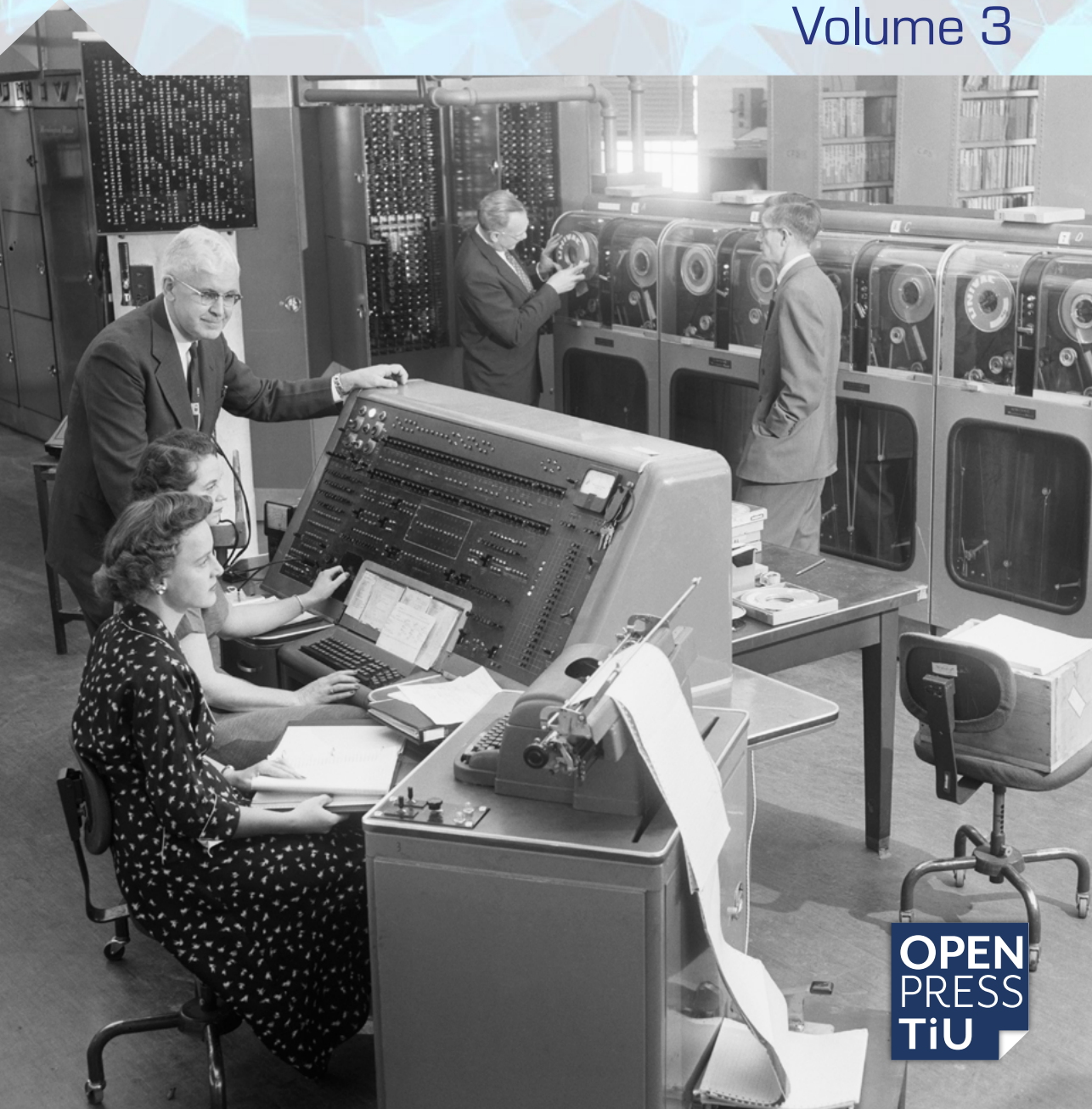


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Technology and Regulation (TechReg) is an international journal of law, technology and society, with an interdisciplinary identity. TechReg provides an online platform for disseminating original research on the legal and regulatory challenges posed by existing and emerging technologies (and their applications) including, but by no means limited to, the Internet and digital technology, artificial intelligence and machine learning, robotics, neurotechnology, nanotechnology, biotechnology, energy and climate change technology, and health and food technology. We conceive of regulation broadly to encompass ways of dealing with, ordering and understanding technologies and their consequences, such as through legal regulation, competition, social norms and standards, and technology design (or in Lessig's terms: law, market, norms and architecture). We aim to address critical and sometimes controversial questions such as: How do new technologies shape society both positively and negatively? Should technology development be steered towards societal goals, and if so, which goals and how? What are the benefits and dangers of regulating human behaviour through technology? What is the most appropriate response to technological innovation, in general or in particular cases? It is in this sense that TechReg is intrinsically interdisciplinary: we believe that legal and regulatory debates on technology are inextricable from societal, political and economic concerns, and that therefore technology regulation requires a multidisciplinary, integrated approach. Through a combination of monodisciplinary, multidisciplinary and interdisciplinary articles, the journal aims to contribute to an integrated vision of law, technology and society. We invite original, well-researched and methodologically rigorous submissions from academics and practitioners, including policy makers, on a wide range of research areas such as privacy and data protection, security, surveillance, cybercrime, intellectual property, innovation, competition, governance, risk, ethics, media and data studies, and others.

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CONTENTS

01	Keeping up with cryptocurrencies Lauren Fahy, Scott Douglas & Judith van Erp	1
02	Not Hardcoding but Softcoding Data Protection Aurelia Tamò-Larrieux, Simon Mayer & Zaira Zihlmann	17
03	On the legal responsibility of artificially intelligent agents: addressing three misconceptions Antonia Waltermann	35
04	Reviving Purpose Limitation and Data Minimisation in Data- Driven Systems Asia J Biega & Michèle Finck	44
05	The Right of Access to Personal Data: a Genealogy René Mahieu	62
	<i>Special Issue: Should Data Drive Private Law</i>	
06	Fostering Consumer Protection in the Granular Market: the Role of Rules on Consent, Misrepresentation and Fraud in Regulating Personalized Practices Antonio Davola	76
07	Talking at Cross Purposes? A computational analysis of The debate on informational duties in the digital services and the digital markets acts Fabiana Di Porto, Tatjana Grote, Gabriele Volpi, Riccardo Invernizzi	87

01

Bureaucratic reputation,
reputation management,
financial regulation,
regulatory agencies,
innovation, cryptocurrency

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Invented in 2008 with Bitcoin, cryptocurrencies represent a radical technological innovation in finance and banking; one which threatened to disrupt the existing regulatory regimes governing those sectors. This article examines, from a reputation management perspective, how regulatory agencies framed their response. Through a content analysis, we compare communications from financial conduct regulators in the UK, US, and Australia. Despite the risks, challenges, and uncertainties involved in cryptocurrency supervision, we find regulators treat the technology as an opportunity to bolster their reputation in the immediate wake of the Global Financial Crisis. Regulators frame their response to cryptocurrencies in ways which reinforce the agency's ingenuity and societal importance. We discuss differences in framing between agencies, illustrating how historical, political, and legal differences between regulators can shape their responses to radical innovations.

1. Introduction

The financial sector is experiencing a wave of radical innovation unmatched since the popular adoption of the Internet. Innovation can drive economic growth and better quality of life.¹ Yet, its disruptive nature poses challenges for regulators.² Cryptocurrencies are a case in point. Emerging in 2008, cryptocurrencies like Bitcoin have brought new types of technically complex and ever-evolving products into financial markets. Cryptocurrencies exacerbated risks financial regulators typically supervise and introduced new risks. Cryptocurrencies work very differently to traditional forms of currency, payment, and money transfer. It was not immediately clear whether their use was legal, and whether it should be.³ How do regulatory agencies respond to this kind of radical innovation?⁴

Legal and regulatory governance scholarship often focuses its analysis of this question, fittingly, on legal and operational responses. These are the ways regulators reform rules and practices to continue to efficiently manage market risks e.g. revising regulations. There is a rich literature describing, analysing, and evaluating such responses.⁵ Prior studies, however, also show a 'political' dimension to how regulators respond. Different stakeholders have different economic interests in, and ideological positions on, how innovation will be regulated.⁶ Regulators are sensitive to these tensions. They want to build stakeholder support for, or at least avoid criticism about, their legal and operational responses.⁷ Agencies may do so through choosing legal/operational responses which are broadly acceptable to the public.⁸ They may also try to maintain/build stakeholder support through strategic communications about those responses.⁹ Research,

1 Cristie Ford, *Innovation and the State: Finance, Regulation, and Justice* (Cambridge University Press 2017) 7.

2 Ford (n 1) 16–17.

3 Douglas W Arner, Janos Barberis and Ross P Buckley, 'The Evolution of FinTech: A New Post-Crisis Paradigm' (2015) 47 *Georgetown Journal of International Law* 1271.

4 Radical innovations, here, are inventions which significantly reduce the costs of key inputs in a way that significantly transforms sectors, economies, or societies (as opposed to gradual, 'incremental' innovations) (C. Freeman and L. Soete, *The Economics of Industrial Revolution* (London: Pinter 1997)). Cryptocurrencies, and the underlying technology of blockchain, have the potential to reduce the costs of financial products and services and are proving disruptive to financial markets, as well as adjacent markets like financial law and accounting (Ford ((n1)) 49; Arner

et al. ((n2)) 7).

5 e.g. R Brownsword, E Scotford and E Yeung, 'Law, Regulation, and Technology: The Field, Frame, and Focal Questions' in R Brownsword, E Scotford and Yeung (eds), *The Oxford Handbook of Law, Regulation and Technology* (Oxford University Press 2017); Karen Yeung, 'How Is the UK Responding to the Technologies of the Fourth Industrial Revolution?' [2017] *Ethics, Law, & Society* 102; Gregory N Mandel, 'Emerging Technology Governance', *Innovative governance models for emerging technologies* (Edward Elgar 2013).

6 ML Jones and J Millar, 'Hacking Metaphors in the Anticipatory Governance of Emerging Technology: The Case of Regulating Robots', *The Oxford Handbook of Law, Regulation, and Technology* (Oxford University Press 2017).

7 Moshe Maor, 'Organizational Reputation and Jurisdictional Claims: The Case of the U.S. Food and Drug Administration' (2010) 23 *Governance* 133.

8 Maor (n 7).

9 Amit Tzur, 'Über Über Regulation? Regulatory Change Following the Emergence of New Technologies in the Taxi Market' (2019) 13 *Regulation & Governance* 340; EF Gerding, *Law, Bubbles, and Financial Regulation* (Routledge 2016); M Lee, 'The Legal Institutionalization of Public Participation in the EU Governance of Technology', *The Oxford handbook of law, regulation, and technology* (Oxford University Press 2017).

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however, has not yet systematically and empirically analysed the kinds of communication strategies agencies use, and why.

Reputational theory has been increasingly applied to analyse political dimensions of regulatory agency behaviour.¹⁰ Reputation is the image of the agency held in the minds of its audiences (e.g. the public, politicians, companies). Reputation is what those audiences imagine the agency to be like; “a set of symbolic beliefs about the unique or separable capacities, roles, and obligations of an organization, where these beliefs are embedded in audience networks”.¹¹ Reputational theories argue that, when faced with a new problem or task, agencies will consider how their response will be perceived. In responding, they seek to manage their reputation so that they maintain audience support.¹² Agencies manage their reputation in various ways, including ‘symbolic’ strategies; through the use of public relations, communications, and marketing.¹³

How, though, do regulatory agencies symbolically manage their reputation in response to the specific challenges posed by radical technological innovation? To answer this question, we draw primarily on bureaucratic reputation theory.¹⁴ This theory provides a framework to describe and compare the symbolic strategies agencies use¹⁵ and explain why agencies choose some strategies over others.¹⁶ Bureaucratic reputation thus provides a strong basis to analyse agency reputation management in the face of new kinds of regulatory challenge. The unique features of innovation governance as a regulatory task are little discussed in theory and rarely empirically examined.¹⁷ This study aims to begin to address this gap.

In this study, we compare communications about cryptocurrencies from three financial conduct regulators in the United Kingdom, United States, and Australia. We use quantitative and qualitative content analysis to determine what kind of symbolic reputation management strategies these agencies used. We then apply a bureaucratic reputation theoretical framework to draw out possible explanations as to why regulators chose the responses they did, analysing responses in historical, political, and legal context.

This study contributes to theory by presenting a more comprehensive framework for describing and explaining how regulatory agencies manage reputation in the face of radical innovation. Through the

case study, we illustrate how such a framework helps us understand the political dimension of regulator responses to innovation. The study illuminates that reputational considerations can deter regulators from intervening to govern radical innovations. Under certain circumstances, however, and — as the cryptocurrency case shows — a desire to bolster agency reputation can actually drive regulators to involve themselves in even the most risky, uncertain, and challenging radical innovations.

2. Case background

Cryptocurrencies began with Bitcoin. In 2008, Satoshi Nakaomoto (a pseudonym for a group of individuals) released Bitcoin’s open-source code. Alongside, Nakaomoto published a paper. It argued that, in the Internet age, relying on financial institutions to pay one another was inefficient and risky. Bitcoin would eliminate the need.¹⁸ Cryptocurrencies are systems by which to send and receive payments through an encryption system run on a decentralized network of computers. They allow users to pay one another through digital transfers in (more or less) real time, like cash, and without mediation by a bank or any third party.¹⁹

Today cryptocurrencies have become more mainstream and commercial. Some people use cryptocurrencies as originally intended: as an online payment system. Others buy cryptocurrencies as an investment or as speculation. Some uses of cryptocurrencies — or uses in some jurisdictions — are illegal, some legally ambiguous, and some fully legal (for example, the regulated Gemini exchange in New York).²⁰ We can now understand cryptocurrencies as part of a large wave of radical innovation in finance in the post-Global Financial Crisis period (along with the rise of other ‘fintech’ like crowdfunding and financial AI). We are still in the midst of this wave, which is introducing new kinds of businesses, products, and ideas to the market.²¹

This study, however, is concerned with how regulators respond to radical innovations as they emerge. Our analysis looks to the first decade after cryptocurrencies were invented. Our case study focuses on three financial conduct regulators: the New York State Department of Financial Services (NY DFS), the Financial Conduct Authority of United Kingdom (UK FCA), and the Australian Securities and Investments Commission (AUS ASIC). These regulators began to publicly acknowledge cryptocurrency trading in their jurisdictions around 2012. At that time, cryptocurrencies were a strange, fringe development. As cryptocurrencies were different to existing financial technologies, they fell outside many legal definitions such as ‘currency’, ‘financial institution’, and ‘derivative’.²² Governments, regulators, and courts were still determining how they should be defined and regulated. Such questions were legally complex, and difficult to answer given the novelty and technical complexity of cryptocurrencies.²³ Regulatory agencies had to consider whether and how to intervene on cryptocurrencies given (typically) gaps in policy and law. Cryptocurrencies, however, were also a controversial topic, of interest to con-

- 10 Jan Boon, Heidi H Salomonsen and Koen Verhoest, ‘A Reputation for What, to Whom, and in Which Task Environment: A Commentary’ [Forthcoming] Regulation & Governance.
- 11 Daniel Carpenter, *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA* (Princeton University Press 2010) 45.
- 12 Moshe Maor, ‘Theorizing Bureaucratic Reputation’ in A Waeraas and Maor, Moshe (eds), *Organizational Reputation in the Public Sector* (Routledge 2015).
- 13 Carpenter (n 11) 70.
- 14 Daniel Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928* (Princeton University Press 2001); (n 11).
- 15 Sharon Gilad and T Yogev, ‘How Reputation Regulates Regulators: Illustrations from the Regulation of Retail Finance’, *Oxford Handbook of Corporate Reputation* (Oxford University Press 2012); Saar Alon-Barkat, ‘Can Government Public Communications Elicit Undue Trust? Exploring the Interaction between Symbols and Substantive Information in Communications’ (2020) 30 *Journal of Public Administration Research and Theory* 77; Dovil Rimkut, ‘Organizational Reputation and Risk Regulation: The Effect of Reputational Threats on Agency Scientific Outputs’ (2018) 96 *Public Administration* 70.
- 16 Daniel Carpenter and George A Krause, ‘Transactional Authority and Bureaucratic Politics’ (2015) 25 *Journal of Public Administration Research and Theory* 5; Moshe Maor, Sharon Gilad and Pazit Ben-Nun Bloom, ‘Organizational Reputation, Regulatory Talk, and Strategic Silence’ (2013) 23 *Journal of Public Administration Research and Theory* 581.
- 17 Maor (n 7).

- 18 Joshua Davis, ‘The Crypto-Currency’ (*The New Yorker*, 3 October 2011) <https://www.newyorker.com/magazine/2011/10/10/the-crypto-currency> (accessed 21 December 2020).
- 19 A Narayan and others, *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction* (Princeton University Press 2016) ix–xiii.
- 20 Nate Lanxon and Olga Kharif, ‘Winklevoss Twins’ Crypto Exchange Is Expanding Into the U.K.’ *Bloomberg.com* (24 September 2020) <https://www.bloomberg.com/news/articles/2020-09-24/winklevoss-twins-crypto-exchange-is-expanding-into-the-u-k> (accessed 21 December 2020).
- 21 Arner, Barberis and Buckley (n 3).
- 22 Ford (n 1) 143.
- 23 Davis (n 18).

sumers, politicians, and business.²⁴ As the next section outlines, we would expect regulators under these circumstances to manage their reputation very carefully as they respond to this radical innovation.

3. Theoretical framework

3.1 Radical innovation: A reputational threat to be managed?

How do regulatory agencies symbolically manage their reputation in the face of innovation in their jurisdiction? Presently, bureaucratic reputation theory provides a partial answer. Two studies to date have examined the field of innovation governance.²⁵ Both examined the US Food and Drug Administration's response to innovation in the pharmaceutical sector.

In his study, Maor developed a model applying bureaucratic reputation theory to explain regulatory responses to radical innovation. Specifically: to explain and predict when agencies will and will not claim their legal authority extends over novel technologies. Claims, here, can refer to statements which explicitly or implicitly demonstrate the agency believes it has authority e.g. policy statements, issuing guidelines.²⁶

When deciding how to respond to innovation, Maor argues, regulators do not simply consider objective, technical and legal questions (e.g. does our current legal authority cover this new biotechnology?). They will also consider how their response will be perceived by their audiences.²⁷ How will their response affect the agency's reputation? In bureaucratic reputation theory, a strong reputation is one of an agency's most important assets. A reputation is strong when most people in a group (or many groups across society) like, or at least accept the legitimate existence of, that organization.²⁸ A strong reputation helps agencies to survive and achieve their goals. A weak reputation makes agencies less effective, and at risk from having their funding cut, or being eliminated altogether.²⁹ Agencies are thus highly motivated to manage the reputation. They want to influence audience perceptions in ways that maintain or build support for the agency and its actions (rather than eliciting public questioning, criticism, or defiance).³⁰

Regulators make decisions about responding to innovation in this context.³¹ Maor contests that regulators are risk averse: they prioritize minimizing anticipated reputational damage over pursuing opportunities.³² Regulators prefer to pursue the low hanging fruit of easy regulatory wins over tackling unwieldy problems.³³ Radically new technologies are uncertain, hard to regulate, and controversial.³⁴ Jurisdic-

tional claims over novel technologies can fail.³⁵ Even if regulators gain authority to act, their responses are likely to be deemed a failure in whole or in part due to the complexities of supervision and mixed public opinion about what constitutes success.

To minimize risks, agencies prefer to delay making claims over novel technologies (or never make them at all).³⁶ Regulators want time to consider and/or prepare a solid claim. They also want time to build a coalition of supporters for that claim. Agencies have different kinds of audiences who could form such a coalition (politicians, business, consumers etc.). Agencies want to build and maintain support with as many audiences as possible, especially those audiences critical to their survival and success.³⁷ Different audiences, though, often have different interests, ideologies, and preferences. It thus takes time for agencies to secure support from various audiences to make a claim.

While agencies prefer to (indefinitely) delay their response to innovation, this strategy can become untenable. Delaying a claim can do more damage to the agency's reputation if certain, other 'threats' arise. One such threat is negative publicity. New information may be published showing this novel technology is harmful e.g. this unregulated medical practice is killing people. Agency audiences then start criticizing the agency for its negligence. Negative publicity makes agencies more likely to make a timely claim.³⁸ Other bureaucratic reputation research reinforces negative public attention increases the likelihood of a quick response.^{39,40}

The second category of threat driving claims concerns how *other* regulatory agencies respond. Novel technologies tend to potentially fall under the authority of two or more agencies. This can incentivize regulators to make a claim quickly before others can.⁴¹ Agencies want to avoid a scenario where other agencies make competing claims over technologies they themselves want to supervise.⁴² Competition can damage their relationship with professional colleagues.⁴³ Further, agencies typically do not want to risk having to share authority.⁴⁴ They do not want to share authority over specific technologies nor the broader regulatory field.⁴⁵ Sharing responsibilities means regulators have less autonomy; leaving them open to criticism about a technology whose supervision they cannot fully control.⁴⁶ Sharing or losing authority like this can, too, make the regulator come to be seen as less *unique*.

Agencies, ideally, want to build and then maintain a *unique* reputa-

tion between Sharing-Economy Practices, Public Policy, and Regulation', *The rise of the sharing economy: Exploring the challenges and opportunities of collaborative consumption* (Praeger 2018).

24 Davis (n 18).

25 Maor (n 7); Carpenter (n 11).

26 Maor (n 7) 134.

27 Maor (n 7) 134.

28 Carpenter (n 11) 45.

29 Carpenter (n 11) 727.

30 Carpenter (n 11) 752–3.

31 Maor (n 7) 134.

32 Maor (n 7) 138; see also: RK Weaver, 'The Politics of Blame Avoidance' (1986) 6 *Journal of Public Policy* 371; Christopher Hood, *The Blame Game: Spin, Bureaucracy, and Self-Preservation in Government* (Princeton University Press 2011); Judith van Erp, 'New Governance of Corporate Cybersecurity: A Case Study of the Petrochemical Industry in the Port of Rotterdam' (2017) 68 *Crime, Law and Social Change* 75.

33 Keith Hawkins, *Environment and Enforcement: Regulation and the Social Definition of Pollution* (Oxford University Press 1984) <https://oxford.universitypressscholarship.com/view/10.1093/acprof:oso/9780198275145.001.0001/acprof-9780198275145> (last accessed 21 December 2020).

34 Ford (n 1); S Ranchordás, 'On Sharing and Quasi-Sharing: The Tension

35 Maor (n 7) 137.

36 Maor (n 7) 137.

37 Maor, Gilad and Bloom (n 16) 583; Sharon Gilad, Saar Alon Barkat and Alexander Braverman, 'Large-Scale Social Protest: A Business Risk and a Bureaucratic Opportunity' (2016) 29 *Governance* 371.

38 Maor (n 7) 139.

39 In bureaucratic reputation theory, responses can be either in the form of communicating, like issuing a press releases, or substantive action, like increasing regulatory resources to address a risk.

40 Maor, Gilad and Bloom (n 16); Carpenter and Krause (n 16).

41 Maor (n 7) 140.

42 see also: JQ Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (Basic Books 1989); Madalina Busuic, 'Friend or Foe? Inter-Agency Cooperation, Organizational Reputation, and Turf' (2016) 94 *Public Administration* 40.

43 Maor (n 7) 141.

44 Busuic (n 42).

45 For example, if a second agency claims authority over one biotechnology this may give them a foothold to claim authority over the supervision of medical technologies in general.

46 Wilson (n 42); Busuic (n 42).

tion. They want to be seen as the sole provider of a public good or service in their jurisdiction. Agencies seem to make a unique contribution are more recognized, socially valued, and harder for politicians to attack or replace.⁴⁷ In the case of innovation, agencies are more likely to make a quick claim if they think it will build their unique reputation.⁴⁸ Conversely, agencies are less likely to make claims over technologies peripheral to their unique reputation. This reflects a more general tendency for agency reputation management to be path-dependent.⁴⁹ Once agencies establish their unique position in their society — one which elicits support from enough audiences — they tend to seek to maintain rather than change that reputation.⁵⁰ Maor argues, in the case of innovation, unusual claims over areas traditionally regulated by someone else upsets the business community. That audience wants agencies to stick to “traditional goals and areas of oversight, rather than innovative forms...”⁵¹ One possible exception is if the agency who should be traditionally responsible does not make the obvious claim. A ‘vacuum’ can lead to more negative publicity, compelling the regulator to respond.⁵²

Maor explored the validity of this model through an analysis of actual claims by the Food and Drug Administration over biotechnologies.⁵³ His analysis supports the expectations discussed thus far. This would imply that, when faced with innovation, regulators prefer *not* to respond or take responsibility. This argument is broadly supported by findings from scholarship on innovation law and governance.⁵⁴ A major limitation of such accounts, however, is they assume regulators always see innovation as a threat.

3.2 Expanding the framework: Innovation as a reputational opportunity

In the main, bureaucratic reputation scholarship examines agency reputation management in cases where, either: 1) events are inherently threats e.g. crises, scandals⁵⁵ or 2) agencies are theorized to perceive them as threats.⁵⁶ In his theoretical model, Maor maps these assumptions onto the field of innovation governance. Yet, we cannot assume, *a priori*, regulators see innovation in these terms.

Carpenter’s⁵⁷ research shows agencies do not always respond to

external events purely as threats. Agencies are not always risk-averse. They can recognize external events, like innovation, as opportunities to strengthen reputation. Agencies do not simply react to negative publicity to fulfill audience demands. Rather, agencies have some capacity to: 1) frame how audiences perceive external events and the agency’s response to them, and 2) choose who their audiences are. Agencies can use language and symbolism to shape how the public understands the opportunities and risks of an event, and court support from new and different audiences.⁵⁸

Carpenter theorizes more directly about technological innovation in his 2010 study of the US Food and Drug Administration. Carpenter’s study shows innovation can be a reputational opportunity for regulators, first, because it creates opportunities for agencies to build their unique reputation. New technologies mean new kinds of public goods and ‘bads’ (i.e. regulatory risks to be managed).⁵⁹ This creates opportunities for agencies to do something new and of societal value. Second, innovation can introduce new audiences for an agency and shift the relative power of audiences (e.g. with the influx of different kinds of businesses to a market).⁶⁰ In his study, the Food and Drug Administration proactively cultivated support for the agency and its interventions into the development of new pharmaceuticals. They did so through their practical actions, but also through their communications: through the use of discourse, rhetoric, language, and symbolism.⁶¹

Combining Maor and Carpenter’s perspectives provides a more nuanced and realistic picture of how regulatory agencies manage their reputation in the face of innovation. Yet, neither author systematically examines what symbolic reputation management strategies agencies use and why. Further, both perspectives were developed through studies of the same regulator, in the same sector, in the same country. It is not clear how well this extends to other contexts.⁶² This study builds upon theoretical frameworks to date, and provides an analytical framework to describe and explain symbolic reputation management in the face of innovation. Further, we explore the validity of this framework through a case study in a significantly different context (finance in the US, UK, and Australia).

3.3 Analytical framework

Another strand of bureaucratic reputation research provides us with the basis for our analytical framework.⁶³ This research has catalogued the kinds of symbolic reputation management strategies agencies use. Critical to this theory is that agency reputation is multi-dimensional. Audiences judge agencies on several different kinds of criteria. This study draws upon the criteria Carpenter⁶⁴ proposes: how well the agency delivers quality outputs and outcomes (*performative reputation*); how expert the agency is (*technical reputation*), how well it follows required or desirable processes (*procedural reputation*), and how ethical and good its goals and means are (*moral reputation*).⁶⁵

47 Carpenter (n 11) 45.

48 Maor (n 7) 140.

49 Maor (n 12) 25; Wilson (n 42) 76.

50 Sharon Gilad, ‘Political Pressures, Organizational Identity, and Attention to Tasks: Illustrations from Pre-Crisis Financial Regulation’ (2015) 93 *Public Administration* 593; Arjen Boon and others, ‘Does Organizational Adaptation Really Matter? How Mission Change Affects the Survival of U.S. Federal Independent Agencies, 1933–2011’ (2017) 30 *Governance* 663.

51 Maor (n 7) 140.

52 Maor (n 7) 141.

53 Maor (n 7).

54 Erik F Gerding, ‘Code, Crash, and Open Source: The Outsourcing of Financial Regulation to Risk Models and the Global Financial Crisis’ (2009) 84 *Washington Law Review* 127 (n 9); Ford (n 1) 48; Rob Frieden, ‘Adjusting the Horizontal and Vertical in Telecommunications Regulation: A Comparison of the Traditional and a New Layered Approach’ (2003) 55 *Federal Communications Law Journal* 207 (2003) <https://www.repository.law.indiana.edu/fclj/vol55/iss2/3>; RG Lee and J Petts, ‘Adaptive Governance for Responsible Innovation’, *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society* (Wiley 2013).

55 e.g. Moshe Maor and Raanan Sultitzeanu Kenan, ‘The Effect of Salient Reputational Threats on the Pace of FDA Enforcement’ (2013) 26 *Governance* 31.

56 George A Krause and J Kevin Corder, ‘Explaining Bureaucratic Optimism: Theory and Evidence from U.S. Executive Agency Macroeconomic Forecasts’ (2007) 101 *The American Political Science Review* 129.

57 (n 14).

58 Carpenter (n 14) e.g. 144; 234–244; 310.

59 see also: Busuioac (n 42).

60 Carpenter (n 11) 72; see also: Kevin Young, ‘Financial Industry Groups’ Adaptation to the Post-Crisis Regulatory Environment: Changing Approaches to the Policy Cycle’ (2013) 7 *Regulation & Governance* 460.

61 Carpenter (n 11) e.g. 60; 66–67.

62 Boon, Salomonsen and Verhoest (n 10).

63 Rimkuté (n 15); Madalina Busuioac and Doviélé Rimkuté, ‘The Promise of Bureaucratic Reputation Approaches for the EU Regulatory State’ (2020) 27 *Journal of European Public Policy* 1256; Gilad and Yogev (n 15); Alon-Barkat (n 15).

64 (n 11).

65 Carpenter (n 11) 45–46.

Table 1. Carpenter’s conceptual framework of agency reputation

Competency	Description
Performative	Concerns agency outputs i.e. how well they are doing the task at hand or achieving their goals.
Moral	Concerns the normative aspects of the agency i.e. the moral value of its goals or its behaviors (e.g. demonstrating compassion).
Technical	Concerns the extent to which the agency has necessary expertise in relevant areas.
Procedural	Concerns how well the agency follows required or desirable processes e.g. administrative, legal.

In their communications, agencies try to shape how audiences perceive them and their actions.⁶⁶ They use language and symbols designed to ‘signal’ to audiences that they are, for example, an ethical organization whose actions are based on technical expert judgments. In this study, we refer to this behaviour as ‘image management strategy’.⁶⁷ Agencies may frame themselves or their actions with more emphasis on some dimensions of reputation over others.⁶⁸ Agencies will also emphasize more specific ‘aspects’ within dimensions. For example, while selling itself on good moral reputation, one agency might discuss the aspect of protecting consumers while another might focus on facilitating market competition.⁶⁹

Agencies further try to shape how audiences perceive them through making strategic choices about whether to communicate in a high- or low- profile manner (here: ‘communications strategy’). Agencies sometimes choose a strategy of ‘positive visibility’.⁷⁰ They communicate a lot and in forums designed to attract public attention.

Alternatively, agencies may be ‘strategically silent’, communicate very little, and/or in forums designed to have a smaller audience.⁷¹ In the context of responding to innovation, agencies also make strategic choices about image management. Centrally: whether they should frame their response as consistent with their existing image, or a departure from that image.⁷²

Which strategies, then, would we expect regulators to choose when faced with innovation? As presented in the theoretical framework, this depends on what the agency is like, what the innovation is like, how audiences perceive the innovation and the agency, and how other agencies respond. These factors are summarized in Figure 1. Prior to a detailed analysis of the cases, we cannot make specific predictions as to which strategies each agency will choose. Our aim is not to develop universal “singular laws”⁷³ for how regulators manage reputation in the face of innovation. Rather, in the following analysis of the cryptocurrency case, we aim to illustrate how applying a reputational lens — and this framework in particular — to innovation governance can help scholars better understand how and why regulators respond as they do.

4. Methodology

We chose cryptocurrency as an extreme case of innovation.⁷⁴ As will be discussed further, cryptocurrencies are a case of *radical innovation*.⁷⁵ Cryptocurrencies represent a substantial departure from previous technologies, rather than an incremental improvement.⁷⁶ Radical innovations are especially challenging – technically and politically – for regulators to manage.⁷⁷ Extreme cases are useful for exploratory research; to probe – in this case – how agencies respond and the possible reasons for those responses in an “open-ended fashion”.⁷⁸

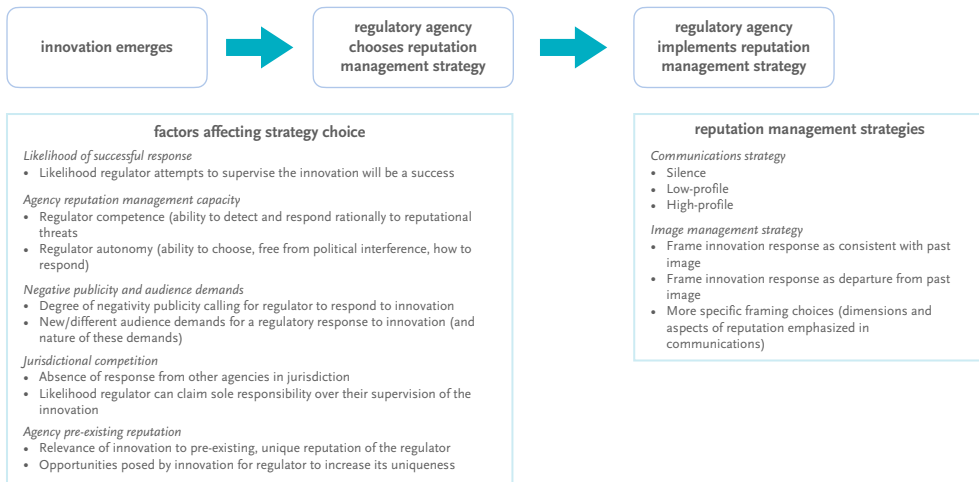


Figure 1. Regulatory agency symbolic reputation management in the face of innovation: Theoretical framework

66 Carpenter (n 11) 70; Manuela Moschella and Luca Pinto, ‘Central Banks’ Communication as Reputation Management: How the Fed Talks under Uncertainty’ (2019) 97 Public Administration 513.
 67 Arild Wæraas and Haldor Byrkjeflot, ‘Public Sector Organizations and Reputation Management: Five Problems’ (2012) 15 International Public Management Journal 186, 190.
 68 Rimkuté (n 15); Gilad and Yogev (n 15); Tom Christensen and Åse Gornitzka, ‘Reputation Management in Public Agencies: The Relevance of Time, Sector, Audience, and Tasks’ (2019) 51 Administration & Society 885.
 69 Wæraas and Byrkjeflot (n 67) 190.
 70 Gilad, Alon Barkat and Braverman (n 37).

71 Maor, Gilad and Bloom (n 16).
 72 Gilad and Yogev (n 15); Maor and Sulitzeanu Kenan (n 55); Carpenter (n 11) 68; Rimkuté (n 15) 6.
 73 Carpenter (n 11) 754.
 74 Jason Seawright and John Gerring, ‘Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options’ (2008) 61 Political Research Quarterly 294, 301.
 75 Ford (n 1) 49.
 76 Kevin Zheng Zhou, Chi Kin (Bennett) Yim and David K Tse, ‘The Effects of Strategic Orientations on Technology- and Market-Based Breakthrough Innovations’ (2005) 69 Journal of Marketing 42.
 77 Brownsword, Scotford and Yeung (n 5).
 78 Seawright and Gerring (n 74) 302.

In this study we compare reputation management responses of three regulators (NY DFS, UK FCA, and AUS ASIC). We sought to compare a manageable number of cases which were from broadly similar contexts: Anglophone, OECD liberal democracies with large, well-established financial markets and rapidly growing fintech sectors.⁷⁹ We chose agencies, too, which were similar. All three agencies included are financial conduct regulators, with responsibilities including consumer protection, with formal autonomy from government.⁸⁰ We examined which communication strategy each agency chose and whether, and how, they engaged in image management. Image management was determined through comparing the image they presented in their communications about cryptocurrency to their image in the period immediately prior, then comparing between cases. The before and after, and inter-agency, comparisons increases our confidence agencies chose particular strategies in response to cryptocurrency trading.

The study used three methods: 1) qualitative document review of the agency's pre-existing image and 2) quantitative and 3) qualitative content analysis of cryptocurrency communications. The quantitative analysis determined communications strategy. The document analysis, with the qualitative content analysis, analysed image management.

For the document analysis, we searched Google Scholar, Westlaw, and Lexis Nexis with agency titles, acronyms, and 'reputation'. Documents were included if they were published in the three years prior to the agency's first communication about cryptocurrency. Documents included the agency's own statements, academic literature, and authoritative media and expert judgements. To determine the nature of the agency's pre-existing image, documents were interpreted using the coding schema described below.

For the quantitative content analysis, we collected all agency communications published after 2008 and before March 2018 about cryptocurrency (a total of 538 individual texts). These were imported into NVIVO and analysed to determine text type and audience.⁸¹ Agencies were considered to have chosen low- or high- profile strategy based on number of texts, frequency of publishing, and high- versus low-profile fora (e.g. targeted, private speeches versus media appearances). A sample of 351 texts were then subjected to qualitative content analysis to determine what kind of image each agency presented. We developed a coding schema using Carpenter's framework of reputational competencies and informed by previous analyses using that framework.⁸² The schema was applied to determine what overall image agencies were signalling.⁸³ This was then compared with the competencies and aspects, presented by the other two agencies, and compared to its pre-existing image. In the final stage, we compared the images agencies presented with their pre-existing reputation, and

with the reputation presented by the other two cases.

5 Findings and analysis

In this section, we first present findings of the quantitative and qualitative content analysis. We then move on to an interpretive analysis. We apply our theoretical framework to draw out some historical, political, and legal case factors which help to explain why regulators responded in this way, and why we see some differences between reputation management by different agencies.

5.1 Findings of the content analysis

5.1.1 Low- or high- profile communications strategy?

The quantitative content analysis found all three regulators chose a high-profile communications strategy. Agencies published texts about cryptocurrencies frequently. Figure 2 shows regulators consistently communicate on the topic. Agencies display somewhat different preferences for specific text types (e.g. speeches versus mass media). Yet, the most common text types were those one would usually use to target mass audiences: tweets, press releases, and web pages (Figure 3). Thus, agencies can be said to have responded to cryptocurrencies in ways one would expect to draw public attention.

5.1.2 (How) do agencies engage in image management?

This section discusses each regulator's image prior to cryptocurrency trading (results of the document analysis) and whether and what signals were different in cryptocurrency communications (results of the qualitative content analysis).

NY DFS

The New York State Department of Financial Services was founded in 2011 in response to the perceived failure of previous regulatory arrangements to prevent the Global Financial Crisis. Perhaps as a result, NY DFS emphasized moral competencies first and foremost. The agency presented itself as a consumer protector standing up to Wall Street to ensure fair play. Performatively, the regulator portrayed itself as tough, strong, and unyielding. As having "worked aggressively to protect consumers, prevent systematic risk and encourage financial services to thrive and create jobs"⁸⁴. The regulator characterized a prominent enforcement action against a large bank as protecting the United States against "terrorists, weapons dealers, drug kingpins and corrupt sectors".⁸⁵ Early enforcement successes led the press to characterize NY DFS as performatively "muscular",⁸⁶ and "the new cop"⁸⁷. Superintendent Ben Lawsky was profiled as "Wall Street's Sheriff"⁸⁸; a "marathon-running lawyer" with a "taste for

79 Z/Yen, 'The Global Financial Centres Index - Long Finance' (2018) <https://www.longfinance.net/programmes/financial-centre-futures/global-financial-centres-index/> (last accessed 22 December 2020); EY, 'EY FinTech Adoption Index 2017: The Rapid Emergence of Fintech' https://www.ey.com/en_kw/financial-services-emeia-insights/the-rapid-emergence-of-fintech (accessed 20 December 2020).

80 On this basis, we chose a US state regulator over a federal agency. US financial regulation is heavily decentralized, partially because the US market is so large (Brian Knight, *Federalism and Federalization on the Fintech Frontier*, 20 VAND. J. ENT. & TECH. L. 129 (2017)). In mandate and market size, NY DFS is more comparable to UK FCA and AUS ASIC than a federal regulator like the Securities and Exchange Commission.

81 Moschella and Pinto (n 66) 520.

82 e.g. Rimkutė (n 15), described in detailed at Appendix 1.

83 Hsiu-Fang Hsieh and Sarah E Shannon, 'Three Approaches to Qualitative Content Analysis' (2005) 15 *Qualitative Health Research* 1277, 124–5.

84 NY DFS, 'DFS Annual Reports | Department of Financial Services' (2011 *First Annual Report of the Superintendent to the Governor and Legislature*, 2012) 6 https://www.dfs.ny.gov/reports_and_publications/dfs-annual-reports (last accessed 23 December 2020).

85 cited in Justin O'Brien and Olivia Dixon, 'The Common Link in Failures and Scandals at the World's Leading Banks' (2013) 36 *Seattle University Law Review* 941, 960.

86 Liz Rappaport, 'Wall Street's New Watcher' *Wall Street Journal* (3 October 2011) <https://online.wsj.com/article/SB10001424052970203405504576605790712611496.html> (accessed 23 December 2020).

87 Danny Hakim, 'Expanding Reach, Cuomo Creates Second Cop on Financial Beat' (Published 2012) *The New York Times* (29 January 2012) <https://www.nytimes.com/2012/01/30/nyregion/financial-services-agencies-reach-spurs-criticism-of-cuomo.html> (last accessed 23 December 2020).

88 Jessica Silver-Greenberg and Ben Protess, 'Benjamin Lawsky, Sheriff of Wall Street, Is Taking Off His Badge' (Published 2015) *The New York Times* (20 May 2015) <https://www.nytimes.com/2015/05/21/business/dealbook/benjamin-lawsky-to-step-down-as-new-yorks-top-financial-regu->