Abstract

Contingent capital securities are a largely overlooked dynamic regulatory mechanism. This article evaluates the use of contingent capital securities in a dynamic regulatory context, including the use of feedback effects for optimized timing and information for regulation and anticipatory regulation.

Table of Contents

I. Introduction .................................................. 767
II. Dynamic Regulation ....................................... 771
III. Contingent Capital ........................................ 773
IV. Dynamic Regulation Via Contingent Capital ............... 776
V. Conclusion .................................................. 777

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I. Introduction

The existing regulatory infrastructure contributes to suboptimal regulatory outcomes,¹ especially when faced with ever-increasing disruptive innovation.² Regulatory challenges presented by disruptive innovation are largely associated with (1) facts-based, ex-post, trial-and-error rulemaking with stable and presumptively optimal rules in the existing regulatory framework,³ (2) the timing of


² Kaal, Dynamic Regulation for Innovation, supra note 1, at 4 (“Bower and Christensen coined the phrase ‘disruptive innovation,’ pointing out that technological changes that damage established companies typically present different performance attributes that existing customers value and improve such performance attributes so rapidly that established markets can be invaded.”).

regulation, and (3) ever-increasing unknown future contingencies in rulemaking.4

First, because facts-based, ex-post, trial-and-error rulemaking cannot anticipate regulatory issues created by innovation, rulemakers may not realize—or may realize much too late—what new regulatory demands apply to a given innovation and its associated regulatory issue. Rulemakers’ near-exclusive reliance on stable and presumptively optimal rules,5 created to attain permanent solutions for perceived regulatory issues,6 ignores the constantly changing environment and the necessity for rules driven by the exponential growth of technology and the associated exponential growth of innovation.

Further, the timing of regulation in an environment of exponential innovation is a significant problem for regulators. Formal rulemaking in the existing regulatory infrastructure is overly time-consuming7 and the speed of product innovation often makes regulations pertaining to an innovative product obsolete before such regulations are finalized.8

Finally, the existing regulatory infrastructure, with stable and presumptively optimal rules, is largely incapable of addressing the unknown future contingencies associated with disruptive innovation. Given the pace of innovation,9 future contingencies in rulemaking are likely to grow substantially, making the dynamic anticipation of future contingencies increasingly important for rulemaking.

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5 See Evolution of Law, supra note 1, at 1212; Kaal, Dynamic Regulation via Government Contracts, supra note 1, at 73; Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1, at 779.
6 Evolution of Law, supra note 1, at 1218.
8 Jo Ann S. Barefoot, Disrupting FinTech Law, 18 FINTECH L. REP. 1, 10 (2015).
9 See supra notes 2, 4 & 8 and accompanying text (discussing disruptive innovation).
The issuance of contingent capital securities (CCS) is a promising dynamic regulatory mechanism that can help address the aforementioned suboptimal regulatory outcomes associated with disruptive innovation. Contingent capital\(^\text{10}\) is an automatic mechanism for increasing capital while reducing debt with the long-term benefit of lowering leverage.\(^\text{11}\) The conversion feature of contingent capital shows great promise to provide a mechanism for general risk control in financial institutions\(^\text{12}\) and could enhance regulatory capital


\(^{11}\) John C. Coffee, Jr., Systemic Risk After Dodd-Frank: Contingent Capital and the Need for Regulatory Strategies Beyond Oversight, 111 COLUM. L. REV. 795, 806 (2011) (promoting contingent capital as an alternative to bankruptcy or bailouts). Coffee suggests a contingent capital design where “(1) The conversion ratio would be deliberately designed to protect the debt holders from loss by instead diluting the existing equity holders, and (2) the debt security would convert into a fixed return preferred stock with cumulative arrearages and significant voting rights.” Id. Coffee avers that converting the debt security into preferred stock creates a “countervailing voting constituency to offset the voting power of risk-tolerant common shareholders, thereby reducing the pressure on corporate managers to accept greater risk and leverage.” Id. Under Coffee’s proposal, conversion would be triggered when the common stock price significantly decreases. Id.

\(^{12}\) Wulf A. Kaal, Initial Reflections on the Possible Application of Contingent Capital in Corporate Governance, 26 NOTRE DAME J.L., ETHICS & PUB. POL’Y 281, 294–96 (2012) (discussing the promise and benefits of contingent capital); Raghuram G. Rajan, Too Systemic to Fail: Consequences, Causes, and
requirements by creating a regime for providing countercyclical regulatory capital.\textsuperscript{13} By internalizing bank failure costs, contingent capital may be able to minimize moral hazard,\textsuperscript{14} avoid financial contagion,\textsuperscript{15} and limit systemic risk.\textsuperscript{16}

This article has five parts. Following this Introduction, Part II outlines the core elements of the theory of dynamic regulation and dynamic regulatory mechanisms. Part III describes the central tenets of contingent capital securities and their function in financial markets. Part IV explains how contingent capital securities can function as a dynamic regulatory mechanism, and Part V concludes.

\section{Dynamic Regulation}

As I have previously argued, supplementing the regulatory infrastructure with dynamic elements can reduce suboptimal regulatory

\textit{Potential Remedies} 25, 28 (Bank for Int’l Settlements, Working Paper No. 305, 2010), http://www.bis.org/publ/work305.pdf [https://perma.cc/5SWW-6M7W] (“[C]ontingent capital is like installing sprinklers. . . . [W]hen the fire threatens, the sprinklers will turn on.”). \textit{But see} Christian Koziol & Jochen Lawrenz, \textit{Contingent Convertibles. Solving or Seeding the Next Banking Crisis?}, 36 \textit{J. Banking & Fin.} 90, 91 (2012) (suggesting that CoCo bonds may “create negative externalities, in the sense that the (destabilizing) risk-shifting problem induced by CoCo bonds may overcompensate the (stabilizing) effect of providing a pre-committed recapitalization to banks.”).


\textsuperscript{16} See Coffee, \textit{supra} note 11, at 806 (suggesting that contingent capital should be designed to create a standard for SIFIs).
outcomes. Dynamic regulation as a regulatory supplement can help address the shortcomings of the existing rulemaking framework and curtail increased demands on the institutional infrastructure.

The timeliness and quality of information is the focus of rulemaking in a dynamic framework. The increased availability of relevant, decentralized, and timely information for rulemaking in a dynamic framework can help facilitate rulemakers’ predictions and anticipation of otherwise unforeseeable contingencies, making anticipatory action by rulemakers possible.

As such, feedback effects are a central tenet of the theory of dynamic regulation. Feedback effects occur when an informational exchange process exists between public and private rulemakers, outcomes and institutions, rules and rulemaking processes, and jurisdictions. Feedback effects in a dynamic regulatory framework can enhance the availability of institution-specific and decentralized information to support the rulemaking process. Rather than acquiring necessary information after rules have emerged as suboptimal, feedback effects help increase the availability of relevant information for rulemaking ex ante and anticipate necessary revisions before rules emerge as suboptimal.

Adapting rules to future contingencies is the focal point for rulemaking in a dynamic framework. Anticipatory regulation uses institution-specific, timely information and feedback effects to create new rules. Anticipatory dynamic regulation can help minimize costly and suboptimal ex-post, trial-and-error experimentation with stable and presumptively optimal rules.

Dynamic regulation uses several tools to accomplish anticipatory rulemaking. For instance, deferred prosecution agreements

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17 See generally Evolution of Law, supra note 1; Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1.
18 Evolution of Law, supra note 1, at 3; see Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1, at 819.
19 Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1, at 819.
20 Evolution of Law, supra note 1, at 1, 4 & 8.
21 Id. at 2–3.
22 Evolution of Law, supra note 1, at 2–3; Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1.
23 Evolution of Law, supra note 1, at 11.
24 Id. at 12.
25 Id. at 3.
(DPAs)\textsuperscript{26} and venture capital investments provide some estimation of existing innovative trends and such trends’ associated regulatory challenges.\textsuperscript{27} DPAs and venture capital investment decisions increase the availability of relevant, decentralized, and timely information for rulemaking and facilitate feedback effects. By increasing the availability of such information ex ante, dynamic regulatory tools help lower unforeseen contingencies in the rulemaking process pertaining to innovation.

\textbf{III. Contingent Capital}

Section 165(b) of the Dodd-Frank Act authorizes the Board of Governors of the Federal Reserve to utilize contingent capital.\textsuperscript{28} Section 115(c) of the Dodd-Frank Act requires a study on the feasibility of contingent capital in the United States.\textsuperscript{29} CCS issuance is a promising dynamic regulatory mechanism that could minimize the suboptimal regulatory outcomes associated with disruptive innovation. Contingent capital is an automatic mechanism for increasing capital while reducing debt with the long-term benefit of lowering leverage.\textsuperscript{30} For purposes of this article, contingent capital is the predefined conversion of a certain percentage of financial institutions’ debt securities into equity securities. Strained financial institutions may find the automatic conversion of debt into equity via contingent capital securities an attractive alternative to being forced into restructuring or liquidation.\textsuperscript{31} The conversion feature of CCS has the potential to change the control dynamic, power, and dependencies within systemically important financial institutions (SIFIs). Given this potential, CCSs could help

\textsuperscript{26} See Kaal & Lacine, \textit{supra} note 1, at 117 (“DPA feedback effects can help create a framework for dynamic and anticipatory forms of regulation as a regulatory supplement.”).

\textsuperscript{27} Kaal & Vermeulen, \textit{supra} note 4.


\textsuperscript{29} § 115(c) (codified at 12 U.S.C. § 5325 (2012)).

\textsuperscript{30} See Coffee, \textit{supra} note 11,11, at 805 (averring that contingent capital can counter leverage debt). For a reading that is critical in the context of automation of financial regulation, see generally AMAR BHIDÉ, \textit{A CALL FOR JUDGMENT: SENSIBLE FINANCE FOR A DYNAMIC ECONOMY} (2010).

\textsuperscript{31} See Coffee, \textit{supra} note 11, at 805.
fill a void left by regulators’ inability to supervise financial institutions effectively, often the result of insufficient public funding.

Policymakers and academics support contingent capital as a policy tool because it shows great promise for internalizing bank failure costs, stabilizing SIFIs, and preparing SIFIs for future financial crises. They have identified several core objectives associated with contingent capital securities, which include: signaling default risk, providing incentive to increase capital, preventing bailouts, decreasing risk taking.

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33 See, e.g., id. at 84–85; Darrell Duffie, A Contractual Approach to Restructuring Financial Institutions, in Ending Government Bailouts As We Know Them (George P. Schultz et al. eds., 2010); Flannery, supra note 14, at 173–74; Coffee, supra note 11, at 803–08; Robert L. McDonald, Contingent Capital with a Dual Price Trigger, 9 J. FIN. STABILITY 230 (2013).

34 See Flannery, supra note 14, at 171 (“Requiring each bank to maintain high levels of equity capitalization could substantially reduce the incidence of bank distress.”).

35 See Raghuram Rajan, Opinion, More Capital Will Not Stop the Next Crisis, FIN. TIMES (Oct. 1, 2009), https://www.ft.com/content/a830fcf6-aed1-11de-96d7-00144feabde0 [https://perma.cc/QKS8-6XNT] (suggesting that CCS should be used to raise capital “when regulators see a crisis coming”); Dudley, supra note 13.


37 See id. at 39 (averring that contingent capital could help prevent the “too big to fail” problem); Coffee, supra note 11, at 806 (promoting contingent capital as an alternative to bailouts); Squam Lake Working Group, supra note 10, at 4 (suggesting that hybrid securities would help prevent bailouts).

38 See George Pennacchi et al., Contingent Capital: The Case of COERCs 9, 13 (INSEAD, Working Paper No. 2011/51/FIN 2013), http://www.ieseg.fr/wp-content/uploads/CoercRev31Mar2013.pdf [https://perma.cc/S3MX-XJED] (suggesting that their COERC proposal would reduce the risks of bonds); Dudley, supra note 13 (averring that because bank difficulties would trigger conversion, this dilution of shareholders creates an incentive for bank managers to “manage not only for good outcomes on the upside of the boom, but also against bad outcomes on the downside”).
minimizing moral hazard,\textsuperscript{39} avoiding financial contagion,\textsuperscript{40} and limiting systemic risk.\textsuperscript{41}

Contingent capital may support and optimize general risk control in financial institutions.\textsuperscript{42} By internalizing bank failure costs, contingent capital can minimize moral hazard,\textsuperscript{43} and appropriate use of contingent capital triggers can further lower default risk of CCS.\textsuperscript{44} Further, contingent capital may be more efficient than raising capital requirements, because the capital injection is available only when it is needed\textsuperscript{45} and, when triggered, only enough CCS converts as is necessary to recapitalize the firm.\textsuperscript{46} Contingent capital may also incentivize SIFI management to decrease financial institutions’ risk taking.\textsuperscript{47} The threat of dilution of stock holdings, in combination with a threat of loss due to conversion could help reduce shareholder pressure on SIFI management to take increasing risks.\textsuperscript{48} In situations where conversion had a negative effect on stock price,\textsuperscript{49} management

\textsuperscript{39} See Flannery, \textit{supra} note 14, at 181.
\textsuperscript{40} See \textsc{Goldman Sachs}, \textsc{Effective Regulation}, \textit{supra} note 15, at 6 (noting that if the appropriate triggers are in place, it could prevent bank runs—though if the trigger is based on market prices, it could worsen bank runs).
\textsuperscript{41} See Coffee, \textit{supra} note 11, at 806.
\textsuperscript{42} See Rajan, \textit{supra} note 12, at 28 (discussing the benefits of contingent capital compared to conventional capital requirements). \textit{But see} Koziol & Laurence, \textit{supra} note 12, at 91 (summarizing the drawback to contingent capital).
\textsuperscript{43} See Flannery, \textit{supra} note 14, at 181.
\textsuperscript{44} See generally \textit{id}.
\textsuperscript{45} See \textit{supra} Part III.
\textsuperscript{46} See Flannery, \textit{supra} note 14, at 187–88.
\textsuperscript{47} See Dudley, \textit{supra} note 13 (“If the bank encounters difficulties, triggering conversion, shareholders would be automatically and immediately diluted. This would create strong incentives for bank managements to manage not only for good outcomes on the upside of the boom, but also against bad outcomes on the downside.”); Coffee, \textit{supra} note 11, at 806. Coffee avers that converting the debt security into preferred stock creates a “countervailing voting constituency,” which offsets the voting power of “risk-tolerant common shareholders, thereby reducing the pressure on corporate managers to accept greater risk and leverage.” \textit{Id}.
\textsuperscript{48} See Dudley, \textit{supra} note 13 (“If shareholders had faced the potential of automatic and substantial dilution, they may have demanded better risk management and disclosure during the boom.”).
could be incentivized further to maintain and manage risk to avoid reputational loss and income reduction due to losses in stock options. Accordingly, contingent capital could create a regime for providing countercyclical regulatory capital that further enhances regulatory capital requirements of the Federal Reserve and under Basel III.

### IV. Dynamic Regulation Via Contingent Capital

Contingent capital is a dynamic regulatory mechanism because (1) capital injection is available only if and when needed; (2) signaling to regulators of impending regulatory issues via conversion of CCS to near worthless equity creates feedback effects; and (3) contingent capital may also incentivize management to lower their risk taking on behalf of the financial institution. Contingent capital accordingly exemplifies and supports the core tenets of dynamic regulation, which include improved information for rulemaking, feedback effects, and anticipatory regulation.

(suggesting that under their design of contingent capital, where the state-contingent conversion ratio prevents value transfer, the prices would be kept “‘smooth’ at conversion”).


53 Basel III calls for 7 percent regulatory capital, up from 3 percent. Press Release, Basel Comm. on Banking Supervision, Group of Governors and Heads of Supervision Announces Higher Global Minimum Capital Standards (Sept. 12, 2010), http://www.bis.org/press/p100912.pdf [https://perma.cc/CZ2S-H623]; see also Rajan, *supra* note 35 (suggesting that CCS should be used to raise capital “when regulators see a crisis coming”).

First, contingent capital has the potential to optimize information for rulemaking. CCS, when issued and triggered, produce highly valuable, real time, decentralized information on the financial wellbeing of a given regulated entity.

Second, contingent capital creates feedback effects because the conversion of debt to equity signals to regulators that the respective entity’s management that was unable to avoid the trigger from debt to equity, which calls for increased regulatory scrutiny. In essence, the occurrence of the trigger from debt to equity creates real-time regulatory information that would require months or years to generate in centralized system, and enables regulators to start a regulatory investigation if and when it is needed.

Finally, contingent capital enables anticipatory regulation because regulators may observe and react in real time to triggering events, before entities encounter financial calamity. Additionally, depending on the disclosure regime that pertains to the respective CCS, regulators will also be able to understand what financial disclosures can affect the stability of such CCS. Such information may allow regulators to anticipatorily adjust their regulatory requirements and the intensity of regulatory investigations.

V. Conclusion

The issuance of CCS is a promising dynamic regulatory mechanism that can help address the suboptimal regulatory outcomes associated with disruptive innovation. While most of the design features of CCS and their triggering events are underdeveloped, despite these shortcomings, CCS could help allows regulators to anticipate regulatory needs in real-time, supported by feedback effects and improved information for regulation.

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55 Kaal, Dynamic Regulation of the Financial Services Industry, supra note 1, at 816.
56 Id. at 825.
57 Id.
58 Id.
59 Id.
60 Id.