INTERNATIONAL BANKING AND FINANCE LAW SERIES

Banking on Climate Change

How Finance Actors and Transnational Regulatory Regimes Are Responding

Megan Bowman



Banking on Climate Change

How Finance Actors and Transnational Regulatory Regimes Are Responding

Megan Bowman



Published by:
Kluwer Law International
PO Box 316
2400 AH Alphen aan den Rijn
The Netherlands
Website: www.kluwerlaw.com

Sold and distributed in North, Central and South America by:
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21704
United States of America
Email: customer.service@aspenpublishers.com

Sold and distributed in all other countries by:
Turpin Distribution Services Ltd
Stratton Business Park
Pegasus Drive, Biggleswade
Bedfordshire SG18 8TQ
United Kingdom
Email: kluwerlaw@turpin-distribution.com

Printed on acid-free paper.

ISBN 978-90-411-5223-7

© 2015 Megan Bowman

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

Permission to use this content must be obtained from the copyright owner. Please apply to: Permissions Department, Wolters Kluwer Legal, 76 Ninth Avenue, 7th Floor, New York, NY 10011-5201, USA. Email: permissions@kluwerlaw.com

Printed and Bound by CPI Group (UK) Ltd, Croydon, CR0 4YY.

Banking on Climate Change

International Banking and Finance Law Series

VOLUME 24

Series Editors

Joseph J. Norton SMU Dedman School of Law, Dallas Ross P Buckley

CIFR King & Wood Mallesons Professor of International Finance and Regulation,
UNSW, Sydney
Douglas W. Arner

Asian Institute of International Financial Law, University of Hong Kong

Advisory Board

P. Wood (Chair), CCLS and Allen & Overy, London The Hon. Mr Justice Blair, Justice of the High Court of England L. Buchheit, Cleary Gottlieb Steen & Hamilton, New York

M. Dassesse, McKenna & Cuneo, Brussels

S. Gannon, Hong Kong Monetary Authority

B. Geva, Osgoode Hall, York University, Toronto

A. Halkyard, University of Hong Kong

N. Horn, University of Cologne

Itzikowitz, Edward Nathan Sonnerbergs and University of the Witwatersrand, Johannesburg

H. Kanda, *University of Tokyo* R. Lastra, *CCLS*, *London*

S. Seigel, NYU Law School, New York

 $M.\ Steinberg, {\it SMU Dedman School of Law, Dallas}$

Z. Zhou, Shanghai University of Finance and Economics

Editorial Review Board

Executive Editors

G.A. Walker, CCLS, London

C. Hadjiemmanuil, London School of Economics and Political Science

J. Winn, Microsoft Center, University of Washington, Seattle

Hsu, Asian Institute of International Financial Law, University of Hong Kong Associate Editors

C. Olive, SMU Institute of International Banking & Finance and Bracewell & Guiliani, Dallas

W. Wang, Fudan University, Shanghai M. Yokoi-Arai, CCLS, London

The titles published in this series are listed at the end of this volume.

Preface and Acknowledgements

The climate finance field is extremely new. Architectural frameworks and key players are still emerging within an Escher-style landscape of fiscal, environmental and political mutability. But I think we are on the cusp of grasping the importance of private capital and public finance to facilitating the most significant and challenging global transition of our time: the transition to a low-carbon economy. I genuinely hope this book is a timely and useful contribution to that broader endeavor.

In recent years there have been rapid developments in all major economies around the world regarding financial markets and, quite separately, climate change. These developments have made the climate finance field highly relevant and frustratingly mercurial. Indeed a litany of important and seemingly unrelated world events occurred during the research and writing of Banking on Climate Change. Interview data were gathered in the aftermath of the 2009 global financial crisis and at a time when societal suspicion of banks had reached an all time high. The world was still suffering economically; collapse of the Eurozone loomed constantly with potential contagion of financial failings between EU member countries; and governments within the United States, Europe and Australia were formulating legal measures to avert future financial crises instigated by irresponsible bank practices. International climate negotiations had stalled, the then-UN Climate Chief had resigned, and nations were beginning to contemplate abandonment of the Kyoto endeavor entirely, only to reinvigorate it in 2014. The BP Deepwater Horizon oil spill occurred in American waters, which precipitated public scrutiny of the world's dependence on fossil fuels and resignation of BP's then-CEO. And in Australia, the Labor Government busily see-sawed not only between its leaders but also in its affection for a carbon price, breaking promises to eventually pass a carbon tax in 2011 that was, in an unprecedented move by a government that takes power with a tax in situ, subsequently repealed by a Coalition Government in 2014.

In short, during the past five years it has become very clear that now is a good time to understand the discrete topics of finance and climate change *together*.

This book embodies one of the first qualitative studies on corporate climate finance. To date, very little empirical work of this nature has been undertaken in the climate finance space so we haven't really understood what makes private finance

actors "tick" let alone "go green" in real life. Banks in particular are multi-cellular and notoriously opaque creatures that do not usually welcome scrutiny. I have been very fortunate in gaining access to senior managers and invaluable information, which opened a window into bank decision-making and motivations vis-à-vis climate change. Many respondents would prefer to remain anonymous so I thank them collectively for their frankness, insights, and generosity in giving their time and knowledge to me. The empirical case study in this book – and the larger lessons learned thereby – could not exist without them.

I was fortunate enough to be selected for a number of international workshops where I could air my theses and receive insights from critical thinkers of exceptional quality. Workshops that were particularly influential on my thinking for this book include the C9/G8 Clean Energy symposium at Tsinghua University in 2011; the Cambridge University Regulation and Governance conference in 2012; the Harvard/Stanford International Junior Faculty Forums in 2012 and 2013; the Responsible Investing workshop at the University of British Columbia in 2013; and the Conference on Empirical Legal Studies at UC Berkeley School of Law in 2014. I thank participants at those fora, and other generous scholars outside of them, for their rich insights and encouragement. In particular, I give special thanks to Professors Eric Talley and Benjamin J. Richardson for their invaluable support and provocations, without which these chapters would be much the poorer; and for further nudges provided by Professors Bill Alford, Cass Sunstein, Bob Kagan, Lynne Dallas, Tima Bansal, Dan Farber, Forest Reinhardt, Venky Narayanamurti, Sam Fankhauser, Ethan Elkind and Steve Weissman.

I would also like to acknowledge the intellectual, financial and moral support of staff at the Australian National University's Regulatory Institutions Network (RegNet) where I undertook my PhD candidature and where this book began. RegNet is recognized internationally not only for its world-class research output but also for the warmth and generosity of its people. There are some people that deserve special mention for their genuine interest and inspiring role-modeling: Professors Neil Gunningham, Val and John Braithwaite, Veronica Taylor, Hilary Charlesworth, Terry Halliday, Howard Bamsey and Dr Kyla Tienhaara.

Many thanks also to those who gave professional stimulation and support along the way. In particular, my UNSW Law colleagues: Dr Rob Nicholls and Professor Justin O'Brien from the Centre for Law, Markets and Regulation; Centre interns Stephanie Cardy, Jacqui Vorreiter and Joe Shin for research assistance when I needed it most; Professors Brendan Edgeworth, Prue Vines, and Fleur Johns for additional (tor)mentoring; and Simone Degeling for faculty grants to Harvard and Berkeley Law Schools to discuss my work in progress. Outside of formal channels, I thank Professors Jaye Ellis and Andrew Clarke for their ongoing support and good advice; the international Network for Sustainable Financial Markets, particularly Cary Krosinksy and Raj Thamotheram; and for subject-specific discussions with Sean Kidney, Tim McDonald and Jim Osborne, Justin Ritchie, Dr. Wei Li, Professors Ruoying Chen, Nico Howson, Peter Drysdale, and the East Asian Bureau of Economic Research team.

I especially thank the Wolters Kluwer team for their professionalism, encouragement and patience: Professor Ross Buckley, Simon Bellamy, and Pritha at NewGen editing.

Finally, I give heartfelt thanks to my family and friends. To Jus and Dan (and their gorgeous girls), Katie and Vlad (and their beautiful offspring), Tamar, Thierry, Jono, Anna, Amanda – your unwavering love and support is a constant source of strength and joy for me. To all the dancers and musicians who inspire and touch me. To my beloved family Mum, Pierre, Marcus, Anjalee, Tristan, Penny, Lily, Gabriel, Wesley: we are so blessed to have each other. And to dear Papa: it was because of you that I always wanted to be a doctor.

List of Abbreviations

ADI Authorized Deposit-Taking Institution

AGM Annual General Meeting

APRA Australian Prudential Regulation Authority

ASIC Australian Securities and Investments Commission

BAU Business-as-Usual

CalPERS California Public Employees Retirement System

CAPM Capital Asset Pricing Model

CBRC China Banking Regulatory Commission

CCS Carbon Capture and Storage
CDP Carbon Disclosure Project

CER Corporate Environmental Responsibility

CFP Corporate Financial Performance
CFR Code of Federal Regulations (US)

CIF Climate Investment Fund

CO₂ Carbon Dioxide

COP Conference of the Parties

CSP Social and Environmental Performance

CSR Corporate Social Responsibility

ENGO Environmental Non-government Organization

EPA Environment Protection Authority

EPC Engineering, Procurement, Construction (Contracts)

ESG Environmental, Social and Governance

ETS Emissions Trading Scheme

EU European Union

FAT Financial Activities Tax

List of Abbreviations

FCA Financial Conduct Authority (UK)

FDI Foreign Direct Investment

FDIC Federal Deposit Insurance Corporation (US)

FIT Feed-in-Tariff

FTT Financial Transactions Tax FRB Federal Reserve Bank (US)

FSA Financial Services Authority (UK)

FSOC Financial Stability Oversight Council (US)

GCF Green Climate Fund GHG Greenhouse Gas

GIB Green Investment Bank (UK)
GFC 2008/2009 Global Financial Crisis
IFC International Finance Corporation

IPCC Inter-governmental Panel on Climate Change

IPO Initial Public Offering
IT Information Technology
KPI Key Performance Indicator
KKR Kohlberg Kravis Roberts
M&A Merger and Acquisition

MOFCOM Chinese Ministry of Commerce

MRET Mandatory Renewable Energy Target

MTR Mountain Top Removal

NGO Non-government Organization

NDRC National Development and Reform Commission (China)

OCC Office of Comptroller of Currency (US)

ODI Overseas Direct Investment

OECD Organisation for Economic Co-operation and Development

OTS Office of Thrift Supervision (US)

PE Private Equity

POE Privately Owned Enterprise
PPA Power Purchase Agreement

PRA Prudential Regulation Authority (UK)
PSI Principles for Sustainable Insurance

PTC Production Tax Credits

PV (Solar) Photovoltaic

ITC Investment Tax Credit

RAN Rainforest Action Network

RBA Reserve Bank of Australia

RE Renewable Energy

RECs Renewable Energy Certificates
RET Renewable Energy Target
RPS Renewable Portfolio Standard

SEC United States Securities and Exchange Commission

SML Security Market Line SOE State-Owned Enterprise

SRI Socially Responsible Investment

SSE State-Supported Enterprise

SSCN Sustainable Supply Chain Network

TXU Texas Utilities
UK United Kingdom

UNEP United Nations Environment Program

UNEPFI United Nations Environment Program Finance Initiative
UNFCCC United Nations Framework Convention on Climate Change

UNPRI United Nations Principles for Responsible Investing

US United States

USC United States Code
VAT Value-Added Tax
VC Venture Capital

WBCSD Business Council for Sustainable Development

WWF World Wildlife Fund

List of Tables

Table 2.2	Classification and Activities of Private Sector Financial Institutions
Table 2.3	Climate Change and the Private Finance Sector: Mutual Impacts
Table 5.1	The US Financial Regulatory Framework After Dodd-Frank
Table 5.2	New US Financial Regulatory Institutions created by Dodd-Frank

List of Figures

Figure 2.1	The Financial System: Financial Markets, Intermediaries, and the Flow of Funds
Figure 4.1	A New Conception of Corporate Reputation
Figure 4.2	The Constitution of Social Reputation Versus Client Service Reputation
Figure 4.3	Modality and Effects: Social Reputation versus Client Service Reputation
Figure 7.1	Risk/Return Trade-Off: The CAPM and SML
Figure 7.2	Tax Equity Partnership Structure

Table of Contents

Preface	and A	ckno	wledg	ements	xi
List of A	bbre	viatio	ıs		xv
List of T	ables				xix
List of F	igure	S			xxi
CHAPTER		11			
Banking					1
§1.01				y, Stupid"	1
§1.02				gulatory Responses to Climate Change	4
	[A]			and Rapidity of Climate Change	4
	[B]			dictional Regulatory Regimes on Climate Change	5
		[1]		national Level	5
		[2]		onal and Regional Climate Regulation	6
			[a]	Regulation That Puts a Price on Carbon	6
			[b]	Regulation That Incentivizes Energy Efficiency and	
				Investment in or Usage of Renewable Energy and	
				Clean Technology	7
			[c]	Regulation That Mandates Compulsory Monitoring	
				and Reduction of Internal Corporate GHG Emissions	9
			[d]	Regulation That Discourages or Prohibits Intensive	
				GHG-Emitting Projects	10
§1.03	Sustainable Development and Climate Finance				11
	[A]				12
	[B]			e Finance Actors	14
		[1]		rers and Reinsurers	16
		[2]		tutional Investors	16

Table of Contents

20121		[3] [4]	Banks Entrepreneurial Finance Actors	17 17
§1.04	-	Pract Empi	Plan of This Book ical and Theoretical Context rical Case Study: Early-Moving Banks in Key Market	17 18
	[C]		omies latory Recommendations	19 20
CHAPTER				
			hip: Private Finance Actors and Climate Change	21
§2.01	Over			21
§2.02			r-Go-Round: Types and Functions of Private Sector	2.1
62.02			nstitutions	21
§2.03	[A]		sks and Opportunities for Private Finance Actors vance by Industry: Climate-Related Risks and Opportunities	27
	$[\Lambda]$	[1]	The Insurance Industry: Insurers and Reinsurers	27
			Institutional Investors	32
			Banks	37
	[B]		vance by Activity: Finance Sector Business Practices and	
	[-]		ate Change	38
		[1]	Risk Assessment and Risk Management	38
		21. 21	[a] Credit and Investment Risks	40
			[b] Reputation Risk	42
			[c] Litigation Risk	47
		[2]	Investing, Lending & Financing	49
		[3]	New Market Entry and Innovative Product Design	55
§2.04	Bank	s as C	orporate Change Agents?	57
	[A]		s as Creditors and Investors	59
	[B]	Bank	s as Advisers and Heads of Supply Chains	60
CHAPTER	3			
Why Do	Com	panie	s Go Green?	63
§3.01	Over			63
§3.02			Framework	63
§3.03			l: Organizational Field Level Drivers of Change	64
	[A]		Short History and Lack of Conceptual Clarity	64
	[B]		Business Case for "Doing Good"	70
		[1]	The "Win-Win"/ "Win-Lose" Literature	71
62.04	14	[2]		75
§3.04 §3.05			el: Socio-Cultural Drivers or "External" Factors el: Intra-organizational Drivers or "Internal" Factors	81 85
§3.06			n: Knowledge Gaps and Empirical Next Steps	89
30.00	Juni	munul	i. Miowicage dups and implified treat steps	09

Снарте	R 4						
The Le	vers o	f Corporate Change: Case Study Evidence	91				
§4.01		Overview					
§4.02	Qual	Qualitative Methodology					
	[A]	Sourcing the Banks and Respondents	92				
	[B]	Data Analysis	94				
§4.03	Drive	Drivers: Bottom-Up, Top-Down and Middle-Out					
	[A]	Meaning and Role of Corporate Reputation as Driver	97				
		[1] Client Service Reputation	99				
		[2] Social Reputation	102				
		[a] Type of Bank	103				
		[b] Type of Employee	106				
		[c] Regulatory Context	108				
	[B]	Risk Mitigation as Driver	111				
		[1] Types of Regulation and Risk	111				
		[2] Leading Bank Approaches by Jurisdiction	113				
		[a] Europe / UK	113				
		[b] United States	114				
		[c] Australia	116				
§4.04	Non-	Non-driver: The "Care" Factor					
	[A]	Manifestation of CSR	119				
	[B]	Conceptualization of CSR	119				
	[C]	Subordination of CSR	122				
§4.05	Impl	ications	125				
Снарте	R 5						
The Li	mits of	Corporate Change: Case Study Evidence	129				
§5.01	Over	view	129				
§5.02	Limi	Limitations of the Business Case as Driver					
	[A]	The Requirement of a Business Case for Green Uptake	130				
	[B]	The Countervailing Business Case for Non-Green Initiatives	131				
§5.03	Bank	Banking Regulation, Corporate Law and Corporate Governance					
	Norr	Norms					
	[A]	Bank Regulation and Supervision	133				
		[1] United Kingdom	133				
		[2] Australia	135				
		[3] United States	136				
	[B]	Corporate Law, Directors' Duties and Corporate Governance					
		Norms					
		[1] United Kingdom	142				
		[2] Australia	144				
		[3] United States	146				
		[4] Summation	149				
§5.04	Incre	emental versus Transformational Change	149				

	[A] [B]	"Organic" Mainstreaming via Isomorphism Going the Distance: Standard-Setting and Real Change [1] Green Activities as an Extension of Current Practice? [2] New Green Initiatives in Competition with Established	149 151 153			
		Non-Green Activities	159			
		[3] Built In versus Bolted On	160			
		[4] Market Size	163			
	[C]	Timeliness: The Imperatives of Expeditious and Radical Change	164			
§5.05	-	cluding Remarks	167			
CHAPTER	6					
Empiric	ally Ir	nformed Regulation	169			
§6.01	Sumi	mary of Empirical Findings	169			
	[A]	A New Taxonomy of "Corporate Reputation" as Driver	170			
	[B]	Climate Change as Risk or Opportunity? The Relevance of				
		Regulatory Context	171			
	[C]	CSR as a Non-driver	172			
	[D]	The Limited Nature of Voluntarism for Mainstreaming	174			
	[E]	Reflections	174			
§6.02		eralizability of Findings to Other Private Finance Actors	175			
§6.03	-	l Implications of Findings: The Case for Regulatory Intervention	176			
§6.04		ct and Coercive Government Regulation	178			
	[A]	Attributes and Benefits of Direct Coercion	178			
	[B]	Examples of Direct and Coercive Climate Finance Regulation	179			
		[1] Prescriptive and Proscriptive Legislation	179			
		[2] Taxation	179			
	[C]	Criticisms of Coercive Legislation	180			
§6.05		ect and "Nudging" Government Regulation	183			
	[A]	What's in a Nudge?	184			
	[B]	Critiques of "Nudging" Regulation	189			
		[1] Incentives Can Have Unintended and Unexpected				
		Perverse Consequences	190			
April 20 10 10 10 10 10 10 10 10 10 10 10 10 10	555A 0	[2] Governments May Not Know What Is "Best" or "Right"	191			
§6.06	The l	Necessity of a Climate Finance "Regulatory Mix"	194			
CHAPTER	7					
Re-setti	ng the	e Regulatory Sights	197			
§7.01	Over	view	197			
§7.02	The (Capital Asset Pricing Model and Risk/Return Requirements for				
		rent Private Finance Actors	198			
§7.03		Equity Partnership Structures and Corporate Climate Finance	202			
§7.04	Climate Bonds and Green Bonds					
§7.05		green Buy-Out Strategies	209			
§7.06	Conc	cluding Remarks	214			