SYSTEMIC THINKING IN FINANCIAL REGULATION: A CONVERSATION WITH PROFESSOR STEVEN SCHWARCZ, DISTINGUISHED VISITING PROFESSOR, UCL FACULTY OF LAWS

Sriram Kilapakkam and Xueming Wang[*]

A. INTRODUCTION

Professor Steven Schwarcz, Stanley A. Star Professor of Law and Business at Duke University, was Distinguished Visiting Professor at the UCL Faculty of Laws between mid-January to mid-May 2018. We invited him to an interview to discuss his extensive scholarship on financial regulation - in particular, relating to how financial regulation can 'fix' the problems of financial crises, such as the global financial crisis 2007-9. The interview took place on 28 March 2018 at Bentham House. Professor Schwarcz's scholarship and thinking spans financial institutions, markets and systems regulation and the importance of incentive-based corporate law and regulation, presenting a rich tapestry of enduring insights for regulatory policy at their most fundamental levels.

Professor Schwarcz's background in engineering and as a practitioner of bankruptcy and international financial law prior to entering academia uniquely positions him to view financial regulation from an alternative and functional perspective to address many of the problems in today's financial markets. His analysis of legal issues has drawn on cross disciplinary insights from diverse fields such as economics and from the functioning of engineering systems. He has offered many creative and practical suggestions and solutions to addressing systemic risk, which has risen in prominence as a topic for regulatory discussion in the wake of the global financial crisis. He has also written extensively on a whole range of topics including

[*] Both authors / interviewers are LLM students (2017-2018) at UCL. The interview process was conducted with guidance and support from Professor Iris H-Y Chiu, Professor of Corporate Law and Financial Regulation, UCL Faculty of Laws.

microprudential regulation,[1] bank resolution,[2] shadow banking,[3] ring-fencing,[4] securitisation, restructurings and securities disclosure issues. Professor Schwarcz was engaged on some of these points in the course of the interview.

This paper is presented in the format of an interview, but the text is a (non-verbatim) transcription and not a replication of the conversation, as the interview was not recorded. In terms of the interviewers, Sriram is represented by 'S', while Xueming is represented by 'X'. Professor Schwarcz is represented by 'P'.

A. THE CONVERSATION

S: You have emphasised the need for regulators not to confuse and conflate the goals of *microprudential* and *macroprudential* regulation. Capital adequacy (and the Basel framework) is primarily a microprudential regulatory concept to ensure the continuity of a firm by correcting a market failure related to risk management (not having sufficient capital to absorb unexpected losses). However, the same is often offered as a regulatory solution in connection with limiting the impact of systemic risk (a macroprudential concern which should be focused on ensuring the protection of the financial system's capacity to function as a network) and even in the context of curbing

[1] Regulatory standards requiring the levels of risks (including credit risk, market risk and operational risk) taken by banks to be supported by the holding of defined minimum levels of capital have been periodically issued by the Basel Committee on Banking Supervision of the Bank for International Settlements in the form of soft law instruments. These have mainly come in three iterations so far – Basel I (1988), Basel II (2004) and Basel III (2010) – and have resulted in broad global harmonisation in the holding of adequate minimum levels of capital by banks. This form of regulation has generally been referred to as 'microprudential' regulation that is primarily aimed at ensuring 'capital adequacy' at the level of individual banks in line with the levels of risks they take. See generally, Bank for International Settlements, 'History of the Basel Committee' <https://www.bis.org/bcbs/history.htm> accessed 14 June 2018.

[2] Bank resolution is the process by which a regulator (the resolution authority) can step in to make sure that a bank that is failing does so in an orderly way. This is viewed as one of the strategies to counteract the 'too big to fail' conundrum faced by global regulators during the global financial crisis that began in 2008. See generally, Bank of England, 'Resolution' (Bank of England, 26 July 2018) <https://www.bankofengland.co.uk/financial-stability/resolution> accessed 11 September 2018 and Jon Cunliffe, 'Ending Too Big to Fail: How Best to Deal with Failed Large Banks' (Bank of England, 05 December 2016) <https://www.bankofengland.co.uk/-/media/boe/files/article/2016/ending-too-big-to-fail-how-best-to-deal-with-failed-large-banks> accessed 14 June 2018.

[3] Shadow banking refers to the activities of financial intermediaries (other than traditionally recognised banks) who perform maturity, liquidity and credit transformation without access to central bank liquidity. They have historically been characterised by light regulation or even by a lack of regulation as their activities may fall outside the conventional commercial banking systems. Shadow banks include entities such as hedge funds. See generally, Steven Schwarcz, 'Regulating Shadow Banking' (2011-2012) 31 Review of Banking & Financial Law 619.

[4] Ring-fencing is a form of structural reform that separates banks' retail banking activities from their wholesale and investment banking activities. The key goals are to protect the stability of the financial system and to reduce reliance on taxpayer-funded bailouts of banks. See generally, Bank of England, 'Structural Reform' (Bank of England, 10 August 2018) <https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/structural-reform> accessed 11 September 2018.

excessive risk taking by banks in the context of the 'too big to fail' moral hazard debate (something you have questioned in your writing). **What do you think is the reason for capital adequacy to have this wide and universal appeal in providing a ready basis for regulatory solutions?**

P: It is often assumed that microprudential regulation, which regulates individual institutions' risk management and safety, would on the whole contribute to macroprudential safety, i.e. the safety of financial systems as a whole. Protecting individual firms is insufficient because financial systems may also fail due to market or infrastructural failure. Regulators nonetheless tend to rely on microprudential regulation as capital adequacy has been traditionally developed to mitigate the moral hazard of having a federal deposit insurance scheme. Such regulation is path dependent to an extent, and as Mokal argues,[5] can even be counterproductive if individual institutions engage in similar behaviour due to microprudential regulatory requirements and collectively contribute to correlation risks.

Very high levels of capital adequacy such as the levels touted by the Federal Reserve of Minneapolis (at 25% of risk weighted assets) can be very costly for banks. By analogy, one should think about how regulation could address fire hazard in housing. Regulation provides for well-equipped and trained fire departments and educates people on fire hazards. But to require every house to be completely fire proof is likely too costly.[6]

S: The EU and the UK continue to believe in reforms to microprudential regulation but have now introduced a new regime, which is based on total loss-absorbing capacity ("TLAC") as devised by the Basel-based Financial Stability Board. The EU has implemented TLAC in the form of minimum requirement for own funds and eligible liabilities ("MREL"). TLAC/MREL require banks to hold much more loss-absorbing

---

[5] Rizwaan Mokal, 'Liquidity, Systemic Risk, and the Bankruptcy Treatment of Financial Contracts' (2015) 10 Brooklyn Journal of Corporate, Financial & Commercial Law 15.
[6] Steven Schwarcz, 'Too Big to Fool: Moral Hazard, Bailouts, and Corporate Responsibility' Minnesota Law Review (forthcoming) <https://scholarship.law.duke.edu/faculty_scholarship/3677> accessed 14 June 2018.

capital, to an unprecedented extent. **Do you foresee any significant risks for going down this regulatory path?**

P: These are forms of proactive resolution-based management. We have three ways to manage financial institution bankruptcies in theory: one is reactive, depending on the insolvency laws of the country dealing with the bankrupt institution after the fact or liquidating it in an orderly manner; one is proactive, which will identify ailing institutions and bring in mechanisms to avert failure; and the third is counteractive management which attempts to prevent problems from arising in the first place. Where proactive bankruptcy management is concerned, TLAC relies on contingent convertible instruments to convert debtholders into equity holders so that financial institutions are able to write off or pay back liabilities. This and other resolution-based regimes in general can be very positive reforms. We cannot pretend that financial crises or institutional failure can be avoided, and *ex post* forms of regulation that address the mitigation of harmful effects are invaluable.[7]

S: In your writings you have given prominence to the role of a privatised fund (based on a system of taxation of systemically important market participants) to provide liquidity support as a functional macroprudential regulatory technique to tackle the impact of systemic risk. You have also mentioned a privatised industry-collected fund in the context of conducting any unavoidable bailouts that occur despite the imposition of a corporate governance based public law duty to align public and private sector benefits/costs. **What do you foresee are the practical barriers to such private funds coming into existence as a way to deal with systemic risk and are any of the regulators in the US or elsewhere working on such an approach?**

P: A privatised systemic risk fund could be immensely useful as banks contribute to this, and could call upon this in times of need. This is similar to a mutualised risk sharing mechanism like the one I have discussed in relation to the mutualisation of risk performed by central counterparties for derivative contracts. The same idea, that a central body mutualises risk-bearing and is able to address the manifestation of systemic

[7] Iman Anabtawi and Steven Schwarcz, 'Regulating *Ex Post*: How Law Can Address the Inevitability of Financial Failure' (2013) 92 Texas Law Review 75.

problems that collectively affect everyone, applies to all financial instruments.[8] If systemically important financial institutions all contribute to this fund, they are incentivised to monitor each other and this can improve risk management behaviour over all. This type of fund was originally proposed in the Dodd Frank bill but was not ultimately included as the existence of the fund is argued to entail moral hazard on the part of financial institutions, a point with which I do not agree.

S: We are still concerned with the systemic risk impact posed by financial institutions especially if they are 'too big to fail'. Does the UK reform to ring-fence retail banks work? In the context of 'ring-fencing' (as a method to break the transmission of systemic risk) you have argued that this technique may be more suitable to ensure continuity of service in a market for provision of a critical non-competitive service such as an essential utility service which has few providers while banking is fundamentally competitive and other banks could step in. **Contrary to such an approach, now that the UK has gone with ring-fencing (following the Vickers report[9]) and its implementation is currently in place to be completed by next year by creating a barrier between the 'risky' and 'non risky' parts of the bank, do you think there are any significant risks (even if in the nature of unintended consequences) for the UK in this regard by the adoption of ring- fencing?**

P: The systemic risk profile of a bank depends in part on size, interconnectedness with other financial institutions and the substitutability of its services. When visiting Oxford in 2010, I advised John Vickers in his report to the government on financial reforms in the UK. Ring-fencing makes sense in the UK because the UK banking sector is concentrated in the hands of a few high street banks and their retail banking services may not be readily substitutable. Hence ring-fencing to protect those services is

---

[8] Steven Schwarcz, 'Central Clearing of Financial Contracts: Theory and Regulatory Implications' University of Pennsylvania Law Review (forthcoming) <https://scholarship.law.duke.edu/faculty_scholarship/3778> accessed 14 June 2018.

[9] Tim Edmonds, 'The Independent Commission on Banking: The Vickers Report & the Parliamentary Committee on Banking Standards' (2013) Commons Briefing Papers SN06171 <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06171#fullreport> accessed 14 June 2018. The Vickers Commission proposed a fundamental change in the way that banks in the UK are organised. According to Edmonds: "The main change is that a 'ring-fence' would separate retail 'utility ' banking work from a range of investment banking and corporate finance activities."

important. This does not apply to the US as the banking sector is not concentrated and with the multitude of banks in the competing space, substitutability is not an issue.

A more widely applicable form of *ex ante* regulation to address financial institution risk-taking and risk of failure lies in aligning bank managers' incentives with a sense of public duty or responsibility.[10] Bank managers account to shareholders in the shareholder primacy system, and they are incentivised to take risks to maximise shareholder return even if that externalises costs onto the public. The public (other than specifically imposed laws) and stakeholders have no standing to call bank managers to account. Hence we need to think about imposing a duty of public governance upon bank managers. [This is further elaborated in response to the final question of the interview below.] The regime for directors' duties can be reformed in the way suggested in my article titled *Too Big to Fool: Moral Hazard, Bailouts, and Corporate Responsibility*.[11]

X: Would the introduction of a public governance duty for bank directors create conflict in relation to their other duties to shareholders?

P: Law reform is needed in order to introduce such a duty for bank directors, and we essentially need to rethink and overhaul corporate law doctrines in order to do so.[12]

S: Should there be regulation on an *ex ante* basis to address complexity in financial engineering, which can give rise to regulatory arbitrage, opaque levels of risk-taking and potential risks to financial systems? When faced with increasing *complexity* in financial engineering what is your view on how best to handle it from a regulatory perspective? Andrew Haldane from the BoE (in 'the Dog and the Frisbee' speech[13]) has argued to not fight complexity with further complexity in regulation, a view Avgouleas[14] shares in the context of Basel capital adequacy calculations which could lead to uncertainty. But reliance on pure, convenient heuristics and rules of thumb in decision making (such as the blind and flawed reliance on credit ratings in the structured

[10] Schwarcz, 'Too Big to Fool' (n 6).
[11] ibid.
[12] ibid.
[13] Andrew Haldane, 'The dog and the frisbee' (*BIS*, 31 August 2012) <https://www.bis.org/review/r120905a.pdf> accessed 14 June 2018.
[14] Emilios Avgouleas, *Governance of Global Financial Markets: The Law, the Economics, the Politics* (Cambridge University Press 2012) 144.

finance market) may also not be advisable. **What is your view on the key ideas/attributes any framework ought to have in dealing with complexity in financing engineering?**

P: Complexity poses the greatest challenge to financial regulation. However, we should be mindful of stifling useful innovation. The EU's series of reforms to make securitised products simple, transparent and standardised is a great initiative as it allows a useful product to continue to be marketed but incentivises certain features that would better meet the needs of financial stability. We cannot completely prevent failures and problems in the financial system, so a large dose of *ex post* regulation is needed such as resolution regimes and a privatised systemic risk fund as discussed earlier. In relation to *ex ante* regulation I have focused on decision-making and incentives in financial institutions, for example in relation to a directors' public governance duty.

X: Would more disclosure regulation be useful to reduce complexity in financial engineering?

P: Complexity likely results in copious amounts of disclosure, which people may not read or process. In a separate piece,[15] I have argued that it is very difficult to regulate in such a way that overcomes people's behavioural irrationalities and tendency to over-rely on heuristics.

S: A final question on a matter of pre-emptive (ie *ex ante*) financial regulation related to shadow banking. You have drawn attention to the existing inadequacies prevalent in the regulation applicable to shadow banking. You envisage ideal regulation to be able to both: (i) in an *ex ante* manner, bring out the best in shadow banking (by functional regulation aimed at increasing its efficiency by addressing information failure, rationality failure, principal-agent and incentive issues); and (ii) in an after-the-fact or *ex post* manner, limit the impact its activities can have on systemic risk. **Could you please elaborate a little more on the use of the *ex ante* strategies you have in mind?**

[15] Steven Schwarcz, 'Regulating Complacency: Human Limitations and Legal Efficacy' (2018) 93 Notre Dame Law Review 1073.

P: Shadow banking institutions can be systemically important. Some of them are largely owned and managed by the same individuals, such as highly interconnected hedge funds. Owner-managers have huge incentives to take significant amounts of risk, as the rewards can be substantial. I proposed in a paper[16] that perhaps limited liability for such owner-managers should be modified, so that they become more responsible for decision-making, as they may be liable to their investors. The double liability rule existed in law for banks prior to the Great Depression, but was abolished for the wrong reason after the Great Depression. This reform, together with the public governance duty I propose,[17] could greatly transform incentives in risk management and decision-making in financial institutions. In an earlier piece,[18] I argued that not only should senior managers' incentives be aligned with the long-term viability of the financial institution, such as through clawback of remuneration, but middle managers should be subject to the same regime of remuneration regulation as they often effectively make the key decisions in relation to complex deals and investment. These *ex ante* reforms, governing incentives in financial institutions, could go a long way towards achieving healthy systemic effects in the long-term.

C. CONCLUDING THOUGHTS

As this interview has hopefully illustrated, Professor Schwarcz seamlessly mixes boldness in critically challenging mainstream ideas with the humility required to first acknowledge the fallibility and fragility of the financial system. This enables him to find creative and practical solutions to systemic problems. His work shows us the proverbial 'other side of the coin' in such matters. He teaches us that the popular ideas of an age such as the focus on the 'too big to fail' conundrum, ring-fencing and the use of contingent convertible capital may have won favour with regulatory policy for the time being but the analysis may not have been complete. He shows us that the traditional focus on the shareholder/manager conflict of interest paradigm may not necessarily be the right framework of analysis on matters related to bank bailouts. Instead, he conceives a new corporate governance duty to bind directors to align private and public sector interests as a way to minimise externalities to contain bailouts. He also invokes

[16] Steven Schwarcz, 'The Governance Structure of Shadow Banking: Rethinking Assumptions about Limited Liability' (2014) 90 Notre Dame Law Review 1.
[17] Schwarcz, 'Too Big to Fool' (n 6).
[18] Steven Schwarcz, 'Conflicts and Financial Collapse: The Problem of Secondary-Management Agency Costs' (2009) 26(2) Yale Journal on Regulation 457.

the use of a private Systemic Risk Fund (to which banks contribute) to address necessary bailouts and in containing the impact of systemic risk.

Impressively, using a cross-disciplinary analytical technique, Professor Schwarcz leans on chaos theory and the functioning of engineering systems to focus on systemic risk. He dwells on limiting the impact of and breaking the transmission of systemic risk more than containing the rise of systemic risk. A complete elimination of such risks arising in the first place may not ever be possible. The complexity, interconnectedness and (lack of) substitutability associated with financial markets and market participants in today's age is too great to keep the 'genie in the bottle' (of systemic risk) from escaping. Professor Schwarcz shows us the role of financial regulation in shaping incentives at every link in financial systems and markets so as to manage risks at an acceptable level. Significantly, he demonstrates that the impact and transmission of inevitable systemic problems can be addressed in a practical and functional manner.