Risk Retention in Securitisation and Empty Creditors

When Financial Regulation (Positively) Spills Over Corporate Governance

Chouliara, E.; Martino, E.D.

DOI
10.2139/ssrn.3824733
10.54648/eulr2022029

Publication date
2022

Document Version
Submitted manuscript

Published in
European Business Law Review

UNIVERSITY OF AMSTERDAM

AMSTERDAM CENTER FOR LAW & ECONOMICS

RISK RETENTION IN SECURITIZATION AND EMPTY CREDITORS

Evgenia Chouliara

Edoardo D. Martino

Amsterdam Law School Legal Studies Research Paper No. 2021-21

Amsterdam Center for Law & Economics Working Paper No. 2021-07

European Banking Institute Working Paper Series 2021-91

EBI Working Paper Series

2021 – no. 91

Evgenia Chouliara & Edoardo D. Martino

Risk Retention in Securitization and Empty Creditors

12/04/2021

The European Banking Institute

The European Banking Institute based in Frankfurt is an international centre for banking studies resulting from the joint venture of Europe's preeminent academic institutions which have decided to share and coordinate their commitments and structure their research activities in order to provide the highest quality legal, economic and accounting studies in the field of banking regulation, banking supervision and banking resolution in Europe. The European Banking Institute is structured to promote the dialogue between scholars, regulators, supervisors, industry representatives and advisors in relation to issues concerning the regulation and supervision of financial institutions and financial markets from a legal, economic and any other related viewpoint. The Academic Members of EBI are the following:

1. Universiteit van Amsterdam, Amsterdam, The Netherlands
2. Universiteit Antwerpen, Antwerp, Belgium
3. Πανεπιστήμιο Πειραιώς / University of Piraeus, Athens, Greece
4. Alma Mater Studiorum – Università di Bologna, Bologna, Italy
5. Academia de Studii Economice din București (ASE), Bucharest, Romania
6. Universität Bonn, Bonn, Germany
7. Trinity College, Dublin, Ireland
8. Goethe-Universität, Frankfurt, Germany
9. Universiteit Gent, Ghent, Belgium
10. Helsingin yliopisto (University of Helsinki, Helsinki, Finland)
11. Universiteit Leiden, Leiden, The Netherlands
12. Universidade Católica Portuguesa, Lisbon, Portugal
13. Universidade de Lisboa, Lisbon, Portugal
14. Univerze v Ljubljani / University of Ljubljana, Ljubljana, Slovenia
15. Queen Mary University of London, London, United Kingdom
16. Université du Luxembourg, Luxembourg
17. Universidad Autónoma Madrid, Madrid, Spain
18. Universidad Complutense de Madrid/CUNEF, Madrid, Spain
19. Johannes Gutenberg University Mainz (JGU), Mainz, Germany
20. University of Malta, Malta
21. Università Cattolica del Sacro Cuore, Milan, Italy
22. Πανεπιστήμιο Κύπρου / University of Cyprus, Nicosia, Cyprus
23. Radboud Universiteit, Nijmegen, The Netherlands
24. Université Panthéon - Sorbonne (Paris 1), Paris, France
25. Université Panthéon-Assas (Paris 2), Paris, France
26. Stockholms Universitet/University of Stockholm, Stockholm, Sweden
27. Tartu Ülikool / University of Tartu, Tartu, Estonia

EBI Working Paper Series

EBI Working Paper Series are a project of the European Banking Institute e.V.. EBI Working Paper Series represent a selection of academic researches into the area of banking regulation, banking supervision and banking in general which have been drafted by professors and researchers of EBI Academic Members and selected by the Editorial Board.

Editorial Board

Risk Retention in Securitization and Empty Creditors

When financial regulation (positively) spills over corporate governance

Evgenia Chouliara[*], Edoardo D. Martino[†]

Abstract

The risk retention rule was introduced in the US and the EU as a mechanism to curb the originate-to-distribute model, associated with securitizations and the financial crisis of 2008. This paper argues that besides its original financial stability rationale, the rule has positive spillovers on debt governance and specifically on the incentives to monitor, the design of covenants and the lender's stance during renegotiation and bankruptcy (the 'empty creditor' problem). Risk retention in true sale securitizations makes the strongest case for debt governance, although the existence of various options of retention appears to be associated with varying incentives. The mechanism and effects of risk retention on synthetic securitizations remain ambivalent, given the perverse incentives associated with over-insurance (negative economic ownership). However, the upcoming restriction of double hedging for synthetic STS transactions is a positive development.

Keywords: Law & Finance, Financial Regulation, Debt Governance, Securitization, Risk Retention

JEL Classification: G21, G38, K22

[*] European Central Bank.

[†] Postdoctoral Researcher at the Amsterdam Center for Law and Economics (ACLE), University of Amsterdam (UvA); Associate Researcher at the European Banking Institute (EBI).

The views expressed in this paper are those of the authors and do not reflect those of the European Central Bank. All remaining errors are our own.

1. Introduction

'Unintended consequences' has become a sadly common jargon in the legal and economic literature discussing the post-financial crisis stream of reform.[1] It has been used with an almost monotonical negative connotation, pointing at the negative effects of regulatory reforms beyond the strict scope of the reforms themselves.

For a change, this article investigates a case of good 'unintended consequence' and claims that the EU Securitization Regulation, and especially the risk retention rule embedded in it, can have a positive effect on the corporate governance of the borrowing firms.[2]

Securitization is the process whereby the credit risk associated with a pool of illiquid exposures, such as residential mortgages, is tranched and sold in the form of liquid, marketable securities.[3] Intuitively, this transfer of credit risk nudges the lender towards inefficient behaviour, removing the consequences of his actions. In particular, the transfer of credit risk can weaken the incentives to properly screen the borrower, before the loan origination, and monitor his performance, during the lending relationship. The latter aspect is what the literature calls the 'empty creditor' problem.[4]

The perverse incentives generated by transferring the credit risk through complex and opaque financial instruments were a major factor of financial instability and propagation in the latest financial crisis, especially in relation to the residential mortgages in the US. This opened a quest for regulatory intervention in both sides of the Atlantic, with a view to limit systemic risk building and preserve financial stability.[5] Among several regulatory interventions, both the

[1] The list of references in this respect would limitless. As a paradigmatic example, we refer to the book by professor David Skeel, where the author discusses the unintended consequences of the Dodd-Frank Act in the US. David Skeel, *The New Financial Deal: Understanding the Dodd-Frank Act and its (Unintended) Consequences* (2010).

[2] Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitization, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012, OJ L 347/35, 28.12.2017, p. 35 [hereinafter Securitization Regulation].

[3] Art. 2 (1) Securitisation Regulation, *ibid*.

[4] Henry T. C. Hu & Bernard Black, *Debt, Equity, and Hybrid decoupling: Governance and Systemic Risk Implications*, 14 Eur. Fin. Manag. J. 663 (2008). The empty creditor idea was first proposed in relation to credit default swaps but, mutatis mutandis, is fully applicable to securitization, as detailed *infra*, Section 3.

[5] Hyun Song Shin, *Securitization and financial stability*, 119 Econ. J. 309 (2009).

EU and the US legislator limit the extent to which transferring credit risk is possible, mandating the retention of a certain amount of risk in the banks' portfolio.[6] However, securitization is still a key component for the transition to market-based finance in Europe (Capital Markets Union). This is especially relevant in light of the post-COVID-19 recovery, to the extent that securitization allows banks to unlock lending capacity and continue to provide funding to the economy.[7]

The simple framework depicted above highlights that those incentives have an impact not only at the macro-level but also at a micro-level, that is, in debt governance. Debt governance can be defined as the 'creditors' overall relationship with the debtor' including the 'negotiations to address loan terms and conditions', as well as 'the exercise or restructuring of contractual and legal rights'.[8] Hence, setting aside any financial stability considerations, transferring credit risk through securitization also alters the lending relationship as such. The detachment of control rights from credit risk might thus negatively affect monitoring, covenant design and waivers, as well as impact debt renegotiation and initiation of bankruptcy proceedings. Weakened monitoring incentives and inefficient initiation of bankruptcy could in turn be associated with a decrease in firm value, either by increasing the cost of capital or by destroying any going-concern surplus.

As mentioned above, risk retention was originally introduced on the background of systemic considerations.[9] However, since the cause of the problem – i.e. the transfer of credit risk – is common in both fields, this article will show that risk retention can have positive spillovers in the context of debt governance. In so doing, Section 2 discusses the role of debt governance and introduces the transfer of credit risk. Section 3 studies the impact of securitization on debt governance, highlighting the societal costs it implies. Against this backdrop, Section 4 analyses the EU risk retention rule. Eventually, Section 5 assesses the positive spillovers of such rule on

[6] Art. 6 (1) Securitization Regulation, *supra* n. 2. For a more nuanced account of the risk retention rule, *see infra* 4.

[7] Action 6 of the new CMU Action Plan. European Commision, *A Capital Markets Union for People and Businesses – New Action Plan*, at 2, 9 [COM (2020) 590 final], https://eur-lex.europa.eu/resource.html?uri=cellar:61042990-fe46-11ea-b44f-01aa75ed71a1.0001.02/DOC_1&format=PDF.

[8] Hu & Black, *supra* n. 4, at 665, 681.

[9] See Recital 10 Securitization Regulation, *supra* n. 2.

debt governance. Moreover, Section 5 discusses the adequacy of current design of the risk retention rule from a debt governance perspective. Section 6 concludes.

2. Creditors and Debt Governance

In the broadest sense possible, corporate governance can be defined as the ways in which suppliers of finance ensure getting a return on their investment.[10] In the case of debt, this means that creditors will strive to get back the principal amount of their exposure together with the promised interest payments, i.e. assuring that the borrower stays solvent or, in case of insolvency, maximising the insolvency proceedings.

In that sense, the debtor (principal) and the borrower (agent) are in an agency relationship characterized by asymmetric information in favour of the borrower that generally knows more about its activities and their probability of success. In this setting, one could recognize at least two functions of debt in curbing adverse incentives and/or resolving frictions, both linked to socially efficient outcomes.[11] First, the creditor can assume a disciplinary role in reigning the free cash-flow problem, ultimately pointing to the efficient allocation of capital.[12] Second, from a subjective perspective, the (prospective) creditor performs project selection and monitoring, which are also linked to allocative efficiency, mitigating informational asymmetries and moral hazard issues.[13] The remainder of this section details how creditors can have a positive impact on the quality of the decision-making of their borrowers (2.1) and why creditors, nonetheless, want to transfer credit risk (2.2).

[10] Andrei Shleifer & Robert Vishny, *A Survey of Corporate Governance*, 52 J. Fin. 737 (1997).

[11] John Armour et al., *Principles of Financial Regulation*, 53 (2016). Informational asymmetries and agency problems are the main two frictions regarding the allocation of capital, *see* Jeremy Stein, *Agency, Information and Corporate Investment, in 1 Handbook of the Economics of Finance* 114 (George M Constantinides, Milton Harris and René M Stulz eds., 2003).

[12] The free-cash flow problem indicates the managerial preference for size over profitability. Debt could induce discipline as any failure to pay coupons is tied to default and its consequences, Michael Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 Am. Econ. Rev. 323 (1986); Stein, *supra* n. 11, at 121.

[13] On the agency costs of debt and on the incentive of both the creditors and the debtor to minimize those in order to reduce the cost of finance, *see* Michael Jensen & William Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. Fin. Econ. 305 (1976), 334.

2.1 The Channels of Debt Governance

Given the focus of our article, the primary focus will be on debt governance carried out by banks. In that context, project selection and monitoring are fundamental. Banks channel liquid assets, such as deposits, into the productive economy through loans, thereby transforming short-term, liquid and riskless liabilities into long-term, illiquid and risky assets. This process is called qualitative asset transformation and is the cause of both the success and the inherent fragility of modern banking as a business model.[14] A key for the success of such a business model lies in the bank's ability to act as a delegated monitor, based on its expertise and cost advantage in project screening and monitoring.[15]

Screening refers to the scrutiny prior to the loan origination and is mostly guided by adverse selection considerations, owning to asymmetric information.[16] The latter left unchecked could in theory either drive safe borrowers out of the market or induce lenders to ration credit.[17] *Monitoring,* on the other hand, is performed during the lifecycle of the lending relationship and is driven by the lender's motivation to recover his investment. In that sense, monitoring primarily targets moral hazard.[18]

It follows that on the other side of the lending relationship there are naturally small, non-traded firms, for whom market-based finance is by and large unfeasible, due to accentuated informational asymmetries.[19] This is especially true in the European context, where the capital market still remains underdeveloped and funds are mainly allocated through banks.[20]

---

[14] Sudipto Bhattacharya & Anjan V. Thakor, *Contemporary Banking Theory*, 3 J. Fin. Intermed. 2 (1993).

[15] Douglas W. Diamond, *Financial Intermediation and Delegated Monitoring*, 51 Rev. Econ. Stud. 393 (1984). More specifically on relational banking *see* Allen Berger & Gregory Udell, *Relationship Lending and Lines of Credit in Small Firm Finance,* 68 J. Bus. 351, 354 (1995); Armour et al., *supra* n. 11 at 287.

[16] The *asymmetric information/signalling* framework is based on Akerlof's and Spence's seminal papers, George Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Quart. J. Econ. 488 (1970); Michael Spence, *Job Market Signaling*, 87 Quart. J. Econ. 355 (1973).

[17] John Kiff, François-Louis Michaud & Janet Mitchell, *An Analytical Review of Credit Risk Transfer Instruments*, 125 Fin. Stab. Rev. 110 (2003).

[18] *Moral hazard* refers to the incentive misalignment between parties in a contractual relationship, the most informed between them extracting value in unobservable ways, Jean-Jacques Laffont & David Martimort, *The Theory of Incentives* (2002); Kiff, Michaud & Mitchell, *supra* n. 17.

[19] Berger & Udell, *supra* n. 15, at 354.

[20] This has been repeatedly acknowledged by the European Institutions in their strive to create a Capital Market Union and reduce the reliance of European SMEs on bank lending. Lately, *see* European Parliament, *Report on*

In the context of larger firms, the same banking function can add to the borrower's reputation and thus indirectly rectify the third investors' information and coordination problems vis-à-vis the firm.[21] Therefore, the bank's delegated monitoring alleviates the informational asymmetry between the borrowing firm and the rest of the firm's debtholders,[22] signalling the creditworthiness of the firm to the rest of the 'less informed' market players and – ultimately – lowering the overall borrowing firms' cost of capital.[23]

Crucially, screening and monitoring is costly for the lender. The fact that other market players can free ride on that information provides a first valuable intuition on the appeal of transferring credit risk through securitization and decreasing the costs incurred in screening and monitoring. Before moving to securitization, it is worth examining some details of traditional debt governance to use as a benchmark for the analysis.

In principle, if rational debtholders foresee the shareholders' harmful behaviour,[24] they will adjust the terms of lending ex ante, effectively raising the firm's cost of debt.[25] On the other hand, covenants, typically embedded in loan contracts, may restrict the courses of actions available for debtholders over the life cycle of the exposure. Covenants usually specify the financial condition and/or behaviour of the borrower that could harm the debtholders' interests and attach negative consequences to those.[26]

Further Development of the Capital Markets Union (CMU): Improving Access to Capital Market Finance, in Particular by SMEs, and Further Enabling Retail Investor Participation 5 (2020/2036(INI)), https://www.europarl.europa.eu/doceo/document/A-9-2020-0155_EN.pdf .

[21] That is, it resolves the free-rider problem faced by multiple lenders or obviates multiple parallel monitoring efforts, Armour et al., *supra* n. 11, at 29, 276.

[22] Kiff, Michaud & Mitchell, *supra* n.17, at 109.

[23] Douglas Diamond, *Monitoring and Reputation: The Choice between Bank Loans and Directly Placed Debt*, 99 J. Pol. Econ. 689 (1991); Alan Morrison, *Credit Derivatives, Disintermediation, and Investment Decisions*, 78 J. Bus. 621, 623 (2005).

[24] Including acts that just redistribute firm value or both redistribute *and* lower firm value (e.g. risk-shifting), Clifford Smith & Jerold Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J. Fin. Econ. 117, 118 (1979).

[25] *Ibid.*, 119.

[26] One could distinguish between *affirmative* and *negative* covenants, which prescribe or prohibit certain behaviour and *financial* covenants, which are based on financial ratios and are further subdivided into *maintenance-based* and *occurrence-based*, depending on the time/circumstances they need to be met; *Greg Nini, David Smith & Amir Sufi, Creditor Control Rights, Corporate Governance, and Firm Value*, 25 Rev. Fin. Stud. 1713 (2012). Another typology distinguishes between covenants that restrict *dividend policy*, *financing* and *investment decisions*, as well as *bonding* covenants, *see* Smith & Warner, *supra* n. 24, at 124.

In particular, covenants limit future managerial discretion and thus lower the cost of debt, raising the value of the firm, while serving as a monitoring device.[27] This result is achieved through the contingent allocation of control rights to creditors if the precontracted thresholds are triggered.[28] The most paradigmatic way to contingently allocate control through covenants is the common 'acceleration clause'. In that case, breaching a covenant, for instance increasing the leverage over a certain threshold, constitutes an event of default on the debt obligation. Consequently, the creditor is granted the right to demand immediate repayment of the principal upon the breach (i.e. before the original maturity).[29]

Therefore, debt maturity becomes contingent on the lender's scrutiny, who has to verify the breach and, by implication, to monitor the borrower.[30] In a subtle way, the acceleration clause provides a better bargaining position to the creditor, that can threat to claim the principal in advance and force the renegotiation of the contract. Thus, apart from delegated monitors, relationship lenders can be also conceptualized as 'delegated renegotiators'.[31]

Consequently, lenders can exert significant informal influence over managerial decision-making. This happens both ex ante, incentivising the management to comply with the obligations contracted upon, as well as in the event of default of such obligations.[32] Finally, the role of creditors in the governance of the borrowing firms is ultimately perfected by the

[27] To the extent that those benefits are set off against the costs of contracting (monitoring, bonding, enforcement) there is arguably a firm-specific optimal set of financial contracts that maximize firm value, Ileen Malitz, *On Financial Contracting: The Determinants of Bond Covenants*, 15 Fin. Man. Assoc. Int. 18, 19 (1986). It should be noted that, in an ideal Modigliani and Miller setting, covenants merely (re)distribute cash flows among claimholders and so they should have no impact on the value of the firm. However, embedding some friction in the model, covenants help decreasing agency costs of debt and hence increase firm's value. On the so-called agency theory of covenants, *see* Bradley, Michael, & Michael R. Roberts, *The structure and pricing of corporate debt covenants*, 5 Quart. J. Fin. 1 (2015).

[28] In an incomplete contract setting, *see* Philippe Aghion & Patrick Bolton, *An Incomplete Contracts Approach to Financial Contracting*, 3 Rev. Econ. Stud. 473 (1992).

[29] That is, covenant violations are equated to default, Smith & Warner, *supra* n. 25, at 151.

[30] Raghuram Rajan & Andrew Winton, *Covenants and Collateral as Incentives to Monitor*, 50 J. Fin. 1113 (1995); Smith & Warner, *supra* n. 24, at 154. *See also* n. 16 and n. 18.

[31] Marco Becht, Patrick Bolton & Ailsa Röell, *Corporate Governance and Control*, *in 1 Handbook of the Economics of Finance* 29 (George Constantinides, Milton Harris & René Stulz eds., 2003).

[32] Douglas G. Baird & Robert K. Rasmussen, *Anti-Bankruptcy*, 119 Yale L. J. 648, 678 (2010).

definitive relocation of control to debtholders within bankruptcy proceedings.[33] In this sense, debt determines a specific *governance structure*.[34]

What latently binds this whole narrative together, though, is that the lenders' incentives ultimately stem from their own exposure to the cash flow variability of the firm, i.e. to the (credit) risk assumed. By implication, any change in the credit risk borne, especially a complete transfer, could alter the debtholder incentives, all else being equal.

Before looking at what happens when credit risk is transferred, it is worth highlighting that a well-functioning debt governance generates societal value. We provide compelling empirical evidence and two broader considerations supporting our claim.

First, Nini and co-authors[35] studied the impact of covenants violation on solvent firms and demonstrated that creditors played an active role both through the available legal mechanisms, as well as behind the scene.[36] Such an engagement leads to two notable results. First, unsurprisingly, it led the breaching borrower to more conservative investment and distribution policies, reducing risk-shifting and asset dilution. Second, the engagement 'produces' value for the corporation. The corporations in breach of contractual covenants, surprisingly, experienced positive abnormal stock returns in the quarters after the breach happened and stayed constant in the following quarters.[37]

Complementing this evidence, it is worth recalling a vast empirical literature showing how credit risk transfer is making debt governance increasingly lax.[38] Piecing together these two pieces of evidence, higher volumes of credit risk transfer through securitization generate socially inefficient losses, as the value produced by debt governance engagement is foregone.

---

[33] Reinier Kraakman et al., *The Anatomy of Corporate Law* , 109 (2017). After all, bankruptcy is not synonymous to liquidation, but could just as well end up in reorganization, Aghion & Bolton, *supra* n. 28, at 490.

[34] Consistently, 'a corporate governance problem arises whenever an outside investor wishes to exercise control differently from the manager in charge', Becht, Bolton & Röell, *supra* n. 31, at 4. After all, 'corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment', Shleifer & Vishny, *supra* n. 10, at 737.

[35] Nini, Smith & Sufi, *supra* n. 26.

[36] For anecdotal evidence on behind the scene creditors engagement, *see* Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, U. Pa. L. Rev. 1209 (2006).

[37] Nini, Smith & Sufi, *supra* n. 26, at 1747.

[38] *Infra*, n. 86.

Second, the rise of non-performing loans (NPLs) represents one of the biggest challenges for financial stability in Europe. The rising stock of NPLs is the result of macro and micro vulnerabilities of the credit system of several European States. However, we cannot help but noting that the core of the problem rests on the imprudent extension or management of credit. Therefore, effective debt governance may contribute to handling, if not preventing, the accumulation of NPLs.[39] In that sense, there is a positive feedback effect between financial regulation and corporate governance, where regulation aiming at enhancing financial stability improves debt governance and, in turn, improved debt governance help safeguarding financial stability even more.

Finally, one can think also of more far-reaching goals related to a functioning debt governance. An example that comes to mind is the growing attention to the role of bank lending in countering climate change, the so-called 'green lending'.[40] Again, we cannot help but noting how a credible shift from brown towards green credit must rely on screening and monitoring of the green projects funded through bank lending, to avoid the risk of funding greenwashed projects. In this regard, the emphasis of several environmental activists and policy makers on green bond securitization may be misplaced.[41]

To sum up, bank creditors affect the decision making of their borrowing firms over the life cycle of their relationship: starting from the selection and design of the project (screening), through the implementation of the project (monitoring), up to the pathological outcomes of the project, leading to renegotiation or bankruptcy. In particular, given the nature of debt contracts, creditors should have incentives to renegotiate all and only the positive going concern value contract and, conversely, trigger the bankruptcy all and only the insolvent companies. The

[39] Better monitoring may also help in the early emergence of non-performing exposure. On the importance of early recognition of NPLs, *see* Andreas Kokkinis & Andrea Miglionico, *The Role of Bank Management in the EU Resolution Regime for NPLs*, 6 J. Fin. Reg. 204 (2020).

[40] This is getting traction in the European Union, at least at the level of regulators and supervisors. Andrea Enria, Chair of the Single Supervisory Mechanism, stated: 'So, fighting climate change will require major changes in our economy. And as banks have a key role in allocating funds to the economy, they will play a part too. Consequently, there are ideas to give banks an incentive to allocate more capital to green projects and assets', Andrea Enria, Chair of the Supervisory Board of the ECB, *Regulation, proportionality and the sustainability of banking* (November 21, 2019) (transcript at https://www.bankingsupervision.europa.eu/press/speeches/date/2019/html/ssm.sp191121_1~a65cdec01d.en.html).

[41] *See*, for instance, the position of the Climate Bond Initiative, https://www.climatebonds.net/resources/reports/green-securitization-unlocking-finance-small-scale-low-carbon-projects.

remainder of the article details how these socially beneficial features are weakened by large-scale securitization and why the risk retention rule is expected to have positive spillovers on debt governance.

2.2 Empty Creditors and Credit Risk Transfer Instruments

Creditors are 'empty' when the control rights embedded in the debt contract are decoupled from the economic rights stemming therein.[42] The transfer of credit risk, i.e. the decoupling of control and economic rights, generates suboptimal incentives in exercising such control rights and thus efficiently engaging in debt governance.

Even though the main focus of the article is on securitization, it is useful to start with the analysis of credit default swaps (CDSs) for two reasons: first, risk transfer through CDSs represents the archetype of the empty creditor problem; second, the use of CDSs is crucial for the so-called 'synthetic securitization'.

Credit default swaps (CDSs) are derivative contracts whereby a party (protection buyer) seeks protection from risk of default of a third party (reference entity).[43] To this end, the protection seller promises to pay the face value of the debt (notional principal) issued by a reference entity, upon the latter's default (credit event).[44] The protection seller, in exchange, receives a premium, typically in periodic payments.[45]

As instruments functionally equivalent to insurance against credit risk,[46] CDSs are typically employed as part of financial institutions' risk management, banks being the commonest users among them. Differently from securitization, though, there is no transfer of title and therefore

[42] Hu & Black, *supra* n. 4, at 731.

[43] John Hull, *Options, Futures and Other Derivatives,* 573 (2015).

[44] That is accurate for physical settlement; in case of cash settlement, the protection seller pays the difference between the face value and the amount recovered at the ISDA organized auction, *ibid.*

[45] Jonathan Berk & Peter DeMarzo, *Corporate Finance,* 785 (2020). The amount paid periodically, expressed as a percentage of the notional principal, is the CDS spread. To the extent that CDSs protect against the risk of default, a corporate bond yield netted against the CDS spread should approximate the risk-free rate, Hull, *supra* n. 43, at 573–575.

[46] The term 'insurance' is used here in a loose, rather than a technical sense, Hull, *supra* n. 43, at 574. Crucially, credit default swaps differ from insurance in that there is no insurable interest required. As a result, credit default swaps can serve speculative rather than hedging purposes which accounts for both the multiplicatively larger size of the credit protection market over the debt market, as well as for the implied incentives, *ibid.*, 571.

the lender's position remains legally identical. To the extent that its exposure is now insured, the bank no longer bears the credit risk and thus the consequences of its further decisions. Keeping this archetype in mind, we now turn to the focus of the article: securitization.

2.2.1 Securitization

The term securitization describes a technique by which relatively illiquid assets, such as consumer or residential loans, are pooled together and turned into liquid, tradable securities.[47] While typically opaque in its mechanics, securitization ultimately aims at unburdening the loan originator from an illiquid asset and the implied credit risk, transferring it to investors that hold the liquid securities.[48]

To appreciate the mechanics behind securitization and its impact on governance incentive, it is worth introducing the main players of a securitization and describe how they interact throughout the process. In particular, we focus on the originator, the 'securitization special purpose entity' (SSPE) and the investors.

Securitization first includes *pooling* a certain number assets in the portfolio of one (or more) originator(s), such as loans or a range of other debt instruments. Those are sold to a SSPE, thus taken off the originator's balance sheet. Already at this point, the originator has theoretically shed the portfolio-related credit risk, has improved its portfolio liquidity.[49] Moreover, the originator has freed up lending capacity, having realized the proceeds from the sale and having improved capital adequacy, all else being equal.[50]

Further down the same process, the SSPE or its sponsoring entity, finances the purchase by issuing asset-backed securities (ABSs) and secondarily asset-backed commercial paper

[47] Günter Franke & Jan Pieter Krahnen, *The Future of Securitization* 8 (Center for Financial Studies, Working Paper No. 31, 2008); Christian Farruggio & André Uhde, *Determinants of Loan Securitization in European Banking*, 56 J. Bank. Fin. 12, 13 (2015).

[48] Hull, *supra* n. 43, at 185; Franke & Krahnen, *supra* n. 47, at 8.

[49] Securitization as a means of funding can be a stand-alone motivation, Farruggio & Uhde, *supra* n. 47; Clara Cardone-Riportella, Reyes Samaniego-Medina & Antonio Trujillo-Ponce, *What Drives Bank Securitization? The Spanish Experience* 34 J. Bank. Fin. 2639 (2010).

[50] Steven Schwarcz, *The Future of Securitization*, 41 Conn. L. Rev. 1313 (2009).

(ABCP).[51] ABSs' payoff in turn derives primarily from the underlying loan cash flows, so that their issuance can be thought of as finalizing the transformation of the original loan portfolio.[52]

The cash flows from the underlying assets are divided and assigned to different, sequenced classes of securities (*tranching*), which receive payments in a waterfall-like manner and thus bear losses in reverse order (*subordination*).[53] To a bare minimum, there are three of them, namely the senior, the mezzanine and the equity tranche.[54] The same process could be repeated for mezzanine tranches, whose cash flows are repackaged anew, underpinning the issuance of another sequence of securities, based on pre-existing ABSs (ABS CDOs).[55]

Typically, each subsequent tranche carries lower rating and higher promised returns, owning to the payment order, the relative size and characteristics (e.g. maturity and risk) of the loan portfolio portion assigned to it. As a result, tranches also differ as to their informational sensitivity. Thus, unlike junior tranches, senior tranches largely capture the benefits of diversification, so that their value should be relatively insensitive to firm-specific information.[56]

This mechanism describes a simplified 'true sale securitization'. However, this is not the only way to securitize assets. The transfer of credit risk though pooling and tranching can be replicated by retaining the loan portfolio ownership and buying protection against default,

---

[51] As a matter of typology, *mortgage-backed securities* (MBSs) are based on residential mortgage loans. If the underlying assets include a wider range of debt instruments, the securities are termed *collateralized debt obligations* (CDOs), Hull, *supra* n. 43, at 583. Similarly, the term CLO stands for *collateralized loan obligations*.

[52] Though indirectly, through the special purpose entity. The issuance of ABCP serves as a supporting mechanism, being used for ABS payments in case of irregular cash flows from the underlying loans, Armour et al., *supra* n. 11, at 439.

[53] That is, every subsequent tranche receives principal and coupon payments only if the former has been fully paid first. There are two waterfalls, one for the principal and one for the interest payments, Hull, *supra* n. 43, at 187.

[54] Ibid., 186.

[55] *Ibid.*, 188. Another form of resecuritization are the so-called *CDOs squared*, whose underlying assets are other CDOs, which in turn might be based on MBSs, Kathryn Judge, *Fragmentation Nodes: A Study in Financial Innovation, Complexity, and Systemic Risk*, 64 Stan. L. Rev. 657, 682 (2012). Art. 8 of the Securitization Regulation banned resecuritization, admitting only a few exceptions deemed as 'legitimate purpose' resecuritizations. *See infra* Section 4.

[56] Franke & Krahnen, *supra* n. 47, at 13. Nonetheless, the different risk properties among tranches are by no means static. Instead, it has been shown that changes in the underlying portfolio, like an increase in the probability of default or correlation, may shift the inter-tranche (relative) loss distribution in favour of junior tranches, *see* Jan Pieter Krahnen & Christian Wilde, *Risk Transfer with CDOs* 12 (Center for Financial Studies, Working Paper No. 15, 2008); Franke & Krahnen, *supra* n. 47, at 36.

using credit derivatives, such as credit default swaps.[57] This alternative process is called synthetic securitization.[58]

Crucially, though, unlike true sale transactions, synthetic securitizations are more prone to speculative purposes, since the same set of assets can be referenced multiple times.[59] Additionally, since synthetic securitizations do not involve the transfer of the underlying assets, control rights remain with the original lender. Hence, true sale and synthetic securitizations might have similar results on the investor side, but diverge significantly as far as the originator and his incentives are concerned.[60]

Finally, it is important to acknowledge that the main three players discussed, namely the originator, the SSPE and the investor, are not the only parties involved.[61] In that sense, (true sale) securitizations reshape the lending relationship both by untying the credit risk from the lender's balance sheet, as well as by transforming bilateral relationships into multi-party structures. This allows to spread and diversify the risks involved in the transaction, but also enlarges the amount of parties prone to suffer losses and, potentially, spread the contagion. With these specifications in mind, it is now time to look at the relationship between securitization and financial (in)stability.

---

[57] It is common to distinguish between 'unfunded' and 'funded' transactions, e.g. credit default swaps and credit-linked notes, respectively. The difference is that credit default swaps expose the protection buyer to counterparty credit risk, whereas credit-linked notes do not, to the extent that the seller of the notes (i.e. the protection buyer) receives an upfront payment from investors, *see* EBA, *The EBA Report on Synthetic Securitisation* 22-23 (EBA/OP/2015/26).

[58] Günter Franke, Markus Herrmann & Thomas Weber, *Loss Allocation in Securitization Transactions*, 47 J. Fin. Quant. An. 1125, 1127 (2012).

[59] Angelos Delivorias, *Understanding Securitization: Background – Benefits – Risk*, at 1, 15 (European Parliamentary Research Service, 2015).

[60] *Ibid.*, 7.

[61] Franke & Krahnen, *supra* n. 47, at 17–18. For example, in mortgage lending, the originator typically concludes the loan contract, possibly via a mortgage broker, while the funds are provided by another entity, the warehouse lender. The lending relationship is then transposed to the special purpose vehicle level and managed by the servicer, who collects the loan payments and handles defaults. At the same time, the underwriter, typically an investment bank, handles the issuance of the asset-backed securities, which are rated by a credit rating agency. The party most involved throughout the process, the arranger, sets up the special purpose vehicle and concludes the web of contractual relationships among the parties that constitute the securitization conduit.

2.2.2 Securitization and Financial (In)Stability

The possibility to pool illiquid assets and sell them as liquid securities represents one of the most important financial innovations of the last decades. So much so as to let many observers believe that securitization would have ended commercial banking.[62] This did not happen and banks were extraordinarily able to react and adapt to the new technology. This way banks found a new, remunerative, scheme to operate their traditional activities.

Ironically, this scheme was supposed not only to generate profits, but also to make banks more resilient to shocks as securitization shielded credit institution from idiosyncratic risk.[63] In hindsight, it is easy to criticize this approach; however, it was based on the, back then, prevailing models according to which crises arise from exogeneous shocks.[64] The financial crisis has taught us that systemic risk piles-up endogenously and, consequently, that most of the previous financial regulation was based on flawed premises.[65] The impact of securitization on financial stability can be better appreciated through these lenses.

Securitizations ambitiously attempts at combining elements of both market- and bank-based finance but did poorly in both respects, combining inefficient decision-making and poor risk allocation.[66] This happened for several reasons whose detailed analysis falls out of the scope of this article. Nonetheless, recalling few crucial elements helps to understand the impact of securitization on debt governance as well as the rationale for the post-crisis regulation.

The rise of securitization incentivized the originate-to-distribute model, according to which banks had incentives to originate a high volume of loans, no matter the creditworthiness of the borrower, only to be *distributed* through securitization schemes. Put differently, originators

---

[62] John H. Boyd & Mark Gertler, *Are Banks Dead? Or Are the Reports Greatly Exaggerated* (Nat' l Bureau Econ. Research, Working Paper No. 5045, 1995).

[63] Gregory R. Duffee & Chunsheng Zhou, *Credit Derivatives in Banking: Useful Tools for Managing Risk*, 48 J. Mon. Econ. 25 (2001).

[64] Mario I. Blejer, Ernesto V. Feldman & Andrew Feltenstein, *Exogenous Shocks, Contagion, and Bank Soundness: A Macroeconomic Framework*, 21 J. Int. Mon. Fin. 33 (2002).

[65] For the endogenous approach to financial risk *see* Hyman P. Minsky, *The Financial Instability Hypothesis* (The Jerome Levy Economics Institute, Working Paper No 74, 1992).

[66] Franke & Krahnen, *supra* n. 47, at 10.

had little incentive to scrutinize potential lenders, as the credit risk would be borne by investors.[67]

The resulting expansion of lending activity created a self-feeding loop of credit expansion and asset appreciation, that scaled up to the creation of the real estate bubble, setting the stage for the recent financial crisis.[68] Additionally, the complex structure of mortgage securitizations and the inherent difficulty to assess the underlying assets, combined with the lack of appropriate rating methodology[69] hindered the understanding of risk assumed by investors and could be further associated with mispricing.[70]

The inevitable defaults on residential mortgages eventually spurred the reverse downward spiral in asset prices. The following uncertainty about the value of asset-backed securities resulted in the widespread refusal to roll over asset-backed commercial paper, a situation equivalent to a bank run.[71] The underlying maturity mismatch, although seated at the special purpose entity level,[72] spread its consequences to the originating bank. In fact, the credit lines (liquidity puts) from the originator toward the special purpose entities were often embedded on the securitization transactions.[73] This were functional to lower the cost of finance of the special purpose entity and credibly market the ABCP in the informational insensitive money market. However, this construction was imperfectly accounted for in capital requirements under Basel

---

[67] Markus Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007–2008 Banking Industry Trends Leading Up to the Liquidity Squeeze*, 23 J. Econ. Persp. 77, 82 (2009); Armour et al., *supra* n. 11, at 414.

[68] While a price increase would normally lower demand, the opposite trend can be explained by the residential real estate being both a consumption good and an investment asset. Investment assets appreciate on expectations (anticipated capital gains), which at times significantly depart from fundamentals (asset bubble), Richard Dusansky & Çagatay Koç, *The Capital Gains Effect in the Demand for Housing*, 61 J. Urb. Econ. 287 (2007); Berk & DeMarzo, *supra* n. 45.

[69] Franke & Krahnen, *supra* n. 47, at 36; Brunnermeier, *supra* n. 67, at 81.

[70] Rational ignorance may also be involved, Judge, *supra* n. 55, at 692; Cem Demiroglu & Christo James, *The Dodd–Frank Act and the Regulation of Risk Retention in Mortgage-Backed Securitie*s, *in Perspectives on Dodd-Frank and Finance* 206 (Paul Schultz ed., 2015); Hull, *supra* n. 43, at 194. Furthermore, the higher returns of asset-backed securities, compared to equally rated bonds, positively stimulated demand on the investor side, exacerbating the bubble, *see* Judge, *supra* n. 55, at 679, 695.

[71] Brunnermeier, *supra* n. 67, at 94; Judge, *supra* n. 55, at 700.

[72] Since ABCP is typically short-term and overcollateralized, it has been thought of as equivalent to a deposit, which nonetheless financed long-term assets, Armour et al., *supra* n. 11, at 440; Brunnermeier, *supra* n. 67.

[73] The originator providing liquidity puts can be seen as a private *lender of last resort*, nevertheless operating without the potency of a central bank, Armour et al., *supra* n. 11, at 440.

I.[74] Eventually, the originating banks had their own solvency exposed, having to meet relatively sudden and massive liquidity needs (funding risk).[75]

The appetite for securitization, however, did not arise exogenously. It rather constituted a response to the growing demand for safety that could not be matched anymore through sovereign and AAA corporate bonds.[76] In this regard, the possibility to issue senior, diversified, liquid securities were particularly palatable for investors. However, the safety of the senior tranches of ABSs relied on a number of assumptions that hold only in good times but spectacularly fail in times of financial distress. In particular, the entire construction relied on the fact that the tradable securities would remain liquid, or to put it differently, that liquidity in the financial system is a free good.[77] The financial crisis painfully taught us that liquidity is always there but for when it is really needed. Hence, when uncertainty grew, liquidity dried up and losses started to spread all over the world, revealing vulnerabilities that were not even imaginable.[78]

Contrary to its risk-reduction promises, securitization failed to allocate risk outside the banking sector, facilitated increased risk taking by originators, eventually being conducive to individual as well as systemic vulnerability.[79]

This brief account of the impact of securitization on financial stability built a clear case for regulatory intervention, in order to maintain the benefits stemming from securitization while minimizing its (systemic) costs. On top of financial stability risk, this article contends that the

---

[74] Wenying Jiangli & Matt Pritsker, *The Impacts of Securitization on US Bank Holding Companies,* SSRN, March 2008, at 1, 4, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1102284; Brunnermeier, *supra* n. 67; Armour et al., *supra* n. 11, at 440; David Jones, *Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage and Related Issues*, 24 Journal of Banking and Finance 35 (2000).

[75] Rob Nijskens & Wolf Wagner, *Credit Risk Transfer Activities and Systemic Risk: How Banks Became Less Risky Individually but Posed Greater Risks to the Financial System at the Same Time,* 35 J. Bank. Fin. 1391, 1392 (2011); Brunnermeier, *supra* n. 67, at 80.

[76] Arvind Krishnamurthy & Annette Vissing-Jorgensen, *The aggregate demand for treasury debt*, 120 J. Pol. Econ. 233 (2012). In this context, safety means a default-free debt instrument.

[77] Katarina Pistor, *A legal theory of finance*, 41(2) Journal of Comparative Economics 315, 316 (2013),

[78] For a detailed analysis of the mechanisms through which losses were propagated, *see* Gary Gorton & Andrew Metrick, *Securitized banking and the run on repo*, 104(3) Journal of Financial economics 425 (2012).

[79] Nijskens &Wagner, *supra* n. 75; Jiangli & Pritsker, *supra* n. 74; Francesca Battaglia & Angela Gallo, *Securitization and Systemic Risk: An Empirical Investigation on Italian Banks over the Financial Crisis*,30 Int. Rev. Fin. An. 274, 275 (2013).

relaxation of debt governance incentives constitutes an additional societal cost. Therefore, the next section analyses the effect of the transfer of credit risk through securitization on the governance of the borrowing firm.

3. Empty Creditors and Debt Governance

The transfer of credit risk removes the conditions necessary for efficient decision-making of the lending bank, weakening the incentives to screen and monitor. As discussed in the previous section, this may bring about negative welfare effects and might have pronounced destabilizing effects that eventually spread out to the real economy, as happened in 2008.[80]

This financial stability risk is coupled with the weakening in debt governance of the borrowing firms brought about by mass-scale securitization. In this regard, the root of the problem lies in the divergence between the control rights and the exposure of the lender.[81] This second issue has been partly overlooked in the literature, especially in relation to the debate on the desirable regulation of securitization.

The decoupling of control rights and exposure of the lender happens in all the cases of credit risk transfer introduced so far: true sale securitization, synthetic securitization and credit default swaps (CDSs). However, the form and channel of decoupling differs among the different transfer modes.

In true sale securitizations, the title is transferred to the special purpose entity, while the exposures are securitized and borne by investors in ABSs. In that case, the original lending relationship is onwards managed by the originating bank or outsourced to a servicer/trustee. It follows that the disassembly of the lending relationship indeed brings about a type of decoupling between control rights and cash flow rights.[82] In that setting, the main problem appears to be a pronounced information asymmetry between the borrowing firm and the investors in ABSs, coupled with the rational apathy of both the investors and the originator or servicer.[83]

---

[80] Brunnermeier, *supra* n. 67, at 91-98.

[81] Hu & Black, *supra* n. 4, at 680.

[82] Hu & Black, *supra* n. 4, at 687; Demiroglu & James, *supra* n. 70, at 201; Florian Gamper, *Credit Default Swaps and the Empty Creditor Hypothesis - If It Ain't Broke Don't Fix It,* 9 J. Bus. Entrepreneurship & L. 681 (2015).

[83] Hu & Black, *ibid.*

Unlike true sale securitizations, synthetic securitizations and credit insurance through credit derivatives involve the retention of title over the loans, nonetheless decoupled from the actual exposure. The original debtholder retains the same legal position and thus control rights within the lending relationship, but has effectively shed the exposure that underpins it - hence the term *empty creditor*.[84] What further exacerbates the incentive problem, though, is that the holder of control rights often has interests that oppose those of the borrowing firm, due to credit insurance, a situation that often implies speculative purposes.

Regardless of the particular form of decoupling, the alignment between control rights and exposure underpins the standard debt governance model depicted in Section 2.1. The departure from that standard model implies a different behaviour of the creditor vis-à-vis the debtor on various stages of the lending relationship, from its inception (contract design) to its end (bankruptcy), often bringing about inefficient results.[85]

3.1 Impact on Covenants and Monitoring

The transfer of credit risk alters the incentives to monitor, as well as its contractual pillar, i.e. covenants.[86] In a baseline scenario, covenants and monitoring could in turn negatively bear on the borrower's investment decisions.

In the case of credit default swaps, the lender is expected to rest upon the protection offered by the contract, which is found to loosen the strictness of performance-based covenants, as well as collateral requirements.[87] After all, if monitoring is costly, a bank protected against credit

---

[84] Hu & Black, *supra* n. 4, at 680.

[85] Henry Hu, Corporate Distress, Credit Default Swaps, and Defaults: Information and Traditional, Contingent, and Empty Creditors, 32 Brook. J. Corp., Fin. & Com. L. 5 (2018).

[86] Frank Partnoy & David Skeel, *The Promise and Perils of Credit Derivatives*, 75 U. Cin. L. Rev. 1019, 1033 (2007); Hu & Black, *supra* n. 4, at 685. For credit protection, *see* Charles Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 J. Corp. L. 641 (2009). For securitization, *see* Gary Gorton & George Pennacchi, *Banks and Loan Sales Marketing Nonmarketable Assets* , 35 J. Mon. Econ. 389 (1995); Christine Parlour & Guillaume Plantin, *Loan Sales and Relationship Banking*, 63 J. Fin. 1291 (2008); Yihui Wang & Han Xia, *Do Lenders Still Monitor When They Can Securitize Loans?*, 27 Rev. Fin. Stud. 2354, 2366 (2014).

[87] Susan Chenyu Shan, Dragon Yongjun Tang & Andrew Winton, *Market versus Contracting: Credit Default Swaps and Creditor Protection in Loans*, SSRN, Sept. 2015, at 1; Chenyu Shan, Dragon Yongjun Tang & Andrew Winton, *Do Banks Still Monitor When There Is a Market for Credit Protection?*, 68 J. Account. & Econ., July 2019, at 1.

risk would rationally abstain from dedicating resources that do not increase its final payoff.[88] Similarly, banks that frequently resort to securitizations are found to impose less restrictive interest coverage, debt-to-cash-flow and book leverage ratio requirements in covenants.[89] This is consistent to the hypothesis that the mere access to the securitization market suffices to weaken the monitoring incentives, mostly expressed through performance-based covenants,[90] even for non-securitized loans.[91]

Furthermore, as mentioned earlier, creditors typically utilize acceleration clauses in the covenant design. Covenant violations are nevertheless often waived, but the lender in turn imposes tighter restrictions, which often pertain to investment and financing decisions[92] and might even scale up to direct control on the firm's management.[93] This function is in turn altered in case of credit risk transfers, absent its own foundation, namely the lender's exposure. Banks actively engaging in securitizations are indeed found to frequently waive covenant violations without imposing additional restrictions on the terms of the loan contract, such as increased interest rates or additional collateral requirements.[94]

On the other hand, in the case of credit default swaps, the interaction between poor investment decisions, the likelihood of default and credit default spreads can be a counteractive factor to the shortcomings of credit risk transfer. In that case, lenient covenants will be less frequent for borrowers prone to agency problems, given the higher cost to buy protection against them.[95] This represents one of the main reasons why CDSs are typically issued and traded only for few, big and transparent companies. However, this argument does not apply to securitizations, where the loosening of covenants, as well as the subsequent increased risk taken

[88] René Stulz, *Credit Default Swaps and the Credit Crisis* (Nat'l Bureau Econ. Research, Working Paper No. 15384, 2009), https://www.nber.org/papers/w15384.

[89] Wang & Xia, *supra* n. 86, at 2355.

[90] For the case of CDS, *see* Shan, Tang & Winton, *supra* n. 87, at 7.

[91] Parlour & Plantin, *supra* n. 86, at 1292.

[92] For example, prescribing the reduction of investments or leverage, Sudheer Chava & Michael Roberts, *How Does Financing Impact Investment? The Role of Debt Covenants*, 63 J. Fin. 2085 (2008); Michael Roberts & Amir Sufi, *Control Rights and Capital Structure: An Empirical Investigation*, 64 J. Fin. 1657 (2009).

[93] Baird & Rasmussen, *supra* n. 32, at 678.

[94] Wang & Xia, *supra* n. 86, at 2357.

[95] Shan, Tang & Winton, *supra* n. 87, at 4; Shan, Tang & Winton, *supra* n. 87, at 2; Stulz, *supra* n. 88, at 8.

on by the borrowing firm have no equivalent market-based counteractive force, especially when the pooled assets are highly heterogeneous and opaque.

Furthermore, credit risk transfers may negate the positive effects induced by the lender's scrutiny on the borrower decision-making, which is especially concerning when it comes to investment decisions.[96] Left unchecked, the borrower of securitizing banks is incentivized to engage in increased risk-taking, possibly scaling up to negative present value investments.[97] Framed in broader terms, in the case of securitizations, enhanced liquidity may come at the cost of ex-ante inefficiency.[98]

Credit default swaps may cause similar results on the borrower's investment decisions via additional channels. In that case, the baseline assumption is that the (over-) protected lender may have incentives to drive his borrower into bankruptcy, in order to capture rents from over-insurance (even if the going-concern value of the borrower is still positive).[99] By backward induction, the best response of the borrower to such an incentive would be taking higher risks ex ante, lowering the probability of his projects succeeding but also increasing the magnitude of the upside if the project succeeds.[100]

In theory, bank monitoring lowers the cost of debt financing for borrowing firms vis-à-vis other creditors. However, despite diluted monitoring incentives, both modes of credit risk transfers have not necessarily been associated with higher cost of debt financing. The most plausible explanation is that securitization stimulated the supply of credit in the primary market.[101] Similarly, the hedging possibilities and informational role of credit default swaps are consistent with lowering the cost of debt.[102] However, the latter explanation is not

[96] Wang & Xia, *supra* n. 86, at 2360.

[97] However, weakened monitoring and increased risk are not inefficient *as such*, i.e. if not translated into negative npv investments, *ibid*., 2371, 2387.

[98] Parlour & Plantin, *supra* n. 86, at 1293, 1294.

[99] Even if the projects are of positive net present value, untimely bankruptcy is possible for liquidity reasons, Patrick Bolton & Martin Oehmke, *Credit Default Swaps and the Empty Creditor Problem*, 24 Rev. Fin. Stud. 2617, 2618 (2011).

[100] Murillo Campello & Rafael Matta, *Credit Default Swaps and Risk-Shifting*, 117 Econ. Let. 639 (2012).

[101] Taylor D. Nadauld & Michael S. Weisbach, *Did Securitization Affect the Cost of Corporate Debt?* 105 J. Fin. Econ. 332, 333 (2012).

[102] Adam Ashcraft & João Santos, *Has the CDS Market Lowered the Cost of Corporate Debt?*, 56 J. Mon. Econ. 514, 515 (2009).

unequivocal for riskier and informationally opaque firms, for which bank monitoring continues to be of particular importance.[103]

3.2 Impact on Renegotiation and Bankruptcy

The mapping of incentives so far relies on the absence of credit risk, which is translated into the lack of incentives typically attributed to lenders. As such, it would apply *mutatis mutandis* to both credit default swap protection and securitizations.

However, credit default swaps and (true sale) securitizations differ regarding the mode of transferring risk, which is reflected on incentives as well.[104] Thus, while both forms of risk transfer are consistent with a passive approach to the lending relationship (e.g. looser covenants), the incentives significantly differ when it comes to renegotiation and bankruptcy.

Credit default swaps provide perverse incentives to the insured creditors, as the failure of their borrower would guarantee them a full pay-off from the derivative. At the extreme, over-insured creditors might even have a strong, positive interest in leading the borrowing firm into bankruptcy, in order to reap the higher CDS payment, even if that outcome destroys value.[105] In those circumstances, over-insured CDS holders have in fact negative net exposure to the firm, in that their interests are inverse to the interests of the borrowing firm. In that sense, over-insured CDS holders have indeed negative economic ownership.[106] Worse still, since credit protection might just as well serve speculative purposes, a protection buyer might acquire the reference entity's debt only afterwards, with the sole purpose of holding out restructuring, induce bankruptcy and thus realize on his net short position.[107]

---

[103] *Ibid.*, 523.

[104] Supra, infra 3.

[105] Partnoy & Skeel, *supra* n. 86, at 1035; Baird & Rasmussen, *supra* n. 32, at 681. Interestingly also characterized as Darth Vader monitors, Partnoy & Skeel, *supra* n. 86, at 1035.

[106] Or *net short debt activism*, Henry Hu, *Corporate Distress, Credit Default Swaps, and Defaults: Information and Traditional, Contingent, and Empty Creditors*, 32 Brook. J. Corp. Fin. & Com. L. 5 (2018); Hu & Black, *supra* n. 4; Daniel Hemel, *Empty Creditors and Debt Exchanges*, 27 Yale J. on Reg. 159 (2010) ; Edward Janger & Adam Levitin, *One Dollar, One Vote: Mark-to-Market Governance in Bankruptcy*, 104 Iowa L. Rev. 1857 (2019).

[107] Stulz, *supra* n. 88, at 9; Hemel, *supra* n. 106, at 167; Janger & Levitin, *supra* n. 106, at 1865; William Bratton & Adam Levitin, *The New Bond Workouts*, 166 U. Pa. L. Rev. 1597, 1635 (2018). For cases, *see* Henry Hu,

Synthetic securitization presents considerable similarities with the incentives stemming from CDSs. In that case, the originator remains the owner of the assets, which then become the reference portfolio in credit default swap contracts with investors. As a result, the investors in securitized positions bear the credit risk associated with a pool of underlying assets, though by means of credit default swaps rather than asset-backed securities.[108] By contrast, the originator retains the control rights, though separated from the credit risk of the assets in the reference portfolio. Thus, synthetic securitization also brings about decoupling of control rights and cash flow rights, which in turn underlie the same empty creditor problem. At the extreme, the originator might employ the same assets in multiple synthetic securitizations, which effectively shifts his interests into negative ownership as in over-insurance, in the sense described above.[109]

By contrast, the problems in relation to true sale securitization mainly lie in the disassembly of the lending relationship implied in the securitization process. Once the underlying assets have been pooled and sold, the lending relationship is often handled by a third party, i.e. a servicer (a term typically used for mortgage-backed securities)[110] or an indenture trustee (for collateralized debt/loan obligations).[111] Thus, unlike initial screening, monitoring and loan renegotiation or filing for bankruptcy are performed by agents different from the loan originator.[112]

Handling the investors' interests rather than his own, the servicer/trustee thus acts as an agent of the investors (principals).[113] However, the investors likely lack the ability or even the

Financial Innovation and Governance Mechanisms: The Evolution of Decoupling and Transparency, 70 Bus. Law. 347, 369 (2015); Hu, *supra* n. 106, at 21.

[108] *EBA Report on Synthetic Securitisation*, *supra* n. 57, at 7.

[109] Hu & Black, *supra* n. 4, at 688.

[110] For simplicity, we will use the term 'servicer' regardless of the particular type of securitization.

[111] Janger & Levitin, *supra* n. 106, at 1868; Hu & Black, *supra* n. 4, at 686; Yingjin Hila Gan & Christofer Mayer, *Agency Conflicts, Asset Substitution and Securitization* (Nat'l Bureau Econ. Research, Working Paper No. 12359, 2006), https://www.nber.org/papers/w12359.

[112] Vinod Kothari, *Securitization. The Financial Instrument of the Future* 673, 696 (2006).

[113] Steven Schwarcz, *Keynote Address: The Conflicted Trustee Dilemma*, 54 NYLS L. Rev. 707, 708 (2010); Adam Levitin & Tara Twomey, *Mortgage Servicing* 28 Yale J. on Reg. 1 (2011).

interest to contract on the terms of servicing, being typically dispersed and of heterogeneous interests, while often underestimating the servicing risk.[114]

Thus, the third party's incentives to renegotiate and engage in private workouts largely rely on the design of their compensation. To illustrate, servicers were typically compensated on the basis of a flat-rate fee, dependent on the outstanding principal, rather than loan performance.[115] Additionally, they were typically reimbursed for any costs related to foreclosure, but not renegotiation.[116] The impact on renegotiation is nevertheless ambivalent. On the one hand, the prospect of continued servicing fees might nudge the servicer to delay bankruptcy or to unnecessarily modify the loan contract;[117] on the other hand, speeding up foreclosure is also likely as a 'low-cost exit', to the extent that foreclosure costs were typically reimbursed, unlike the costs of renegotiation (foreclosure bias).[118]

The important thing to note in any case, thought, is that the third party's incentives are clearly disconnected from maximizing the value of the loan pool.[119] In that sense, delegating the relationship management to a third party effectively creates another type of empty 'creditor',[120] who exercises control rights without any meaningful personal stake, that is, without internalizing the costs and benefits of her decisions.[121] Indeed, it has been observed that servicers of mortgage securitizations were inclined to ensure automated and cost-minimizing processes, yet often uncoordinated and without any regard to the actual recovery.[122]

---

[114] Tomasz Piskorski, Amit Seru & Vikrant Vig, *Securitization and Distressed Loan Renegotiation: Evidence from the Subprime Mortgage Crisis* , 97 J. Fin. Econ. 369, 370 (2010); Judge, *supra* n. 55, at 684, 702–703; Schwarcz, *supra* n. 113, at 708; Levitin & Twomey, *supra* n. 113, at 6.

[115] John Geanakoplos, *Solving the Present Crisis and Managing the Leverage Cycle*, 2010 FRBNY Econ. Pol. Rev. 101, 119; Gan & Mayer, *supra* n. 111, at 2.

[116] Piskorski, Seru & Vig, *supra* n. 114, at 370.

[117] Franke & Krahnen, *supra* n. 47, at 18; Adam Ashcraft & Til Schuermann, *Understanding the Securitization of Subprime Mortgage Credit* 9 (Federal Reserve Bank of New York, Staff Report No. 318, 2008), https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr318.pdf.

[118] Sumit Agarwal et al., *The Role of Securitization in Mortgage Renegotiation*, 102 J. Fin. Econ. 559 (2011); Piskorski, Seru & Vig, *supra* n.114, at 370; Geanakoplos, *supra* n. 115, at 119.

[119] Levitin & Twomey, *supra* n. 113, at 5.

[120] Hu & Black, *supra* n. 4, at 687.

[121] Armour et al., *supra* n. 11, at 444; Levitin & Twomey, *supra* n. 113, at 5. However, it is reported that servicers do sometimes hold the first loss piece, Gan & Mayer, *supra* n. 111, at 3.

[122] Armour et al., *supra* n. 11, at 444; *Problems in Mortgage Servicing from Modification to Foreclosure: Hearing Before the Committee on Banking, Housing, and Urban Affairs*, 111th Congr. 353–354 (2010); Levitin & Twomey, *supra* n. 113, at 4.

At the same time, servicing agreements often provided poor guidance and left little margin of discretion as to loan modifications. Additionally, since the agent serves divergent economic interests related to each tranche, his stance towards loan modifications is necessarily ambivalent.[123]

Therefore, the third party's limited involvement, both in terms of role and economic stake, combined with the multitude of interests involved (investors) and the multitude of borrowers within the pool, is consistent with rational apathy towards loan modifications.[124] The latter explains not only the bias towards foreclosure but also the inefficiency of the modification as such, when chosen.[125]

This section mapped how debt governance incentives change when the credit risk is transferred through true sale or synthetic securitization. Against this background, Section 4 analyses the most relevant provisions of the EU Securitization Regulation. Eventually, Section 5 assesses if and to what extent the Regulation is able to restore debt governance for securitized exposures.

4. Securitization Regulation and Risk Retention

Despite the multi-dimensional shortcomings of securitizations, the post-crisis EU policy attempted to remedy the underlying weaknesses, aiming to re-establish securitization in the context of the Capital Markets Union.[126] The latter reflects a package of EU policy initiatives, commonly designed to promote market-based finance next to the dominant, in Europe, bank-based finance, as well as to achieve market integration at the European level.[127] In that context, securitization is utilized on its capacity to allocate risks outside the banking sector and facilitate

[123] Judge, *supra* n. 55, at 703–705; Schwarcz, *supra* n. 113, at 708.

[124] Hu & Black, *supra* n. 4, at 687; Schwarcz, *supra* n. 113, at 709; Levitin & Twomey, *supra* n. 113, at 5.

[125] Agarwal et al., *supra* n. 118, at 575.

[126] *See* p. 2 of the Preamble to the Securitization Regulation, *supra* n. 2.

[127] European Commission, *Mid-Term Review of the Capital Markets Union Action Plan,* at 2 (COM(2017) 292 final), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0292&from=EN; European Commision, *Action Plan on Building a Capital Markets Union,* at 2, [COM(2015) 0468 final], https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0468&from=EN.

the provision of bank credit, which has pressingly come to the fore once more, in light of the COVID-19 crisis.[128]

4.1 The EU Securitization Regulation

The reformed approach to securitizations specifically addresses the incentive misalignment problem and the lack of transparency that led to excessive risk-taking and the well-known financial stability implications, as well as the loss of confidence on the investor side.

In contrast to the Dodd-Frank Act, the Securitization Regulation defines securitizations in a more functional way, omitting any details regarding the specific legal structure or the instruments used.[129] In that sense, the core conceptual elements of securitizations, as set out in the Regulation, are *pooling*, *tranching* and *subordination*.[130]

The Securitization Regulation provides a set of rules applicable to all securitizations. This general framework, i.e. the general requirements to be met in all securitizations, applies to all transactions falling under the generic definition mentioned above. In particular, the Regulation sets out due diligence obligations on the investor side,[131] as well as risk retention[132] and disclosure requirements[133] on the originator/sponsor/original lender side, along with a direct obligation to abstain from the originate-to-distribute type of credit-granting criteria.[134] In the same line of thought, resecuritizations are no longer permitted due to their inherent complexity and opaqueness, a ban that is nonetheless subject to certain exceptions.[135]

On a second level, securitizations are further subdivided into *synthetic* and *true sale* securitizations, depending on the means of credit risk transfer and its consequences. In particular, art. 2(10) of the Regulation defines synthetic securitizations as the transactions in which the transfer of credit risk is effectuated by use of credit derivatives (or guarantees) and where, as a result, the exposures remain on the originator's balance sheet. By contrast, in true

---

[128] European Commision, *A Capital Markets Union for People and Businesses-New Action Plan,* 9, *supra* n. 7.

[129] For example, Dodd-Frank Act directly defines the 'asset-backed security' as 'a fixed-income or other security collateralized by any type of self-liquidating financial asset', 15 U.S.C. § 78c(a)(79).

[130] Article 2(1) Securitization Regulation, *supra* n. 2.

[131] *Ibid.,* Art. 5.

[132] *Ibid.,* Art. 6.

[133] *Ibid.,* Art. 7.

[134] *Ibid.,* Art. 9.

[135] *Ibid.,* Art. 8.

sale securitizations, the title to the underlying exposures is legally transferred to the special purpose vehicle,[136] that is, the exposures are no longer present in the originator's balance sheet.

Along with the general framework outlined above, the Regulation also introduces a specific framework of simple, transparent and standardized (STS) securitizations, a designation specifically made for transactions meeting additional requirements.[137] Importantly, STS-labelled transactions enjoy preferential regulatory capital treatment under the Capital Requirement Regulation (CRR).[138] In this article, we do not focus on STS transactions as we aim at a more general evaluation of securitization. However, the requirement of simplicity and transparency seem to reinforce the positive effect of risk retention on debt governance.

As it will be analyzed below, the securitization framework is now being amended based on the relevant Commission Proposal, whose main feature is the extension of the STS label to synthetic transactions.[139]

4.2 The Risk Retention Rule

Within the provisions applicable to all securitizations, the risk retention rule directly aims at handling the specific problem of incentive misalignment between the parties involved to securitizations and investors. The rule is inspired by its US functional equivalent introduced by the Dodd-Frank Act in 2010.[140] In particular, according to Art. 6(1) of the EU Securitization

[136] or SSPE, in the Regulation's terminology, *see, e.g., ibid.,* Art. 20.

[137] In line with the distinction above, while the general framework is applicable to all securitizations, as defined above, the STS framework only pertains to true sale securitizations, provided that all further relevant requirements are met. *See* Art. 19 et seq. Securitization Regulation, *supra* n. 2. Nonetheless, there is already a Commission Proposal extending the STS label to balance-sheet synthetic securitizations, in line with the relevant EBA report, pursuant to Art. 45(1) of the Securitization Regulation. European Commission, *Proposal for a Regulation of the European Parliament and of the Council amending Regulation EU 2017/2402 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation to help the recovery from the COVID-19 pandemic* 6 [2020/0151/COD, COM (2020) 282], https://ec.europa.eu/finance/docs/law/200724-securitisation-review-proposal_en.pd; EBA, *On STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402* (EBA/OP/2020/07).

[138] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012, OJ L 176/1, 27.06.2013, p. 1 [hereinafter CRR].

[139] *Supra*, n. 137 and *infra*, Sections 5.1, 5.2.

[140] *See* 15 U.S.C. § 78o-(11).

Regulation, the originator, the sponsor or the original lender shall keep *a material net economic interest* in the securitization of at least 5%, on an ongoing basis.[141]

The risk retention rule is then complemented by a corresponding due diligence obligation on the institutional investor side,[142] which can be described as an *indirect* format of the risk retention rule that was already in place in different pieces of legislation, although with a narrower scope of application.[143]

According to the Regulation, the risk may be retained either by the originator, the sponsor or the original lender. Additionally, the new Commission Proposal amending the Regulation adds the servicer as a fourth possible option, although only for non-performing exposures.[144]

Broadly speaking, the *originator* is understood as the entity that creates the exposures that will be pooled in the securitization scheme, while the *sponsor* as the entity that initiates the securitization process, e.g. the parent of the originator. In practice, though, it might just as well be the case that the originator and the sponsor are the same entity. Thus, owning to the multiple formats possible, the terms are often used interchangeably.

Nonetheless, the Regulation follows a more nuanced approach, defining:

(1) the *originator*,[145] as the entity that was involved in the original agreement,[146] that creates the exposures or the entity that purchased the exposures to be securitized;

---

[141] *See* point 10 of the Preamble to Securitization Regulation, *supra* n. 2; Jan Pieter Krahnen & Christian Wilde, *Skin-in-the-Game in ABS Transactions: A Critical Review of Policy Options* (ECGI, Working Paper No. 549, 2018), https://ecgi.global/sites/default/files/working_papers/documents/finalkrahnenwilde.pdf.

[142] Art. 1(5)(d) Securitization Regulation, *supra* n. 2.

[143] The indirect risk retention rule was first introduced by Art. 122a of Directive 2006/48/EC (no longer in force), which was added by CRD II (Directive 2009/111/EC) and applied to *credit institutions*. As of 1 January 2014, the same rule was included in CRR, in Art. 405 (that replaced Art. 122a) and applied to *institutions* (i.e. credit institutions and investment firms, Art. 4(1)(3) CRR). In parallel, similar indirect risk retention rules existed in Solvency II [Directive 2009/138/EC, Art. 135 (2)(a)] for insurance companies and AIFMD [Directive 2011/61/EU Art. 17(a)]. All those rules were replaced by the due diligence obligation on the institutional investor side, as set out in the Securitization Regulation (Art. 5). For the previous state of the rule, *see* Jeremiah Wagner, *EU Risk Retention Requirement: A Brief Overview of the Current Framework,* 131 Banking L. J., 342 (2014).

[144] Art. 1, European Commission, *Proposal for a Regulation of the European Parliament and of the Council amending Regulation EU 2017/2402*, *supra* n. 137.

[145] Itself of through related entities, Art. 2(3) Securitization Regulation, *supra* n. 2.

[146] Directly or indirectly, Art. 2(3), *ibid.*

(2) the *sponsor*, as the institution[147] that establishes the securitization, which may involve purchasing exposures from third parties. The sponsor may manage the portfolio itself or delegate the task to third parties;
(3) the *original lender*, as the entity[148] that concluded the agreement that creates the exposure to be securitized.

Those entities are disjunctively obliged to retain 5% of the securitized exposures; this means that the requirement does not apply more than once per transaction nor it can be split among multiple parties. Nonetheless, if there is no relevant agreement, the party obliged to fulfill the requirement is the originator. Importantly, the retained piece cannot be subject to any risk mitigation or hedging. For simplicity, in this article the term originator will be used to denote both the party that creates and securitizes the exposures, as well as the party that retains the 5% piece, unless differently specified.

The *material economic interest*, as conceptualized in Art. 6 of the Securitization Regulation, is further broken down to a set of choices regarding the modality of the piece to be held. In particular, according to Art. 6(3), the retainer can choose among the following:

(1) The retention of at least 5% of the nominal value of each tranche, i.e. a vertical slice throughout the tranche structure.
(2) The retention of at least 5% of the nominal value of each of the securitized exposures in the case of revolving securitizations, i.e. a pari passu share.
(3) The retention of randomly selected on-balance sheet exposures, equivalent to 5% of the nominal value of securitized exposures.
(4) The retention of the first loss tranche, i.e. a horizontal slice. If the first loss tranche is less than 5% of the securitized exposures, the retained piece shall be complemented by additional tranches of higher risk and longer maturity than the ones sold to investors.
(5) The retention of first loss exposure in each asset, amounting to at least 5% of each exposure.

The immediate rationale of the rule is that risk retention partly reconstructs the incentives that induce properly-assessed loan origination, that is, reflects a skin-in-the-game approach. Thus, in broader terms used earlier, the rule aims at mitigating the dissonance between

[147] Credit institution or investment firm, as defined in CRR and MiFID II respectively, Art. 2(5), *ibid.*
[148] Itself or through related entities, directly or indirectly, Art. 2(20), *ibid.*

decision-making (loan origination) and consequences (exposure).[149] That approach is analogous to the Jensen and Meckling agency framework, in that the originator's (agent) incentives converge to the investors' (principals) interests, as the fraction of the cost borne by the former increases.[150] Yet instead of the extraction of private benefits, the initial problem here lies with the lack of screening effort, with the counteractive factor in both cases being the cost implied by either equity or the retained piece, respectively.[151] In that sense, risk retention aims at addressing the implications that stem from the separation between ownership of the securitized exposure and control over it (moral hazard).[152]

Risk retention can be additionally analysed in the framework of informational asymmetries.[153] As a matter of background, buyers-investors, aware of their informational disadvantage and the seller's incentive to overstate the value of the assets (adverse selection), will rationally bring the price they are willing to offer down to an estimated average, eventually driving sellers of higher-than-average products out of the market. In a less stylized framework, though, it is more plausible that investors will be the ones to ultimately bear the adverse selection costs.[154] In that setting, risk retention can be conceptualized as a signal, credibly conveying the quality of the underlying assets and mitigating the problem of adverse selection.[155] Nonetheless, the signalling value of risk retention can be doubtful, as it is now mandated, rather than chosen;[156] however, the signalling rationale could remain for any percentage of the exposure voluntarily held in excess.

---

[149] Demiroglu & James, *supra* n. 70, at 201.

[150] Jensen & Meckling, supra n. 13; Ingo Fender & Janet Mitchell, *Incentives and Tranche Retention in Securitization: A Screening Model*, at 1, 13 (BIS, Working Paper No. 289, 2009); Krahnen & Wilde, *supra* n. 56, at 13.

[151] Fender & Mitchell, *supra* n. 150, at 13.

[152] Gan & Mayer, *supra* n. 111, at 5.

[153] *See supra*, n. 16.

[154] Guixia Guo & Ho Mou Wu, *A Study on Risk Retention Regulation in Asset Securitization Process*, 45 J. Banking & Fin. 61 (2014).

[155] Hayne Leland & David Pyle, *Informational Asymmetries, Financial Structure, and Financial Intermediation*, 32 J. Fin. 371 (1977); Peter DeMarzo, *The Pooling and Tranching of Securities: A Model of Informed Intermediation*, 18 Rev. Fin. Stud. 1 (2005); Craig Furfine, *The Impact of Risk Retention Regulation on the Underwriting of Securitized Mortgages*, 58 J. Fin. Serv. Res. 91, 93 (2020).

[156] Guo & Wu, *supra* n. 154, at 62.

Nonetheless, given the different risk characteristics of the tranches, the flat-rate requirement of 5% has been subject to criticism.[157] Additionally, confined only to specific parties, risk retention has been criticized as a narrow and thus inadequate response against the complex agency problems posed by the securitization chain.[158]

5. Risk Retention Rule and Debt Governance

As analysed earlier, risk retention has been introduced in order to mitigate the incentive misalignment between originators and investors (*skin-in-the-game*),[159] on the background of financial stability considerations related to the transfer of credit risk. That said, since the transfer of credit risk bears on the whole lending relationship, it follows that risk retention unintendedly touches also upon debt governance.

In particular, decoupling control rights from exposure through securitization can significantly alter the perceived function of debt governance, along with its positive welfare effects. In that sense, risk retention can be understood as partly 'recoupling' creditor rights and exposure. On a second level, since the risk is retained during the lifecycle of the exposure, it would also reasonably affect not only the initial screening, which is the main purpose of the rule,[160] but also the monitoring of the borrower.[161]

This statement is nonetheless subject to certain qualifications. Firstly, the extent to which risk retention can have a positive spillover on debt governance primarily depends on the scope of the rule; after all, despite their common cause, the problems identified above significantly diverge, depending on the specific credit transfer instrument.

As far as the scope is concerned, it should be noted that the rule does not apply to credit default swaps *as such*, but only to securitizations. However, the negative economic ownership

[157] Ethan Mobley, *Regulating Moral Hazard: The True Risk of Dodd-Frank's Risk Retention Requirement*, 10 J. Bus. Entrepreneurship & L. 45, 58 (2017); Demiroglu & James, *supra* n. 70, at 202.

[158] Amy McIntire, *Dodd-Frank's Risk Retention Requirement: The Incentive Problem*, 33 Banking & Fin. Serv. Rep. 11 (2014).

[159] Krahnen & Wilde, *supra* n. 141, at 6; Demiroglu & James, *supra* n. 70, at 201.

[160] Demiroglu & James, *supra* n. 70, at 201.

[161] EBA, *EBA Report on Securitisation Risk Retention, Due Diligence and Disclosure* at 1, 9 (EBA/OP/2016/06).

complications analysed above are not excluded, as synthetic securitizations also combine title retention and credit protection, both primarily associated with the empty creditor problem.

Secondly, since risk retention is targeted to screening more so than monitoring,[162] the effects on the lifecycle of the lending relationship are likely to be by and large indirect, which will be addressed in detail in the following section.

It should be noted that the preceding analysis was based on the chronological sequence of creditor rights in place within the lending relationship. However, the problems identified in each stage are best understood with reference to the underlying incentives, regardless of the stage of the lending relationship. Thus, the section below attempts to identify the positive effects of risk retention distinguishing between the *transfer* and *retention* of control rights, i.e. distinguishing between true sale and synthetic securitizations.

5.1 True Sale Securitizations

Since risk retention primarily pertains to proper loan origination, the most direct positive effects are expected to be found in the design of covenants, which apart from facilitating monitoring, are in close proximity and depend on the screening phase.

Since banks active in securitizations are found to be generally inclined to employ looser covenants, even for non-securitized assets, the effects of risk retention could be extended to a wider range of loans as well.[163] Stated otherwise, monitoring effort might be intensified for non-securitized loans, still present in the bank balance sheet. Furthermore, it can be hypothesized that securitizing banks will be prompted to engage in loan renegotiations and private workouts more often, to the extent that they expect a net gain by preserving the going-concern surplus.

By contrast, monitoring of loans that have been channeled into securitizations by sale will depend on the incentives of the (third) party that manages the relationship. In this regard, one should recall that the Regulation is agnostic as for who retains the risk. To comply with risk-retention rule, the risk can be retained either by the original lender, the sponsor or the originator. Indeed, from a financial stability perspective that does not make a difference. However, this

[162] Demiroglu & James, *supra* n. 70, at 201.

[163] *Supra* n. 91.

does not seem to be the case from a debt-governance perspective. It seems desirable to have the original lender as the risk-retainer, as that would make her more attentive in both screening and monitoring. On the contrary, the risk retention at the sponsor level may have a limited impact on debt-governance, since multiple and heterogeneous exposures are already pooled together. In other words, the risk retention by the sponsor would not reconstruct the exposure and, hence, would not reconstruct the screening and monitoring incentives.

However, lacking a specific agreement between the parties, the Regulation states that the originator is indeed the party that shall retain the material net economic interest.[164] Thus, the reconstruction of the exposure and, consequently, of the incentives would go in the right direction.

In that case, if the originator does not delegate the relationship management to a third party, it should be expected that any positive impact on screening will have a symmetrical impact on monitoring as well, though in a less straightforward manner, due to the dynamic nature of monitoring.[165]

If instead the servicer is a third party, matters appear more complicated, as the rule applies only to originators, sponsors or original lenders. As mentioned earlier, the servicer can be described as an agent handling the interests of investors, who ultimately carry the credit risk of the underlying assets and thus the consequences of the agent's actions (principals); however, contracting is unfeasible between them, so that any agency problems are largely left unchecked. In this setting, the introduction of risk retention shifts a part of that relationship at the originator-servicer level. Stated otherwise, to the extent the originator is now mandated to carry an interest in the securitized exposures, she also becomes a principal vis-à-vis the servicer. In that sense, risk retention might bear on the contractual terms of the servicing agreement, which the originating bank is well-equipped and incentivized to negotiate, unlike the dispersed investors.[166]

Similarly, it can be argued that risk retention might positively affect the choice of the servicer. In broader terms, since risk retention partly reconstructs the original screening and monitoring incentives, it can be expected that an equivalent amount of 'screening' and

[164] Art. 6(1), Securitization Regulation, *supra* n. 2.

[165] Henri Pagès, *Bank Monitoring Incentives and Optimal ABS*, 22 J. Fin. Intermed. 30 (2013).

[166] Piskorski, Seru & Vig, *supra* n. 114, at 370.

'monitoring' effort will be expended to curb the servicer's rational apathy, who substitutes for the originator in loan monitoring, as well as in the exercise of control rights. Although that channel is subject to the limitations of contractual incompleteness, it is estimated that the choice and discipline of the servicer indeed heavily affect recovery.[167]

Given the limits inherent to contracting, it could also be expected that originators might be prompted to monitor themselves to a greater extent. Apart from transaction costs, the originator's direct stake could make delegating uneconomical in some cases, raising its potential cost. Given that a bank is typically both well-equipped and incentivized to monitor the underlying pool, that assessment is plausible for small, opaque and risky firms, where the bank expertise is harder and costlier to replace. In that case, the dilemma between foreclosure and renegotiation loses some of its significance, since loan ownership is associated with efficient decision-making, regardless of the particular choice between foreclosure and renegotiation,[168] as well as because the efficient choice is by and large circumstantial.[169]

Alternatively, it also conceivable that the originator will now demand the retention of risk by the servicer, which has already been observed sometimes in practice and has been linked with increased monitoring effort.[170]

In this regard, it is important to note that the recent Commission Proposal for the amendment of the securitization framework now introduces the retention of risk by the servicer, at least for securitizations that include non-performing exposures.[171] It is indeed recognized that the servicer is better equipped to ensure 'the alignment of its interests with those of the investors', 'given its special position in the deal'.[172] While non-performing loans directly exemplify the importance of the servicer in terms of preserving value, it is not clear why the proposal does not included loans other than non-performing, especially since the retention by the servicer is set out as optional.

---

[167] Pagès, *supra* n. 165, at 32.

[168] Judge, *supra* n. 55, at 706; Agarwal et al., *supra* n. 118, at 575.

[169] Judge, *supra* n. 55, at 705.

[170] Gan & Mayer, *supra* n. 111, at 3–4.

[171] Art. 1, European Commission, *Proposal for a Regulation of the European Parliament and of the Council amending Regulation EU 2017/2402*, *supra* n. 137.

[172] *Ibid.*, n. 5 of the Explanatory Memorandum.

5.2 Synthetic Securitizations

Issues relating to synthetic securitizations appear to be more perplexed, especially in the case of the affirmative incentive to destroy value. Returning to the baseline assumption mentioned above, the protected lender is hypothesized to be indifferent towards efficient private workouts, possibly resorting to bankruptcy and the certain payoff that it is thus entailed. In that case, risk retention might indeed have a positive influence on the incentives to engage in private debt restructurings and thus the preservation of any going-concern surplus, since the exposure increases the expected gain, but also the possible loss.

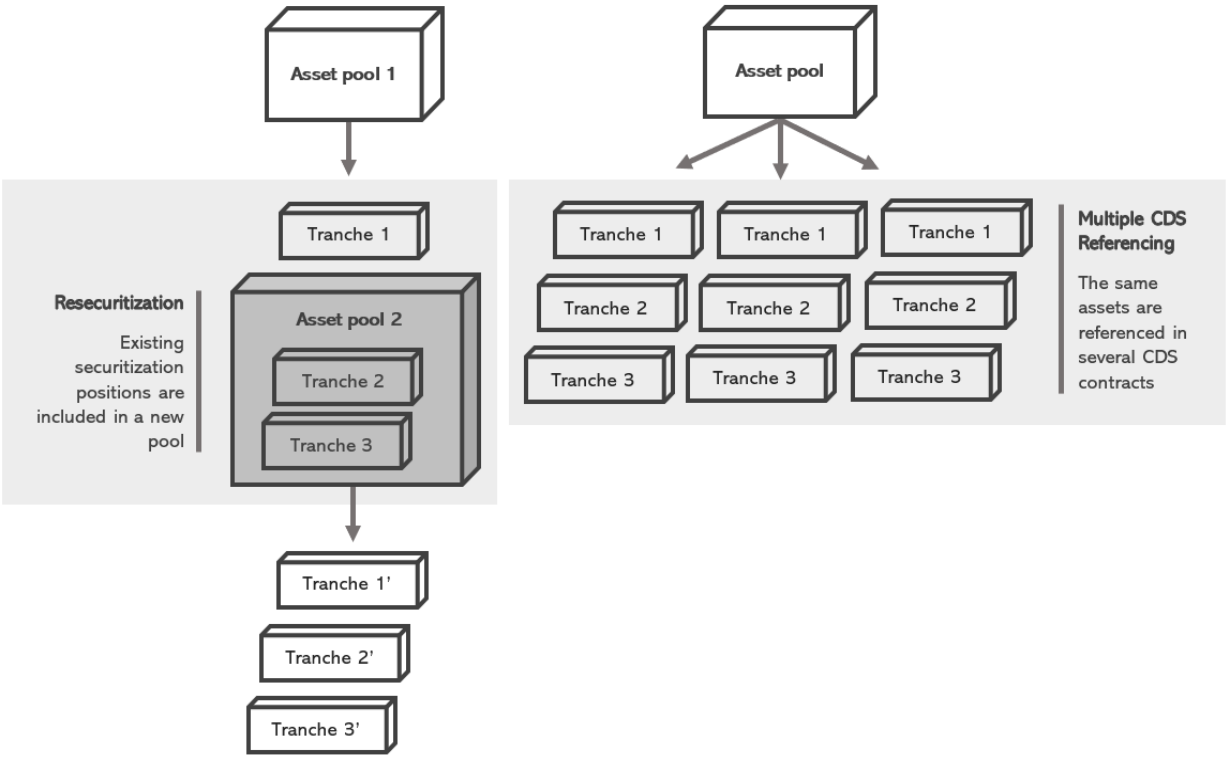
On the other hand, the issue is somehow perplexed considering the possibility to reference the same set of assets in multiple CDS contracts. If the same asset can be referenced in multiple synthetic securitizations, the impact of risk retention on neagative economic ownership is likely to be insignificant, especially to the extent associated with over-insurance.

In this regard, neither the ban on resecuritization nor the prohibition to hedge the retained part seem to offer an adequate solution. According to the Regulation, resecuritization is 'securitization where at least one of the underlying exposures is a securitization position'.[173] On the other hand, 're-referencing' is understood as referencing the same set of assets in several CDS contracts, which do not necessarily include any existing securitization positions. In that sense, multiple referencing and resecuritization are indeed two transactions distinct in structure (fig. 1). Thus, despite appearing similar, multiple referencing is indeed not captured by the general ban on resecuritizations outlined in Art. 8 of the Securitization Regulation.[174]

[173] Art. 2(4), *ibid.*

[174] Securitization Regulation, *ibid.*

Figure 1. *Resecuritization (left) v. multiple referencing (right).*



Furthermore, according to Art. 6(1) of the Securitization Regulation, the retained piece shall not be subject to any credit risk mitigation or hedging. This provision clearly does not prevent the originator from further referencing the same set of assets, as long as he complies with the retention requirement in each transaction. Nonetheless, the portion available for further hedging should decrease with each subsequent transaction, for the same set of assets. Therefore, the risk retention rule is not entirely bypassed by the possibility to over-insure, although its effects on the incentives of an over-insured lender still seem to be insignificant.

This problem is likely to become more material than it may sounds at first, considering that the market for synthetic securitization in Europe is steadily growing, whereas the market for true sale securitization keeps on shrinking.[175] However, it is important to highlight that both EBA and the Commission Proposal on the extension of the STS framework introduce the

[175] Orçun Kaya, *Synthetic securitization Making a silent comeback*, EU Monitor, Feb. 2017, at 1, https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000441788/Synthetic_securitization%3A_Making_a_silent_comeback.PDF?undefined&realload=Z5vS~zUDE5MEPv96bn8UBWXYTkdY~2wciKkeZc7XzjinPTSe90fzXLLVp1cTovIvVdWRrT6rU~TjsJLNFFcoBw==

prohibition of 'double hedging', as a prerequisite of simplicity for synthetic, 'on-balance-sheet' STS transactions.[176] While limited in scope, this development in fact indirectly addresses the negative economic ownership issues associated with over-insurance, at least for STS transactions.

5.3 The Choice of Slice

Since the reconstruction of incentives is based on the reconstruction of the exposure, the modalities of the latter should be reflected on incentives as well. In that sense, the choice of a particular slice might have diverging effects on screening and monitoring incentives.

5.3.1 Slices & Screening Incentives

The diverging effects on incentives primarily depend on the risk characteristics of each tranche. A good starting point is the case of screening incentives, where the baseline assumption is that the initial screening effort depends on the magnitude of the expected payoff, which in turn varies based the type and thickness of the slice held.

In this regard, the equity tranche is relatively more sensitive to systematic risk compared to other tranches. For that reason, higher probability of realization of the adverse state means greater likelihood of the equity tranche being wiped out, especially when the slice is thin.[177] Thus, similarly to the incentives of equity holders, higher probability of the adverse state is inversely related to screening incentives, as the impact of effort on payoff gradually decreases as the probability increases.[178] If instead the likelihood of the unfavorable state is low or if the slice is thick enough, it is shown that retaining the equity tranche can achieve first-best results in terms of incentives, again owing to its residual nature.[179] The same applies when the cost of screening is low, ceteris paribus.[180]

---

[176] Article 26(b)(a), European Commission, *Proposal for a Regulation of the European Parliament and of the Council amending Regulation EU 2017/2402, supra* n. 137. For a more detailed description, *see EBA Report on STS Framework for Synthetic Securitisation, supra* n. 137, at 44-45.

[177] Fender & Mitchell, *supra* n. 150, at 19; John Kiff & Michael Kisser, *Asset Securitization and Optimal Retention* (IMF, Working Paper No. 10/74, 2010), https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Asset-Securitization-and-Optimal-Retention-23691.

[178] Fender & Mitchell, *supra* n. 150, at 20.

[179] *Ibid.*, 5; Kiff & Kisser, *supra* n. 177, at 21.

[180] Fender & Mitchell, *supra* n. 150, at 5.

Unlike equity tranches, though, mezzanine tranches increase the payoff contingent on effort in the low state, as well.[181] Thus, in a sense, the payoff structure is similar to the case in which an entrepreneur holds debt, having sold the equity to outsiders.[182] On the other hand, holding a vertical slice means that the screening effort has a positive effect on payoff both in the favorable, as well as in the adverse state, implying a linear payoff. Hence, the intensity of incentives in that case primarily depends on the size of the slice held.[183] However, research shows that for the same slice size, the mezzanine tranche would yield best results in terms of initial screening effort, compared to both the vertical and the equity tranche.[184]

5.3.2 Implications for Monitoring Incentives

Keeping those general remarks in mind, it is worth considering the likely effect of each tranche for monitoring. Unlike initial screening, though, monitoring spreads throughout the lifecycle of the lending relationship.[185] Thus, while screening by and large refers to the initial, one-off effort exerted to recognize the exogenously given 'type' of the borrower,[186] monitoring implies a continued interaction between the counterparties. The payoff is, consequently, largely endogenous and placed in a dynamic setting.[187] Therefore, both unforeseeable contingencies and the lender's own stance can bear on the borrower behavior, as well as the final payoff,. This obscures the causal relationship between the type of the slice/payoff and monitoring incentives. Put differently, in the case of screening, the expected payoff is assumed to linearly drive the effort exerted by the lender, whereas in the case of monitoring, the future payoff both drives and is driven by the monitoring effort.

As a starting point, it should be also kept in mind that each tranche brings about divergent economic interests, owing to the prioritized mode of payments (subordination).[188] Thus, there

[181] That specific model assumes that the increased payoff in the favorable state is a result of the circumstances rather than the effort; without the systematic factor, the equity tranche would be optimal, *ibid.*, 20–21.
[182] *Ibid.*, 6.
[183] *Ibid.*, 5, 20.
[184] *Ibid.*, 20-21; Kiff & Kisser, *supra* n. 177, at 28.
[185] Pagès, *supra* n. 165, at 31; Guo & Wu, *supra* n. 154, at 62.
[186] Fender & Mitchell, *supra* n. 150, at 8; Kiff & Kisser, *supra* n. 177, at 2.
[187] Pagès, *supra* n. 165, at 31.
[188] Judge, *supra* n. 55, at 703; Schwarcz, *supra* n. 113, at 708; Geanakoplos, *supra* n. 115, at 119.

is a useful analogy between the priority among tranches and the priority between debtholders and equity holders,[189] which can be further translated into conflicted interests.

For example, debt renegotiation might have different impact on each tranche, with a principal write-down leaving senior tranches unaffected – or even improving their long-term performance – but directly harming junior tranches.[190] Similarly, approaching default when collateral values are low, it is in the senior tranches' best interest to liquidate the assets, attempting to secure a full payoff; by contrast, investors of equity tranches would be better-off with renegotiation, since liquidation would confer no benefit whatsoever, especially when the underlying loans become increasingly delinquent.[191] In broader terms, equity tranche holders might choose the riskiest option, as the unlikely upside is the only way to receive any payoff whatsoever, even if value is incidentally destroyed – a form of asset substitution or risk-shifting.[192] Considering the options provided by the Regulation, those remarks apply mutatis mutandis both on holding the first loss (equity) piece, as well as holding the first loss exposure of every asset, according to the choices of Art. 6 of the Regulation.

Given those characteristics of the equity tranches, it follows that vertical slices, devoid of subordination features, would avoid conflicted interests vis-à-vis other tranches, as well as possible incentive distortions attributed to residual claimants. Furthermore, since vertical slices tie the originator's interests to the lending relationship on a wider spectrum of contingencies, it could be argued that holding a vertical slice appears more promising, given the long-term and dynamic nature of monitoring. On the downside, though, holding a vertical slice also means that there is a varying but positive payoff in every state, regardless of the monitoring effort.[193]

On the other hand, given their payoff structure, mezzanine slices could mimic the original lender's incentives more effectively, although there is no such explicit choice under the Securitization Regulation.[194]

---

[189] Schwarcz, *supra* n. 113, at 710; Fender & Mitchell, *supra* n. 150, at 6; Gan & Mayer, *supra* n. 111, at 2.

[190] Judge, *supra* n. 55, at 707; Geanakoplos, *supra* n. 115, at 119.

[191] Schwarcz, *supra* n. 113, at 709. That behaviour has been documented for servicers that own the equity tranche, Gan & Mayer, *supra* n. 111, at 26.

[192] Gan & Mayer, *supra* n. 111, at 5, 12, 20.

[193] Pagès, *supra* n. 165, at 31.

[194] Art. 6, Securitization Regulation, *supra* n. 2.

Additionally, the Regulation provides the option of holding a random selection of on-balance sheet exposures, equivalent to 5% of the securitized exposures. Nevertheless, given the ex ante undefined nature of the retained piece, it is hardly feasible to infer the corresponding incentives. A safe but abstract assumption would nonetheless be that the originator will choose a more prudent stance towards on-balance sheet assets.

The last option provided by the Regulation is retaining 5% of each asset in case of revolving securitizations. While interesting in structure, that case is unlikely to bring about any changes in debt governance, as securitizations employing revolving structures largely refer to short-term credit, such as credit card receivables.

Regardless of which type of slice is preferable, since screening and monitoring are induced by slightly different channels, it appears that there is probably not a single tranche that optimizes all the dimensions at once. Furthermore, each tranche carries different risk characteristics, while the percentage requirement is uniform. Therefore, the effects on screening and monitoring induced by a the same percentage might further diverge across the different types of slices. It could be thus argued that the originators' specific choice of slice might convey information specific to either screening or monitoring. In that sense, risk retention might acquire a nuanced signaling role, not only through its specific mode but also by its thickness, to the extent that originators choose to hold more than the prescribed percentage.

5.3.3 Choice of Slice and Choice of Leverage

Finally, we can generalize the arguments proposed so far by highlighting the relevance of the 'capital structure' of the securitization. Drawing from the previous analogy to the incentives of equity- and debtholders, we can infer that the incentives toward screening and monitoring are contingent on the leverage of the securitization.[195]

In particular, the risk retention rule and the ban on resecuritization essentially regulate the 'leverage' on the underlying assets, that is, they cap the amount of assets that can be securitized. However, the Regulation is clearly indifferent towards the thickness of the different tranches,

[195] The traditional corporate governance theory focuses on the incentives of different corporate constituencies, *see*, ex pluribus, Jensen & Meckling, *supra* n. 13. *See also*, *a contrario*, Modigliani & Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 Am. Econ. Rev. 261 (1958).

i.e. towards the 'leverage' of the securities issued, as well as towards the choice of a particular slice by the retainer. However, as discussed above, this makes a material different for both debt governance and risk-taking incentives. For example, regarding the choice of slice, if the equity tranche is thick (low leverage), the horizontal retention is by far preferable for both debt governance and risk-taking incentives. However, if the equity part is thin, a vertical or even a mezzanine slice is preferable.

This is a blind spot of the Regulation in terms of debt governance and the issue ultimately rests upon the – possibly strategic – incentives of the originator. This feature deserves further attention by the regulator and academics, also looking at the current choices of the originators in terms of both slice choice and the capital structure of the securities.

Tentatively, it is reasonable to argue that the risk retention rule could generate better incentives if the amount of net economic interest to be retained was contingent on both the choice of the slice and the leverage of the securities issued as a result of the securitization process. However, this more refined regulatory approach would likely decrease the effectiveness of the framework, making it more complex to implement and supervise.

6. Conclusion

In the preceding analysis, we argued that the introduction of the risk retention rule has positive spillovers in the area of debt governance, over and above its original financial stability rationale. The argument is in essence fairly simple: since the cause of relaxed monitoring is partly reversed, so should be the lender's loose stance towards covenants, monitoring and renegotiation with borrowers. Those indeed represent three major aspects of debt governance that are inextricably linked with (in)efficient allocation of capital. Debt governance, especially monitoring, can also play an important role on another level of growing importance, that is, bank financing of green projects.

However simple in conception, though, the risk retention rule is expected to have varying effects based on the nature of the securitization transaction, the identity of the retainer and the type of the slice held. The skin-in-the-game effect is indeed best represented for originators in true sale securitizations. However, this outcome remains largely subject to the limits inherent in contracting, to the extent that the relationship management is delegated to a third party. In

this respect, the newly proposed extension of the rule to servicers is in fact a fairly positive development.[196]

On the other end of the spectrum, however, any positive effects are considerably confounded in the case of synthetic transactions, given the option to over-insure. In this regard, a straightforward but partial solution seems to be offered by the Commission Proposal on the extension of the STS label, which introduces the prohibition of 'double hedging' as a prerequisite of simplicity for synthetic STS securitizations.[197]

At the same time, the identity of the retainer and the particular choice and thickness of the slice heavily bear on the stance of the retainer. While those contingencies indeed do not permit bold generalizations for debt governance, they can support focused empirical research on the lender's stance, primarily towards covenants and the choice/contractual discipline of the servicer/trustee, depending on the retained slice. Furthermore, it appears that there is further research needed in the area of synthetic securitizations.

[196] *Ibid.*

[197] Article 26(b)(a), European Commission, *Proposal for a Regulation of the European Parliament and of the Council amending Regulation EU 2017/2402*, *supra* n. 137.

Address

European Banking Institute e.V.

TechQuartier (POLLUX)

Platz der Einheit 2

60327 Frankfurt am Main

Germany

For further information please visit our website www.ebi-europa.eu or contact us at info@ebi-europa.eu

www.ebi-europa.eu

The European academic joint venture for research in banking regulation

www.ebi-europa.eu