

## INNOVATION AND THE STATE

From social media to subprime mortgage-backed securities, innovation carries both risk and opportunity. It also throws up profound regulatory challenges. As it evolves, innovation continually undermines, circumvents, and sidelines regulatory structures designed to accommodate it. Here, Cristie Ford investigates the relationships between contemporary regulatory approaches and private-sector innovation, and considers the implications of both for broader social welfare priorities including equality and voice.

Regulation is at the leading edge of politics and policy in ways not yet fully grasped. Seemingly innocuous regulatory design choices have clear and profound practical ramifications for many of our most cherished social commitments. Innovation is a complex phenomenon that needs to be understood not only in technical terms but also in human ones. Ford argues for a fresh approach to regulation that recognizes innovation for the regulatory challenge it is, and that binds our social values and our regulatory tools ever more tightly together.

Cristie Ford is Associate Professor and Director of the Centre for Business Law, Peter A. Allard School of Law, University of British Columbia. She is an internationally recognized scholar in the fields of financial regulation and regulatory theory. She has written, lectured, and consulted extensively on financial regulation and was previously editor of the journal *Regulation & Governance*. She is also a coauthor of the leading securities regulation text in Canada.

# Innovation and the State

FINANCE, REGULATION, AND JUSTICE

**CRISTIE FORD**

Peter A. Allard School of Law,  
University of British Columbia



Cambridge University Press  
978-1-107-03707-6 — Innovation and the State  
Cristie Ford  
Frontmatter  
[More Information](#)

## CAMBRIDGE UNIVERSITY PRESS

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781107644892](http://www.cambridge.org/9781107644892)

DOI: 10.1017/9781139583473

© Cristie Ford 2017

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2017

Printed in the United States by Sheridan Books, Inc.

*A catalogue record for this publication is available from the British Library.*

*Library of Congress Cataloging-in-Publication Data*

Names: Ford, Cristie, author.

Title: Innovation and the state: finance, regulation, and justice / Cristie Ford.

Description: New York: Cambridge University Press, 2017. |

Includes bibliographical references and index.

Identifiers: LCCN 2017023475 | ISBN 9781107037076 (hardback) |

ISBN 9781107644892 (paperback)

Subjects: LCSH: Technological innovations – Economic aspects. | Industrial policy.

Classification: LCC HC79.T4 F648 2017 | DDC 338/.064–dc23

LC record available at <https://lcn.loc.gov/2017023475>

ISBN 978-1-107-03707-6 Hardback

ISBN 978-1-107-64489-2 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Cambridge University Press  
978-1-107-03707-6 — Innovation and the State  
Cristie Ford  
Frontmatter  
[More Information](#)

---

*Dedicated with immeasurable love and gratitude to my family*

The bourgeoisie cannot exist without constantly revolutionizing the instruments of production, and thereby the relations of production, and with them the whole relations of society. . . . All fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses, his real conditions of life, and his relations with his kind.

Karl Marx and Friedrich Engels, *The Communist Manifesto*

The major impulses to successful financial innovations over the last twenty years have come, I am saddened to have to say, from regulations and taxes.

Merton Miller, 'Financial Innovation: The Last Twenty Years and the Next', *Journal of Financial and Quantitative Analysis*, 1986

Cambridge University Press  
978-1-107-03707-6 — Innovation and the State  
Cristie Ford  
Frontmatter  
[More Information](#)

---

In *Innovation and the State: Finance, Regulation, and Justice*, Cristie Ford provides a thorough analysis of the evolution of academic literature on ‘flexible regulation’ and couples this with an analysis of different forms of innovation to consider how regulation can fulfil progressive social goals whilst coping effectively with the risks and uncertainties that innovations within markets can pose. Elegantly written and perceptively observed, this is a timely analysis, which reminds us that regulation is a political and social project as well as a technical one.

Julia Black, Professor of Law, Pro Director for Research, and interim  
Director, London School of Economics and Political Science

A tour de force of innovation and financial regulation. Cristie Ford is street smart, experienced on Wall Street. She explains how sedimentary innovation is bound to defeat inflexible rulish regulation. Yet sedimentary innovation also defeats flexible regulation, if it fails to fill the gaps that open within a scaffolding of regulatory principles. Ford’s brilliant book teaches us to learn to see financial innovation. It cautions political wisdom in building loyalty to public values as regulators steer economic interests.

John Braithwaite, School of Regulation and Global Governance  
(RegNet), Australian National University

Like the words ‘growth’ and ‘progress’, ‘innovation’ is often taken for granted as a public good. Indeed, it can be. But Cristie Ford shows in this deep and thoughtful book the way this taken-for-grantedness has seduced regulators, academics and the public into a set of beliefs that undermines the necessary task of regulation itself. She points the way forward to a more sophisticated interaction between regulation and innovation in a more just, progressive society.

Donald Langevoort, Thomas Aquinas Reynolds  
Professor of Law, Georgetown

## Contents

<i>List of Figures</i>	<i>page</i> xiii
<i>List of Tables</i>	xiv
<i>Acknowledgments</i>	xv
<i>List of Abbreviations</i>	xvii
<b>Introduction: Why Innovation Is Not (Just) Romantic, and Regulation Is Not Dull</b>	1
Innovation and Regulation	1
Innovation, Progress, Hope	7
What Does Contemporary Regulation Look Like?	9
A Thought Experiment: Innovation-Fostering Regulation	12
On Regulation: The Way Forward	18
<b>1 Innovation as a Regulatory Challenge: Four Stories</b>	24
The Innovations: Securitization and Derivatives	27
Four Regulatory Moments	31
Enron and Derivatives: Gameable Bright-Line Rules	31
ABCP in Canada: Outdated Assumptions about the Market	32
Basel Capital Adequacy Rules: Evolving into and Out of Innovation-Framing Regulation	35
The Volcker Rule: Innovation as Silencing to Non-Experts	39
Innovation and Regulation: Three Misperceptions	42
Complexity and Dynamism: The Reality and the Narrative	43
The Assumption That the Regulatory Moment Is the Important One	45

	The Assumption That Regulation Sits Outside Innovation and Is Not Directly Implicated by It	46
	Conclusion	48
<b>2</b>	<b>How We Got Here: The History and Roots of Flexible Regulation</b>	51
	The Regulatory State as an Idea	54
	From Welfare State to Regulatory State	56
	Shifting Ideologies in the Move to the Regulatory State	66
	The Influence of Economics in the New Innovation- Framing Regulation	67
	Risk as Regulatory Touchstone	69
	The Philosophical Dimension in Flexible Regulation	73
	Governance, Regulation, and the Shattering of Authority: The Phoenix Rises	75
<b>3</b>	<b>Four Key Perspectives: Flexible Regulation and the Link to Innovation</b>	79
	Lord Turner's Charge	79
	The Concern with Flexibility	83
	Opening Up and Accepting Contingency, by Degrees	84
	Responsive Regulation	85
	Reflexive Law	88
	Smart Regulation	91
	New Governance and Experimentalism	92
	Abiding Insights from Flexible Regulation	96
<b>4</b>	<b>Flexible Regulation Scholarship Blossoms and Diversifies: 1980–2012</b>	101
	An Empirical Review of the Flexible Regulation Scholarship, 1980–2012	103
	How Is Flexible Regulation Meant to Be Better?	105
	The Regulatory Scaffolding and the Spaces Within It	106
	How Central Were Market Forces?	109
	What Was the Regulatory Innovation Trying to Achieve?	111
	Does a Rising Tide Lift All Boats?	112
	Financial Regulation Scholarship as Outlier	113
	What Relationship between Private Innovation and Regulatory Innovation?	115
	Flexible Regulation and Innovation	118



<b>5</b>	<b>Why Flexible Regulation Was Not Simply a Misguided, Neoliberal Project</b>	121
	Flexible Regulation and Ideology	122
	Politics: Flexible Regulation and Progressive Values	122
	Authority and the Market: Milton Friedman or Karl Polanyi?	125
	Decentralization: James Madison or Friedrich Hayek?	128
	Translation to Practice: Promising the Moon and the Sky through Regulatory Innovation	131
	Where the Scholarship Does Not Reach: Understanding Innovation as a Regulatory Challenge	135
<b>6</b>	<b>Refocusing Regulation around the Challenge of Innovation</b>	139
	Flexible Regulation, Innovation, and Finance	139
	Starting Points from the Innovation Literature	144
	How Do Innovations Develop? Creation, Diffusion, and Swarming	149
	Can We Apply These Insights to Financial Innovation?	152
	Who Is Innovating?	153
	What Are Their Innovations and Why Are They Pursuing Them?	155
	How Do Innovations Develop?	157
	Where and When Does “Swarming” Happen?	159
	Takeaway Points: Reframing Regulation around Innovation	161
<b>7</b>	<b>Seismic Innovation: The Radical Step Change as Regulatory Opportunity</b>	166
	The Characteristics of Seismic Innovation	171
	American Railroads and Financial Innovation in the Gilded Age	173
	Deepwater Oil Drilling	176
	Twenty-First-Century Financial Innovation in Securitization and Derivatives	178
	What Kinds of Problems do Seismic Innovations Present for Regulation?	180
	Uncertainty and Illegibility	180
	Hindsight Bias, <i>Ex Post</i> Overreactions	183
	What Regulatory Responses to Seismic Innovation Make Sense?	186
	Meta-Regulation or Experimentalist Regulation	186
	Safety-Case Regulation	187
	The Precautionary Principle and/or <i>Ex Ante</i> Licensing	189
	Reflections on Responding to Seismic Innovation	191

<b>8</b>	<b>Sedimentary Innovation: Responding to Incremental Change</b>	194
	What Is “Sedimentary Innovation?”	194
	Sedimentary Innovation as Regulatory Opportunity and Regulatory Challenge	196
	The Impact of Network Effects: Brandeis and the “Swarm”	200
	Networks as Institutional and Social Phenomena	202
	Herding and the First-Mover Advantage	206
	Making Sense of Sedimentary Innovation	207
	Humans Struggle to See Sedimentary Change	207
	Epistemological Problems and Awareness Problems	210
	Regulatory Boundaries and Coordination Problems	212
	Sedimentary Innovation and Flexible Regulation	213
	Potential Regulatory Responses to Sedimentary Innovation	215
<b>9</b>	<b>Innovation-Ready Regulation: Learning to See Financial Innovation</b>	218
	Responding to Innovation as a Technical Regulatory Challenge	220
	The Normative Piece: On Deliberation and Contingency	233
	On Financial Regulation, Fairness, and Equality	236
	<i>Appendix A: Methodology</i>	239
	<i>Appendix B: Coding Questions</i>	248
	<i>Appendix C: Additional Coding</i>	252
	<i>Notes</i>	259
	<i>Select Bibliography</i>	339
	<i>Index</i>	349

## Figures

2.1	Frequency of terms in books from 1900 to 2008	<i>page</i> 72
4.1	The frequency of articles across time	104
4.2	The frequency of articles for the four most popular regulatory innovations advocated across time	110
4.3	The frequency of articles responding to the different categories of human-created or manufactured risk	117
7.1	Asset-backed versus non-securitized commercial paper issued in the United States, 2000–2009	168
7.2	Wells drilled in the Gulf of Mexico by water depth, 1940–2010	169
7.3	Asset-backed versus non-securitized commercial paper issued in the United States, August 2015–August 2016	185
8.1	CDS network	203
8.2	US Office of Financial Research, three-dimensional multilayer network map of the financial system	204
9.1	Aspects of innovation-ready financial regulation	225

## Tables

4.1	Primary subject matter of articles	<i>page</i> 103
4.2	Type of justification for flexible regulation in the literature by frequency	106
4.3	The frequency of catalysts for innovation in the literature	116
4.4	Kinds of manufactured/human-created risks described in the literature	116
9.1	Framework for innovation-ready regulation	226
A.1	The most-cited flexible regulation articles in the database	245
B.1	Coding questions	248
C.1	Additional coding questions	252

## Acknowledgments

No book can be produced without enormous help from many quarters. A book such as this one, which aims to link legal sub-disciplines that do not always speak directly to each other, and which also aims for some level of interdisciplinarity, has perhaps drawn on (and drawn on the patience of) a wider group of readers than most. For their encouragement, engagement, and insightful feedback on previous drafts and portions of this book, I am very much indebted to Dan Awrey, Lawrence Baxter, Julia Black, John Braithwaite, Alex Burton, Cary Coglianesi, Onnig Dombalagian, Adam Feibelman, Stavros Gadinis, Erik Gerding, Benjamin Goold, Fiona Haines, Douglas C. Harris, Carol Heimer, Camden Hutchison, Rony Kahan, Don Langevoort, David Levi-Faur, Emilio Marti, Saule Omarova, Christine Parker, Frank Partnoy, Nancy Reichman, Tanina Rostain, Chuck Sabel, Dan Schwarcz, Jodi Short, Susan Silbey, Steve Davidoff Solomon, Elen Stokes, Judith van Erp, Bill Wilhelm, and David Zaring.

This project has also benefited greatly from feedback from participants at faculty lectures and workshops from 2014 through 2016 at the Bar Ilan, Berkeley, Cornell, Georgetown, Hebrew University, Tulane, University of British Columbia, and Utrecht Faculties of Law; and the Centre for Corporate Reputation at Oxford University. An earlier version of Chapter 1 was published as Cristie Ford, “Innovation-framing regulation” (2013) 649 *Annals Am Acad Polit & Soc Sci* 76–97, on which I received helpful feedback from participants at the volume’s associated workshop at the Faculty of Anthropology at MIT. I also appreciate the helpful feedback received at annual meetings of the Law and Society Association and the Society for the Advancement of Socio-Economics, and the fifth and sixth Regulation & Governance biennial conferences of the European Consortium for Political Research. Errors and omissions of course remain my own.

I have enlisted the help of several research assistants from my home institution, the Peter A. Allard School of Law at UBC, over the long course of this project. Each of them demonstrated exceptional commitment and thoughtfulness, and each contributed in unique and valuable ways. My sincere thanks go to Andrew Burgess, Dustin Chelen, Stephanie Dickson, Sebastian Ennis, Emilie Feil-Fraser, Hardeep Gill, Kelly Kan, Vera Mirhady, Carly Peddle, Kendra Shupe, and David Wu for their engagement, their curiosity, and their dedication. I could not have hoped for a more talented or pleasant set of interlocutors. Their contributions, and this book, would not have come to pass without the support of research grants from TMX Group Capital Markets Initiative, the Law Foundation of British Columbia, and the Allard School of Law, which I very much appreciate. My thanks, as well, to Lisa Gourd for insightful copyediting on the first three chapters, and to my editor, John Berger.

Above all, I am grateful to my family for supporting this project, and me, in more ways than I could possibly say. This book is for my beloveds – Sasha, Moss, and Nina Liv – and is in honor of the two fierce, loving, and remarkable women who raised me to imagine that writing academic books might be a reasonable thing for me to do: Liv Kulterstad Oyen (1909–2009), and Donna Oyen Ford.

## Abbreviations

ACBC	Asset-Backed Commercial Paper
CDO	collateralized debt obligation
CDS	credit default swap
CFPB	Consumer Financial Protection Bureau
CSE	Consolidated Supervised Entities
EMT	Efficient Market Theory
FASB	Financial Accounting Standards Board
FDA	Federal Drug Administration
FSA	Financial Services Authority (UK)
FSB	Financial Stability Board
FSOC	Financial Stability Oversight Council
GAAP	generally accepted accounting principles
HFT	high-frequency trading
IFRS	International Financial Reporting Standards
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association
LTCM	Long-Term Capital Management
MMS	Minerals Management Service
NPM	New Public Management
NPR	National Program Review
OFR	Office of Financial Research
OMB	Office of Management and Budget
OTC	over-the-counter
PIG	public interest group
SEC	Securities and Exchange Commission
SPV	special-purpose vehicles
VaR	Value at Risk
WEF	World Economic Forum