Unchaining the blockchain

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2015 was something of a breakthrough year for blockchain, with significant achievements in terms of identifying value-add use cases and securing meaningful investment.

While a 'blockchain revolution' may seem inevitable to some, this article considers the regulatory obstacles to revolution and asks what blockchain-focussed regulation may look like.

Unleashed but not unchained

Blockchain applications can achieve meaningful structural simplifications in financial services, but the core priorities of regulators – the stability and continuity of financial services and markets – will remain constant. If the blockchain is to be used as a platform for systemic financial activity, we should not expect it to be unchained from regulation, but blockchain pioneers have an opportunity to influence the regulatory landscape.

Blockchain gains

2015 has been called 'the year of the blockchain', a reference more perhaps to the pace of innovation than to widespread commercial application. Although the heralded 'blockchain revolution' is now written about with a sense of inevitability, the timing and success of this revolution will depend on blockchain pioneers overcoming regulatory obstacles familiar to any fintech entrepreneur.

If, as many expect, blockchain applications come to play a central role in the financial services ecosystem – in particular banking and payments infrastructure and securities trading and settlement systems – it is inevitable that those applications will attract regulatory scrutiny of one form or another.

This is not necessarily to be frowned at. While excessive or disproportionate regulation can have a suffocating effect on innovation by raising barriers to entry for new models, those models can just as easily suffocate in a regulatory vacuum.

A 'risk' that fintech innovation will destabilise financial systems has been identified at both national and international levels – the Financial Stability Board (a body formed by the G20 to set international regulatory standards) recently identified the risk of operational disruptions caused by fintech as an area for its focus in 2016 – but there is scant evidence that law-makers and regulators are motivated to frustrate innovation; in the UK at least, the regulator is effectively obliged by statute to do the opposite.

A meaningful regulatory policy for blockchain activity in the UK financial services sector has yet to be articulated, but it seems to us unrealistic to expect blockchain-based financial services applications ever to be completely unchained from regulation.

The right question is therefore perhaps not whether the blockchain will be unchained, but what will those chains look like, and how and where will they be attached?

Disintermediating the system

Simply put, the effect of a distributed ledger such as the blockchain is to disintermediate transactional activity. Negating the role of intermediaries could, at a stroke, render a swathe of regulation obsolete. We believe the blockchain revolution could therefore also lead to a regulatory revolution of sorts, with the technology being a driver of less rather than more regulation.

The impact of the technology may nevertheless be tempered in some areas where incumbent regulatory frameworks require (for now at least) the presence of an intermediary, although even here Blockchain applications could influence the development of standards if they offer policy-makers a robust alternative to intermediary-based models.

A good example of this may be the world of OTC derivative contracts, which both Europe and the US now require to be cleared as far as possible through centralised clearing bodies. Interestingly the initial thinking behind these measures was that centralised clearing would increase transparency and certainty and thus reduce systemic risk (following the collapse of Lehman Brothers, uncertainty about the status of OTC derivative transactions caused destabilisation on a global scale). But the concentration effect of focusing trillions of dollars of transactional activity through a small number of centralised ledgers is now also giving rise to concerns. Blockchain solutions may address these concerns.

So will the blockchain revolution feature a regulatory bonfire? Perhaps; while we can see how blockchain technology could make some aspects of the regulatory framework redundant in the longer term, it must also be the case that financial regulators will remain focussed on maintaining adequate means to manage the next Lehman-type systemic disruption event. New financial infrastructure models based on distributed ledger technologies (whether public or private) will not therefore be permitted to operate beyond the perimeter of that regulatory framework: the regulatory means may need to change, but the policy ends will not.

The promoters of blockchain applications in the financial services sector will need to work with policy-makers and regulators to ensure that existing regulatory architectures are not inimical to the practical applications of the blockchain.

But if there is to be a true blockchain revolution such that the technology becomes an integral part of the financial ecosystem, regulators will need to find an effective means to exercise comparable levels of oversight and the ability to manage systemic disruption events. We believe this may lead regulators to seek powers not just in relation to the operation of applications built on blockchain technology, but also in relation to the blockchain itself.

In short, we believe the more revolutionary its effects and the more pervasive its reach, the greater the imperative for regulatory policy-makers to seek powers to regulate not only the front end applications living on the blockchain, but also the operation of the blockchain which underlies those applications.

The blockchain offers regulators a radical alternative to 'traditional' means of supervising. By looking for the means to exert control over the blockchains underlying critical financial services systems, regulators might regulate 'from within'. Far from doing away with regulatory oversight, could blockchain technology place regulators at the heart of every transaction?

Regulation is not the bogeyman

2015 undoubtedly saw a significant loosening of the technological and financial chains that might previously have held back the development of commercial blockchain applications but we detect a concern from some quarters that the resulting acceleration could be slowed by regulatory complications.

Before considering how blockchain technology may be regulated in the future, we think it important to challenge an assumption that has sometimes been regarded as axiomatic: that regulation will impede the development of new technological models for financial services. While regulation is fairly associated with an element of cost and administration, pragmatists will recognise that sensible and proportionate regulation can in fact stimulate rather than stifle a nascent industry.

It is perhaps instructive to consider the differing experiences of the bitcoin project and the UK's online P2P lending sector. Until recently, bitcoin had avoided regulation almost completely, but as a result seems now to have been permanently scarred by its 'Wild West' repute in mainstream media and a series of damaging trust and confidence issues. Recent proposals to apply anti-money laundering measures to bitcoin exchanges seem unlikely to heal those scars: confidence is hard earned and easily lost.

This contrasts sharply with the development of the UK's P2P lending sector. Originally unregulated, early pioneers in the UK collaborated to write industry codes and lobbied the UK Government for the introduction of a proportionate regulatory regime. The result has been a framework that has buttressed consumer confidence and, through establishing barriers to entry, given early risk-takers some space to grow. The UK now has one of the largest P2P lending markets in the world.

The challenge for industry participants is therefore not so much to unchain blockchain applications from regulation completely, but to ensure that the right sort of regulation is applied so that it contributes to the appeal of applications that utilise the technology.

The optimum level of regulation will, of course, depend on both the nature of the blockchains involved (public vs private) and their applications. As was the case for P2P lending platforms in the UK, a logical short-term objective for proponents of blockchain applications in financial services may well be to develop bespoke industry standards that can shape the direction of the regulatory policy debate. That debate will no doubt intensify if the anticipated blockchain revolution takes hold.

Prevention before cure

So if the blockchain revolution takes hold, how might law-makers and regulators approach the regulation of blockchains and their real world applications? We believe the answer to this question lies in appreciating that blockchain activity will be subject essentially to two sets of rules.

The first set of rules, 'legislative rules', are external laws and regulations which can apply to the blockchain and to any blockchain-based financial service or product. Legislative rules for financial services and activities tend to apply without reference to the technological basis of those services and activities. Thus, blockchain-based securities settlement activities should ostensibly be subject to the same external legislative rules as traditional securities settlement systems.

The second set of rules, 'technical rules', are embodied in the coding that gives life to the blockchain itself. The technical rules are intrinsic and internal to the blockchain in question and are for now beyond the scope of government or regulatory oversight.

In principal, therefore, there are two quite different ways to control or influence the

parameters within which a blockchain application functions.

So where will regulators choose to focus their attention? It seems quite possible they will take a hybrid approach. Nobody expects law-makers and regulators to dispense with legislative rules, though any attempt to legislate around the blockchain will clearly require bespoking and 'fintech futureproofing'. We suggest, however, that regulators could well become more focussed on controlling or influencing the technical rules in the longer term.

We have two reasons for making this prediction.

First, regulators will be unnerved by the fact that a decentralised operating model can act to obscure the identity of the person 'performing' any given regulated activity and the location of that activity – two data points that are key to determining the application of legal powers in the existing model for regulation by legislative rules.

This may lead to blockchain-based systems being perceived in some way to be evading regulatory jurisdiction. If regulators struggle to make use of traditional legislative rules to exercise control over blockchain-based financial activity, the logical next step will be to seek powers that facilitate access to the technical rules that control the parameters of that activity.

This could potentially be achieved in legal terms by making the lawful operation of blockchain-based financial systems conditional on blockchain sponsors and coders granting access in one form or another to regulatory authorities.

The second ground for our prediction, however, is more fundamental and could have ramifications for the broader fintech industry.

We believe that supervision by regulation of technical rules may prove too tempting a proposition for policy-makers and regulators to resist. The attraction of focusing on the control of technical rules is that, potentially, rather than needing to identify and pursue bad behaviour after its occurrence, it should in principle be possible to calibrate blockchains to exclude particular forms of behaviour before they occur.

In effect, by controlling or influencing technical rules, regulators could ensure that legislative rules become hardwired into the DNA of a blockchain application. Regulation of technical rules could give regulators more power than ever before to police conduct in regulated financial markets.

There is a certain irony about this conclusion, given that blockchain has been all about excluding centralised authority, rather than providing a means for it to be exercised. The prospect of regulatory intervention in blockchain coding may, therefore, be philosophically distasteful for some. But philosophical principles are not necessarily compatible with commercial outcomes.

The manner and intensity of regulation should, of course, be proportionate to the nature and systemic significance of any given blockchain application, but in cases where a blockchain becomes integral to the functioning of systemically important financial systems, romantic notions of open source code, community ownership and light touch regulation seem far-fetched.

Setting the agenda

This brings us to the question of what a blockchain revolution would look like. The word 'revolution' implies a paradigm shift in the way systems function and services are provided. We doubt the conditions are right for this to happen in the near-term, and we anticipate instead that over the course of 2016 and 2017 there will be a proliferation of private blockchains organised within national or at least regional (e.g. EU) borders, and this will lead to an incremental evolution in financial system infrastructure – a controlled small-scale revolution in select test-beds.

A full-scale blockchain revolution could conceivably follow if use-cases are sufficiently proven and traction can be gained with consumers (wholesale or retail, as the case may be); and, crucially, if there is a credible regulatory framework that fosters rather than frustrates the emergence of blockchain-based models for bettering existing financial market systems.

The blockchain should not be viewed as a means of decentralising control in the financial system; rather it merely transfers control to a different group – the sponsors and coders of the blockchains on which new applications operate. By making it a legal condition of operation that regulators can exert control or influence over the underlying coding of the blockchains on which new applications operate, regulators may find that the technology facilitates more rather than less supervision of transactional activity.

The blockchain will never be completely unchained from regulation if used as a platform for activities that are either already regulated or otherwise systemic to the financial system. We suggest that a key question for proponents of blockchain applications in the sector is whether regulators will limit their role to supervising the providers of blockchain applications or whether they will involve themselves more directly in the functionality of the underlying blockchains.

Our sense is that where blockchain technology underlies applications that have systemic significance for the financial system, the opportunities presented by taking powers to control or at least influence the technical rules that govern the operation of a blockchain will be compelling.

However, as the experiences of P2P lenders demonstrate, blockchain entrepreneurs should not regard themselves as passive spectators to the formation of this new regulatory landscape; rather as active architects of that landscape. By working together to develop industry codes or by engaging in proactive outreach with policy-makers and regulators, fintech innovators more generally have an opportunity to help fashion a regulatory regime that meets the needs of government, industry and consumers.

We are undoubtedly now in a transitional phase and there is still much to play for when it comes to a regulatory policy for blockchain solutions in the financial services sector. If applied proportionately and intelligently, regulation could nurture and even hasten the revolution rather than quash it: the blockchain can be unleashed without being fully unchained.

The authors are both members of the fintech team at Slaughter and May. We are interested in your views on this topic – please get in touch if you have any thoughts to share.

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