting derivative, repo and other types of financial transactions[1] worth trillions of US dollars in value,[2] had withstood the storm.[3] This was taken as substantiating the value of the risk mitigation mechanisms included in these agreements, probably their most important function.[4] Their significance is readily illustrated by a comparison with the real estate market. Just as the real estate market in its present form would not exist without concepts such as mortgage or hypothec, the modern financial market would not exist without master agreements and their built-in risk mitigation mechanisms, notably

[1] This article, for ease of reference, generally refers to derivative and sale-and-repurchase ('repo') transactions. In a derivative contract, the obligations of the parties depend on a reference value which typically changes over time, eg the market price of a basket of shares. Derivatives are generally (but not necessarily) documented under the 2002 Master Agreement (or its earlier versions) promoted by the International Swaps and Derivatives Association (ISDA – not publicly available). Repos are functionally akin to a secured loan but different from the legal perspective: an asset is sold against a cash payment and bought back at a later point in time at a slightly different price. Repos are often documented under the Global Master Repurchase Agreement (GMRA) <http://www.icmagroup.org/assets/documents/Legal/GMRA-2011/GMRA-2011/GMRA%202011_2011.04.20_formular.pdf> accessed 10 March 2015. However, safe harbours generally also cover other types of contract, such as securities lending, dealings in foreign exchange, financial instruments, precious metals, etc, see UNIDROIT, Principles on the Operation of Close-out Netting Provisions (2013 – 'Unidroit Principles on Close-out Netting'), Principle 4 and accompanying commentary <http://www.unidroit.org/instruments/capital-markets/netting> accessed 10 March 2015. There are many different national, regional and international master agreements, see for further examples P Paech, 'The Need for an International Instrument on the Enforceability of Close-out Netting in General and in the Context of Bank Resolution' (2011) UNIDROIT Study S78c Doc. 2, 11 http://www.unidroit.org/english/documents/2011/study78c/s-78c-02-e.pdf> accessed 10 March 2015.

[2] To provide a fragmentary and regionally limited picture: at the end of June 2014 the outstanding gross market value of over-the-counter derivatives was about 17.5tn USD world wide, see Bank for International Settlements (BIS), Derivatives Statistics, Table 19 <http://www.bis.org/statistics/derstats.htm> accessed 10 March 2015. On 8 October 2014, the value of total outstanding repo transactions in the USA was 3.88tn USD, see A Copeland and others, 'Lifting the Veil on the U.S. Bilateral Repo Market' <http://libertystreeteconomics.newyorkfed.org/2014/07/lifting-the-veil-on-the-us-bilateral-repo-market.html#.VP3J6ELd7wx> last accessed on 10 March 2015. At the European end of the repo market, the total value of the repo contracts outstanding on the books of the 65 institutions that participated in the relevant survey was EUR 5.7tn EUR in June 2014, see International Capital Markets Association, 'European Repo Market Survey No 27' <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/repo/latest/> last accessed 10 March 2015.

[3] See D Mengle, 'The Importance of Close-out Netting' (2010) ISDA Research Notes No. 1 <http://www.isda.org/researchnotes/pdf/Netting-ISDAResearchNotes-1-2010.pdf> accessed 10 March 2015; in relation to the fall-out from the (pre-crisis) Enron scandal see ISDA, 'Enron: Corporate Failure, Market Success' paper delivered at the 17th Annual General Meeting, Berlin, 17 April 2002, 10-15 <http://www.isda.org/whatsnew/pdf/EnronFinal4121.pdf> accessed 10 March 2015.

[4] Master agreements provide the general advantages of widely used standard contracts, such as common terminology, compatibility, etc. The ISDA Master Agreement, for instance, further adds provisions on taxation and on multi-branch scenarios.

termination, close-out netting and collateral.[5] That is to say, what is discussed in this article refers to a cornerstone of our modern economies.

In the event of a financial institution's[6] insolvency or similar event, a master agreement limits the credit risk[7] of its financial counterparties.[8] Master agreements enable financial counterparties to liquidate entire portfolios of open contracts as soon as the other part fails or otherwise becomes a greater risk.[9] Prompt liquidation of all derivatives and repo positions leaves the counterparties with a relatively modest amount to pay to or, respectively, claim from the failing institution. Accordingly, their potential loss remains comparably small and their contracts do not run the risk of becoming entangled in lengthy insolvency proceedings that might be opened over the failing firm.

The laws of most developed financial markets[10] make sure that these — purely contractual — arrangements are enforceable despite the fact that the liquidation arrangements made under master agreements somehow contravene the *pari passu* principle,[11] much as in the case of security interests. The insolvency law provisions that guarantee the enforceability of master agreements in the event of insolvency are generally

[5] See n 32 and n 35 and accompanying text.

[6] 'Financial institutions' is used here in the colloquial sense and includes banks, investment firms and many other types of business intervening in the financial markets. The exact scope of eligible financial institutions differs between jurisdictions, see P Paech, 'Close-out Netting, Insolvency Law and Conflict-of-laws' (2013) 14-2 Journal of Corporate Law Studies 419, 443-444.

[7] Counterparty credit risk refers to the potential loss suffered by a party if its counterparty fails, in particular in case of insolvency. It basically corresponds to the replacement value of an unperformed contract (A fails and B, while neither has to perform, loses the value that their contract had for it). The risk only exists in relation to transactions that have a positive value for the solvent party. Counterparty credit risk is different from settlement risk (A fails before performing on the contract, while B has already performed).

[8] 'Financial counterparty' is often used to refer to an insolvent's counterparty which is a financial institution.

[9] Typically, 'events of default' refer to events where one party fails to comply with its obligations, such as non-performance, breach of contractual warranties or representations, etc. 'Termination events' refer to instances where no-one is at fault but the circumstances change, such as the merger of a party, taxation, etc. Both allow for immediate termination and liquidation of the contracts covered by the master agreement.

[10] ISDA lists 43 jurisdictions in which the relevant provisions of master agreements are regarded as generally enforceable <http://www.isda.org/docproj/stat_of_net_leg.html#f1> accessed 10 March 2015.

[11] For ease of reference, this article adopts a broad understanding of *pari passu* as the principle of equal treatment of general creditors which informs three questions, notably which assets are available for distribution, who participates in the distribution and how the assets should be shared amongst the general creditors (notably *pro rata*). However, these three issues differ conceptually, see, for example, M Bridge and J Braithwaite, 'Private Law and Financial Crisis', (2013) 13 Journal of Corporate Law Studies 361, 367-370.

referred to in the context of US bankruptcy law as the 'safe harbour' rules.[12] In this article, I will use this catchy label also in relation to other jurisdictions, albeit with the caveat that safe harbours and their context differ from one jurisdiction to another, as will be shown below.

The rationale for the privileged treatment arising under insolvency safe harbours appears to be two-fold. The part of the rationale that occupies the less prominent place in the policy debate concerns increased market liquidity through an increased volume of repo and derivatives transactions. Quite comparably to 'traditional' security interests,[13] safe harbours encourage financial institutions to enter into these contracts by considerably reducing the degree of counterparty risk to which they are exposed. The second, more prominently voiced rationale refers to contagion in the market should one of these systemically important institutions fail.[14] This situation, where a financial market participant fails because of the earlier failure of its own counterparty is often described as 'a domino of insolvencies' or, more generally, systemic risk.[15] This second rationale is about decreasing overall systemic risk in the financial market.

However, the value of the special protection afforded by safe harbours may be questioned.[16] Particularly in the wake of the latest financial crisis, safe harbours may be

[12] For an overview of the incremental development of US safe harbour rules see C Mooney, 'The Bankruptcy Code's Safe Harbors for Settlement Payments and Securities Contracts: When is Safe too Safe?' (2014) 49 Texas International Law Journal 245, 247-251.

[13] In the following I refer to 'traditional security interests', meaning arrangements such as, in particular, pledge, mortgage, hypothec and charge. This is to facilitate the distinction with the most popular form of securing an obligation in the financial market, so called title-transfer collateral, which is an agreement where the obligor transfers full (legal and beneficial) title over an asset which is to be re-transferred once the debt has been discharged. The difference between mortgage and title-transfer collateral consists in the fact that in case of a mortgage, the mortgagor retains equity of redemption of the asset whereas under a title-transfer collateral arrangement the obligor only has a contractual right to retransfer of title of an asset of the same type, see H Beale et al, The Law of Security and Title-based Financing, para 3.14; M Smith, 'Security' in DD Prentice (ed), Corporate finance law in the UK and EU Oxford University Press 241, 242.

[14] See UNIDROIT Principles on Close-out Netting (n 1), Principle 4 – Key Considerations.

[15] For an explanation of systemic risk, see GG Kaufman and KE Scott, 'What is systemic risk, and do bank regulators retard or contribute to it?' (2003) VII-3 The Independent Review 371-391.

[16] See FR Edwards and ER Morrison, 'Derivatives and the Bankruptcy Code: Why the Special Treatment?' (2005) 22 Yale Journal on Regulation 91-122; RR Bliss, and GG Kaufman, 'Derivatives and Systemic Risk: Netting, Collateral, and Closeout' (2006) 2 Journal of Financial Stability 55-70; SL Lubben, 'Derivatives and Bankruptcy: the Flawed Case for Special Treatment' (2009) 12-1 University of Pennsylvania Journal of Business Law 61-78; 'Repeal the Safe Harbors' (2010) 18 American Bankruptcy Institute Law Review 319-335; The Bankruptcy Case without Safe Harbors' (2010) 84 American

regarded as extending unjustified privileges to financial institutions which produce negative externalities overall, not least since their cost is borne by non-financial market participants and other stakeholders, including society as a whole. Therefore, curtailing or even abolishing safe harbours and leading financial institutions back into the 'regular' insolvency regime may help to dismantle these distortions and decrease the risks inherent in the financial market.

Discussing these assumptions takes us straight back to the two prongs of the rationale of safe harbour rules. Again, as we know from the context of traditional security interests, it is debatable to what extent there is overall social and economic value in allowing parties to circumvent the *pari passu* baseline of distribution through private bargaining, leading to a shift of the risk away from those with higher bargaining power (typically banks) to the broader economy. It is ultimately the legislator who transforms the result of that debate into a normative policy decision as to the extent to which insolvency privileges are available.[17]

My main goal is to remove the biases that have dominated the debate so far. Therefore, this article places the safe harbours into a broader context, notably by looking at jurisdictions other than the US and by adopting a cross-jurisdictional view, as opposed to an idiosyncratic one which is incongruent with the international character of financial markets. Furthermore, I believe that insolvency law cannot be considered in isolation but

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Bankruptcy Law Journal 123-144; E Perotti, 'Systemic Liquidity Risk and Bankruptcy Exceptions' (2010) DSF Policy Paper Series No 8 <http://dare.uva.nl/document/2/114634> accessed 10 March 2015; JM Peck, R Mokal and T Janger, 'Financial Engineering Meets Chapter 11 Safe Harbors and the Bankruptcy Code' (2011) <http://discovery.ucl.ac.uk/1402065/1/Peck,%20Mokal%20and%20Janger%20on%20Safe%20Harbors%20and%20the%20Bankruptcy%20Code.pdf> accessed 10 March 2015; MJ Roe, 'The Derivatives Market's Payment Priorities as Financial Crisis Accelerator' (2011) 63 Stanford Law Review 539-589; D Duffie and D Skeel, 'A Dialogue on the Costs and Benefits of Automatic Stays for Derivatives and Repurchase Agreements' (2012) University of Pennsylvania Law School Institute for Law and Economics, Research Paper No. 12-2 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1982095> accessed 10 March 2015. DA Skeel and TH Jackson, 'Transaction Consistency and the New Finance in Bankruptcy' (2012) 112 Columbia Law Review 152-202; SL Schwarcz and O Sharon, 'The Bankruptcy Law Safe-Harbor for Derivatives: a Path-Dependence Analysis' (2014) 71 Wash & Lee Law Review 1715-1755; ER Morrison, MJ Roe an CS Sontchi, 'Rolling Back the Safe Harbours' (2014) <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2484565> accessed 10 March 2015.

[17] See V Finch, *Corporate Insolvency Law* (2nd edn, Cambridge University Press 2009) 601.

must be viewed together with other areas of law, notably financial regulation.[18] In particular, the new global soft law standards, especially those set by the G20 States and the Financial Stability Board (FSB), are currently gaining unprecedented momentum and are likely to dominate the debate to a much greater extent than will considerations of domestic insolvency law policy.[19] Regulation is an area of the law that has far greater impact on risk mitigation in the financial market than insolvency law could ever achieve.[20] This issue ties in with the dispute on the insolvency 'axioms'[21], ie the question of what insolvency law can and should achieve, in particular in motivating market participants to adopt a certain type of conduct while they are still going concerns.

In the second section, I will widen the perspective to jurisdictions other than the US since the picture there is quite different. However, differences relate not so much to the safe harbour regime (which is fairly homogeneous globally speaking) as to the gap between the safe harbour, on the one hand, and the generally applicable insolvency regime, on the other hand: in the US, that gap is considerably more pronounced than it is in other jurisdictions (England, Germany, Italy and Belgium will serve as examples here). As a result, the polarity between the treatment of the financial and the non-financial world — which generally informs the debate in the context of debtor-friendly US bankruptcy law — is the exception rather than the rule. It will become clear that jurisdictions with a

[18] The differentiation between financial 'law' and financial 'regulation' is not very clear and in parts nonsensical. However, for the present purpose one might think of 'law' as addressing horizontal rights between, in particular, creditors and debtors or owners and non-owners, whereas 'regulation' addresses the vertical State-to-market relationship, mainly working on the basis of orders, prohibitions and sanctions for non-compliance.

[19] Since the recent financial crisis, the G20 States have set a number of broader policy goals aimed at strengthening financial regulation, in particular relating to derivatives clearing, bank capital requirements, banks' compensation practices, and bank resolution, see in particular '*G20 Leaders Statement: The Pittsburg Summit'* < http://www.g20.utoronto.ca/2009/2009communique0925.html#system>. These are typically picked up by the Financial Stability Board and transformed into more detailed standards, see http://www.financialstabilityboard.org/what-we-do/policy-development/. In most cases, these standards are refined by organisations such as the Bank for International Settlements, the Basel Committee on Banking Supervision or the International Organization of Securities Commissions before they are implemented into national law or EU law, respectively. Section 4 of this article refers to a number of these instruments. See generally C Brummer, 'Soft Law and the Global Financial System' (2011) Cambridge University Press.

[20] See Section 4.

[21] DG Baird, 'Bankruptcy's Uncontested Axioms' (1998) 108 Yale Law Journal 573-599; See V Finch, 'Security, Insolvency and Risk: Who Pays the Price' (1999) 62 Modern Law Review 633-670.

more creditor-friendly approach to insolvency policy are much more inclined to embrace the notion of insolvency safe harbours.

The third section addresses the less prominently discussed, yet probably more relevant rationale for safe harbours, that of increased liquidity.[22] Much like the rationale underlying traditional security interests, which are typically introduced to strengthen lending markets,[23] safe harbour rules allow for more liquidity in the relevant derivatives and repo markets. However, the economic advantages of safe harbours go far beyond the known effects of traditional security interests. They create remarkable flexibility across different types of asset relevant to the financial market, which are money, claims and securities. At the same time, they do away with certain legal categorisations, in particular that between title transfer collateral and traditional security. This gives financial institutions scope for a type of risk management where all positions may be used for all purposes and throughout all jurisdictions that admit safe harbours. Under the safe harbour protection, the use of collateral becomes extremely efficient—or, viewed from a different perspective, it would be fair to say that safe harbours allow the available collateral cover to be stretched ever more thinly.

The fourth section addresses the reduction of systemic risk as the more prominent rationale for providing safe harbours. While the base argument — that reducing individual counterparty risks leads to reduced overall systemic risk — looks relatively straightforward, there would appear to be two potential antagonists to the effect of safe harbours which render a discussion much more complex. The first antagonist is moral hazard. It stands to reason that considerably lower counterparty risk is likely to trigger a more lenient approach to matters of creditworthiness of counterparties — however, whether this will lead to a riskier market overall remains difficult to assess. It is equally unclear whether it should be the role of insolvency law at all to control market

[22] 'Liquidity' is the ability to sell any asset for other assets or cash at will, K Pistor, 'A Legal Theory of Finance' (2013) 41 Journal of Comparative Economics 315, 316.

[23] See Finch, 'Security, Insolvency and Risk' (n 21) 637.

participants' conduct while they are going concerns. The second antagonist is the effect of mass liquidation in the event of failure of a financial institution. Safe harbours may rapidly cause the liquidation of the greater part of the portfolio, thereby triggering collateral shortages affecting the entire market. Discussing both antagonists leads us straight into the question of the growing role of regulation in limiting systemic risk. To begin with, bank resolution regimes are now being introduced all over the globe. These are novel administrative measures that fall outside traditional categories of insolvency proceedings and are precisely aimed at avoiding the systemic impact of bank failures. Furthermore, there are now regulatory measures (some under preparation, others already implemented) that focus on specific aspects of avoiding systemic risk. As a consequence, the immediate relevance of systemic risk mitigation through safe harbours is considerably reduced.

The final section pulls together the various aspects and attempts to draw an overall picture of the value of safe harbours. It concludes that safe harbours in their current form are necessary for a functioning derivatives and repo market and for the modern financial market as a whole, and that they have highly positive effects on liquidity — it is true that the collateral cover in the market can be stretched very thinly on the basis of safe harbours but this effect is better controlled by regulation. In that sense, the systemic risk rationale for safe harbours is somewhat at odds with reality. Insolvency law should not be concerned with attempting to mitigate systemic risk in the market: despite its obvious influence on managerial decisions it is too bold a concept and not suitable for controlling the behaviour of financial institutions. Measures belonging to the sphere of financial regulation, such as those mentioned above, are much more effective in this regard.

2. *The Significance of the Privilege*[24]

When a market participant fails or becomes insolvent, each and every one of its business partners will face three fundamental questions:[25] first, am I bound to those of our contracts that are still open, or may I terminate and liquidate them? Secondly, do I have swift access to the collateral or security provided in my favour (if any) or do I need to wait before I can enforce it? Thirdly, are earlier actions of my counterparty which were in my favour, such as recent payments or recent delivery of security or collateral, potentially subject to avoidance by the insolvency official or court? These questions are particularly important for financial institutions, especially in respect of their derivative contracts, repurchase agreements or similar transactions with the insolvent party. It is not uncommon for two financial institutions to have hundreds or even thousands of open financial contracts with one another at any given point in time. Therefore, the answers provided by insolvency law to these questions generally affect contracts and collateral of an enormous combined value.

The insolvency laws of most developed financial markets[26] generally take a favourable approach to the financial industry and their financial contracts: contracts can be terminated and the collateral swiftly enforced and, generally, earlier payments or delivery of collateral cannot be avoided by the insolvency official. These, in plain language, are the effects of safe harbour rules. This approach is remarkably homogeneous across developed markets.[27]

However, safe harbours are more of an exception to generally applicable insolvency law in some jurisdictions than in others, largely because the starting point of the general insolvency law rules is different. In other words, the 'privilege' may be more or less significant. The critique voiced by US authors is partly based on the argument that the

[24] I am grateful to Giulia Pecce and Sebastiaan Bierens, both research assistants at the LSE Department of Law, for researching the relevant Italian and Belgian law referred to in this section.

[25] See Mooney, 'The Bankruptcy Code's Safe Harbors' (n 12) 249.

[26] See n 10.

[27] See the US and European rules listed in n 33, n 40 and n 51.

treatment of the financial industry is diametrically opposed to the treatment afforded to other, non-financial market participants.[28] However, this polarity is particularly pertinent to US law. In other jurisdictions the picture is different simply because the starting point of their insolvency law is different. Accordingly, it would be inappropriate to transplant the debate from the US to other jurisdictions without first examining these differences.

One clarification is in order here. Comparing the relevant US and EU laws poses a structural difficulty from the outset. In the US, the safe harbour rules are federal law contained in the United States Code.[29] They form part of the general provisions of Title 11 'Bankruptcy', and as a consequence apply in both Chapter 7 'Liquidation' and Chapter 11 'Reorganisation'. The Code is directly applicable and self-contained. EU law contains a relevant set of rules spread over a number of instruments, the most important of which is the Financial Collateral Directive.[30] EU directives are not directly applicable or self-contained and therefore do not afford much insight into legal reality. They require implementation into national law, ie their rules are cast into the relevant domestic statutes, such as domestic insolvency law, secured transactions law, bank regulation and other statutes. As a consequence, we have not a single set of EU safe harbour rules but 28 of them. Therefore, this article has to look at EU law through the filter of concrete jurisdictions. To this end, I have chosen four EU countries with different legal traditions (common law, civil law Germanic and Napoleonic type) and different approaches to implement the Financial Collateral Directive (integration into insolvency law or stand alone statute), notably England, Germany, Belgium and Italy. Further, in this section (and throughout this article) I make occasional reference to the UNIDROIT Principles on

[28] Lubben, 'Repeal the Safe Harbors' (n 16) 322-326; Roe, 'The Derivatives Markets Payment Priorities' (n 16) 547-549.

[29] On the gradual expansion of the USC safe harbours see M Krimminger, 'The Evolution of U.S. Insolvency Law for Financial Market Contracts' (2006) Working Paper <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=916345> accessed 10 March 2015.

[30] Directive 2002/47/EC of the European Parliament and of the Council of 6 June 2002 on financial collateral arrangements, OJ L168/43 of 27.6.2002 ('Financial Collateral Directive'). See on the EU framework P Paech, 'Close-out Netting' (n 8) 434-439.

Close-out Netting[31]. They are a non-binding best-practice guide and offer a succinct overview on the effect of safe harbours.

A. *Liquidation of Contracts*

The principal building block of master agreements consists of provisions allowing one party to liquidate, *en bloc*, all executory contracts should a termination or default event occur. The term 'close-out netting' is generally used instead of 'liquidation' in that context. Close-out netting involves a number logical steps: first, termination of the relevant bundle of contracts; secondly, determination of the value of each contract; thirdly, set-off of the positive and negative values so that only a net balance is owing; and, fourthly, acceleration of the resulting payment obligation.[32] The safe harbour rules of the relevant forum typically prescribe that the close-out netting mechanism contained in the master agreement remains enforceable beyond the counterparty's insolvency and cannot be stayed or avoided on the basis of their being deemed inconsistent with the principle of equal treatment of creditors. [33]

In US law, by contrast, termination of executory contracts upon insolvency motivated solely by the financial position of the insolvent ('*ipso-facto* clause') is expressly prohibited and the set-off of any debt owing to the debtor is stayed from the moment the petition is filed.[34] Also, the trustee can cherry-pick, choosing contracts favourable to the insolvent estate and rejecting the others, thus disintegrating what was

[31] See n 1.

[32] The liquidation mechanisms provided for in the different master agreements do not necessarily work exactly in the same way but the functional result remains the same, see UNIDROIT Principles on Close-out Netting (n 1), Principle 2 with commentary.

[33] Articles 4(4), 7(4) Financial Collateral Directive; 11 USC §§ 362(b)(6)-(7)-(17)-(27) and (o); 555-556, 559-561; s12(1) Financial Collateral Arrangements (No. 2) Regulation (UK); §104 Insolvenzordnung (Germany); Article 14 Loi relative aux sûretés financières (Belgium); Article 7 Decreto legislativo n. 170 in material di contratti di garanzia finanziaria (Italy). For a generic functional liquidation clause, see UNIDROIT Principles on Close-out Netting (n 1), Principle 7 with commentary. As long as parties are solvent, contractual provisions to that effect are unproblematic and can be freely operated as an expression of the principle of freedom of contract. However, should a party become insolvent, that principle might be overridden by mandatory rules of insolvency law, thus hindering in particular termination and set-off of the bundle of contracts.

[34] 11 USC §§ 365(e)(1) and 541(c)(1); § 362(a)(7).

originally intended for liquidation *en bloc*.[35] As a result, the non-defaulting party must perform on contracts that are unfavourable from its point of view or else pay damages (largely corresponding to the replacement cost) for non-performance, yet will receive only part of the damages provided for those broken contracts that are favourable to it. It is worth emphasising that these principles apply not only in the context of reorganisation proceedings but also in the event of liquidation, evidence that the idea of saving a business is paramount in US bankruptcy law or, in other words, of its pronounced debtor-friendliness.

By contrast, other jurisdictions are less debtor-friendly and more creditor-friendly, regardless of whether they belong to the common law or the civil law tradition. Most prominently, England is much more creditor-friendly, and the general legal position in respect of liquidation of contracts upon insolvency was traditionally such that the later implementation of the EU Financial Collateral Directive did not require fundamental changes to the regime in place. In England, termination and set-off upon insolvency have always been possible, also in a non-financial context.[36] Under German law, the treatment of non-financial scenarios is much closer to the English position than to that of the US, with far-reaching termination and set-off rights also for non-financial counterparties.[37]

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[35] 11 USC § 365(a).

[36] Agreements to terminate a limited interest conferred on another, or providing for automatic termination of that interest, if that other becomes insolvent do not contravene the anti-deprivation rule, Goode, 'Perpetual Trustee' (n 34) 8. The underlying idea is that insolvency law does not override freedom of contract where no question of a sham transaction has arisen (Lord Neuberger MR in *Perpetual Trustee Company Ltd v BNY Corporate Trustee Services Ltd* [2009] EWCA Civ 1160, [2010] Ch 347 at [91]. Cf n 37). As regards set-off, in England insolvency set-off kicks in upon commencement of the proceedings, which applies to all mutual credits, debts, or other mutual dealings between the insolvent and its counterparty (Insolvency Rules 1986 (as amended), rule 2.85 (for administration) and rule 4.90). It is mandatory, retroactive and self-executing (*MS Fashions Ltd v Bank of Credit and Commerce International SA (No. 2)* [1993] per Hoffman LJ at 432-433; *Stein v Blake* [1996] 1 A.C. 243 per Lord Hoffmann at 253). However, it does not cover executory contracts but only obligations. Still, as termination remains possible, parties can always agree on automatic termination should one of them become insolvent, which would turn their executory contracts into simple payment obligations to which mandatory insolvency set-off would then apply, Goode, *Principles of Corporate Insolvency Law* (4th edn, Sweet & Maxwell, London 2011) para 9-43. See also Peck, Mokal and Janger, 'Financial Engineering' (n 11), 4-6.

[37] Termination clauses are only void to the extent that they refer to the commencement of proceedings as the relevant trigger (Insolvenzordnung § 119), but are valid as a matter of contractual freedom if they refer to an event prior to commencement, such as default or filing of the bankruptcy petition, since the insolvency official has to accept the estate as is (BGH ZIP 1994, 40, 42; BGHZ 96, 34, 37-38. Further, there is a mandatory insolvency set-off rule for forward contracts, Insolvenzordnung §§ 94-96. If claims become due or congeneric only in the course of the proceedings, set-off must wait until

Belgium has introduced legislation that affords identical treatment in insolvency to financial and non-financial counterparties, which leaves only situations involving natural persons not acting in a merchant capacity to the general regime. The law expressly provides for close-out netting agreements to be enforceable.[38] Lastly, the Italian legal regime generally allows for close-out netting provisions for financial and non-financial market participants, although it makes an exception for large corporations.[39]

B. *Swift Access to Collateral*

The second element of safe harbours relates to the timely enforceability of collateral in insolvency, ie, to the question of whether a secured counterparty may have immediate recourse to the collateral assets. In respect of financial counterparties, the various laws typically provide that, upon insolvency, financial counterparties can immediately enforce collateral provided by the insolvent, without prior authorisation, the obligation to conduct a public auction or similar requirements.[40]

In the US, again, this contrasts with the general approach taken in respect of non-financial counterparties. Outside the safe harbours, enforcement of security or collateral requires prior application to the court called upon to grant relief in case of otherwise inadequate protection of the secured creditor or if the asset is not essential to effective reorganisation.[41]

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then. If obligations are in different currencies or units, conversion is possible to make them congeneric). The continued availability of set-off combines with the validity of pre-commencement termination: termination values can be set off even if proceedings have commenced in the meantime.

[38] Article 14 Loi relative aux sûretés financières.

[39] Within special reorganisation proceedings for large companies, the right to terminate and set-off is not recognized. However, the insolvency officials of the relevant proceeding would probably not be allowed to cherry-pick outstanding transactions under the master agreement that are favourable to the defaulting party and reject those that are disadvantageous for the latter. Instead, the insolvency official's choice to continue the master agreement applies to the entire bundle of covered transactions.

[40] 11 USC § 362(b)(6)-(7)-(17)-(27) and (o); Article 4(4) and (5) Financial Collateral Directive; see UNIDROIT Principle 7(1)(a).

[41] 11 USC § 362(a) and (d).

This clearly contrasts with English law, where the general policy is very different from that in the US. In winding-up proceedings, creditors are largely unaffected by the liquidation process as they can remove their security from the pool and realize it.[42] In administration (remotely comparable to US reorganisation), the approach is obviously different and closer to the US model, as the secured creditor is dependent on leave from the court to enforce its security; this will usually be granted if significant loss to the secured creditor is likely to result from a refusal.[43] Only substantially greater losses caused to others by such leave may outweigh the interest of the secured creditor.[44] This is where the implementation of the Financial Collateral Directive has a significant impact, as it explicitly abolishes the requirement of court approval for transactions that come within its scope.[45]

Under German law, the general position[46] is that pledged movables are generally realized by the insolvency official for a secured creditor entitled to direct the manner in which the asset is realized and to whom immediate payment is made from the proceeds. The asset can also be transferred to the creditor if that is the most suitable solution. The insolvency official does, however, have the right to use the asset for the estate, in which case compensation has to be paid to the secured creditor for any deterioration of the asset affecting the security. In this respect, the German regime is comparable to the US model. The privilege afforded to financial counterparties consists in the fact that pledged financial collateral is exempt from this regime and can be realized by the counterparty unaffected by the commencement of proceedings.[47] The Belgian Financial Collateral law

[42] Goode, *Principles of Corporate Insolvency Law* (n 36), Sweet & Maxwell, London 2011, para 8-47. Collateral can be used in the ordinary course of business without an application to the court; cash collateral may only be used with consent of creditor or the court. Only if the liquidator refuses to release the security asset must the creditor obtain leave of the court, which will almost invariably be granted since what is involved is not the property of the insolvent. Goode, *ibid*, referring to James LJ in *Re David Lloyd & Co* (1877) 6 Ch. D. 339 at 344-345.

[43] Insolvency Act 1986 Schedule B1 para. 43(2). But note the ability of the administrator to use cash collateral in case of a floating charge without consent of the creditor or court, *ibid*, para 70.

[44] Nicholls LJ in *Re Atlantic Computer Systems Plc* [1992] Ch. 505 at 543.

[45] Financial Collateral Arrangements (No. 2) Regulation 2003, reg. 8.

[46] Insolvenzordnung §§ 166, 169, 170, 172.

[47] Insolvenzordnung §§ 166(3), 173(1).

provides – for all market participants except natural persons – that the enforcement rights of those creditors benefiting from collateral are not suspended as long as the agreement creating the collateral was executed before the date of the bankruptcy order. The beneficiary of a share pledge has the right to appropriate the shares upon default of the pledgor. No prior notice or authorisation is required if appropriation is expressly permitted in the pledge agreement.[48] In Italy, the impact of safe harbour legislation on the swift enforcement of collateral is considerable, as the insolvency regime outside the safe harbours resembles rather the US then the UK approach. Court authorisation confirming the existence of the claim is needed to enforce collateral, and the court can give directions as to how the security asset has to be realised and order it to remain part of the estate, against reimbursement of the creditor.[49] By contrast, in respect of financial collateral, the collateral taker is entitled to immediately enforce the financial collateral by sale or appropriation, with respect to financial instruments, or by set-off, with respect to cash.[50]

C. *Protection against Avoidance*

The third element relates to avoidance. The relevant laws typically provide that in the insolvency of a financial institution, the insolvency official is generally unable to avoid prior legal acts on the ground that they constituted preferential treatment of a creditor or were undervalue transactions.[51] Again, the gap between general insolvency law and the privileged safe harbour regime may vary depending on the jurisdiction. However, as to avoidance, the picture differs from the findings of the foregoing sections. Here, the privilege afforded to financial institutions is of similar significance throughout, as robust

[48] Article 8 Loi relative aux sûretés financières. Although no prior court approval is required, the law provides for the possibility for the courts to exercise some form of control afterwards, see Article 8(3)s.

[49] Articles 53, 107 Bankruptcy Act (Italy).

[50] Art. 4(1) of Legislative Decree 170/2004 (enacting the Financial Collateral Directive in Italy).

[51] See 11 USC § 546(g), (j); Article 8(1)-(3) Financial Collateral Directive. European jurisdictions are to a large extent free to set the parameters for avoidance as the Directive leaves this issue largely to the law of the Member States, exempting only a number of standard situations of constructive preferential treatment from avoidance. See also UNIDROIT Principles on Close-out Netting (n 1) Principle 7(1)(c)-(d). However, regularly, fraudulent transactions are not protected, see 11 USC § 546(e); Recital 16 Financial Collateral Directive; UNIDROIT Principles on Close-out Netting, Principle 7(2).

avoidance rules for non-financial market participants exist in the US as well as in England, Germany, Belgium and Italy.

In the US, the general position is that creditors who have received payment or a security interest within 90 days prior to the commencement of bankruptcy proceedings are, as a rule, required to return it, except if the transfer was for value or undertaken in the ordinary course of business.[52] In English administration or liquidation proceedings avoidance is possible in case of undervalue transactions except the debtor was in good faith, and in case of preferential treatment of a creditor provided that the debtor intended to prefer a creditor. Undervalue transactions or preferences can be avoided if they occurred within a two-years time frame prior to insolvency in case of a beneficiary that is connected with the debtor company, or within 6-month time frame in case of an unconnected beneficiary.[53] Under German law, transactions can be avoided for preference within a three-month period prior to commencement of proceedings if the creditor knew about the insolvency of the debtor or if it could not have been unaware of it.[54] Undervalue transactions can be avoided without any further ado if they occurred during the last month before the commencement of insolvency proceedings, or if they occurred during the second or third month before insolvency if the debtor was insolvent at that point in time, or if the creditor knew that other creditors would be prejudiced or if that fact was obvious to it.[55] Belgian law contains a number of discretionary and automatic claw-back rules that apply during a six-month period prior to the commencement of proceedings, whereas avoidance of fraudulent transfers is not subject to a time limit.[56] Under Italian law, transactions at undervalue are invalid if entered into during the two years prior to

[52] 11 USC § 547.

[53] Insolvency Act 1986, ss 238, 239, 240.

[54] Insolvenzordnung § 130. Variation margins provided under financial collateral arrangements are expressly exempt. Interestingly, the rule expressly states that the exemption takes effect only to the extent that the additional margin reflects the changes in value of the secured obligation. This requirement seems to have been inserted to avoid the problem of systematic under-collateralisation, see text to n 98-109.

[55] Insolvenzordnung § 131.

[56] Bankrupty Act (Belgium) of 8 August 1997, Articles 12, 17, 18 and 20.

commencement of proceedings. Furthermore, payments falling due on the day of the commencement of proceedings or thereafter are equally void if made during that two-year period. Fraudulent transactions can be voided if entered into during a suspect period of six months or one year, depending on the type of transaction.[57]

3. *Exponentiated Liquidity*

The strong polarity of the insolvency treatment of the financial sector, on the one hand, and of the non-financial sector, on the other hand, such as currently exists under US law, seems to be the exception rather than the rule. In other jurisdictions, the gap between the safe harbour regime and the general insolvency rules is much smaller and in some cases, the treatment of financial and non-financial scenarios is even identical or quasi-identical, at least as regards termination, set-off and swift access to collateral. The only exception is the regime for avoidance. Here, safe harbour rules afford considerable relief to the financial industry, not only in the US but also in other jurisdictions. The more obvious consequence of the above finding is that the perception of egregious privileges afforded to financial institutions can only be upheld in a domestic tunnel vision.[58] Moreover, and more importantly, the above findings tie in seamlessly with the distorted view on the rationale for safe harbours. Liquidity as a main argument is not appropriate in a rather debtor-friendly environment such as the US Bankruptcy Code, which is why greater prominence is given, at least on the surface, to the systemic risk argument. In more creditor-friendly jurisdictions, which put greater emphasis on assets flowing back into the

[57] Art 64-67 Bankrupty Act (Italy).

[58] See Morrison, Roe and Sontchi, 'Rolling back the Safe Harbors' (n 16) 12: 'But if the safe harbours increase social welfare because they increase liquidity overall (and not just the benefited creditors at the expense of other creditors), then the safe harbours should apply to all secured debt, not just financial contracts.'

economy quickly, there is obviously more room for a rationale based on liquidity and market efficiency.[59]

Unlike the case of traditional security interests, the liquidity rationale of safe harbours has never received the degree of prominence in the policy debate it would have deserved.[60] This is surprising, also because it may be safely assumed, in the light of lessons learned from the latest financial crisis, that in lobbying for safe harbours, the financial industry was probably focused more on business development than on risk limitation.[61]

On the face of it, safe harbours produce economic effects quite similar to those associated with the protection of traditional security interests in insolvency.[62] Because parties need not worry about their counterparty's solvency, derivatives and repo contracts become more easily available, and at a reduced cost. As a result, the basic economic effect of safe harbours is considerable growth in volumes of the relevant types of transaction, as could be observed in the run-up to the financial crisis, when repo markets doubled within 5 years[63], and more efficient allocation of assets.

In considering whether to introduce insolvency privileges, legislators must take into account the fact that such privileges almost automatically entail a shift of the risk from one segment of the market to another, the latter being potentially 'weaker' creditors. In this regard, too, there are no fundamental differences between traditional security interests and safe harbours. Therefore, the basic assumptions about liquidity and the resulting discussion about the overall social value of insolvency privileges are very

[59] ISDA, Memorandum on the Template for Netting Legislation (March 2006). <http://www2.isda.org/search?headerSearch=1&keyword=model+netting> accessed 10 March 2015.

[60] See Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 66. See Recitals 12 and 19 Financial Collateral Directive. See also ISDA, Memorandum (n 59) where the word 'risk' appears eight times, whereas 'liquidity' is not mentioned at all; ABI, Reform of Chapter 11, (n 14) Section IV.E on 'Financial contracts, derivatives and safe harbour protection' mentions liquidity as a policy argument only once, and in the context of a side issue, whereas 'stability' is referred to eleven times.

[61] See Bliss and Kaufman, ibid 56.

[62] See Finch, 'Security, Insolvency and Risk' (n 21) 637-643.

[63] See Bank for International Settlements, Quarterly Review, December 2008 <http://www.bis.org/publ/qtrpdf/r_qt0812e.pdf> accessed 10 March 2015.

similar to those prevailing in the case of traditional security interests[64] and will not be addressed here. Rather, I will concentrate on four novel effects of safe harbour rules that represent a quantum step in terms of increasing liquidity, in particular if taken in combination with one another.

A. *Flexibility across Legal Categories and Asset Types*

The risk mitigation techniques of master agreements (as protected by the safe harbour rules) are used to abolish established legal boundaries. In particular, differences between full title and security interest disappear, and boundaries between claims, cash and securities become blurred. This high degree of flexibility is nothing less than revolutionary, overthrowing traditional legal restrictions on the use of assets with a view to obtaining cash and creating liquidity more generally. The EU Financial Collateral Directive contains a paradigmatic blueprint for this phenomenon.[65]

First, the differences between full title and security interests disappear because the safe harbours sanction the use of title transfer collateral, netting and 'margining'.[66] Under such arrangements, while the collateral provider is protected as efficiently as it would be under a traditional security interest such as a pledge or mortgage, the collateral taker enjoys far greater freedom to use the collateral assets than it would under a traditional security interest, in that it becomes the legal and beneficial owner of the asset and can therefore dispose of it, without being obliged to return that specific asset as long as the asset returned is of the same kind. What is remarkable here is that the rights of one party appear to grow whereas the risk borne by the other party remains unchanged.

[64] See, eg, Finch, 'Security, Insolvency and Risk' (n 21); LA Bebchuk and J Fried, 'The Uneasy Case for the Priority of Secured Claims in Bankruptcy' (1996) 105 Yale Law Journal 857-934.

[65] See Articles 3-8 Financial Collateral Directive.

[66] 'Margining' is necessary because both the obligation and the value of the collateral asset typically change over time. Therefore, collateral levels are adjusted to the exposure on a daily basis. The obligation to post collateral might reverse in the course of the term of the contract; see, eg, Article 8(3) Financial Collateral Directive.

Furthermore, the boundaries between claims, money and securities become blurred as the collateral provider can validly substitute new collateral assets for the assets originally provided, which it might need for other purposes.[67] The only proviso is that the replacement assets must be of substantially equivalent value. As a consequence, the collateral provider is allowed to replace one kind of securities collateral for another, or give cash for securities collateral, or claims for cash collateral, etc.

On that basis, the specificity of the collateral assets becomes as irrelevant as their nature (money, claims or securities). Positions become interchangeable and the collateral provider will collateralize all available assets as efficiently as possible, thereby creating maximum return. The fact that assets are freed from the conceptual burdens associated with legal limits to traditional security interests means that they can be treated as mere accounting positions, the only parameter being current market value. Thus, thanks to the existence of safe harbours, a portfolio resembles a gigantic current account into which assets and liabilities, including collateral of whatever description, accruing under whichever type of arrangement, can be booked at current market value, so as to show the net exposure as a grand total.

B. *Stretching the Collateral Cover Thinly*

A phenomenon closely connected to the foregoing is the fact that safe harbour rules enable collateral to be allocated so efficiently that there will hardly be any collateral buffers around. The first aspect here is the effect of the enforceability of close-out netting on collateral levels. If a risk reduction of 80% can be taken for granted,[68] parties would,

[67] 'Substitution' describes the right to withdraw financial collateral on providing, financial collateral of substantially the same value, see, eg, Article 8(3)(b) Financial Collateral Directive.

[68] The notional amount (face value) of all types of OTC contract stood at approximately USD 693 trillion at the end of June 2013. The gross market value of these contracts, ie, the cost of replacing all of them by equivalent contracts at the market price, was approximately USD 20 trillion. This amount corresponds to the gross market risk inherent in these contracts, ie, market participants were, on an aggregate basis, exposed to each other by that sum. At the same time, market participants' aggregate actual credit exposures, ie, the remaining credit risk taking into account legally enforceable master agreements amounted to

of course, only collateralize the remaining 20%. Hence, much less collateral will be needed from the outset or, to put it differently, the same amount of collateral will suffice to cover a higher volume of transactions.

At the same time, master agreements make it possible constantly to adjust collateral levels to the underlying exposures so as to avoid over or under-collateralisation. These margining mechanisms rely on the safe-harbour limitation of avoidance powers as they might otherwise be classified as late provision of collateral.

Lastly, safe harbours enable the re-use of collateral assets by the collateral taker, given that the latter generally becomes their legal and beneficial owner. Therefore, as opposed to what is common in other markets (which are bound to traditional secured transactions, lack of safe harbour protection), the collateral taker will generally put the collateral assets to use instead of just 'holding' them, thereby maintaining the assets in constant flow.

The result of the foregoing is that asset allocation is extremely efficient throughout the market. However, by the same token, it may also mean that the cover becomes extremely thin, as there are no longer any pools of unused assets.

C. *Sourcing Collateral Globally*

Collateral assets are scarce and sourcing them from a wider market would therefore be beneficial in terms of liquidity. However, before the broad introduction of safe harbour rules, financial institutions had to rely on domestic secured financing law. The diversity of mandatory insolvency and property law nurtured substantial doubts as to the cross-jurisdictional enforceability of closeout netting and collateral.[69] Cross-border collateral

USD 3.9 trillion, which represents a risk reduction of about 80 %. See Bank for International Settlements, 'OTC Derivatives Statistics at End-June 2013' (November 2013) 2 <http://www.bis.org/publ/otc_hy1311.pdf> accessed on 4 January 2014.

[69] See, regarding enforceability of collateral: P Paech, 'Market Needs as Paradigm – Breaking up the Thinking on EU Securities Law', in PH Conac, L Thévenoz and U Segna (eds), *Intermediated Securities*, (Cambridge University Press, 2013), 22-64; in relation to enforceability of close-out netting: 'Close-out Netting' (n 6).

was possible but complicated to arrange, and each arrangement was only compatible within the two jurisdictions involved. The most prominent move to address this issue was the introduction of the Financial Collateral Directive, which created a harmonized safe harbour regime across the EU and led to the *de facto* abolition of traditional asset-based security interests amongst financial institutions. However, the phenomenon is not confined to the EU, as safe harbour rules are relatively homogeneous throughout all jurisdictions that have developed financial markets,[70] even if the safe harbours of the Financial Collateral Directive are particularly broad.

As a consequence, there is a harmonized legal space in which financial institutions can source and use collateral quasi-globally. The fact that there is now a level legal environment is illustrated by the circumstance that transactions can be documented in different markets under the same master agreements. In particular, the ISDA Master Agreement has gained global significance[71] because its functionalities (termination, liquidation, set-off, collateral) are now recognized in the relevant jurisdictions. At the same time, the restriction of avoidance powers removes fears of re-characterisation, claw-back and similar court actions. Despite the fact that many legal differences remain as to detail, it is probably fair to say that the market for collateral, and therefore the market for derivatives and repos, comes close to having a globally harmonized legal framework. The extensive introduction of safe harbour rules is actually a significant example of market-driven high-impact international legal harmonisation,[72] somehow silently overcoming statutory legal hurdles from which parties traditionally could not derogate. Mandatory insolvency and property law typically constituted the most significant threats to the enforceability of contracts. However, at statutory level, despite considerable efforts, States have to date been unable to agree on a legal framework that is compatible across

[70] See above, 2nd Part.

[71] See Briggs J in Lomas & ors v JFB Firth Rixson, Inc & ors [2010] EWHC 3372 (Ch) at [53].

[72] See Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 56.

borders.[73] Harmonisation on the basis of the introduction safe harbours not only lessens the importance of domestic policy in matters of insolvency but also reduces the importance of legal considerations in risk management to a significant extent.

D. *Efficient Use of Regulatory Capital*

Lastly, banking regulation sanctions the liquidity thus increased by the safe harbours. Notably, it recognizes the net exposures used by financial institutions for risk management purposes also with a view to calculating capital requirements. Safe harbour rules are of fundamental importance in this context because the relevant regulatory rules require absolute certainty that close-out netting and collateral will be enforceable in the event of insolvency.[74] If that is so, banks are allowed to calculate their regulatory capital on the basis of net, rather than gross, credit risk exposures. As mentioned earlier, the average risk reduction through netting is roughly 80%. In order to grasp the effect of this significant reduction, it may be helpful to recall that regulatory capital is not, as is often assumed, a requirement to hold certain cash reserves available. Rather, regulatory capital describes the ratio between risk exposure and the capital raised by issuing own shares. As a consequence of the recognition of net risk in a safe harbour environment, a bank is able to enter six times the gross risk in its balance sheet than it would otherwise be allowed to accept.[75]

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[73] The law governing the cross-jurisdictional transfer of property over securities, including the issue of securities collateral, is still entirely national and therefore probably the only piece of that globalisation puzzle that is still missing. The Geneva Securities Convention and the Hague Securities Convention both address this issue but have never been implemented. See UNIDROIT Convention on Substantive Rules for Intermediated Securities of 9 October 2009 ('Geneva Securities Convention') <http://www.unidroit.org/instruments/capital-markets/geneva-convention> accessed on 15 March 2015; Convention on the Law applicable to certain Rights in respect of Securities held with an Intermediary of 5 July 2006 ('Hague Securities Convention') <http://www.hcch.net/index_en.php?act=conventions.text&cid=72> accessed on 15 March 2015.

[74] Bank for International Settlements/Basel Committee on Banking Supervision, 'International Convergence of Capital Measurement and Capital Standards (Comprehensive version)' (June 2006 – 'Basel II Accord') paras 117, 118, 139, 188 <www.bis.org/publ/ bcbs128.htm> accessed on 15 March 2015; 'Strengthening the resilience of the banking sector' (December 2009) 43 <www.bis.org/publ/bcbs164.pdf?noframes=1> accessed on 15 March 2015.

[75] By way of a simplified example: a bank's derivative and repo portfolio is taken into account at a gross risk of 1000 GBP because there are no safe harbours. This risk needs to be matched, at the current minimum rate of 10.5% regulatory capital, by

The effect is two-fold.[76] First, availability and liquidity of repo transactions are improved because absolute regulatory limits accommodate a higher volume where calculation on a net basis is allowed. This effect is not necessarily confined to derivatives and repo transactions but extends across the balance sheet to any other risk-taking activity such as ordinary lending. If as a consequence of safe harbours less capital is needed to match derivatives and repo transactions, ordinary lending activity may likewise be increased. The second effect is a cost-saving element for banks, since share capital is a relatively expensive means of financing. If contracts of a higher aggregate volume can be entered on the basis of the relevant available share capital base, their relative cost decreases.

4. *A Systemic Risk Zero-Sum Game?*

As we have just seen, safe harbours considerably increase efficiency and liquidity but may lead to the collateral cover being stretched thinly. The connection with the second — more prominent — rationale for safe harbours is obvious: the question of how much collateral is available is of immediate importance for systemic stability: more efficiency increases the availability of collateral which is generally beneficial—but overstretching is harmful because there will be no reserves when collateral becomes scarce.

Insolvency safe harbours have to date mainly been regarded as necessary to decrease the systemic risk inherent in the financial market, in particular to assist in avoiding the domino effect of bank insolvencies.[77] To this end, derivatives and repo transactions need specific exemptions from the usual 'threats' that flow from the opening of insolvency

105 GBP in own share capital. In other words, the amount of issued share capital limits the possibility to take on more risk. However, if netting is allowed the bank can, on the basis of the same 105 GBP in share capital, enter into contracts exposing it to a gross risk of 5000 GBP if we assume that close-out netting reduces the gross risk by 80%.

[76] See Paech, 'The Need for an International Instrument' (n 1) 16-19.

[77] See, in particular, Basel Committee on Banking Supervision, 'Report and Recommendations of the Cross-Border Bank Resolution Group' (2010) 36-40 <http://www.bis.org/publ/bcbs169.pdf> accessed 10 March 2015. For US legislative history see Mooney, 'The Bankruptcy Code's Safe Harbors' (n 12) 247-251.

proceedings.[78] First, the insolvency of one financial institution could provoke the failure of its counterparties which, alone or jointly, might in their turn bring down others, sparking off a chain reaction. Secondly, there is significant potential for transmission of liquidity problems between market participants. Thus, the limitation (or near-elimination) of individual counterparty credit risk is expected to have a beneficial effect on systemic stability. In other words, privileges afforded to counterparties of a failing institution would translate into systemic stability and therefore into advantages benefiting the market as a whole. This argument is particularly relevant to the financial sector, even more so than to other sectors, as financial institutions are so closely intertwined.[79] Network externalities are therefore much more likely to occur than they are in other industries, and furthermore spread from the financial sector to invade entire economies.[80] On the basis of this broad argument, safe harbour rules have been successively introduced in over 40 jurisdictions.

However, in light of the significant economic benefits that come with safe harbours, some authors regard them as the result of path-dependent legislation originally set off by banks' own lobbying efforts.[81] These, they argue, should now be considerably restricted or repealed altogether, since they actually created systemic risk rather than curbed it.[82] The reasons brought forward in relation to this argument are appealing, and the picture is certainly a complex one. Thus, while, on the one hand, credit risk contagion is effectively inhibited by close-out netting and collateral as protected by safe harbour rules, it is also true that, on the other hand, these mechanisms can at the same time develop adverse systemic effects through other transmission mechanisms.[83] Broadly speaking, relevant

[78] See UNIDROIT Principles on Close-out Netting (n 1) Principles 6 and 7.

[79] Edwards and Morrison, 'Derivatives and the Bankruptcy Code' (n 16) 11.

[80] Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 66; Lubben, 'Repeal the Safe Harbors' (n 16) 329.

[81] Schwarcz and Sharon, 'The Bankruptcy Law Safe-Harbor' (n 16) 1737-1742.

[82] See, in particular, Lubben, 'Repeal the Safe Harbors' (n 16); Roe, 'Derivatives Market Payment Priorities' (n 16).

[83] Pistor, 'A Legal Theory of Finance' (n 22) sections 3.2 and 4.3 provides evidence that the antagonising effects of financial law, ie creating and threatening liquidity at the same time, are a general and logical characteristic of the market.

examples fall into two categories of risk transmission mechanism, to wit, moral hazard and collateral/liquidity shortages.

While these two typical systemic risk transmitters can, in principle, antagonize the systemically beneficial effects of safe harbours, it would not make sense to analyse this interdependency in isolation. Regulation is much more relevant to the limitation of systemic risk and directly addresses the relevant contagion mechanisms through other — often novel — measures. This leads to the question of whether the strong influence insolvency law has on conduct makes it an appropriate means to control systemic risk and the behaviour of market participants while they are going concerns. In the following sections, I shall attempt to combine these aspects to form an overall picture.

A. *Moral Hazard*

Safe harbours create a transaction environment for financial institutions that is almost entirely free of counterparty risk. This places financial institutions in a privileged position as compared to other, non-financial counterparties (although, as discussed in the second part of this article, the degree of privilege differs from one jurisdiction to another[84]). Thanks to these privileges, risk is shifted to non-financial counterparties, which alone have to bear the specific cost of bankruptcy. In that respect, safe harbour rules have an effect quite comparable to that of traditional security interests.

The existence of such a privilege is bound to affect the perception and conduct of market participants generally. As a result, the existence of safe harbours may provoke moral hazard.[85] In the context of financial regulation, the term 'moral hazard' describes a mechanism whereby real or presumed guarantees for the financial sector render the financial market more risk-prone on an aggregate basis. The phenomenon has been identified as a major driver of the 2007-2009 financial crisis. For years, financial

[84] See second Part.

[85] Roe, 'Derivatives Market Payment Priorities' (n 16) 545. See Baird, 'Bankruptcy's Uncontested Axioms' (n 21), 578, 589-592.

institutions had enjoyed high income generated by excessive risk-taking in the expectation that the cost of failure would be socialized. After the crisis, a number of regulatory changes were introduced in an attempt to tame moral hazard, with a view to re-allocating to financial institutions and their stakeholders the risk they themselves create.[86]

Shifting the risk as such does not necessarily entail moral hazard. All kinds of insolvency privileges shift risk around the insolvent's various types of creditors. The question, rather, is whether that shift entails a behavioural pattern that increases the risk overall, or, to put it differently, whether the level of systemic risk in the market as a whole increases.

Such an overall rise in systemic risk could be caused in particular by market inefficiencies. Already in relation to traditional security interests, the possibility for bigger players to demand security indirectly subsidizes their businesses at the expense of certain other players, since the latter are unable to adjust to the increased risk.[87] The effect of the risk transfer caused by insolvency safe harbours is similar: parties to whom risk is shifted are generally remote from the financial sector and as a result lack the ability to monitor the shift and adjust their own behaviour, in particular by demanding a higher risk premium or by not entering into the relevant position or quitting it altogether.[88] The risk-taming effect of corrective behaviour at that end of the market is lacking, and this in turn renders the distribution of risk inefficient and the market overall riskier. It is worth noting that this shift of risk is global, as in practice all eligible creditors will take the necessary steps to move ahead of the pool by using the safe harbours.[89] The risk is shifted to those that have no means of improving their position in any insolvency proceedings: in particular depositors, unsecured bond-holders, share-holders and 'ordinary' creditors of

[86] These measures include remuneration of bank managers, higher bank capital requirements, new bank resolution regimes, stricter regulation of derivatives, introduction of anti-cyclical capital and liquidity buffers, and others. See for an instructive overview < http://ec.europa.eu/finance/general-policy/policy/map_reform_en.htm#row7> accessed 10 March 2015.

[87] See Finch, 'Security, Insolvency and Risk'(n 21) 639.

[88] Edwards and Morrison, 'Derivatives and the Bankruptcy Code' (n 16) 32, 34; Roe, 'Derivatives Market Payment Priorities' (n 16) 570; Finch, 'Security, Insolvency and Risk' (n 21) 644-645 (in relation to traditional security interests).

[89] See Finch, *Corporate Insolvency Law* (n 17) 36.

the insolvent. It is true that non-adjusting market participants in the proper sense are few, traditionally they included retail depositors (which are now often protected by own preferences and/or deposit insurance) and ordinary creditors. However, mindful of the too-big-to-fail phenomenon, to which safe harbours contribute by allowing for exponential growth of the derivatives and repo markets, the State has traditionally assumed the risk as a whole, so that even adjusting creditors have no need to take the shift of risk into account.[90]

Furthermore, security may distort managerial diligence in the choice of counterparties.[91] As before, this argument can be translated into the context of insolvency safe harbours: financial counterparties rely exclusively on the risk-mitigation tools guaranteed under the safe-harbour regimes instead of investing into *ex ante* and on-going monitoring of their counterparties.[92] Yet, such overreliance on safe harbours could also lead to moral hazard.[93] By contrast, if, in the absence of safe harbours, monitoring were a necessity, any concentration of risk on certain players would be detected and priced in by potential counterparties; as a consequence, there would be more players with smaller risk portions in the market, and the market would be more diversified overall.[94] Moreover, in times of crisis, with falling or unclear collateral value, the information obtained through monitoring would allow lending to continue as healthy counterparties could continue to operate even in adverse times.[95]

However, it is moot whether a case of moral hazard can be built on the foregoing. It is not evident that the market becomes riskier *overall*, as compared to the hypothetical

[90] See Roe, 'Derivatives Market Payment Priorities' (n 16) 558-559; Peck, Mokal and Janger, 'Financial Engineering' (n 16), 12. It is debatable whether this holds true in all respects. The implicit State guarantee for banks might be regarded as the price paid for having energetic, growth-producing and stimulating financial markets. Although recent regulatory initiatives attempt to remove the State guarantee completely, it is not absolutely certain whether financial markets that go beyond pure utility banking can be governed in a way that makes bail-outs completely unnecessary in the future. See also more generally Pistor, 'A Legal Theory of Finance' (n 22) 323.

[91] See Finch, Security, Insolvency and Risk, 646.

[92] Roe, 'Derivatives Market Payment Priorities'(n 16) 560-561.

[93] Roe, ibid.

[94] Roe, ibid.

[95] Roe, ibid 567-568.

alternative, a market without safe harbours. Hard evidence of such a connexion is difficult to establish and is often attempted with an eye to a preconceived result.[96] To begin with, obviously, improved monitoring is always beneficial.[97] Yet the value of monitoring highly complex, international and interconnected counterparties is limited. Comprehensive data regarding the counterparties is unlikely to be available. Even where such data is available, its value is limited as counterparties' balance sheets are not static and are subject to network externalities, since the riskiness of assets depends on the market as a whole.[98] Therefore, the available data says little about the riskiness of a balance sheet in times of stress. In other words, monitoring counterparties to prevent risk is generally useful but not as powerful a tool as reducing counterparty risk through security, collateral and close-out netting — for which the existence of safe harbours is essential.

Speaking more generally, moral hazard, together with the too-big-to-fail argument, are amongst the main phenomena that have been identified as the origins of the recent financial crisis. They are not triggered by the existence of safe harbours alone but by an amalgam of causes and incentives and, probably, the fundamental socio-economic set-up of the financial market as a whole. Repealing or restricting safe harbour regimes is not, therefore, necessarily a suitable means of removing moral hazard, in particular because safe harbours are concerned above all with enforceability of contractual rights and only have an indirect influence on behaviour. Instead, measures explicitly designed to address moral hazard and too-big-to-fail are more focused and therefore more effective, such as bank resolution (discussed below), structural reforms cutting down the size and interconnectedness of banks, and reform of pay structures that dis-incentivize excessive

[96] Baird, 'Bankruptcy's Uncontested Axioms' (n 21) 589.

[97] See, in particular, efforts to strengthen due diligence regarding counterparties instead of exclusive reliance on credit ratings: Financial Stability Board, 'Principles for Reducing Reliance on Credit Ratings' (27.10.2010) <http://www.financialstabilityboard.org/wp-content/uploads/r_101027.pdf?page_moved=1> accessed 10 March 2015.

[98] See, eg, AG Haldane and RM May, 'Systemic Risk in Banking Ecosystems' (2011) 469 Nature 351-355.

risk taking.[99] These measures address moral hazard and too-big-to-fail directly, instead of using the threat of unenforceability, the consequences of which are difficult to contain, as a vehicle. They are currently being refined and implemented on a wide scale, but of course this does not *per se* exclude complementary adjustments to the safe harbour regime should they prove necessary.

B. *Collateral/Liquidity Shortages*

When a financial institution enters troubled waters, the safe harbour-protected liquidation rights of counterparties will be triggered at some point. The contractual arrangements with basically all counterparties are highly likely to be affected simultaneously.[100] Such a scenario of mass liquidation can have adverse systemic effects that antagonize the beneficial systemic effects of safe harbours.[101] The following two examples illustrate how safe harbour rules can limit and spread contagion at the same time — 'which effect is more important is conceptually indeterminate', thereby weakening the systemic risk rationale for insolvency safe harbours.[102]

A first example[103] of off-setting systemic benefits and drawback relates to a phenomenon that was a major transmission mechanism for systemic risk during the recent financial crisis. The failure of a major participant in the highly concentrated derivatives

[99] See, eg, Financial Stability Board, Principles for Sound Compensation Practices (2.4.2009) <http://www.financialstabilityboard.org/wp-content/uploads/r_0904b.pdf> accessed 10 March 2015; Principles for an Effective Risk Appetite Framework, (18.11.2013) <http://www.financialstabilityboard.org/wp-content/uploads/r_131118.pdf> accessed 10 March 2015; Progress and Next Steps towards Ending To-Big-To-Fail (2.9.2013) http://www.financialstabilityboard.org/wp-content/uploads/r_130902.pdf> accessed 10 March 2015. Many, if not most, post-crisis legislative initiatives address moral hazard and too-big-to-fail in one way or the other.

[100] See, eg, Section 5(a)(vi) ISDA 2002 Master Agreement, the 'cross-default' provision following which a default event will occur if a party defaults on a third-party obligation and the default or the obligation is in excess of a specified threshold amount.

[101] Basel Committee on Banking Supervision, (n 74) para 115; Financial Stability Board, 'Key Attributes of Effective Resolution Regimes for Financial Institutions' (2014) paragraphs 4.3-4.4 and Annex IV <http://www.financialstabilityboard.org/wp-content/uploads/r_141015.pdf> accessed 10 March 2015; see Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 20; Duffie and Skeel, 'Cost and Benefits of Automatic Stays' (n 16) 10.

[102] Roe, 'Derivatives Market Payment Priorities' (n 16) 566-567. See Edwards and Morrison, 'Derivatives and the Bankruptcy Code' (n 16) 2.

[103] See Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 11, 18-19 and fig. 2; Edwards and Morrison, 'Derivatives and the Bankruptcy Code' (n 16) 10-11; Morrison, Roe and Sontchi, 'Rolling Back the Repo Safe Harbors' (n 16) 14-16; Roe, 'Derivatives Market Payment Priorities' (n 16) 545-546.

market causes a liquidity and collateral shortage. Safe harbours, on the one hand, protect the market from these failures because the relevant counterparties can have recourse to close-out netting and seize collateral. Thus, the failure of a major player is unlikely immediately to cause further insolvencies through the domino effect. However, all the insolvent's counterparties would need to replace all terminated contracts in order to re-hedge their open positions, ie, a large number of new contracts would be created elsewhere in the market within a very short time frame. Fire-sale liquidation of collateral and the sale of further assets to be able to post cash collateral under the new contracts might considerably depress asset prices and might still push the entire market into a collateral crunch.

A second example[104] relates to the situation of financial institutions that are already ailing but not yet technically insolvent, or in relation to which no proceedings have as yet been opened. Does the protection of close-out netting and collateral arrangements exacerbate or improve their financial position? On the one hand, if parties are properly collateralized, close-out netting and collateral arrangements ensure that a market participant is able to continue trading, since as long as there is no actual failure (or other termination event), its counterparties will see no immediate need to pull out of the relationship.[105] Thus close-out netting and collateral, at this stage, can help to prevent a further deterioration of the financial position of an ailing firm. On the other hand, it might be argued that as soon as the market becomes aware of financially deteriorating conditions, collateral arrangements will lead to calls for additional collateral, since the collateral taker will have initially made do with collateral the value of which was inferior to the actual exposure (which is common practice between financially healthy parties). This would force the ailing firm into a liquidation of assets in order to meet these demands and spark a depression in asset prices, as the valuation of assets is based on

[104] See Bliss and Kaufman, ibid 10, 19. Roe, ibid 565-566; see also Edwards and Morrison, ibid 91, 94, 101 (citing the example of the failure of Long Term Capital Management (LTCM) in 1998).

[105] See Morrison, Roe and Sontchi, 'Rolling Back the Repo Safe Harbors' (n 16) 9.

market price ('mark-to-market'), thereby further aggravating the situation. The moment the firm failed to provide sufficient collateral to one of its many counterparties, thereby triggering close-out, cross-default clauses would ensure that virtually all contracts with other market participants were closed out at the same time, thus leaving the firm totally unhedged. Its financial position will prevent it from replacing these hedges at market price, a situation guaranteed to propel it over the brink of insolvency very quickly, rendering any further attempts at restoring viability useless.

This example points to the important issue of insufficient levels of initial collateralisation (generally called 'initial margin'). Safe harbour regimes allow for margining during the lifetime of a contract. The rationale for this exception is to prevent unenforceability of collateral provided prior to insolvency, including during a so-called suspect period where, from the point of view of the estate, there is no need for avoidance,[106] notably because there is no preferential treatment of a creditor. If applied consistently, margining does not actually constitute preferential treatment. Other creditors are not disadvantaged because there is no net outflow of assets from the pool. However, safe harbour rules in many jurisdictions do not distinguish on the basis of the criterion of net outflow but restrict avoidance more generally.[107] As a consequence, later delivery of collateral is not voidable even in cases in which there is a net outflow of assets. In practice, parties use this freedom in 'good times' to suspend the provision of initial margin for an indeterminate period, notably as long as the obligor is financially sound.[108] Yet this practice could be exactly regarded as a preference in that it does not merely reflect an increased obligation.[109] It is also problematic in terms of systemic risk; no great

[106] See Recital 16 Financial Collateral Directive.

[107] See, in particular, Recital 16 Financial Collateral Directive: '[…] The intention [of restricting avoidance] is merely that the provision of top-up or substitution financial collateral cannot be questioned on the sole basis that the relevant financial obligations *existed before that financial collateral was provided*, or that the financial collateral was provided during a prescribed period. […]' (emphasis added).

[108] Roe, 'Derivatives Market Payment Priorities' (n 16) 563.

[109] Roe, ibid, 573; Mooney, 'The Bankruptcy Code's Safe Harbors' (n 12), 257; Skeel and Jackson, 'Transaction Consistency' (n 16) 190-191.

flight of imagination is needed to see that not enough collateral would be available should calls for additional collateral occur on a wider scale across the market, which is exactly the mechanism that caused the AIG insolvency during the financial crisis. Any defaults on calls for additional collateral would trigger liquidation under the relevant master agreements. Thus, insufficient initial margin, to the extent made possible by the insolvency safe harbours, would therefore appear to be a significant crisis accelerator.[110] However, again, this problem could potentially be addressed from different angles. The insolvency safe harbours could either be narrowed so that calls for additional margin that went beyond a mere adjustment of values could be avoided, or regulation could impose proper collateralisation on the parties. After the crisis, the international community went for the second option by setting standards on initial margin while at the same time upholding the safe harbours in this respect.[111] These standards pay particular attention to the equilibrium of systemic risk, on the one hand, and liquidity on the other hand, notably by imposing gradual requirements that are in addition phased in over a longer period. This measure is complimentary to other regulatory rules, such as transparency requirements regarding repo portfolios, restrictions on re-use of collateral securities, mandatory haircuts,[112] liquidity buffers and requirements for central clearing and

[110] See FSB, 'Implementing OTC Derivatives Market Reform' (2010) para 3.6.2 <http://www.financialstabilityboard.org/wp-content/uploads/r_101025.pdf> accessed 22 March 2015.

[111] Basel Committee on Banking Supervision and Board of the International Organisation of Securities Commissions, 'Margin requirements for non-centrally cleared derivatives' (March 2015) <http://www.bis.org/bcbs/publ/d317.htm> accessed 17 March 2015; IOSCO Committee on Payment and Settlement Systems, 'Principles for Financial Market Infrastructures' (April 2012) Principle 6 <http://www.bis.org/cpmi/publ/d101a.pdf> accessed 17 March 20015; Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (commonly called 'EMIR') Article 46(1).

[112] 'Haircut' is market vernacular for a risk control measure applied to underlying assets whereby the value of those underlying assets is calculated as their market value reduced by a certain percentage (the 'haircut'). Haircuts are applied by a collateral taker in order to protect itself from losses resulting from declines in the market value of the collateral asset in the event that it needs to liquidate that collateral, see European Central Bank online glossary, <https://www.ecb.europa.eu/home/glossary/html/glossh.en.html> accessed 10 March 2015. 'Mandatory haircut' refers to a legal requirement to apply such abatement for risk management purposes, see Basel Committee on Banking Supervision and Board of the International Organisation of Securities Commissions, 'Margin requirements for non-centrally cleared derivatives' (March 2015) <http://www.bis.org/bcbs/publ/d317.htm> accessed 17 March 2015.

reporting of derivatives.[113] All these measures are conceived directly to address the systemic risk flowing from the use of repos and securities lending transactions and derivatives, amongst other purposes. It would not be possible to achieve similarly well-calibrated solutions to that problem by abolishing or restricting safe harbour regimes — such an approach would be too bold and the resulting legal uncertainty would paralyse the market, as nobody would be able to rely on the enforceability of contractual risk mitigation.

C. *Bank Resolution and Systemic Relevance*[114]

As discussed before, one of the rationales of safe harbours is the need to prevent the systemic consequences of the failure of financial institutions. Obviously, not every failure need trigger systemic risk: for instance, the breakdown of a local savings bank will leave the wider financial world and economy largely unaffected. Typically, the systemic importance of financial institutions grows with increasing size, irreplaceability and interconnectedness.[115] Therefore, safe harbours have the most effect where they protect large, interconnected institutions from the insolvency of their peers. However, it now appears that this understanding should be fundamentally revised, as the largest financial institutions will, in future, no longer enter into insolvency proceedings but instead will face 'resolution'. Supervisory authorities will now in practice use this new, special administrative procedure to stave off consequences of the kind experienced in the wake of the Lehman failure, deploying various tools such as transferring viable business to a state-

[113] See, in particular, European Commission, Proposal for a Regulation of the European Parliament and of the Council on reporting and transparency of securities financing transactions (29.01.2014) COM(2014) 40 final <http://ec.europa.eu/transparency/regdoc/rep/1/2014/EN/1-2014-40-EN-F1-1.Pdf> accessed 9 April 2015; FSB, Strengthening Oversight and Regulation of Shadow Banking, (29.8.2013) <http://www.financialstabilityboard.org/wp-content/uploads/r_130829a.pdf>; Regulatory Framework for Haircuts on non-centrally cleared securities Financing Transactions (14.10.2014) http://www.financialstabilityboard.org/wp-content/uploads/r_141013a.pdf as well as the measures listed in n 111.

[114] I am grateful to Johannes Rehahn, research assistant at the LSE Law Department, for his valuable assistance on this section.

[115] International Monetary Fund/Bank for International Settlements/Financial Stability Board, *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations* (2009) paras 12-15 <http://www.bis.org/publ/othp07.pdf> accessed 10 March 2015.

owned bridge bank or another healthy bank, or converting debt owed by the failing bank into shares in the bank ('bail-in'). Resolution regimes are now being introduced globally[116] and apply to banks, investment firms,[117] and, increasingly, financial market infrastructures,[118] the three most important categories of financial institution in systemic terms. Insolvency of systemically important financial institutions will therefore be a well-nigh redundant concept. No insolvency officials or courts will be involved and no cherry picking or avoidance for preference will be available. Insolvency safe harbours will therefore remain relevant only to the counterparties of failing financial institutions other than banks, investment firms and financial market infrastructures.

Even where master agreements provide for termination and close-out upon reorganisation or restructuring,[119] resolution regimes eschew the route of privileged treatment through a safe harbour-like mechanism. Instead, they espouse the idea of a stay or moratorium with automatic effect or one which may, and probably as a rule will be imposed on the counterparties of the institution under resolution by regulators.[120] This breathing space was introduced to allow the competent authority to evaluate the financial contracts of an ailing institution and to decide which should be transferred to a healthy

[116] The US introduced this mechanism in the Federal Deposit Insurance Act in 1991 to address negative externalities potentially caused by the exercise of termination rights. The FDIA was originally applicable to institutions with a banking licence. After the Financial Crisis, the US modelled a broader rule on the FDIA that was included in the Dodd-Frank Act, sections 201(a)(11), 203, now also covering bank holding companies and, under certain conditions, non-banks. England and Germany adopted similar rules in 2009 and 2010. Also in 2010, the mechanism was elevated to global best practice by the FSB and several jurisdictions have since followed suit. In 2011, the FSB published twelve main features of effective resolution regimes which were updated in October 2014; see Financial Stability Board, Key Attributes (n 101). The EU introduced a common rule in 2014, implemented in the course of 2015; see Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC [etc] of the European Parliament and of the Council [2014] OJ L173/190 ('Bank Resolution Directive').

[117] See article 1(1)(a) Bank Resolution Directive; sections 201(a)(7), (8), (11), 203(b) Dodd-Frank Act.

[118] Committee on Payments and Market Infrastructures/International Organization of Securities Commissions, 'Recovery of Financial Market Infrastructures' (2014) para 2.2.3 <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD455.pdf> accessed 10 March 2015; Financial Stability Board, 'Key Attributes' (n 101) para 1.2. In the EU, the Consultation on a framework for the recovery and resolution of financial institutions other than banks was closed on 28 December 2012. No further steps have been taken so far. Under US law, large parts of the financial market infrastructure are already covered; see sections 201(a)(8), (11), (14), 102(a)(4)(C) Dodd-Frank Act.

[119] See, for example, sections 10(a)(vi), (b)-(g), 2(a)(v) of the 2011 Global Master Repurchase Agreement; section 5(a)(vii) ISDA 2002 Master Agreement: 'a general assignment, arrangement or composition with or for the benefit of its creditors' is assigned to be an Event of Default and Termination Event.

[120] Articles 69-71 Bank Resolution Directive; section 210(c)(10)(B) Dodd-Frank Act.

institution and which should remain in the ailing estate and be wound up. The idea is also to avoid important changes on the balance sheet caused by extensive exercise of termination rights.[121] Resolution regimes are more clear-cut in this regard than insolvency laws. There are no exceptions from the administrative stay comparable to safe harbour rules in insolvency law.[122] Indeed, the stay typically ends after two days and termination rights do not re-emerge in relation to those parts of the business saved by the regulator, in particular by transferring them to a financially healthy institution such as another bank. Termination rights are only revived in respect of those contracts which remain in the now isolated 'toxic' part of the estate which is destined to be liquidated by recourse to ordinary liquidation proceedings.[123] But this rump estate would typically not be of systemic importance.

However, if systemic risk is increasingly brought under control by regulatory changes, 'what then remains of the original rationale for the safe harbours'?[124] As a consequence of the introduction of resolution regimes, counterparties of an ailing financial institution will fall into one of the following three categories. First, they will include those market participants that are not covered by safe harbour rules; these will generally belong to the non-financial world and will not be of systemic importance to the financial sector. Secondly, they will encompass those financial market participants generally covered to the extent that they deal with banks, investment firms and financial market infrastructures, which will in practice never become insolvent but enter resolution proceedings as they fail. Thirdly, they will include those financial market participants that are generally covered to the extent that they contract with a counterparty that enters insolvency proceedings as it fails, which means any financial institution other than banks,

[121] Recital (94) Bank Resolution Directive.

[122] However, title transfer financial collateral arrangements and set-off and netting arrangements are to be protected against split-up in the event of a transfer; see article 77 Bank Resolution Directive.

[123] Articles 71(1)-(5), 118 Bank Resolution Directive. The suspension does not, however, apply where the counterparty is a central bank, a central counterparty or a settlement system, ibid (3); section 210(c)(8)(A) and (10)(B) Dodd-Frank Act.

[124] Morrison, Roe and Sontchi, 'Rolling Back the Repo Safe Harbors'(n 16) 3.

investment firms and financial market infrastructures or one of the aforementioned where the regulator decides not to invoke resolution but to allow the market participant to fail as it is of no systemic importance.

As a result, the safe harbour rules will remain without effect in the most systemically relevant failures, notably those of systemically relevant banks, investment firms and infrastructures. Instead, regulators will use a completely different set of legal mechanisms to avoid contagion, including a stay on termination of contracts. Where insolvency proceedings may still occur, notably upon failure of a systemically irrelevant financial institution, the systemic risk rationale of safe harbours does not bite: the failure of such an institution is unlikely to contribute significantly to systemic risk, either through knock-on effects on counterparties or by leading to a liquidity crunch.[125] Thus, it is probably fair to state that the introduction of bank resolution regimes has considerably reduced the scope of application of safe harbours mainly to systemically irrelevant scenarios. This does not, however, remove the importance of safe harbours for all types of financial institution which occur before resolution or insolvency proceedings are opened, as described earlier.

5. *Conclusion*

Insolvency safe harbours are conceived on the basis of a double rationale. On the one hand, safe harbours allow for exponentially increased market liquidity based on the highly efficient use of assets for purposes of collateralisation. Literally any type of asset, regardless of its legal nature, can now be turned into cash using repo or derivatives transactions. Differences between cash, claims and securities become irrelevant and the importance of the legal nature of rights in these assets (traditionally full title, security interest or claim) likewise vanishes. As a consequence, the concept of 'asset' assimilates with the concept of 'liquidity' as all positions held by a financial institution with its

[125] Bliss and Kaufman, 'Derivatives and Systemic Risk' (n 16) 17.

counterparty form part of the same gigantic current account—the grand total of which, the 'net amount', corresponds to the risk exposure. The amount of liquidity created through safe harbours, which mirrors the degree to which risk is shifted, depends on the scope of safe harbours (Which types of transaction? Which types of financial institution?) as chosen by the relevant legislator.

On the other hand, insolvency safe harbours limit — or even well-nigh eliminate — individual counterparty credit risk for the sake of increased overall systemic stability. However, the systemic risk aspect of the rationale is much more complex than is commonly understood and goes far beyond the idea that domino-like contagion is avoided from the outset because the counterparties of the insolvent party will not fail as a consequence of the safe harbour protection. Rather, that — valid — argument is both supported and countered by other mechanisms that either limit (eg, avoidance of runs on ailing firms) or increase (eg, moral hazard) the systemic risk. Which of these effects will prevail depends on the concrete circumstances and is difficult to predict. The systemic risk rationale is further weakened by the appearance of bank resolution regimes. These new administrative procedures render safe harbours largely irrelevant as tools to mitigate systemic risk.

Furthermore, the liquidity and the risk rationale are closely intertwined. The highly efficient use of homogenized assets on a cross-border, globalized basis makes collateral more readily available and at lower cost, but at the same time spreads the collateral cover very thinly across the market: it is large and flexible but can break easily if something goes wrong. So again, what is beneficial generally (collateral more easily available) may turn out to be dangerous in times of stress (no asset reserves).

The above leaves the legislator with a picture in which the containment of counterparty risk through safe harbours is clear, but where it is not so obvious whether the limitation of systemic risk is a good enough policy argument. This dilemma reflects

the fact that in the financial market, risk can be dispersed but will not effectively disappear until obligations are settled. Yet legislators, in their normative decisions, opt for liquidity and strong growth of the financial market — an argument well-known in the world of traditional security interests, which generally privileges major market players for the sake of a more liquid lending market. To the extent that safe harbours are based on a systemic risk rationale, this is at odds with reality – the main argument, at least today, is liquidity. This incongruence explains why the debate on safe harbours is so relevant to the US but much less so in other jurisdictions. Where insolvency law is more creditor-friendly from the outset, liquidity of assets is a more attractive argument than it is in debtor-focused insolvency regimes.

Still, repealing or fundamentally revising the concept of safe harbours with a view to avoiding adverse systemic effects is not only unnecessary but also rather counter-productive.[126] First, systemic risk is based on an amalgam of many different causes and incentives and changing the safe harbour regime would only address one isolated aspect, whereas the overall repercussions for risk management flowing from changes to the safe harbour regime are potentially negative. Secondly, insolvency law, though it has significant influence on the behaviour of market participants towards risk-taking while they are going concerns is too bold a tool to control that behaviour. This role is better left to regulation. Regulation is able to address more selectively the vast majority of adverse systemic effects in which safe harbours may have a (smaller or larger) share, notably by establishing requirements for liquidity buffers, mandatory haircuts, initial margin requirements, central clearing and in respect of risk-taking behaviour, without choking the liquidity made possible by the safe harbours.

Furthermore, there is no equally effective risk mitigation tool to hand at the moment, especially not from a global point of view. Only safe harbours allow for cross-

[126] The recent report of the American Bankruptcy Institute on a possible reform of Chapter 11 (n 14) has stopped short of recommending a fundamental overhaul of the safe harbour concept. See, in particular, ibid. 102 in relation to the risk-accelerating effect of safe harbours.

jurisdictional use of assets on the present scale, an effect that is achieved through homogenous insolvency regimes in this respect. This globalisation of asset use could never be achieved on the basis of traditional security, if only for reasons of lack of legal certainty.

In the future, safe harbours will continue to spread to other jurisdictions. Insolvency safe harbours have a logical attraction for every aspiring financial market. The fact that safe harbours are an integral part of the capital requirements regime and the considerably increased liquidity that comes with safe harbours would make it virtually impossible for a jurisdiction to participate in the global financial market if they did not have a safe harbour regime. Contracting with market players from markets that lack safe-harbour protection is expensive and much riskier. Therefore, markets and regulators will need to continue implementing safe harbours, many using the Financial Collateral Directive or the UNIDROIT Principles on Close-out Netting as blueprints. As long as fundamental ideas about the size of the financial market and the acceptance of the risk naturally flowing from it are not re-thought, there is no viable alternative to insolvency safe harbours.