The post-crisis approach and new challenges to banking regulation

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Abstract
The aim of this article is to consider how the regulation of banks has developed since the financial crisis of 2008 and the challenges which are now facing the regulators. The lessons learned from the crisis must not be forgotten. However, political pressures are giving rise to calls for deregulation and emerging technological challenges confront the regulators.

Introduction
The regulation of banks is a difficult and high profile task. The banking industry is a complex one which plays a fundamental role in the United Kingdom's economy.[348] The financial crisis highlighted the importance of countries having a regulatory regime which can maintain the health and stability of the banking sector. Banks provide payment and funding services which are central to the successful operation of a modern economy. Regulation therefore needs to ensure that a banking sector is healthy. This article will describe the features of the UK's post-crisis regulatory approach, and will then consider the new challenges which banking regulators in the UK (and many other countries) are facing.

The modern regulatory approach in the UK
It is not surprising that banking regulation in the UK has undergone significant changes since the financial crisis of 2008. The UK suffered badly, as two of the largest banking groups had to be bailed out by the government and several smaller banks failed. The Financial Services Authority (FSA), the industry regulator at the time, was widely criticised for failing to anticipate the crisis and minimise its consequences.

In the period since 2008 attention has shifted somewhat from prudential to conduct issues as a result of UK banks being embroiled in high profile misconduct situations concerning: the misselling of payment protection insurance and interest rate hedging products; the manipulation of LIBOR and foreign exchange markets, and money laundering.

The headline reform in the years since the crisis has been the changes to the regulatory structure introduced by the Financial Services Act 2012. This measure amended the Financial Services and Markets Act 2000 (FSMA) by replacing the FSA, the former sole regulator, with a 'twin peaks' regulatory model consisting of two new regulatory bodies (the Prudential Regulation Authority (PRA), which is part of the Bank of England, and the Financial Conduct Authority (FCA)).

Yet, these well-known reforms to the structure of financial services regulation are only part of the picture. Less well appreciated are the changes which have taken place in the approach adopted by the regulators. There are several distinctive features of the post-crisis regulatory approach.

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[348] The Financial Conduct Authority states that financial services currently provide 12% of the UK's total economic output. FCA, *Our Future Mission,* 2016, p 9.

Proactive regulation and supervision

The most important development has been the emphasis which the regulators now placed on proactive regulation and supervision, the aim to be forward looking and pre-emptive. The intention is that the regulators should be able to identify and eliminate problems before they can cause significant consumer or market detriment: 'prevention is better than a cure'.[349] The theory is that a problem such as payment protection insurance would now be identified and eliminated well before it could grow into a major misselling scandal.

The impact of proactive supervision can be seen. On the prudential side, the PRA has been working on improving the stability and resilience of banking institutions in order to enable them to better withstand future economic shocks. Examples of such work include: addressing problems with capital and liquidity requirements,[350] introducing stress testing,[351] and developing the resolvability of banking institutions.[352] For example, press reports have stated that the PRA has drawn up contingency plans to meet the Cooperative Bank's funding problem, which include an orderly winding up of the business, should it be unsuccessful in its search for new sources of capital.[353] In terms of stress testing, banks operating in the UK have been asked to ensure that they have contingency plans in place to enable them to cope with the whole range of possible scenarios which Brexit may produce.[354] On the conduct side, more rigorous supervision by the FCA has placed great emphasis on ensuring that firms have strong risk management frameworks in place and pay greater attention to the needs of their customers. The FCA has also undertaken work on subjects such as mortgages,[355] credit card debt[356] and payday lending[357] with the aim of reducing the risks that practices in these areas might create. In relation to interest only mortgages, the result was that over two and a half million customers were contacted by mortgage providers to be asked whether they had a repayment strategy.[358] The proactive approach can also be seen in the way in which the regulators are playing an active role in the development of Financial Services Technology (FinTech) and in moves to ensure IT resilience and to counter cybercrime.

Judgement, risk and outcomes based supervision

Another aspect of modern supervision can be seen in the FCA's statement that its current approach is a 'judgement based' one.[359] Judgement based supervision can be seen as a reaction against the mechanistic 'light touch' 'tick box' form of regulation centring on systems and processes which is regarded as having failed to identify the problems that were developing in the sector prior to 2008.[360] Regulators are expected to consider actively the issues confronting banks rather than simply conducting a limited box ticking exercise. This approach is coupled with an emphasis on outcomes which reduces the risk that regulation becomes a meaningless exercise in box ticking and leaves firms with discretion as to how they achieve the required outcomes. This creates scope for banks to develop innovative techniques whilst still satisfying the regulators.[361] It recognises the fact that the sector being supervised is both diverse and

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349 FCA *Annual Report 2013-14*, p 5.

350 http://www.bankofengland.co.uk/pra/Pages/supervision/banking/capitalliquidity.aspx.

351 http://www.bankofengland.co.uk/financialstability/Pages/fpc/stresstest.aspx.

352 http://www.bankofengland.co.uk/pra/Pages/supervision/banking/recoveryresolution.aspx. Resolvability refers to the process of winding up failing banks.

353 B Marlow, *Officials draw up rescue plan for Co-op Bank*, The Telegraph, 18th March 2017. http://www.telegraph.co.uk/business/2017/03/18/officials-draw-rescue-plan-co-op-bank/.

354 Bank of England, News Release 22nd March 2017. http://www.bankofengland.co.uk/publications/Documents/news/2017/008.pdf.

355 FCA, *Embedding the Mortgage Market Review: Responsible Lending Review,* Thematic Review, TR 16/4, 2016. See the FCA's Mortgages and Home Finance: Conduct of Business Sourcebook (MCOBS).

356 FCA, *Consultation on persistent debt and earlier intervention remedies* CP17/10, 3rd April 2017.

357 FCA, *Detailed rules for the price cap on high-cost short-term credit,* Policy Statement, PS 14/16, 2014. See the FCA's Consumer Credit Sourcebook (CONC) Chapter 5A.

358 FCA, *Annual Report 2013-14*, p 7.

359 FCA, *Annual Report 2015-16,* p. 11.

360 FSA, *The Turner Review:A Regulatory response to the Global Banking Crisis,* 2009, pp 86-9.

361 Financial Services Authority, *Principles-based regulation Focusing on the outcomes that matter*. 2007, p 6.

dynamic: 'one size fits all' regulation cannot hope to cope with the wide variety of firms operating in the financial services sector.[362]

Given the size of the sector being supervised, it is essential that the regulator uses its judgement to prioritise its work in order to achieve the most effective results. The supervisory model therefore aims to be risk based and proportionate in that it concentrates resources on those firms, products and services which create the greatest risk. To achieve these aims, the regulator needs to have a good understanding of regulated firms' business models and strategies as well as the external economic context in which they are operating. This requires it to have sufficient specialism amongst its staff and knowledge of the businesses being supervised to enable it to intervene effectively at an appropriate time, such as when a product is being brought onto the market. The aim to reduce, if not eliminate, risk is an essential component of this form of supervision.

The modern system is also one of meta-regulation. This means that it is accepted that responsibility for much of the day to day regulation of the industry must be placed on those being regulated.[363] In practice, the regulators lack the resources to undertake detailed regulation of all firms within their remit and must therefore rely on the industry to police its staff. In *WH Ireland Limited*[364] the FCA stated that:

> 'The first line of defence in the fight against market abuse is the systems and controls that firms have in place to protect against, detect and help prevent it, including comprehensive compliance oversight, robust governance, and adequate training.'

It is not surprising that it follows that the FCA tends to be highly critical of firms which are found to have inadequate lines of defence in place. In WH Ireland Limited a penalty of £1.2 million was imposed on the firm on the ground of failings in this regard.

Principles based regulation

The modern regulatory approach applied by the FCA is based on high level 'Principles'. The use of such principles means that the regulator does not need to develop detailed rules of conduct for each of the sectors of the industry which are regulated.[365] Black, in her work on the crash,[366] argues that it is a mistake to equate 'Principles based' with 'Light touch' regulation and states that Principles Based Regulation 'is in practice a collation of strategies which can be applied with varying degrees of intensity.'[367] That is undoubtedly correct. Modern practice points strongly to the current picture being one of 'Principles based, but intrusive'[368] regulation, at least in relation to the largest banks. It is the mode of implementation by the regulator which is critical.

Reliance on specific Principles for Businesses[369] dominates the FCA's enforcement work and has allowed it to take action in circumstances where no specific rules existed to govern a particular activity.[370] Principle 3, which requires a firm to take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems, is the principle commonly invoked in such cases. It was, for example, used in the decisions

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362 HM Treasury, *A new approach to financial regulation: judgement, focus and stability,* Cm 7874, July 2010, para 1.7. The FCA currently supervises over 56,000 firms, 18,000 of which are also regulated prudentially by the FCA.. FCA, *Our Mission 2017*, p 5.

363 I Chiu, *Regulating (From) the Inside,*2015, Hart Publishing, p 14-15.

364 FCA Final Notice, *WH Ireland Limited,* 23rd February 2016.

365 FCA, *Our Mission 2017*, p 6.

366 J. Black, *Paradoxes and Failures: 'New Governance' Techniques and the Financial Crisis* (2012) 75(6) MLR 1037.

367 Ibid p 1044.

368 The FSA referred to its post-crash approach to supervising conduct risks as 'intensive and intrusive.' FSA Final Notice, *Bank of Scotland Plc,* 23rd May 2011, para 4.4.

369 The FCA Handbook creates eleven Principles for Businesses. They are set out in PRIN 2.1.1R. The PRA Handbook contains eight Fundamental Rules. There is considerable overlap. The PRA rules omit the customer facing ones in the FCA list.

370 For a full discussion of the role of principle based regulation, see J. Black, M. Hopper & C. Band, *Making a success of Principles-based regulation* (2007) 1:3, Law and Financial Markets Review, 191-206.

concerning manipulation of the foreign exchange and LIBOR markets which were outside of the regulatory scheme at the time that the conduct occurred.[371]

Behavioural Influences

The regulatory approach also has a new element to it: the incorporation of behavioural economics. This reflects the way in which the understanding of decision making has changed. Prior to the crisis, it was believed that consumers and market actors were rational individuals, making rational decisions on the basis of the information available to them. The financial crisis highlighted that in relation to financial services, this is not always the case.[372] Different motivations can impact how individuals make decisions. This has resulted in both the FCA and the PRA looking to other fields of scholarship, including behavioural economics and psychology, in order to improve the regulatory approach. The literature in this area emphasises the impact of biases on decision making.[373] Individuals might have a preference for a particular product or service on the basis of past experience: existing beliefs (such as being overly confident of their own ability) can impact how individuals view different options. Decision making itself can be affected by different skills, expectations and even existing 'rules of thumb' (heuristics).[374] As a result an optimal decision may not be reached. These insights are being used to guide regulatory and supervisory processes.

Essentially, the work in this area has two strands: using these new insights to improve the understanding of how consumers and market participants make decisions, and to improve the quality of decisions made by regulators.

The FCA first set out their approach to using behavioural economics in an occasional paper, published in 2013.[375] The overarching thinking behind this approach is that: 'If regulators are to make markets work better, we [the FCA] need to understand whatever materially drives the equilibria we observe. In particular the decisions that firms, consumers and, of course, regulators take.'[376] Understanding how these behaviours can change the decision making process therefore puts the FCA in a stronger position to ensure that consumer protection policies are designed appropriately[377] and to make sure that biases are not exploited to cause consumer detriment.[378] It also enables the FCA to understand why those operating in markets make choices, and enables the regulators to be aware of the reasons they themselves might come to particular decisions. Such understanding can result in improved decisions. This new addition of behavioural understanding therefore informs the work conducted by the regulatory authorities at each stage of the regulatory and oversight process. As the FCA has noted, behavioural economics is now 'embedded into traditional regulatory analysis: so to some extent it flies under the radar.'[379]

Within the Bank of England, improved understanding of the impact of biases is being incorporated into day to day operations. The Bank indicated its intention to utilise literature from the field of psychology to improve their decision making processes in their Strategic Plan

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[371] e.g. FCA, Final Notice, *The Royal Bank of Scotland plc,* 11th November 2014. These benchmarks have been regulated since 2015. See Financial Services and Markets Act 2000 (Regulated Activities) Order 2001, Schedule 5.
[372] M Wheatley, *Human face of regulation*, speech at the London School of Economics, 10th April 2013
[373] The insights build on the scholarship of academics such as D Kahneman, who describes the basic psychological model in *Thinking, Fast and Slow* (Penguin, 2012), and R H Thaler, whose work on the development of behavioural economics is summarised in *Misbehaving* (Penguin, 2015).
[374] For an overview of the biases identified by the FCA as impacting consumer decision making, see: FCA, Occasional Paper No 1*: Applying behavioural economics at the Financial Conduct Authority*, 2013, p 16-19
[375] Ibid.
[376] P Andrews, '*Beyond economics?*', speech at conference on behavioural finance held by Queen Mary University of London School of Business, Lancaster Business School and Santa Clara University, 14th June 2016. https://www.fca.org.uk/insight/speech-beyond-economics
[377] See E Costa et al, *Applying behavioural insights to regulated markets. A Behavioural Insights Team report for Citizens Advice* (2016). http://www.behaviouralinsights.co.uk/consumer-affairs/applying-behavioural-insights-to-regulated-markets/.
[378] See, for example, FCA, *Our Mission 2017*, April 2017, p 22
[379] M Wheatley, '*Making competition king – the rise of behavioural economics at the FCA'*, Speech at the Australian Securities and Investments Commission, 25th March 2014. https://www.fca.org.uk/news/speeches/making-competition-king-%E2%80%93-rise-behavioural-economics-fca

in 2014,[380] acknowledging the potential for biases affecting PRA supervisory decisions. The Bank's Chief Economist, Andrew Haldane, has also highlighted the biases that can affect the way that the Bank conducts its responsibilities. To some extent, this is to minimise the potential for 'groupthink' affecting decision-making, yet it must also be acknowledged that 'groupthink' is not the only psychological phenomenon that can detrimentally affect decision making. The Bank is slowly recognising that they need to be open to challenge if they are to operate successfully in accordance with their statutory objectives.[381]

The Bank also expects firms to take this approach into account when assessing their governance requirements and the organisation of their senior management: the negative impact of over-confidence (or hubris) within firms, on their culture, and on the decisions they make has been highlighted by the Bank.[382] This understanding is all the more important given the emphasis placed on firms' culture after the financial crisis.

Individual responsibility and culture

In accordance with the focus on culture, measures have also been taken with a view to strengthening the accountability of individuals working in banks: the regulatory framework governing those working in banks has been revised and the FCA has shown an increased willingness to take enforcement action against individuals.[383] These developments are intended to improve the culture within the industry. The logic is that it is the senior management within banks who set the culture of the institution and that misconduct usually has its roots in cultural problems. It is, for example, hoped that customers will receive a better level of service if bank staff are moved away from 'bonus' or 'sales' cultures. 'Firms need to have a culture that focuses on customers and integrity.'[384]

At the centre of this development is the replacement of the former Approved Persons Regime by the new Senior Managers and Certification Regimes,[385] overseen by both the PRA and the FCA. There is now a defined list of key roles within a bank.[386] Banks are required to supply the regulators with a responsibilities map detailing the firm's managerial structure and the names of the senior managers who are undertaking those key roles.[387] The regulators approve those individuals as suitable to undertake those functions. Under a new section 66A(5) of FSMA[388] senior managers bear personal responsibility for failures within the part of the firm they are managing. A breach of these responsibilities can lead to the appropriate regulator taking action against the senior manager. It is intended that this individual responsibility should lead to managers driving improvements in the culture of firms. It is also hoped that the new system will overcome the difficulty which was highlighted by reports into the HBOS[389] and RBS[390] failures of attributing personal responsibility for misconduct to the highest level of management.

[380] Bank of England, '*News Release – Bank of England launches strategic plan'*, 18th March 2014. http://www.bankofengland.co.uk/publications/Pages/news/2014/058.aspx. See also: A Haldane, 'Central Bank Psychology', 17th November 2014. http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech776.pdf

[381] See: H Powley, 'Culture in the banking regulators: the need for challenge', University of Bristol Law School Blog, 21st November 2016. http://legalresearch.blogs.bris.ac.uk/2016/11/culture-in-the-banking-regulators-the-need-for-challenge/

[382] A Bailey, *'Culture in financial services – a regulator's perspective'*, Speech given at the City Week 2016 Conference, 19th May 2016

[383] FCA Annual Report and Accounts 2014/15, p. 13.

[384] Ibid, p 29.

[385] See: Bank of England, 'Strengthening Accountability', http://www.bankofengland.co.uk/pra/Pages/supervision/strengtheningacc/default.aspx; and FCA, 'Senior Managers and Certification Regime', https://www.fca.org.uk/firms/senior-managers-certification-regime

[386] FSMA s 59ZB.

[387] FSMA s 60.

[388] This provision derives from section 29 of the Bank of England and Financial Services Act 2016.

[389] Bank of England, Prudential Regulation Authority, *Report into the FSA's enforcement actions following the failure of HBOS,* by A Green QC, 2015, p 6.

[390] FSA, *The Failure of the Royal Bank of Scotland,* 2011, p 7-8.

The Certification Regime applies to staff, other than senior managers, whose role within a bank could pose a risk of significant harm to the firm or any of its customers.[391] Such persons, examples given include staff who give investment advice to customers or administer benchmarks, no longer require PRA/FCA approval in order to undertake their work. It will be for their firms, rather than the regulators, to certify that they are fit and proper to conduct their roles. They are, however, obliged to comply with the FCA's Individual Conduct Rules[392] and can therefore be subjected to penalties following enforcement action for a breach of those rules.

Developing challenges

There is a widespread consensus that the changes which have been made have resulted in the UK having a banking system which is more capable of withstanding any economic shocks which may assail it. When the outcome of the UK's referendum on leaving the EU (the 'Brexit vote') was declared the Bank of England swiftly issued a press release.[393] This emphasised that the Bank had previously put contingency plans in place to deal with any adverse market reaction following from the vote, and that changes introduced since the crisis had resulted in a much more robust and resilient financial sector which, in comparison to the position in 2008, possessed greatly increased levels of capital and liquidity.

However, the position faced by the banking sector is not a static one: it is nearly ten years since the crisis unfolded. Banking regulators need to be alert to the emergence of new challenges as they continue to deal with the problems highlighted by the financial and conduct crises. The picture in 2017 is one of an emerging tension between, on the one hand, the desire to maintain the additional security built into the financial system by the regulatory changes made since 2008 and, on the other, calls to lessen the regulatory burden with a view to increasing the returns made by the industry. This tension is emerging against a background of political uncertainty and an industry which is undergoing rapid change as a result of technological developments.

<u>Challenges: the political backdrop and deregulation</u>[394]

First, the broader political backdrop needs to be considered. The regulation of banks is a matter of political concern. If this had moved out of the minds of politicians in the years before the financial crisis, the experience of 2008 emphasised the importance of the banking industry to the health of a country's economy. As a result, banking regulation has been in the spotlight in the years after the crisis. That is still the case today. Recent political events have returned the question of banking regulation to the forefront of the debate.

The UK has entered a period of uncertainty, with the triggering of Article 50 of the Treaty on European Union indicating the UK's decision to withdraw from the EU.[395] With the political blustering around the issue, it is, as yet, unclear how Brexit will impact the operation of banking regulation in the UK: particularly in relation to UK licensed banks having access to the EU's single market. There are indications, however, that it may result in significant upheaval within the UK banking sector. Numerous banking institutions have indicated that they have either drawn up, or started to initiate, contingency plans to minimise the impact of Brexit on their operations by repositioning themselves outside of the UK. HSBC was the first bank to announce that it is considering the relocation of 1,000 staff. Goldman Sachs have announced[396] that they have drawn up contingency plans to move business out of London in

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[391] FSMA s 63E(1).
[392] FCA Handbook, COCON 2.1
[393] *Bank of England Governor Mark Carney's statement following EU referendum result* - 24 June 2016, http://www.bankofengland.co.uk/publications/Documents/news/2016/056.pdf.
[394] S Brush and A Weber, *How Trump and Brexit Could Change Global Bank Rules,* https://www.bloomberg.com/news/articles/2017-04-28/how-trump-and-brexit-could-change-global-bank-rules.
[395] See: '*Prime Minister's letter to Donald Tusk triggering Article 50'*, 29th March 2017 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf.
[396] https://www.theguardian.com/business/2017/may/05/brexit-city-goldman-sachs-lloyd-blankfein-london-uk.

the event that the Brexit negotiations do not go well. JP Morgan[397] and Deutsche Bank[398] are other examples of banks that have announced plans to relocate staff from London offices to different sites in Europe, depending on the outcome of the negotiations.

The declaration of these contingency plans reflects the Bank of England's requirement for banks to have clear formulations of their post-Brexit options. This illustrates the Bank's concerns surrounding the potential for market instability arising from Brexit and the possibility of an outcome whereby the UK does not reach a deal with the EU on the terms of the its exit. The PRA, has warned banks that they must be prepared for a situation where the 'UK and EU do not reach agreement on issues such as implementation periods, mutual recognition of standards, and co-operation in financial regulation or supervision',[399] emphasising the importance of ensuring the safety and soundness of their operations in accordance with the PRA's statutory objective. Brexit introduces considerable threats for the operation of the UK's banking sector.

However, financial instability is not the only threat currently facing regulators as a result of the Brexit-focused political backdrop. A significant amount of work will need to be conducted to detangle UK and EU regulation, and to incorporate revised rules into the UK's regime, regardless of the outcome of the negotiations. The FCA will work with HM Treasury and the Bank of England in this regard to minimise disruption to the UK's financial sector.[400] This is going to be important work. It will also be time consuming and potentially politically contentious. The FCA and the PRA need to ensure that they balance their responsibilities appropriately. There could be periods when there are risks to their statutory objectives, and the regulators will need to work to minimise these. It is also possible that the demands of the Brexit work will move into the forefront, and over-shadow other responsibilities held by the regulators in terms of day-to-day supervision of the banking sector. Whilst Brexit will be important and needs to be prioritised to ensure the continued functioning of the UK's financial services market, regulators need to make sure that they do not fall foul of the problems that plagued their predecessor and place too much emphasis on one area of responsibility over others.

Further, there are increasing possibilities that the UK might move towards deregulation. A 2015 Treasury publication focused on addressing the UK's 'productivity puzzle',[401] highlighted the belief that there should be 'open and competitive markets with the minimum of regulation', and noted that 'there is no room for complacency in pushing for ever greater consumer power, nor in fighting stifling regulation'.[402] Brexit is considered by some to be an opportunity 'for the UK to deregulate and stimulate growth'.[403] David Davis MP, the Secretary of State for Exiting the European Union, has referred to 'needless and restrictive regulation' in an article published on the Conservative Home website.[404] Prominent members of the 'Leave' campaign have hailed the process of the UK leaving the EU as an opportunity for the UK to reduce the

[397] https://www.theguardian.com/business/2017/may/03/jp-morgan-jobs-uk-brexit-dublin-frankfurt-luxembourg.
[398] https://www.ft.com/content/b950b28c-2a9e-11e7-bc4b-5528796fe35c.
[399] The PRA's 'Dear CEO' letter is available at: http://www.bankofengland.co.uk/pra/Documents/about/letter070417.pdf?utm_source=Bank+of+England+updates&utm_campaign=1631555701-EMAIL_CAMPAIGN_2017_04_06&utm_medium=email&utm_term=0_556dbefcdc-1631555701-113379485. See also: 'Bank of England tells City to prepare better for 'no-deal' Brexit', https://www.ft.com/content/3cc18680-1b74-11e7-a266-12672483791a.
[400] FCA, '*Business Plan 2017-18*', p 15.
[401] HM Treasury, '*Fixing the foundations: creating a more prosperous nation*', Cm 9098, July 2015
[402] Ibid 12.
[403] FT.com, '*Big Bang II: After Brexit, what's next for the City of London?*', https://www.ft.com/content/bf2a2c16-6eb4-11e6-a0c9-1365ce54b926; Risk.net, 'Brexit and financial regulation: a delicate negotiation', http://www.risk.net/regulation/3951611/brexit-and-financial-regulation-a-delicate-negotiation
[404] Although this article was originally published before David Davis's appointment as Secretary of State for Exiting the European Union, it was republished following this appointment. http://www.conservativehome.com/platform/2016/07/david-davis-trade-deals-tax-cuts-and-taking-time-before-triggering-article-50-a-brexit-economic-strategy-for-britain.html

extent of 'cumbersome' financial regulation and benefit as a result of doing so.[405] Lord Lawson, an ex-Chancellor of the Exchequer, has also argued in favour of 'intelligent deregulation'.[406]

Within the banking sector itself, a more nuanced version of this argument has been advanced. Rather than outright calls for deregulation, institutions are lobbying for a lighter form of regulation: for regulation which is easier to comply with. Firms have complained about the cost of compliance, the constant iterative regulatory change,[407] the time burdens associated with compliance and the uncertainty of regulatory developments. It has also been contended that firms are spending more on compliance than innovation and that the cost of compliance is responsible for the slow growth of productivity in the UK's banking sector.[408] However, those who followed the criticism of the Financial Services Authority in the years after the crisis will be aware of the risks of a movement towards 'lighter' regulation. From the regulator's perspective, endorsing such an approach risks a return to those pre-crisis days, where the light-touch regime meant that problems developing in the financial sector went unidentified. Such an approach is also directly at odds with the modern, proactive, approach to financial supervision outlined earlier in this paper.

Despite the risks that could accompany deregulation, there are still calls from sector representatives for a 'smarter' approach to the regulation of banks. These attitudes can be demonstrated with a quote taken from a CBI report published in October 2016: 'The pace and burden of regulation change is stifling the ability of firms to dedicate meaningful resource to innovation, which is subsequently inflicting damage on the sector, and the wider economy, for the future.'[409] The CBI are not calling directly for deregulation or 'less' regulation, but rather a 'stable' regulatory regime. This reflects concerns within the sector about the pace of regulatory developments and the number of changes which have had to be implemented in recent years.[410] The CBI, therefore, are seeking a regime which places a greater emphasis on the UK's global competitiveness.[411] Indeed, they appear to be arguing that now that reforms have rendered the system robust and able to withstand shocks it is time for a new priority of fostering growth to be embraced: it is lack of growth that is the real threat to the economy in 2017.[412] In a period in which the UK's productivity is poor[413] policies designed to foster innovation are bound to be attractive.

The CBI is not the only industry body calling for a change to the regulatory approach. The British Bankers Authority (BBA), while cautious in their tone, highlight the possibilities of Brexit enabling the UK to 'tailor its banking rules and regulations more specifically to the needs of the UK banking system';[414] the chief executive of TheCityUK, a financial services lobbying group, has stated that 'there is absolutely no appetite for a regulatory bonfire. ... But there is space for a tonal shift'.[415]

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405 Financial News, '*Cheer Up! London could be the new 'Super Singapore'*', 15 September 2016, https://www.fnlondon.com/articles/brexit-john-redwood-howard-flight-shearman-sterling-20160915

406 Lord Lawson, '*Brexit gives us a chance to finish the Thatcher revolution*', https://www.ft.com/content/6cb84f70-6b7c-11e6-a0b1-d87a9fea034f

407 Confederation of British Industries, *Smarter Regulation*, p 9

408 Ibid p 17.

409 Ibid p 31.

410 Thompson Reuters estimate that the number of regulatory updates (including publications, amendments to regulation and announcements) issued on a yearly basis increased by 492% between 2008 and 2015. UK Business Insider, '*Thompson Reuters launches a regtech solution*', 30th January 2017, http://uk.businessinsider.com/thomson-reuters-launches-a-regtech-solution-2017-1

411 Ante n 60, p 14

412 Ibid p 19

413 For the latest data see the Office for National Statistics, *Labour Productivity: Oct to Dec 2016* at *https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures*. See also, L Elliott, *What is productivity and why is the UK's so poor?* at https://www.theguardian.com/business/2016/dec/25/what-is-productivity-why-uk-poor.

414 BBA, '*Brexit: What now for UK regulatory reform?*', https://www.bba.org.uk/news/bba-voice/brexit-what-now-for-uk-regulatory-reform/#.WQs4PVUrKUk

415 FT.com, 'City of London pushes for lower taxes to sweeten Brexit pill', https://www.ft.com/content/4f87513c-0c92-11e7-b030-768954394623

There are changing attitudes as to the nature and extent of banking regulation. There is a risk that the lessons learnt in 2008 are already being forgotten as the push for looser regulation builds strength. It has always been acknowledged that this risk exists, and yet slowly, but surely, the arguments advanced against regulation in the pre-crisis days are resurfacing. These changing attitudes, accompanied by the concerns created by Brexit, will pose a challenge for the future of banking regulation. There are, therefore, important questions as to the approach the UK government will take after Brexit. Some degree of deregulation might be seen as both throwing off the burdens of EU regulation in order to increase London's competitiveness in global markets,[416] and as a way of tempting banks to stay in the UK. This, however, doesn't take the importance of equivalence with EU regulatory standards into account. The need for institutions based in the UK to have access to the single market may prove to be a decisive factor in favour of the UK maintaining regulatory equivalence with EU standards.[417]

Global challenges

These domestic challenges need to be set against the global political picture. There are increasing concerns that the consensus surrounding the need for global regulatory standards developed after the financial crisis is starting to break down. Central to these concerns are the policies proposed by the Trump Administration: to repeal the Dodd-Frank Act[418] and weaken the regulatory regime for financial institutions in the US.[419] An Executive Order,[420] setting out the core principles for financial regulation in the US, was signed by President Trump in February 2017. The Executive Order emphasises the importance of a regulatory regime that ensures that American companies are globally competitive, and highlights the need for regulatory policies to be 'appropriately tailored'. This Executive Order has initiated a review of US regulatory agencies and of the operation of the Dodd-Frank Act itself. The Trump Administration considers the Dodd-Frank Act to be an example of 'regulatory overreach'.[421]

The dismantling of Dodd-Frank, the removal of the protections it affords, and the potential impact this could have on US and global markets is concerning.[422] However, there is an additional element in that the desire within the US to reduce the regulatory burden on US banking institutions could also impede the development of global standards. Since the crisis significant progress has been made to improve the global consensus as to international regulatory standards, but there are signs this momentum is beginning to stall. Changing standards within the US could make it difficult to achieve any further progress on global banking standards.[423] The Systemic Risk Council (SRC) has written to G20 leaders, highlighting their:

> 'concern[ed] about the reports that the Basel Committee on Banking Supervision, and even the Governors and Heads of Supervision who oversee the prudential standard

[416] H Agnew and P Jenkins, *Big Bang II: After Brexit, what's next for the City of London?* The Financial Times, 1st September 2016. https://www.ft.com/content/bf2a2c16-6eb4-11e6-a0c9-1365ce54b926.

[417] It appears that MiFID II (European Parliament and Council Directive 2014/65/EU on markets in financial instruments, OJ 2014 L 173/349) and CRD IV (European Parliament and Council Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, OJ 2013 L 176/338) are the primary targets for those in favour of deregulation.

[418] Dodd–Frank Wall Street Reform and Consumer Protection Act (Pub.L. 111–203, H.R. 4173, July 21, 2010.

[419] For what the reforms may amount to see: B Jopson and L Leatherby, *FT Explainer: Dodd-Frank picked to pieces* https://www.ft.com/content/915666b6-f928-11e6-bd4e-68d53499ed71.

[420] The White House, '*Presidential Executive Order on Core Principles for Regulating the United States Financial System*', 3rd February 2017, https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-executive-order-core-principles-regulating-united-states

[421] https://www.theatlantic.com/business/archive/2017/02/trump-dodd-frank/515646/

[422] B Protess and J Hirschfeld Davis, *Trump Moves to Roll Back Obama-Era Financial Regulations* New York Times, February 3rd 2017, https://www.nytimes.com/2017/02/03/business/dealbook/trump-congress-financial-regulations.html?_r=0; *Remaking American financial regulation*, The Economist, 11th February 2016, http://www.economist.com/news/finance-and-economics/21716622-donald-trump-starts-long-struggle-overhaul-dodd-frank-act-remaking?fsrc=scn/tw_ec/remaking_american_financial_regulation. Also, US bill targets Consumer Financial Protection Bureau revamp, http://www.bankingtech.com/818322/us-bill-targets-consumer-financial-protection-bureau-revamp/.

[423] Howard Davies, *Will Trump build a wall protecting US banks from global rules?* The Guardian, 2nd March 2017. https://www.theguardian.com/business/2017/mar/01/trump-us-banks-federal-reserve-banking-regulation?CMP=Share_iOSApp_Other.

setters, have been debating softening their plans for the final capital standards in the face of intense industry pressure. That would be a perilous course.'[424]

The SRC continues: 'Most vitally, governments and legislators should resist the siren calls of those who would have them reduce equity standards for big and complex firms, economize on liquidity requirements, retreat on central counterparties or dismantle the new resolution regimes'.[425] The SRC is not alone in urging policymakers and regulators to resist calls to roll back the regulatory regime. Mark Carney, the Governor of the Bank of England, has emphasised the threats to global consensus on banking regulatory standards, highlighting the risk of 'reform fatigue' accompanying the possibility that the standards addressing issues such as institutions being too big to fail will not be completed.[426]

Alongside concerns that global initiatives will stall, the combination of Brexit and the potential for a loosening of standards within the US has sparked concerns that there could be a regulatory 'race to the bottom', resulting in regulatory arbitrage between jurisdictions. Such a scenario would defeat the progress that has been made to address the deficiencies with banking regulation emphasised by the financial crisis.

The combination of these pressures paints a disturbing picture in which the UK's banking regulators are at risk of struggling to maintain their current approach to the oversight of banking institutions. Given the significant progress which has been made in strengthening the banking regulatory regime after the financial crisis, a weakening of the rules will threaten the stability of banking institutions and raise concerns for consumer protection. Failure to fully implement the regulatory initiatives which currently appear to be the target of those who favour deregulation will also raise questions about the extent of the UK's equivalence with the EU's regulatory regime, an issue that could be problematic for UK-regulated institutions seeking to continue to do business in the EU. This, of course, depends on the outcome of the Brexit negotiations.

The regularity with which representatives of banking regulatory bodies are emphasising the importance of maintaining the post-crisis reform momentum[427] illustrates the concerns that exist as a result of changing attitudes within the US and elsewhere towards the maintenance of global standards for banking regulation and the possible impacts of Brexit on one of the world's leading financial markets. Global standards underpinning the global financial markets will come under threat if two of the world's largest financial centres go their own way because of domestic political considerations.

The political backdrop sets the scene for the challenges facing the future of banking regulation. It is clear that there is a push for a loosening of regulatory standards. Yet, at the same time there are developing tensions between innovation and compliance. As financial technologies (FinTech) grow, banks are finding themselves in a position where they need to be able to innovate and keep pace with institutions offering consumers a different kind of banking: access to products or services in a novel, more convenient or cheaper way to that offered by high street banks. Banks have argued that the costs of compliance are impeding their ability to innovate and compete. Further, innovation inevitably brings risks with it. As the Governor of the Bank of England has said, the Bank must work to ensure that 'the right hard and soft

[424] Systemic Risk Council, '*Systemic Risk Council issues Policy Statement to G20 Leaders on Defending and Strengthening Key Pillars of the Global Reform Program*', 27th February 2017 http://4atmuz3ab8k0glu2m350em99-wpengine.netdna-ssl.com/wp-content/uploads/2017/02/Systemic-Risk-Council-Policy-Statement-to-G20-Leaders.pdf, p 5
[425] SRC p 6
[426] Mark Carney, 'What a Difference a Decade Makes', Speech, 20th April 2017, http://www.bankofengland.co.uk/publications/Documents/speeches/2017/speech976.pdf
[427] M Carney, *The High Road to a responsible, open financial system,* Speech 7th April 2017. http://www.bankofengland.co.uk/publications/Documents/speeches/2017/speech973.pdf; S Lautenschläger, *Walled off? Banking regulation after the crisis.* Speech at the Institute of International and European Affairs, 13th March 2017. http://www.bis.org/review/r170314b.htm. Also, *UK Watchdog warns against scrapping US rules for failing lenders,* Financial Times, 23rd April 2017.

infrastructure are in place to allow innovation to thrive while keeping the system safe'.[428] The threat of FinTech is not the only challenge to current banking models. The drive for increased competition within the UK's banking sector has resulted in a number of 'challenger' banks seeking to attract customers from existing institutions. Technological advances are also introducing threats in the form of cybercrime and the risks associated with a cyber-attack. There are, therefore, numerous challenges for banking regulators and the banking sector, ahead. The next section will address these challenges in detail.

Specific challenges: FinTech, Competition and Cybercrime

FinTech

The FinTech arena is one in which the innovation versus compliance tension is clearly illustrated. FinTech, or financial technology, is an area of development that has received significant attention in recent years. The FCA states that 'the term that describes the intersection between finance and technology. It can refer to technical innovation applied in a traditional financial services context or to innovative financial services that disrupt the existing financial services market'.[429] Broadly, FinTech relates to new technology that can be used to improve the customer experience. There are numerous firms based in the UK developing new technologies that can be used to improve the customer experience of the banking sector. Closely aligned with FinTech is RegTech, regulatory technology, defined as 'the adoption and use of technology to help financial services firms to understand and meet their regulatory requirements more efficiently or effectively'.[430] Both areas have experienced a boom in popularity in recent years. FinTech companies attracted over £520 million in investment in the UK in 2015 alone.[431]

FinTech has also been at the centre of UK political attention. Government policy aims to position the UK as the leading global FinTech hub,[432] in part to protect the UK's position as one of the world's leading financial centres. A result of this has been the introduction of initiatives designed to increase the attractiveness of the UK to developers wishing to create and market innovative financial technology. The UK government has created a special envoy for FinTech in the UK, a role currently held by Eileen Burbidge, designed to 'champion the development of new and innovative technologies and ideas'.[433] In the 2016 Autumn Statement, the Chancellor of the Exchequer pledged £500,000 a year for 'FinTech specialists' and also declared that the FinTech envoy system will be expanded, creating a network of regional FinTech representatives.[434] FinTech firms could also find themselves supported by the £400 million that the British Business Bank was granted to invest in 'innovative firms'.[435] HM Treasury indicated the centrality of FinTech to UK economic policy in its 2017 economic policy recommendation letters to the FCA[436] and Prudential Regulation Committee,[437] highlighting the importance of ensuring that market conditions allow innovative businesses to prosper. The UK Government hosts a yearly FinTech conference,[438] and the UK has a dedicated FinTech week.[439] The 2017 offerings are the second of each event.

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428 M Carney, *Building the Infrastructure to realise FinTech's Promise*, speech to the International FinTech Conference 2017, 12th April 2017. http://www.bankofengland.co.uk/publications/Documents/speeches/2017/speech974.pdf.
429 FCA, *'Business Plan 2017/18'*, April 2017, p 42
430 Ibid.
431 EY, '*UK FinTech: on the cutting edge*'. 2016. http://www.ey.com/Publication/vwLUAssets/EY-UK-FinTech-On-the-cutting-edge/%24FILE/EY-UK-FinTech-On-the-cutting-edge.pdf
432 HM Treasury, '*Fixing the foundations: Creating a more prosperous nation*', July 2015, Cm 9098, p. 57.
433 Ibid, p 12
434 HM Treasury, '*Autumn Statement 2016*', November 2016, Cm 9362, p 31.
435 ibid.
436 HM Treasury, '*Recommendations for the Financial Conduct Authority*', 8th March 2017. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/597668/Recommendations_Financial_Conduct_Authority_Spring_Budget_2017.pdf.pdf.
437 HM Treasury, '*Recommendations for the Prudential Regulation Committee*', 8th March 2017. http://www.bankofengland.co.uk/pra/Documents/chancellorletter080317.pdf. The Prudential Regulation Committee (PRC) is the executive committee of the Prudential Regulation Authority, and is therefore the body responsible for decision making within the PRA. See: http://www.bankofengland.co.uk/ABOUT/Pages/people/prapeople.aspx.
438 For information on the 2017 International FinTech Conference, see https://www.events.trade.gov.uk/international-fintech-conference-2017-3/.
439 See https://www.fintechweek.com/.

The FinTech sector, globally, is still in its infancy. While this provides a benefit to the UK in terms of its ability to position itself as the leading FinTech centre, it also means that there are a number of challenges surrounding the operation of FinTech products and services that need to be understood if the sector is to be able to develop without posing a threat to the UK's financial system.

Proactive regulation and supervision is, of course, intended to deal with the risks which might be created by innovation. This is evidenced by the creation of new regulatory initiatives aimed at ensuring that innovation does not take place beyond regulatory controls. Separate initiatives have been created by the UK's banking regulators. The FCA has introduced an 'Innovation Hub',[440] forming part of 'Project Innovate', a project designed by the FCA to support innovative businesses.[441] Project Innovate supports firms that are truly innovative and that aim to provide benefits to consumers[442] by assisting them through the authorisation process, providing information on regulatory requirements, and, in a recent modification to the system, providing a point of contact within the FCA after the authorisation has been received.[443]

This process acknowledges that attaining regulatory approval can be a time consuming, confusing and costly process for young firms with limited investment, and thus addresses one of the key problems technology firms had experienced when trying to enter the financial services market.[444] Falling within Project Innovate is the FCA's 'Regulatory Sandbox', a space in which approved firms can develop and test new products and services in real life situations. This allows firms to improve their understanding of how the product or service operates, and of how regulation applies to it, before offering it to the wider market. The Regulatory Sandbox also enables both the developer, and regulators, to identify and minimise any potential risks that could be created by that innovation.

The FCA has stated that encouraging innovation enables it to support the public, businesses and economy.[445] This package of measures demonstrates the FCA's openness to innovation that supports consumers. This is further illustrated by the way the Regulatory Sandbox works. The FCA has sought to assuage fears that those using the Regulatory Sandbox will find themselves subject to FCA enforcement proceedings in the event that their product or service causes harm during the development period. Given that firms need to have FCA authorisation to use the Regulatory Sandbox,[446] there is a risk that a breach of an FCA rule during this period could result in penalties. This might deter FinTech innovation in the UK. To combat this, the FCA emphasise the powers at their disposal to minimise the risk of this occurring. The FCA have the ability to issue waivers for breaches of rules (provided that the 'waiver test', contained in s.138A(4) FSMA is satisfied), and can provide firms with individualised guidance on the FCA's interpretation of the rules. The FCA can also issue a 'No enforcement letter' indicating that it will not take enforcement action in certain circumstances. What this amounts to is an encouraging regime for innovation from the FCA.

The FCA's Regulatory Sandbox has been a popular, and successful initiative. In 2016, 24 out of 69 applications met the FCA's criteria for participating in the Sandbox initiative, and were

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440 See https://www.fca.org.uk/firms/innovate-innovation-hub

441 C Woolard, 'UK FinTech: Regulating for innovation', Speech delivered at the FCA's event on UK FinTech: Regulating for innovation, 22nd February 2016. https://www.fca.org.uk/news/speeches/uk-fintech-regulating-innovation

442 For the FCA's eligibility criteria for firms seeking to participate in Project Innovate, see: https://www.fca.org.uk/firms/project-innovate-innovation-hub/eligibility.

443 FCA, '*Innovate: next steps*', 11th April 2017, https://www.fca.org.uk/firms/innovate-innovation-hub/next-steps.

444 EY, '*UK FinTech: On the cutting edge. An evaluation of the international FinTech sector*', 2016, p 51.

445 FCA, '*Our Mission 2017: How we regulate financial services*', April 2017, p 7

446 Unauthorised firms have to attain a tailored authorisation before they can use the FCA's Regulatory Sandbox. In effect, this is a restricted authorisation designed to be proportionate to the product that the firm wants to test. It allows for a faster process than complete authorisation. See: FCA, 'Regulatory Sandbox', November 2015, p 8. https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf

accepted to start testing products.[447] In 2017, the FCA received 77 applications from firms to participate in the second round of testing in the Regulatory Sandbox.[448] It is expected that the successful firms will be announced in May 2017. A study of global FinTech centres, conducted by EY for HM Treasury, found that the UK has 'the most supportive regulatory regime', due in part to the 'supportiveness and accessibility' of the FCA.[449] It is no surprise, therefore, that as an increasing number of countries seek to encourage FinTech developments, the FCA's process has become a model for other jurisdictions to follow.[450] The FCA has entered a number of collaboration agreements with regulators in other countries[451] with a view to extending this work. There is a desire to use this collaboration to identify common standards to be applied to innovation in the sector in order to avoid the risk of a regulatory 'free for all' developing.[452]

However, there are concerns that differing standards are being applied in regulatory approval of FinTech products and developments in different jurisdictions.[453] Given the international nature of banking activities, this is something that needs to be closely monitored. Further, banking authorities are not the only bodies developing sandboxes for FinTech testing: there are several initiatives that have been introduced at industry level.[454] These sandboxes do not operate under the purview of the regulator, and therefore do not provide the regulatory assistance associated with the initiatives outlined above, however they do provide firms with a similar opportunity to test innovative products away from the marketplace. As the FCA has emphasised, standards need to be maintained to ensure that innovation is responsible and does not compromise consumer protection.[455]

As indicated above, the Bank of England has its own version of Project Innovate: the FinTech Accelerator.[456] Whilst operating with a slightly different focus, namely to encourage technologies that can assist central banking-related activities, this forms part of the UK's overall FinTech package. In a similar move to the FCA, and to remain abreast of developments in this field, the Bank has announced a new 'FinTech community', with three objectives: to share developments, insights and trends; to enable the Bank to engage with FinTech firms; and to provide FinTech firms with networking opportunities.[457] While the Bank's project operates on a smaller scale than that of the FCA (the Bank is currently only working with three firms), it demonstrates the breadth of FinTech developments taking place in the UK.

An offshoot of the FinTech scene is that of RegTech. RegTech aims to assist financial institutions with their compliance obligations, providing technology that can ease or speed up the compliance process, thus reducing costs.[458] It has been described as 'the future of financial

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447 FCA, '*Financial Conduct Authority unveils successful sandbox firms on the second anniversary of Project Innovate*', 7th November 2016. https://www.fca.org.uk/news/press-releases/financial-conduct-authority-unveils-successful-sandbox-firms-second-anniversary

448 FCA, '*Regulatory sandbox – cohort two*', 21 April 2017. https://www.fca.org.uk/firms/innovate-innovation-hub/regulatory-sandbox#cohort2

449 EY, '*UK FinTech: On the cutting edge*', p 11

450 See, for example, The Canadian Securities Administrators, Regulatory Sandbox http://www.osc.gov.on.ca/en/NewsEvents_nr_20170223_regulatory-sandbox.htm; the Hong Kong Monetary Authority's Fintech Facilitation Office http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech-facilitation-office-ffo.shtmland the Financial Technology Enabler Group (Malaysia) https://www.myfteg.com/about.

451 China, Japan, Canada and Hong Kong, See C Woolard, *Innovating for the future: the next phase of Project Innovate,* Speech to the Innovate Finance Global Summit. 10th April 2017. https://www.fca.org.uk/news/speeches/innovating-future-next-phase-project-innovate.

452 Ibid.

453 EY, 'UK FinTech: *On the cutting edge. An evaluation of the international FinTech sector*', 2016, p 16-17

454 For an overview, see http://industrysandbox.org/

455 C Woolard, '*Competition and innovation in financial services: the regulator's perspective*', speech delivered at Cheung Kong Graduate School of Business, 11th May 2017

456 See: Bank of England, 'FinTech Accelerator'. http://www.bankofengland.co.uk/Pages/fintech/default.aspx

457 Bank of England, '*Press release: Bank of England FinTech Accelerator launches new community and latest proofs of concept*', 17th March 2017. http://www.bankofengland.co.uk/publications/Pages/news/2017/029.aspx

458 *This Irish fintech startup is helping banks wade through an 'Eiffel Tower' of regulation* http://www.thejournal.ie/corlytics-john-byrne-3-3410497-May2017/?utm_content=buffer57598&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

regulation'.[459] As discussed earlier, banking institutions have been increasingly vocal about the compliance pressures placed upon them by the current regulatory regime: technology has the potential to provide solutions to some of these problems. In this context, RegTech firms have identified a need within the market place and are seeking to provide a product or service to address that need. It is becoming apparent that technology can be used to automate elements of compliance with regulatory requirements: reducing overheads for firms whilst ensuring that they are subject to proper regulation.[460] Within the industry itself, services are being developed to aid the identification of misconduct within institutions,[461] assist with anti-money laundering compliance requirements,[462] and rationalise the process of regulatory reporting.[463]

These developments are being supported by the FCA. The FCA has indicated that it is searching for RegTech solutions to a number of current challenges, including those relating to regulatory reporting, data sharing and improving the accessibility of its Handbook.[464] In accordance with this emphasis, the FCA has held a number of 'TechSprint' days, designed to encourage industry participants to work together on these challenges to 'help address the cost, efficiency and effectiveness of regulatory reporting'.[465]

These technological developments are positive ones. There have been concerns within the UK about the level of competition within the banking sector given the consolidation that took place during the financial crisis and about the levels of consumer protection that accompany limited competition. FinTech firms have the ability to offer consumers a greater choice, and aim to do so with an ease that customers do not believe they experience when dealing with conventional banks. FinTech products are more streamlined and intuitive to use.[466] From a RegTech perspective, given the current pressures to deregulate, the development of products and services that can assist banks with their compliance requirements as an alternative to looser forms of regulation must also be seen in a positive light. However, that does not mean that there are no concerns. Charlotte Hogg, in her previous role as Chief Operating Officer of the Bank of England, noted 'there remain real questions around the potential risks and as yet unknown ramifications. As we have seen before, not least during the financial crisis, even the tools considered the most advanced analytically at the time may be flawed'.[467] The FCA have noted the possibility of innovation moving risk from the firm to the consumer, of innovation being used to avoid regulatory requirements, and of regulation failing to keep pace with technological developments.[468]

Regulators must pay attention to these risks as the FinTech industry continues to gather pace. Innovation brings with it additional risks which are impossible to quantify with accuracy: the most obvious being that interconnected innovative technologies might become systemically important or might threaten the viability of older established banks. While the majority of FinTech issues will fall within the remit of the FCA, given the FCA's consumer protection and

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459 Government Office for Science, '*FinTech Futures: The UK as a World Leader in Financial Technologies*', March 2015. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/413095/gs-15-3-fintech-futures.pdf#page=12

460 *Will robotic process automation herald a new digital era in regulatory compliance in banks?* http://www.bankingtech.com/800902/will-robotic-process-automation-herald-a-new-digital-era-in-regulatory-compliance-in-banks/.

461 e.g., Sybenetix (http://www.sybenetix.com/) provides software designed to aid compliance monitoring and use behavioural indicators to identify potential misconduct.

462 e.g., ComplyAdvantage (https://complyadvantage.com/) offers users a platform through which to analyse global sanctions, watchlists, politically exposed persons and media coverage in relation to their anti-money laundering obligations. Duedil (https://www.duedil.com/) provides a similar service, on the basis of a different data set.

463 e.g., Suade, (https://suade.org/) seeks to assist banks in interpreting, managing and responding to regulation.

464 C Woolard, '*London FinTech Week 2016 – innovation in RegTech*', Speech delivered at the London FinTech Week 2016, 25th July 2016.

465 FCA, '*Innovate: RegTech*', 11th April 2017. https://www.fca.org.uk/firms/innovate-innovation-hub/regtech.

466 FinTech Insider by 11:FS, '*The Secret to UK FinTech Success*', Podcast first broadcast 10th September 2016.

467 C Hogg, '*Bridging the gap between institution and innovation*', speech at the Web Summit, Lisbon, 9th November 2016. www.bankofengland.co.uk/publications/Documents/speeches/2016/speech936.pdf.

468 FCA, '*Business Plan 2017/18*', April 2017 p 42.

market integrity objectives, the potential for systemic risk also pulls FinTech developments directly within the scope of the PRA's concerns.

This emphasis on new technology poses further challenges for the future of banking regulation. Will the authorities have the ability to understand these new products to the extent that they can identify how these products or services could pose a threat to financial stability, consumer protection or the integrity of the banking sector? Do the authorities have the technical expertise to adequately oversee the development and use of FinTech?

Similar questions arise in relation to RegTech, and potentially even more so given the current calls for deregulation, or 'smarter' regulation. It must be ensured that RegTech does not allow firms to evade existing regulatory requirements in exchange for cheaper, or easier, compliance. An example of the problems that could arise from defective RegTech can be illustrated by the importance the regulators place on cooperative engagement from firms.[469] Both regulators are reliant upon firms providing them with accurate information regarding the nature of their business activities, yet a defective algorithm[470] or misplaced emphasis in RegTech used by firms to control their compliance data has the potential to result in incorrect information being transmitted.

The need to improve staff expertise in relation to financial and regulatory technologies has been acknowledged, particularly by the FCA, who have indicated their intention for the Regulatory Sandbox initiative to provide both developers and regulators with knowledge and understanding of the technologies being tested and the risks that could arise from innovation.[471] This experience, while a valuable one, will only be able improve knowledge in relation to the products that are authorised through the FCA's sandbox scheme. In a world where numerous regulators are using the sandbox model, and with multiple financial centres vying for the global FinTech title, the UK's regulators will not be able to monitor all new technology. The introduction of industry sandboxes only heightens these concerns. Regulators must therefore ensure that they are alert to, and can minimise, these risks.

The risks surrounding Brexit do not disappear in this regard. While FinTech is currently operating in a climate of regulatory support, the UK's exit from the EU poses a threat to the continued ability of London to retain FinTech activity. Funding from EU bodies that has, in the past, supported London-based FinTech businesses, is already in the process of being withdrawn.[472] FinTech firms, in the same manner as banks, will also value the single passport if they wish to conduct business within the EU. While the current picture surrounding the FinTech sector is a positive one, there is every risk that this will not continue to be the case. With other financial centres competing aggressively to attract FinTech activity, UK regulatory policies need to continue to support and encourage innovation and development if they wish to maintain the FinTech momentum. There is a fine line between supportive regulatory policy designed to attract businesses and regulation that fails to meet its objectives. Regulators will need to monitor this closely to ensure that they have the balance right.

Competition and challenger banks

The issues discussed thus far in this paper reflect the changing nature of the UK's banking services market. Another important element of this evolution is reflected by the renewed

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469 Principle 11 of the Principles for Businesses in the FCA's Handbook states: 'A firm must deal with its regulators in an open and cooperative way, and must disclose to the appropriate regulator appropriately anything relating to the firm of which that regulator would reasonably expect notice'. A practically identical provision is found at Fundamental Rule 7 in the PRA's Rulebook: 'A firm must deal with its regulators in an open and cooperative way and must disclose to the PRA appropriately anything relating to the firm of which the PRA would reasonably expect notice'.

470 R Krystosek, *The Algorithm Made Me Do It and Other Bad Excuses*, http://www.minnesotalawreview.org/2017/05/the-algorithm-made-me-do-it-and-other-bad-excuses/.

471 FCA, *'Business Plan 2017/18'*, April 2017, p 45-46

472 K Shubber, '*UK tech investors face loss of significant funding after Brexit*', 10th May 2017. https://www.ft.com/content/8fab88be-34c9-11e7-bce4-9023f8c0fd2e

emphasis on competition within the banking sector[473] and the encouragements for 'challenger' banks to enter the market to compete with established banks. These developments have also been stimulated by the political agenda. Government policy has been strongly supportive of the view that enhanced competition and innovation in the banking sector will benefit the UK's productivity. Greater competition should improve the efficiency of banks, increase the attractiveness of their products and services and improve customer choice.

The FCA has the promotion of effective competition in financial services markets in the interests of consumers as one of its statutory operational objectives.[474] The FSMA states that in pursuing this objective the Authority may consider, along with other matters, both the ease with which new entrants can enter the market, and how far competition is encouraging innovation.[475]

An example of an area of competitive challenge to established banks which is now well established is peer to peer lending (P2P).[476] To its proponents, this is a new form of lending which utilises technology to produce a result which offers attractive terms to both lenders and borrowers by directly matching them. It challenges traditional bank lending practices and adds competition to the market which benefits consumers. It can make lending available to customers who cannot obtain funds from traditional banks. To its critics, P2P offers a model which is dependent on investor confidence, uses untested risk processes and has yet to be challenged by an economic downturn.[477] It offers lenders a lower level of protection for their savings than traditional banks would: it is an accident waiting to happen which needs to be subject to greater regulation.[478]

Increasing competition also involves encouraging FinTech firms to bring innovative products onto the market. Familiar high street banking institutions operate on the basis of aging infrastructure, minimising their ability to offer truly new and innovative products. With the regulators' encouragement, new businesses have sought to fill this gap and challenge those institutions. An important facet of this has been the creation of the 'New Bank Start-up Unit', a joint PRA and FCA initiative, designed to improve the access of new banks to the UK's banking sector, announced in the July 2015 'Productivity Plan'.[479]

Bank of England statistics indicate that, between April 2013 and April 2016, 14 new banks were granted authorisation, with a further 6 applications being considered.[480] This number increased in the year following. While there are no official statistics on new authorisations over the last year, a number of firms have gained permission to operate in the banking sector.[481] As of March 2016, the PRA had indicated that alongside the 6 new bank applications, there were a further 14 new interested applicants.[482] It is expected that this figure is now higher.

Prior to the introduction of the New Bank Start-up Unit, potential new entrants to the banking sector experienced difficulties accessing the sector and harboured concerns about the

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[473] The current account switching service, which is designed to enhance competition between banks by removing barriers to switching, has been in operation since 2013. The FCA has been conducting a review into its effectiveness. See FCA, *Making Current Account Switching easier,* 2015 and *Our response to the CMA's final report on its investigation into competition in the retail banking market,* 2016.
[474] FSMA s 1B(3)(c).
[475] FSMA s 1E(2)(d) and (e).
[476] FCA, *Call for input to the post-implementation review of the FCA's crowdfunding rules*, July 2016 (p 20) states that in 2014 P2P lending to small businesses was 12% of that of established banks. In 2012 it had been 1%.
[477] Financial Stability Board, Committee of the Global Financial System, *FinTech credit Market structure, business models and financial stability implications*, 2017. http://www.fsb.org/wp-content/uploads/CGFS-FSB-Report-on-FinTech-Credit.pdf.
[478] Some regulation of P2P lending now exists in the CONC section of the FCA Handbook. It is aimed at the protection of borrowers rather than lenders. P2P platforms are also now required to meet minimum capital requirements.
[479] HM Treasury, '*Fixing the foundations: creating a more prosperous nation*', Cm 9098, July 2015 p 12
[480] Bank of England: Prudential Regulation Authority, *Annual Competition Report 2016,* p 16.
[481] The PRA's list of banks, published on a monthly basis, indicates that 6 banks have been added to this list between April 2016 and April 2017. See: http://www.bankofengland.co.uk/pra/Pages/authorisations/banksbuildingsocietieslist.aspx
[482] Bank of England: Prudential Regulation Authority, *Annual Competition Report 2016*, p 16

regulatory requirements for authorisation. Before authorisation can be granted new entrants must be able to demonstrate that they meet the requirements for authorisation set out by the PRA and FCA (termed Threshold Conditions)[483] and, further, that they will be able to meet these requirements on an ongoing basis. The Threshold Conditions can operate as a barrier for new entrants, requiring potential banks to demonstrate that they have the appropriate infrastructure in place as well as the necessary financial resources.[484] Firms therefore have to engage in a high level of expenditure, securing IT systems and executive-level staff, for example, before they are authorised, without the assurance that they will obtain authorisation at the end of the process.

The New Bank Start-up Unit[485] aims to address these concerns, and ease the authorisation process for new entrants by guiding new banks through the various stages of the process. Potential new banks have the opportunity to meet with the regulators at the pre-application stage, and a new 'mobilisation' stage has also been introduced in the authorisation timeline,[486] providing new entrants with the opportunity to gain authorisation at an earlier point than previously available.

Mobilisation addresses some of the concerns that new banks experienced under the previous authorisation process. It allows banks to start operating before the 'full' bank set-up is in place and before the new bank has met all Threshold Conditions, providing the certainty that if the Threshold Conditions are met within 12 months of entering the mobilisation stage, authorisation will be granted. New banks will therefore be able to start to trade (albeit with restrictions on their activities, such as limits on the amount of deposits they can accept) if they can demonstrate to the regulators that they have met all essential requirements and have the ability to meet the Threshold Conditions within 12 months.[487]

This development is a positive one for new entrants: it enables them to develop their business by acquiring further investment and staff, building IT systems and contracting with external suppliers secure in the knowledge that they will be fully authorised to trade in due course.

However, these developments present challenges for banking regulation in two ways. First, existing banking institutions are likely to experience difficulties in keeping pace with a rapidly evolving, competitive, market. Second, new market entrants need to be able to compete effectively on entry to the marketplace to provide that competition. As with the other issues raised in this paper, this requires a careful balancing of regulatory policy and supervision: regulators need to maintain existing banks whilst creating a supportive environment for new ones.

First, the new challenges for existing banking institutions. The phrase 'challenger bank' has become so ubiquitous in the banking regulation arena that the Oxford English Dictionary provides a definition of the term: 'a relatively small retail bank set up with the intention of competing for business with large long-established national banks'.[488] Challenger banks, however, are institutions of varying structures and sizes. They can range from new entrant full-service firms offering consumers the complete range of banking products and services (such as Metro Bank, for example), through to a specialised institution offering a particular

[483] For a summary of the Threshold Condition requirements, see:
http://www.bankofengland.co.uk/pra/Documents/authorisations/newfirmauths/thresholdconditionsfactsheet.pdf
[484] For detail on the content of the Threshold Conditions, as well as the PRA's approach to the operation of the Threshold Conditions, see: PRA, 'The PRA's approach to banking supervision', June 2016, p 12-18. Available at:
http://www.bankofengland.co.uk/publications/Documents/praapproach/bankingappr1603.pdf
[485] Bank of England, '*New Bank Start-up Unit*', http://www.bankofengland.co.uk/pra/nbsu/Pages/default.aspx
[486] Bank of England, '*New Bank Start-up Unit: Mobilisation*',
http://www.bankofengland.co.uk/pra/nbsu/Pages/mobilisation.aspx
[487] The PRA set out the activities that can be deferred during the mobilisation stage in '*A review of requirements for firms entering into or expanding in the banking sector: one year on*', July 2014
[488] Oxford English Dictionary, 'challenger bank', https://en.oxforddictionaries.com/definition/challenger_bank

product or service to a particular type of consumer, or consumers in a particular area, or in a specific manner.[489]

These institutions are seeking to challenge the status quo in the sector, attracting consumers from more established firms by offering products and services to consumers in a novel way that meets consumer need. Yet, alongside the challenge represented by increased competition, incumbent banks are also having to address the FinTech challenge. Banks are still considered to have a poor public image as a result of the financial crisis and the subsequent conduct issues, and consumers do not always feel that existing banks provide them with products or services that meet their expectations. Challenger banks and FinTech firms are seeking to exploit this sentiment.

Existing banks therefore need to improve the quality of the products and service they offer, as well as the ease of access to those products. Yet, banks are likely to experience challenges in doing so. Incumbent banks are dealing with legacy IT systems that are difficult to update and costly to replace. On top of this, some banks are still working on incorporating different IT systems acquired as a result of the mergers that took place during the financial crisis. These aging IT systems impede the ability of big banks to compete on technology and product offerings: to do so is considered to be too risky by some institutions. FinTech firms and challenger banks are vying to fill this gap and offer new and innovative products and services where existing banks do not. There may come a time when legacy systems put an existing bank at risk. The FCA has acknowledged this as a problem. Feedback to the FCA's 'Our Mission' consultation highlighted comments from respondents warning the FCA to ensure an appropriate balance between 'old' business models and newer ones.[490] The FCA has also announced a review into the business models of retail banks, given the significant challenges facing incumbent institutions, in part focusing on 'how changes in economic, technological, social and regulatory factors are impacting retail banking business models'.[491] While there is limited evidence of consumers switching from their current banks to 'challengers', as awareness of alternatives grow, there is every possibility that consumers will do so.

The second issue revolves around challenges for the 'challenger' institutions. Whilst the New Bank Start-up Unit provides applicants with assistance throughout the process of starting the business of being a bank and getting authorised, new banks are still experiencing difficulties after they have received authorisation. PwC highlighted the difficulties faced by new banks in a detailed report on the development of the challenger bank market within the UK.[492] PwC highlight several key difficulties for challenger banks: including the cost of compliance, capital levels, access to payment systems and data, and improving customer awareness.[493] It is argued that the requirements for challenger banks to comply with the same regulations as larger banks results in challenger institutions having disproportionately high costs compared with established institutions because of the size of their compliance departments.[494] This is impacting on the ability of challengers to develop their brand or commit resources to innovation. PwC highlight support for the view that 'the regulator should focus on enabling smaller players to take risks that will have a smaller impact – and even if they fail, such exercises provide learning opportunities for the industry.'[495] Further, capital levels are an issue for new institutions.[496] Two approaches are used within the UK to determine the capital

[489] e.g., Aldermore Bank focuses on Small and Medium sized enterprises; Monzo offers a 'mobile first' bank; Atom Bank is also a digital-only bank; and, Hampshire Community Bank offers banking services to those in the locality. For an overview of UK 'challenger' banks (incorporating FinTech start-ups), see: http://www.bankingtech.com/570702/uk-challenger-banks-whos-who-and-whats-their-tech/

[490] FCA, '*Our Mission 2017: Feedback Statement'*, FS17/1, April 2017, p 37.

[491] FCA, *Strategic review of retail banking business models*, 11th May 2017 https://www.fca.org.uk/publications/multi-firm-reviews/strategic-review-retail-banking-business-models.

[492] PwC, '*Who are you calling a 'challenger bank'?*' March 2017. https://www.pwc.co.uk/industries/banking-capital-markets/insights/challenger-banks.htm.

[493] ibid, p 3.

[494] ibid, p 15.

[495] ibid, p 15.

[496] ibid, p 12.

requirements for banks: the Internal-Ratings Based (IRB) approach and the Standardised Approach (SA), yet for banks to be able to use their own internal-ratings based models they need to provide a significant amount of information to the regulator. The time and cost demands of this process has meant that new banks operate on the basis of SA, however this approach results in banks using SA holding proportionately more capital than those on IRB (only used by the UK's six largest banks). This is also restricting the ability of challenger banks to compete effectively.[497] The PRA is currently consulting on the operation of the IRB and SA models[498] and have demonstrated that they are aware of the potential for imbalances,[499] but it is clear that there is still work to do to remove barriers for new entrants.

Access to payment systems forms the third area of concern for challenger institutions. The UK's payment systems are currently privately owned and controlled by existing market players, and, as such, operate to limit access to retail systems. The Payment Services Regulator (PSR), a body launched in 2015 with the objectives of promoting competition and innovation in payment systems whilst promoting the interests of those who use or rely on those systems,[500] is aware of the problems surrounding direct access to essential infrastructure, and has identified this as a 'top priority' in the work it is conducting.[501] It has stated its intention to enable payment service providers (including challenger banks) to be able to access payment systems 'on a fair, open and transparent basis'.[502] The Payment Strategy Forum, an industry panel set up by the PSR to develop strategy and encourage innovation, has identified the issue of access as central to its strategy,[503] and the Competition and Markets Authority's (CMA) work on retail banking is also expected to have a positive impact on the ability of challengers to gain access to payment systems and data.[504]

The Second Payment Services Directive (PSD2)[505] should be implemented in the UK in January 2018. The introduction of this Directive, in the form of the Payment Services Regulations 2017, should improve the way that banks and other payment service institutions (thus incorporating appropriately authorised FinTech firms) access payment systems and share data.[506] Regulation 103 will introduce a prohibition on restrictive rules governing access to payment systems, ensuring that, amongst other objectives, these rules do not 'prevent, restrict or inhibit access more than is necessary to: (a) safeguard against specific risks such as settlement risk, operational risk or business risk; or (b) protect the stability of the payment system;'[507] or restrict users from participating in other payment systems.[508] As the PwC report highlights, it is expected that this will be a positive development for challenger institutions and should reduce the cost and complexity of gaining access to payment systems.

However, PSD2 does not only impact access, it will also have a significant impact on the way that 'big data' and information is exchanged between payment service providers.

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[497] G Shone, *Is the UK mortgage market a level playing field for new banks?* http://banknxt.com/60808/mortgage-market-new-banks/.

[498] See PRA, 'Internal Ratings Based (IRB) approach: clarifying PRA expectations', CP 5/17, March 2017. Concerns surrounding the potential imbalances between the IRB and SA models have also resulted in the PRA consulting on the operation of its Pillar 2A capital requirements. PRA, '*Refining the PRA's Pillar 2A capital framework*', CP3/17, February 2017.

[499] M Stewart, "*Harrowing the ploughed field' – Refining the standardized capital regime*', Speech given 3 March 2017

[500] See sections 40-52 Financial Services (Banking Reform) Act 2013.

[501] PSR, '*Access*', https://www.psr.org.uk/psr-focus/access.

[502] PSR, '*Factsheet: Access and governance report 2017*', No.171. Available at: https://www.psr.org.uk/sites/default/files/media/PDF/Access-Governance-2017-Factsheet.pdf

[503] Payment Strategy Forum, '*A Payments Strategy for the 21st Century: Putting the needs of users first*', November 2016, p 5

[504] Gov.uk, 'Press release: CMA paves the way for Open Banking revolution', 9th August 2016, https://www.gov.uk/government/news/cma-paves-the-way-for-open-banking-revolution.

[505] EU Directive 2015/2366 on payment services in the internal market.

[506] The PSR has stressed that PSD2 might require changes to its approach on access to payment systems. PSR, '*Access and governance report on payment systems: update on progress and areas for ongoing focus*', March 2017, p 31.

[507] Regulation 103(1)(b) Payment Services Regulations 2017. Regulation 2 of the Payment Services Regulations 2017 defines 'payment service providers' as including authorised payment institutions, small payment institutions and registered account information service providers, among others.

[508] Regulation 103(1)(3)(a) Payment Services Regulations 2017. Regulation 103 does not amount to a requirement to allow all payment service providers access to the system. This acknowledges the commercial risks involved. It does, however, does set out the framework within which access to payment systems should be considered.

Developments in this area are not solely the responsibility of the PSR, but also build on work conducted by the CMA[509] and the Open Banking Working Group,[510] in consultation with the industry.[511] They have culminated in an 'Open Banking Application Programming Interface Standard' (the Open Banking API Standard): an industry-wide standard setting out the framework on how banking software should require authentication, enable access to data and direct payments. Banks are required to comply with this Standard by January 2018, to coincide with the implementation of PSD2, although some delays in meeting this target are expected.

The Open Banking API Standard means that firms offering services that require information on how individual consumers use their accounts will be able to access this data from banks (with the appropriate consent from the consumer) in order to provide the consumer with a service tailored to their needs[512] and greater choice in their financial dealings. This opens the possibility of all banking institutions (including challenger banks and FinTech firms) enhancing the quality of their offerings to consumers on the basis of the new data they will have available.[513]

Within the UK, the movements towards 'open banking' dovetail with a number of developments affecting the sector. The CMA view open banking as a way to improve levels of customer service and competition; open banking ensures compliance with the PSD2; and, it accords with the current political emphasis on innovation, challenger banks and FinTech within the sector. However, developments in this area do need to be monitored. Mark Carney has stated that they could 'signal the end of universal banking as we know it'.[514] There are concerns that the construction of the Open Banking API Standard will impede the ability of FinTech firms, and potentially some challenger banks, to access the data they require to compete directly with incumbent banking institutions. Further, existing challenger and FinTech firms might have to reform business models and technology to operate in accordance with the new standard.[515]

There should also be concern as to potential issues arising in the future: confidentiality questions are bound to be posed when consumers grant consent for their financial data to be used in a particular way. Questions also need to be asked about who is accountable in the event that there is a technological breakdown, or a cyberattack: the bank account provider, or the challenger/FinTech firm accessing the information or providing the 'add on' to the existing

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509 Gov.uk, '*Press release: CMA paves the way for Open Banking revolution*', 9th August 2016. Available at: https://www.gov.uk/government/news/cma-paves-the-way-for-open-banking-revolution.

510 Open Banking Working Group, '*The Open Banking Standard: Unlocking the potential of open banking to improve competition, efficiency and stimulate innovation*', 8th February 2016. https://theodi.org/open-banking-standard.

511 Nine banks (AIB Group, Bank of Ireland, Barclays, Danske, HSBC Group, Lloyds Banking Group, Nationwide, RBS Group and Santander), FinTech firms and industry leaders have been involved in the process of developing the Standard.

512 CMA, '*Making banks work harder for you*', 9th August 2016. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544942/overview-of-the-banking-retail-market.pdf.

513 The CMA remedy for 'Open Banking' only applies to business and personal current accounts, however the HM Treasury consultation on the implementation and draft Payment Services Regulations 2017 goes further than this, intending the Open Banking API Standard to apply to all online payment accounts. See, HM Treasury, '*Implementation of the revised EU Payment Services Directive II*', February 2017, p 36

514 M Carney, '*The Promise of FinTech – Something New Under the Sun?*', Speech to the Deutsche Bundesbank G20 conference on 'Digitising finance, financial inclusion and financial literacy, 25th January 2017 p 11.

515 These issues are currently at the centre of a debate currently taking place at the EU level – with the European Banking Federation seeking to amend PSD2 to incorporate a ban on a practice known as 'screen scraping' whereby consumers grant FinTech firms permission to access data by handing over confidential banking information necessary to use the service. It has been argued that this practice should be banned because it creates confidentiality and cyber security issues. FinTech firms have considered this to be an attempt by banks to limit their ability to compete and to innovate by changing the operation of the API standards and the Regulatory Technical Standards that will accompany PSD2 (not yet agreed but to be implemented 18 months after the final version is published). This episode highlights the difficulties of the debate surrounding competition and innovation in the sector itself. The general consensus appears to be that developments in the UK are less likely to be affected by this debate given the content of the Open Banking API Standard, but there are still likely to be problems surrounding the implementation and operation of the UK's standard. For an excellent podcast on this issue, see: FinTech Insider, FS:11, 'Ep 250 – *If you Liked It Then You Should've Put A Blockchain On It*', first broadcast 15th May 2017. See also: A Peyton, '*European banks call for EC support on screen scraping ban*', 16th May 2017. http://www.bankingtech.com/836582/european-banks-call-for-ec-support-on-screen-scraping-ban/ and, The Finanser, '*FinTech versus banks*, round one: PSD2', May 2017, https://thefinanser.com/2017/05/fintech-versus-banks-round-one-psd2.html/

service? The Open Banking Working Group have suggested the introduction of an independent authority to ensure that standards are met, and to compile a 'white list' of firms that have been vetted.[516] This has introduced yet another area of concern from new firms: that existing banking institutions will use this list to restrict access to consumers. It is thus evident that this is, and will continue to be, a controversial development, and one that regulators need to keep abreast of.

The overarching challenge for challenger banks is that of resilience. Despite the positive developments taking place in this area, there are likely to be difficulties ahead. For new banking institutions to survive, the regulatory regime needs to balance the interests of existing banks and new entrants whilst ensuring that the objectives of the regulatory regime are met. There are a significant number of new institutions entering the retail banking market place, and with the existence of the challenges highlighted above, talk of reconsolidation to enable smaller banks to upscale and target particular market niches is beginning to arise.[517] The pressures on business development and compliance within challenger banks have placed them in a difficult situation, and they are likely to find their position in the market squeezed with the advent of the implementation of the Payment Services Regulations II and Open Banking. Whilst some of these institutions might be better placed to deal with technological advances than incumbent banking institutions, these technological developments also raise the classic problem of unknown unknowns: problems that have not yet been identified. A market consolidation is to be expected, but if new banks and innovative firms are to be able to truly compete, addressing the hurdles in this area needs to be a priority.

Cybercrime

Intrinsically connected to developments across the banking sector are the challenges posed by cybercrime. In a recent podcast focusing on FinTech issues, Eileen Burbidge noted the risks arising from cybercrime as one of the potential crisis areas for FinTech.[518] The advent of Open Banking introduces a new set of security risks. Cybercrime presents a major ongoing challenge for both regulators and banks. Banks hold commercially sensitive data on their customers which must be protected[519] and, as the RBS Group IT failure of 2012[520] illustrated, there is a risk that a denial of service attack will render all or parts of the payments system inoperative. Larger banks are often struggling to keep their IT systems up to date[521] and an increased reliance on widely distributed technology also increases the challenge of protecting the financial sector from cyber risks.

The 'WannaCrypt0r 2.0' ransomware attack in May 2017 highlighted the threat that cybercrime poses for institutions. Whilst it does not appear that any UK banks were affected, the attack caused disruption on a global scale – affecting businesses and organisations in at least 74 countries.[522] Within the UK, the NHS was significantly affected as computers were

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[516] Open Data Institute, '*Introducing the Open Banking Standard*', 2016, p 10. https://theodi.org/open-banking-standard.

[517] B Martin, 'Upstart challenger banks eye consolidation', 7th May 2017, http://www.telegraph.co.uk/business/2017/05/07/upstart-challenger-banks-eye-consolidation/.

[518] BBC Radio 4, 'The Bottom Line: FinTech', podcast initially broadcast 16th March 2017. www.bbc.co.uk/programmes/b08hpwbz.

[519] For a recent failure to do this, see the case of Tesco Bank discussed by A Charlesworth and K Stanton, *Tesco Bank and Cybercrime*, http://legalresearch.blogs.bris.ac.uk/2016/11/tesco-bank-and-cybercrime/.

[520] This was not a case of cybercrime but it does show the disruption that a successful denial of service attack could cause to the payments system. Internal IT failures within the banks resulted in approximately 6.5 million customers (ie 10% of the UK population) encountering difficulty in accessing their accounts for up to six days. This inevitably had a knock on effect on non-customers whom the customers were dealing with. The regulators imposed penalties totalling £56 million on the banks in respect of these failures. See PRA, Final Notice, *Royal Bank of Scotland Plc, National Westminster Bank Plc, Ulster Bank Ltd,* 20th November 2014, and FCA Final Notice, *Royal Bank of Scotland Plc, National Westminster Bank Plc, Ulster Bank Ltd*, 20th November 2014.

[521] M Arnold, T Braithwaite, *Banks' Ageing IT Systems Buckle under Strain,* Financial Times, June 18th 2015, https://www.ft.com/content/90360dbe-15cb-11e5-a58d-00144feabdc0; FCA, *'Business Plan 2016/17'*, April 2016, p 22

[522] The Guardian, *'Accidental hero' halts ransomware attack and warns: this is not over'*, 13th May 2017, https://www.theguardian.com/technology/2017/may/13/accidental-hero-finds-kill-switch-to-stop-spread-of-ransomware-cyber-attack.

rendered inaccessible and staff were unable to access patient data [523] Numerous banking institutions took steps to strengthen their online security in the weekend after the cyberattack,[524] but it is not difficult to envisage the problems an attack on this scale could cause for banking institutions and global financial stability, especially if confidential banking data were to be leaked, or if the payments system were to be affected. The threat posed by cybercrime will only continue to increase as attackers become more sophisticated and technological developments, such as the 'internet of things,' open new ways of routing an attack.

This is not an area in which there are calls for deregulation. Indeed, the regulators already possess adequate tools to deal with failures to take proper precautions.[525] However, cybercrime presents a practical challenge for regulators seeking to ensure that a large financial services industry is alive to constantly evolving risks.

The FCA's approach in this area is a three pronged proactive one under which firms are expected to get the basics right. This includes: having a good backup strategy, one which enables data to be easily restored, in place;[526] developing a 'secure culture' amongst staff in order to ensure that individuals do not undermine the bank's efforts to ensure security and cooperating by sharing information about risks with others in the industry. The FCA has established a number of Cyber Coordination groups with the aim of improving understanding of the risks in this area. It is hoped that a sharing of solutions will increase the resilience of firms in the face of attacks. The FCA is also collaborating actively on the issue with regulators in other countries.[527]

Conclusion

The 2008 crash was a trauma for banks, their regulators and society in general. The lessons that were learned in a hard way about the risks that light touch regulation of banks can create for the whole economy must not be forgotten.

Progress has been made. The UK's banking sector is regularly claimed to be more capable of withstanding a severe shock nowadays than it was in 2008. Significant moves have been made to improve the culture in banks, albeit that it is still unclear how effective these will be.

However, politicians and regulators must appreciate that times have moved on and that new risks which need to be confronted have emerged. The political climate has changed radically and technology continues to advance. The period following the crisis witnessed strong support for enhanced global banking standards. Emerging free market politics in countries which are actively seeking to protect national interests may well pose a threat to this consensus. In addition, emerging technologies and cybercrime continue to pose new questions for regulators. In particular, as the technology under development is unlikely to be confined by national frontiers the choice is between global regulatory standards and regulatory arbitrage.

Whether what is being done is sufficient to protect the banking system against new and currently unforeseen risks remains to be seen. The next financial crisis is highly unlikely to resemble a previous one. What is clear is that political decisions to reduce the level of

[523] S Neville, '*NHS fights to restore services after global hack*', 13th May 2017, https://www.ft.com/content/fa5ed73a-37e7-11e7-ac89-b01cc67cfeec

[524] J O'Donnell and A Winning, '*Banks reinforce cyber defences after global attack*', 15th May 2017, http://www.reuters.com/article/us-cyber-banks-idUSKCN18B2A3

[525] PRA Rulebook, Fundamental Rules 5 and 6. FCA Handbook Principles for Businesses Principle 3.

[526] It is said that the majority of security breaches involve a small number of vulnerabilities, most of which are known and could be eliminated by use of available fixes. Delfas, fn 175 below and the Government sponsored Cyber Essentials scheme at https://www.cyberaware.gov.uk/cyberessentials/.

[527] N Delfas, *'Expect the unexpected' - cyber security - 2017 and beyond*, Speech at the Financial Information Security Network. 24th April 2017, https://www.fca.org.uk/news/speeches/expect-unexpected-cyber-security-2017-and-beyond.

regulation in order to benefit the economy should not be taken without a full appraisal of the possible impact on the economy of such deregulation in a variety of (possibly unlikely) circumstances. On the other hand, the view that the current model of supervision of banks must continue unaltered should not go unquestioned. Today's consensus may well be tomorrow's fallacy. The rules which have emerged since 2008 may well require rethinking and modification in the light of technological change.