

Regulating Financial Benchmarks by 'Proprietisation': A Critical Discussion

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Abstract and Introduction

The integrity of price-related financial benchmarks such as the London Inter-bank Offered Rate (LIBOR) and the foreign exchange London WM Reuters 4pm 'fix' has suffered in the wake of revelations of manipulative activity carried out by individuals in financial institutions. A regulatory regime has since 2013 been introduced in the UK to oversee LIBOR, and more comprehensive thinking has been developing in relation to regulating financial benchmarks in general.¹ This article argues that the regulation of financial benchmarks is very much caught between the desire on policy-makers' part to preserve market stability, and yet maintain the nature of the financial benchmark as a market good.

In the immediate aftermath of benchmark manipulation revelations, it is clear that regulatory response is needed. However, as will be discussed, policy-makers wished to avoid excessive intervention that would 'publicise' important benchmarks, and yet create a regulatory regime that would assure of the credibility of financial benchmarks that are produced by the private sector. The ultimate approach taken in the UK legislation is premised upon preserving hitherto trusted benchmarks by allowing them to become 'proprietised'. These premises also underlie the international framework developed by IOSCO and the European approaches.

The 'proprietisation' approach essentially allows designated entities to have exclusive rights to develop and exploit the financial benchmark in return for protecting its quality. This is a market-based approach which preserves hitherto important financial benchmarks, but such preservation is achieved at the price of destroying the original characteristics of the benchmarks. The article fleshes out the features of the UK, EU and IOSCO regulatory regimes that reflect the proprietisation approach and critically engages in its benefits and drawbacks. We argue that the proprietisation approach, heavily underscored by regulatory subsidy, neither delivers optimal characteristics of market-based governance nor effectively addresses key regulatory objectives. We offer some suggestions as to adjustments to the current regulatory frameworks.

1. Developing the Regulation of Price-related Financial Benchmarks

Price-related Financial Benchmarks

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¹ See for example, Financial Stability Board, *Progress in Reforming Major Interest Rate Benchmarks* (July 2015); International Organisation of Securities Commissions, *Review of the Implementation of IOSCO's Principles for Financial Benchmarks* (Feb 2015).

Financial benchmarks are widely used in determining the price of many financial contracts. For example, an interest rate benchmark serves the purpose of sign-posting the cost of credit at any one time. An interest rate benchmark like the London Inter-bank Offered Rate (LIBOR) provides a basis for the calculation of the price of debt over a period of time. As debt contracts need to mature, whether in the short term or longer term, parties to such a contract who have to agree on the price of debt at the outset are unable to fix the price where the value of a currency inherently fluctuates according to changes in interest rate. Benchmarking the price of a debt contract allows for limited flexibility and the best-possible certainty in determining price in an incomplete contracting situation. The benchmark device thus saves on future transaction costs in terms of research and negotiation costs over the period of the contract. It acts as a facilitator for trust and access to such transactions, and serves the wider economic objective of democratising access to credit.² Financial benchmarks that play such a crucial role in contractual price formation are hereinafter referred to as ‘price-related financial benchmarks’.

The LIBOR was first developed in the 1980s³ to facilitate the syndicated loans market, which allowed groups of banks together to fund large corporate borrowings and to share risks. In order to arrive at a price of debt that would be agreeable to all in the most cost-effective manner, the use of an interest rate benchmark to price the loan over the term seemed most efficacious and sensible. LIBOR has been generated by banks in the syndicated loans market, but the adoption of LIBOR has been extended to price a range of wholesale financial instruments such as futures, options and swaps, and also longer term products such as loans, savings and mortgages. Other financial benchmarks that serve the purpose of price discovery and the reduction of transaction costs are found in contracts that involve currency exchanges, e.g. the WM Reuters 4pm fix for foreign exchange; and commodities whose prices are subject to regular fluctuations in market discovery, e.g. the London gold fix and LBMA silver fix, and the ICE Brent futures for crude oil.⁴ These are largely used in the wholesale sector.

Price-related financial benchmarks have become important collective goods generated by financial sector institutions to meet the needs of financial intermediation. They are privately produced goods albeit serving the collective purpose of the financial markets, and have hitherto been in the realm of ‘private ordering’⁵ or self-regulation. As the integrity of a number of price-related benchmarks has been recently undermined, this calls into question the weaknesses of the self-regulatory nature of such privately produced collective goods.

From Self-Regulation to Regulation

² Darrell Duffir, Piotr Dworzak and Haoxiang Zhu, ‘Benchmarks in Search Markets’ (2014) at <http://ssrn.com/abstract=2515582>.

³ *The Wheatley Review of LIBOR* (Final Report Sep 2012) at p.75.

⁴ All identified as important benchmarks in Fair and Effective Markets Review, *Recommendations on Additional Financial Benchmarks to Be Brought into UK Regulatory Scope* (Report to HM Treasury, Aug 2014).

⁵ Also discussed in Dan Awrey, ‘The Limits of Private Market Ordering within Modern Financial Markets’ (2015) Review of Banking and Financial Law, forthcoming.

The London Interbank Offered Rate⁶ (LIBOR) and the London foreign exchange ‘4 pm fix’⁷ scandals have revealed the weaknesses of the private ordering system for price-related financial benchmarks. As price-related benchmarks are a collective good, many financial sector participants play a part in the production of the benchmark, by making submissions, quotes or producing transaction data. The inputs may be made with self-interest in mind, or may even be manipulative in nature. Although there may be a centralised body that aggregates the inputs (for example the British Bankers’ Association in relation to LIBOR up to 2014), such a body can be largely administrative in nature and does not police the substantive quality of the benchmark. Hence there may not be any incentives for financial sector participants or benchmark aggregating bodies to be dedicated to the collective maintenance of benchmark quality. The revelations that large global banks such as Barclays,⁸ UBS⁹ and JP Morgan¹⁰ have been engaged in manipulative conduct relating to LIBOR, the WMR London fix for foreign exchange trading and the London gold fix have raised concerns globally as to the inadequacy of self-regulation.¹¹

In response to the LIBOR scandal, the UK instituted the Wheatley Review which recommended in September 2012 that a regulatory regime should be established for LIBOR.¹² This became a leading template for international study, and was arguably influential in the issue of non-binding Guidelines by the European Banking Authority/European Securities and Markets Authority in June 2013¹³ and in the introduction of the Principles for Financial Benchmarks by the International Organization of

⁶ “LIBOR Manipulation: Done for you, Big Boy”, *Financial Times* (27 June 2012); ‘Barclays hit with £290m Fine over LIBOR Fixing’, *The Telegraph* (27 June 2012); ‘UBS Latest Bank to be Hit with Multimillion LIBOR Fine’, *The Guardian* (13 December 2012); ‘RBS Fined £390m for Rigging LIBOR Interest Rate’, *The Guardian* (6 February 2013). Martin Wheatley, *The Wheatley Review of LIBOR* (Sep 2012).

⁷ ‘Six banks fined \$5.6bn over rigging of foreign exchange markets’, *Financial Times* (20 May 2015); ‘FCA fines five banks £1.1 billion for FX failings and announces industry-wide remediation programme’, FCA Press release (12 Nov 2014) at <http://www.fca.org.uk/news/fca-fines-five-banks-for-fx-failings>.

⁸ ‘Timeline: Barclays Libor-fixing Scandal’, *BBCNews* (6 Feb 2013) at <http://www.bbc.co.uk/news/business-18671255>; ‘Barclays fined £26m for failings surrounding the London Gold Fixing’, *FCA Press Release* (23 May 2014) at <https://fca.org.uk/news/barclays-fined-26m-for-failings-surrounding-the-london-gold-fixing>.

⁹ ‘UBS traders charged, bank fined \$1.5 billion in Libor scandal’, *Reuters* (19 Dec 2012); ‘UBS to settle allegations over precious metals trading’, *Financial Times* (9 Nov 2014).

¹⁰ ‘Foreign exchange: The big fix’, *Financial Times* (12 Nov 2013) discussing 15 banks including JP Morgan in foreign exchange fixing.

¹¹ Justin O’Brien, ‘Singapore Sling: How Coercion May Cure the Hangover in Financial Benchmark Governance’ (2013) at <http://ssrn.com/abstract=2350445>.

¹² Martin Wheatley, *The Wheatley Review of LIBOR* (Sep 2012). The regulatory regime for LIBOR is found in the FCA Handbook MAR 8.

¹³ EBA/ESMA, *ESMA-EBA Principles for Benchmark-Setting Processes in the EU* (June 2013).

Securities Commissions (OICU-IOSCO) in July 2013¹⁴ following a 3 month consultation from April 2013. The UK has continued to developed more comprehensive thinking about regulating non-securities markets in the fixed income, currencies and commodities sectors (FICC) including the use of financial benchmarks in those sectors. The Fair and Effective Markets Review was established by the UK Chancellor in June 2014, to conduct a comprehensive and forward-looking assessment of the way wholesale non-equities markets operate,¹⁵ including a review of financial benchmarks that are UK-based, of significant importance to the financial markets and relating to which serious misconduct concerns have arisen. The Review recommended in an interim report in 2014 that the LIBOR regime established in 2013 should be extended to seven other widely used benchmarks in UK markets.¹⁶ In the final report of the Review published in June 2015,¹⁷ the Review made further recommendations that would strengthen the integrity of the FICC markets and financial sector trading culture generally. The Financial Stability Board (FSB)¹⁸ monitors the outworking of benchmark governance regimes. Further, the EU has now finalised legislation¹⁹ on financial benchmarks generally, in the form of a Regulation that is applicable to all Member States without national transposition.

This article argues that the new regulatory frameworks have adopted an approach that ‘proprietyises’ the financial benchmarks within their scope. This is a market-based approach which avoids excessive regulatory control (perhaps to prevent moral hazard and the drawbacks of publicising financial benchmarks, as will be discussed below) yet is driven by the public interest needs of maintaining

¹⁴ OICU and IOSCO, *Principles for Financial Benchmarks: Final Report* (July 2013).

¹⁵ The aim is to produce a comprehensive survey and recommendations that would holistically address issues of trust and confidence in wholesale markets, to help restore trust in those markets and influence the international debate on trading practices, see <http://www.bankofengland.co.uk/markets/Pages/fmreview.aspx>. The integrity of important financial benchmarks fall within the scope of the review, and an interim report of the Review has already highlighted the need to subject these to regulation. The benchmarks identified therein will be subject to FCA regulation from 1 April 2015. See <http://fca.org.uk/news/fca-to-regulate-seven-additional-financial-benchmarks>.

¹⁶ The scope of financial benchmarks highlighted for regulatory attention is based on the scale of use and hence impact upon the market if the benchmark were impeached- ‘In judging whether a benchmark could be regarded as ‘major’, the Review had regard to a number of indicators, including the number and value of financial contracts directly or indirectly linked to the benchmark, the range of different usages to which the benchmark is put, and the degree of market recognition. In the Review’s judgment, it is these benchmarks that would have the biggest impact on retail and wholesale investors if they were distorted or abused, and would represent the greatest source of systemic vulnerability and risk if their integrity were questioned.’ See *Fair and Effective Markets Review, Recommendations on Additional Financial Benchmarks to Be Brought into UK Regulatory Scope* (Report to HM Treasury, Aug 2014) at para 28.

¹⁷ *Fair and Effective Markets Review: Final Report* (Bank of England, June 2015).

¹⁸ See note 1.

¹⁹ European Commission, *Proposal for a Regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial Contracts* (27 Oct 2014, version Presidency compromise text). See final compromise text of the Parliament and Council which will be finalised into legislation at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf> (4 Dec 2015).

market stability. Section 2 will set in context the key drivers for the ‘proprietyisation’ approach. Section 3 explains how this approach has shaped the key features of the IOSCO, UK and EU regulatory regimes. Although the EU regime will supercede the UK regulatory framework once it comes into force, it is still useful to examine the pioneering framework that the UK developed which provided the fundamental leadership in adopting the ‘proprietyisation’ approach. Section 4 critically draws out the implications of this approach and argues that its weaknesses have been recognised, such as by the FSB. However, there are a number of difficulties in overcoming these weaknesses, such as via the approach of developing alternative benchmarks. Section 5 offers some concluding remarks.

2. Theoretical and Policy Context to the ‘Proprietyisation’ of Price-related Financial Benchmarks

The pioneering regulatory framework in the UK has adopted a market-based approach to regulating financial benchmarks. This is consistent with the subsequent IOSCO regime and the new EU regulatory regime. Designated private sector institutions are now responsible for producing and maintaining the benchmarks, an approach termed in this article as ‘proprietyisation’, subject to regulatory obligations and accountability. Regulatory compliance by these institutions act as a proxy signal of benchmark credibility for financial markets, so market confidence in the relevant benchmarks can be maintained.

The Proprietyisation Approach

The key attributes of the proprietyisation approach are essentially: designating ‘ownership’ of the benchmark in order to incentivise quality maintenance; imposing a regime of governance for such ‘owners’ as the ‘owners’ can now be identified and regulated; and designating specific responsibilities for such owners in return for the enjoyment of their ownership rights conferred by regulation. Such a regime is akin to the conferment of exclusive exploitation rights over intellectual property, except in this case, the generation of the ‘intellectual content’ in financial benchmarks may not clearly be attributed to the designated owners. Price-related financial benchmarks are often generated out of an aggregate of information, whether based on trade data or notional submissions. Hence, the boundaries between public and private may seem blurred for such a collectively produced good that is capable of benefitting the market generally. We argue that policy-makers seemed averse to traversing into the ‘public’ side of the boundary in becoming responsible for administering price-related financial benchmarks that have become widely-used and important. Hence, a deliberate decision was taken in UK regulatory policy to frame the price-related financial benchmark as a private good and to strengthen its private good characteristics, although the *raison d’être* of governing such goods lies in public interest. This incomplete characterisation, which is the cornerstone of the proprietyisation approach, accounts for much of the weaknesses in the regulatory regimes discussed in this article. As Section 4 will flesh out, the ‘market-based’ proprietyisation approach is unlikely to achieve optimal forms of market-based governance such as competitive efficiencies and market discipline, as it is heavily underscored by regulatory subsidy and distortion. On the other hand, the extent of regulatory governance is restrained in deference to the market-based proprietyisation approach. This results in an inadequate balance of regulatory governance to address key public interest needs such as long-term market and systemic stability.

This Section now turns to the theoretical perspective of the price-related financial benchmark offered by Rauterberg and Verstein which very much accords with the proprietisation approach adopted in regulation. We will point out the weaknesses in the theoretical framework, which can now be discerned in the current regulatory frameworks discussed in Section 3. Nevertheless, the ‘proprietisation’ approach meets the needs of certain policy drivers, which will also be discussed below.

Theoretical Perspective of the Price-related Financial Benchmark

The price-related financial benchmark has been described by Rauterberg and Verstein²⁰ as a ‘by-product index’. They argue that the ‘by-product’ nature of such benchmarks make them especially susceptible to damage.

Rauterberg and Verstein²¹ are of the view that price-related benchmarks are not developed as end products in themselves, but as mechanisms to facilitate financial contracting. Thus, no one is incentivised to dedicate resources to the protection of by-product quality. In fact, perverse incentives may be at play, manipulating such by-products as long as the end result desired by the manipulators are met.

The authors suggest that the quality of ‘by-product’ indices can only be improved if by-producers are allowed to become producers, having stronger intellectual property and proprietary rights over these indices so that they can profit out of index production. Turning price-related benchmark production into a commercial activity would incentivise the ‘producers’ to protect the ‘brand’ associated with these benchmarks. In this way, those interested in the commercial viability of the benchmark would take ownership of its quality and institute due governance for it.²² This article terms the above approach as the ‘proprietisation’ of financial benchmarks. The governance of such benchmarks is premised upon the conferment of exclusive proprietary rights over them to designated private sector entities.

The regulatory frameworks in the UK, IOSCO and EU have to a large extent adopted this approach of incentive regulation by proprietisation. Section 3 fleshes out the regulatory attributes reflecting the proprietisation approach. Before we turn to those, this article suggests that the perspective taken by Rauterberg and Verstein, which emphasises incentives for producers of the benchmark, should be adopted with caution. This is because the perspective neglects the users of the benchmarks, which are the subjects intended for regulatory protection.

By-product indices are rather special market goods as they are not only consumed by users who are in a bilateral contractual relationship with the producer of the good. As by-product indices are developed for the purposes of facilitating financial transactions, they have been made freely

²⁰ Gabriel Rauterberg and Andrew Verstein, ‘Index Theory: The Law, Promise and Failure of Financial Indices’ (2013) 30 *Yale Journal of Law and Regulation* 101.

²¹ Gabriel Rauterberg and Andrew Verstein, ‘Index Theory: The Law, Promise and Failure of Financial Indices’ (2013) 30 *Yale Journal of Law and Regulation* 101.

²² The ICE’s administration of LIBOR now adopts this model to a certain extent, see ICE, *Position Paper on the Evolution of ICE LIBOR* (20 Oct 2014). ICE, *Position Paper on the Evolution of ICE LIBOR* (20 Oct 2014).

available and are not restricted in use and redistribution. For example, where LIBOR is concerned, although the development of the benchmark was for the purpose of providing the necessary mechanism for banks in a syndicated loan group to enter into such transactions in a cost-effective manner, the producers have no incentive to restrict use and indeed every incentive to promote use as the benchmark device could then be used to overcome transaction costs in other syndicated loan transactions, credit and structured credit transactions, derivative transactions and so on. Financial institutions are incentivised to freely distribute the interest rate benchmark in order to promote the growth of transactional markets based on this transaction-cost effective device. Consumers generally benefited from this as access to financial transactions may be made easier and at lower cost of price discovery. The ‘free-riders’ of by-product indices are an important group of stakeholders in these benchmarks. Their adoption and use of a financial benchmark adds value to the benchmark by collective affirmation, strengthening a benchmark’s appeal and leadership. This is beneficial to the benchmark producers in creating a positive feedback loop effect that reinforces the credibility of the benchmark. Hence, financial institutions have no incentive to limit free access and redistribution of such benchmarks and it is arguable that the very nature of by-product indices is characterised by such free access to them.

A regulatory approach that seeks to proprietise financial benchmarks would fundamentally change the nature of these by-product indices and the relationship between these benchmarks and their user base. Although regulators believe that the proprietisation approach will introduce incentives for the benchmark producer to protect benchmark quality, hence benefitting users, the benefit of free access to this transaction-cost reducing mechanism may be compromised. Although the EU Regulation explicitly states that access to the benchmark should be provided based on transparent and non-discriminatory criteria, access is no longer free.²³ This is not necessarily an approach that is *wrong*. However, it is important to point out this particular tradeoff, which will be discussed in detail in Section 4, in considering the objectives of introducing regulation. We now turn to the policy drivers supporting the proprietisation approach.

Policy Drivers for the Proprietisation Approach

The Wheatley Review that was commissioned to look into LIBOR reform after the manipulation scandals emerged considered many possibilities in regulating LIBOR, including the possibility replacing LIBOR with a new regulated benchmark. It ultimately concluded in favour of comprehensively reforming LIBOR. The Review was convinced by representations to the effect that LIBOR was not severely damaged to the extent that needed replacement, and that it would be highly disruptive to the market, if a forced change from LIBOR were to occur.²⁴

From the perspective of market participants, preserving the incumbent financial benchmark that is already widely used is important for market stability. But as the incumbent benchmark is damaged by market manipulation, there is a need for regulation to play a part in restoring the credibility of the benchmark. The market stability agenda requires a proportionate but not revolutionary

²³ Article 13b, at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

²⁴ Martin Wheatley, *The Wheatley Review of LIBOR* (Sep 2012) at paras 1.11-1.12.

response.²⁵ Hence, reforming LIBOR was designed to secure the effect of preserving *and* strengthening the existing benchmark. In this respect, the ‘proprietyisation’ approach arguably meets the objectives in reforming LIBOR. The proprietyisation of a financial benchmark ensures its preservation, as a private sector entity is incentivised by commercial motivations to protect that benchmark in order to exploit it. The private sector entity is made subject to regulation in return for its right of commercial exploitation. Thus, the existence of regulation underscores the credibility of the benchmark and supports market confidence in it. The proprietyisation approach arguably achieves congruence with the immediate market stability needs identified by policy-makers.

However, it could equally be argued that market stability needs are achieved by making LIBOR a public good instead of allowing private sector entities to assume proprietary rights over it. Self-regulation has failed in respect of LIBOR, and would not regulatory intervention be appropriate to address the failure of such private ordering?²⁶

Regulators have the option of turning LIBOR into a public good,²⁷ and this would preserve the commons nature of the good. Such an option brings about the chief advantage that the benchmark continues to be an easily accessible transaction-cost reduction mechanism that would help promote access to markets, a socially useful and fair objective. However, public administration of what first began as a market good may not always be appropriate and may bring about unintended consequences. There would no longer be a market for benchmarks, but one could argue that this same consequence entails too if the proprietyisation approach is taken. Benchmark proprietyisation could allow certain benchmark administrators to entrench incumbent benchmarks and distort competition in the market for benchmarks. Nevertheless and perhaps more importantly, the disassociation of a market-based financial benchmark from free markets would create adverse impressions surrounding the benchmark. Kreicher et al²⁸ argue that users have long favoured private sector produced benchmarks over government ones as the latter are prone to instability when policy changes or macro-economic or political shocks occur. Rebranding a damaged benchmark as a public good would likely be looked upon disfavouredly in markets as global market participants would be concerned about whether domestic policy and political interests would interfere with the integrity of the benchmark. Hence, turning LIBOR into a public good may in fact be counterproductive to achieving the preservation of LIBOR and the restoration of market confidence surrounding the benchmark.

The question whether regulation should preserve existing benchmarks or replace benchmarks is not addressed in the subsequent IOSCO and European Regulation. It seems taken for granted that the

²⁵ Stephen Bainbridge, ‘Reforming LIBOR: Wheatley versus the Alternatives’ (2013) 9 NYU Journal of Law and Business.

²⁶ Justin O’Brien, ‘Singapore Sling: How Coercion May Cure the Hangover in Financial Benchmark Governance’ (2013) at <http://ssrn.com/abstract=2350445>.

²⁷ Justin O’Brien, ‘Singapore Sling: How Coercion May Cure the Hangover in Financial Benchmark Governance’ (2013) at <http://ssrn.com/abstract=2350445>.

²⁸ Lawrence Kreicher, Robert N McCauley and Philip Wooldridge, ‘Benchmark Tipping in the Global Bond Market’ (Oct 2014) at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2506748.

regulatory framework is for *existing* benchmarks for the purposes of safeguarding market stability. Where the EU is concerned, harmonising the regulatory framework for financial benchmarks also reduces the likelihood that Member States will introduce diverse regulatory regimes that adversely affect the integration of EU financial markets. Further, the EU Regulation²⁹ limits the adoption of financial benchmarks administered by foreign benchmark administrators unless given the recognition of equivalence. Such equivalence recognition can be given based on ESMA's assessment of the equivalence of foreign regulatory frameworks supporting the credibility of such benchmarks. The Regulation is thus a market protection measure for EU-administered benchmarks and compels foreign benchmarks to meet equivalent standards.

The article also suggests that the proprietisation approach could appeal to national regulators in the interest of protecting the attractiveness of their markets in global competition. National financial markets can become deeper and more attractive if the use of financial benchmarks tied to these national markets is widespread even at the international level. The UK's interest in preserving the integrity of certain financial benchmarks in connection with LIBOR, the London fix for foreign exchange or the London gold fix is tied to its interest in maintaining a dominant position for transactions based on these benchmarks that come to London markets.³⁰

3. Unpacking the Proprietisation Approach Regulating Price-related Financial Benchmarks

The UK, EU and IOSCO have established regulatory frameworks that treat financial benchmarks as market-based goods whose protection is seen to be strengthened by increasing designated private sector institutions' proprietary rights over them. These institutions are however subject to an elaborate regime of compliance and accountability for the privilege of commercialising these benchmarks.

The proprietisation approach in financial benchmark regulation is reflected in the following key features:

- (a) designating specific entities as exclusive holders of rights over financial benchmark production and distribution;
- (b) subjecting such entities to regulation in order to secure due governance over them;
- (c) designating responsibilities for such entities to ensure that benchmark production is credible; and
- (d) designating responsibilities for such entities to manage the benchmark including its attrition.

²⁹ Arts 19, 20, see <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

³⁰ The author has benefited from Dan Awrey's feedback that the regulatory regime seemed excessive and that a leaner and simpler approach in strengthening market abuse scope and sanctions would sufficiently address the concerns in the LIBOR and other benchmark-rigging scandals. However, the regulatory regime responds to the needs of public interest in perceiving that a robust approach towards market confidence is taken, and that the reputation of the London markets where the affected financial benchmarks are used extensively, is preserved.

The following explains how the proprietisation approach is reflected in the key pillars of financial benchmark regulation in the UK, EU and IOSCO regimes.

(a) Designating Benchmark Administrators as having Proprietary Rights over Financial Benchmarks

First, the regulation of financial benchmarks under the UK framework, IOSCO's standards and European Regulation³¹ commonly embrace the approach of allowing 'benchmark administrators' to be appointed by regulators in respect of individual benchmarks.³² Such benchmark administrators have exclusive rights over the production and distribution of the financial benchmark/s under their purview. In the wake of the LIBOR scandal, the then voluntary administrator, the British Bankers' association surrendered its administration rights so that such rights can be put to tender. The ICE (Inter-Continental Exchanges) has successfully gained administration rights for LIBOR. In addition, the ICE is also administrator for the ISDAFIX and the LBMA Goldfix. The free distribution of LIBOR has now been replaced by a licensing scheme introduced by the ICE.³³

The proprietisation approach has fundamentally changed or arguably destroyed the original character of price-related financial benchmarks as a collective good enjoyed by the market generally. However, it may be argued that regulation is not responsible for destroying the 'commons' nature of such by-product indices- individual deviant and abusive behaviour in the market is the culprit. Regulation may be regarded as having done 'the next best thing' by preserving the benchmark for the continuity of use in markets, but users would have to adapt to changes introduced as a result of benchmark proprietisation by the administrator. Section 4 explores this tradeoff in detail.

(b) Regulating Benchmark Administrators

In return for the rights of commercial exploitation of financial benchmarks, benchmark administrators are now subject to regulatory oversight in terms of their internal governance. Good internal governance often serves as a proxy for sound outcomes.³⁴

Under the IOSCO and European approaches, benchmark administrators are required to establish effective internal control mechanisms, record-keeping and conflict of interest management policies,³⁵ and ensure that they appropriately supervise their outsourcees.³⁶ The UK framework is less

³¹ See Appendices 1 and 2 for Tables of Comparison between the UK, IOSCO and European approaches to regulating benchmark administrators and submitters respectively.

³² See Martin Wheatley, *The Wheatley Review of LIBOR* (Sep 2012) at paras 2.4-2.15; 3.5-3.16, in particular, 3.16.

³³ ICE, *Position Paper on the Evolution of ICE LIBOR* (20 Oct 2014).

³⁴ This approach is also taken in the regulation of credit rating agencies, see Regulation (EC) No 1060/2009 of the European Parliament and of the Council on credit rating agencies amended in 2011 and 2013. See Iris H-Y Chiu, 'Regulatory Governance of Credit Rating Agencies in the EU: Pursuing the Holy Grail of Rating Accuracy' (2013) 4 *European Journal of Risk and Regulation* 209.

³⁵ Principles 1, 3, 4 OICU-IOSCO, *Principles for Financial Benchmarks* (July 2013) (hereinafter known as IOSCO Principles); Para B.13, B.15, C.3-C.8, ESMA/EBA, *ESMA-EBA Principles for Benchmark Setting Processes in the EU* (June 2013) (hereinafter known as the ESMA/EBA Principles); Art 5, 5b, 5c, 5d, Regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts

specific on organisational requirements but requires the administrator to be effectively governed.³⁷ The UK framework emphasises the need for robust irregularity detection mechanisms in the organisational framework of benchmark administrators, including whistle-blowing.³⁸

Further, all three regimes require that benchmark administrators institute oversight committees at Board level³⁹ to scrutinise benchmark administration processes, production methodology and benchmark quality. Oversight committees in UK benchmark administrators comprise of external and independent persons, such as representatives of market infrastructure providers and users. The administrator must also appoint a number of independent non-executive directors to the committee. The oversight committee assists the Board but also has direct accountability to the regulator in cases of suspected deviant behaviour in relation to benchmark submitters.⁴⁰

The European approach further identifies benchmark calculation agents⁴¹ and publishers⁴² to be subject to the regulatory regime. These are subject to similar governance requirements such as relating to the establishment of effective internal control, conflict of interest management mechanisms.

All three approaches call for extensive reporting and accountability to the regulators. In the UK, benchmark administrators are subject to quarterly reporting to regulators,⁴³ and to inspection and supervisory scrutiny. The UK FCA also requires daily reporting of benchmark submissions data to the regulator⁴⁴ and immediate reporting of suspicions of benchmark manipulation.⁴⁵ The IOSCO

(Presidency and Parliament compromise text, Dec 2015) at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

³⁶ Art 6, EU Proposal; Para B.16, ESMA/EBA Guidelines; Principle 2, OICU-IOSCO Guidelines.

³⁷ FCA Handbook, MAR 8.3.1, 8.3.3, 8.3.12A on record-keeping.

³⁸ FCA Handbook MAR 8.3.7; para B.14, ESMA/EBA Guidelines.

³⁹ Art 5a, EU Regulation, Principle 5, OICU-IOSCO Principles; FCA Handbook MAR 8.3.8-8.3.10A. Although the ESMA/EBA Guidelines only envisaged that suitably independent persons be appointed to the governing body of the benchmark administrator to ensure that due oversight and monitoring of the benchmark production process is carried out, see para B.9, ESMA/EBA Guidelines.

⁴⁰ See FCA Handbook, MAR 8.3.9, 8.3.10. These are more detailed than Art 5a, EU Regulation which envisages the Committee to be a separate body in the organisation.

⁴¹ Para D, ESMA/EBA Principles.

⁴² Para E, ESMA/EBA Principles.

⁴³ FCA Handbook MAR 8.3.12.

⁴⁴ FCA Handbook MAR 8.3.11.

⁴⁵ FCA Handbook MAR 8.3.17, 8.3.18.

principles and European initiatives envisage transparency and accountability to the regulators⁴⁶ and to the public, recommending that benchmark administrators establish a complaints procedure that can be accessed generally.⁴⁷ Further, IOSCO principles and European initiatives also require the public publication of benchmark methodologies.⁴⁸ The European initiatives envisage that such transparency would assist users in being diligent in continuously evaluating the quality of the financial benchmarks that they use.⁴⁹

Verstein argues that *ex ante* forms of governance would only give rise to cosmetic compliance and unintended consequences that arise from unnecessary prescriptions.⁵⁰ Although the governance framework appears comprehensive, it could be susceptible to being proceduralised⁵¹ and give rise to a box-ticking form of compliance. Regulators need to be mindful of the limitations of procedure-based regulatory frameworks⁵² and engage in meaningful supervision to discern their effectiveness. That said, other commentators have observed how proceduralised regulatory frameworks give rise to increased transparency, accountability and improved substantive behaviour.⁵³

(c) Governing the Benchmark Production Process

Although benchmark administrators have proprietary rights over the financial benchmarks under their purview, they are not completely free to develop and produce the benchmarks as they see fit. The UK regulatory framework, the IOSCO standards and European approaches have all introduced certain prescriptions for the process of benchmark production. These prescriptions arguably reflect the public interest in the quality of and purposes served by the benchmarks concerned. In this way, the proprietisation approach may be regarded as a hybrid between market-based and regulatory governance, as financial benchmarks are not freely developed by benchmark administrators to any standard as they see fit as a matter of property. It may be argued that in this way, the proprietisation approach has not completely abrogated the previous relationship between free by-

⁴⁶ Principles 1, 9, 18 and 19, OICU-IOSCO Principles; para B.17, D.8 and E.6, E.7, ESMA/EBA Principles; Articles 5c, 8, EU Regulation at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

⁴⁷ Principle 16, OICU-IOSCO Principles, Article 5c, 5e and para 15, Annex 1, EU Regulation at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

⁴⁸ Art 7b, see <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>, Principles 9 and 11, IOSCO Guidelines; para B.8, ESMA/EBA Guidelines.

⁴⁹ Para F, ESMA/EBA Guidelines.

⁵⁰ Andrew Verstein, 'The Law and Economics of Benchmark Manipulation' (2015) 56 Boston College Law Review 3.

⁵¹ Sharon Gilad, "It Runs in the Family: Meta-regulation and its Siblings" (2010) 4 Regulation and Governance 485.

⁵² Cristie Ford, "New Governance, Compliance, and Principles-Based Securities Regulation" (2008) 45 American Business Law Journal 1.

⁵³ Christine Parker and Vibeke Lehmann Nielsen, 'Corporate Compliance Systems : Could They Make Any Difference?' (2009) 41 Administration and Society 3.

product indices and their wide user/stakeholder base. However, it may also be argued that the regulatory prescriptions are narrowly defined, and are specific to addressing the weaknesses uncovered in LIBOR. Hence, it remains questionable to what extent the regulatory prescriptions are indeed a means by which public or wider stakeholder interest can be represented in the process of benchmark production.

There are two categories of regulatory prescriptions. One relates to the methodology that benchmark administrators should adopt in benchmark production. The second relates to benchmark administrators' relationship with benchmark submitters who provide the necessary input into the benchmark production process.

Methodological Prescriptions

On the first, the IOSCO and European initiatives make somewhat detailed prescriptions for the methodology in benchmark production. Although the UK approach is silent on such prescription at the moment, this approach will have to fall into line when European legislation comes into force.⁵⁴ The IOSCO framework⁵⁵ and European⁵⁶ Regulation specify that transaction-based data⁵⁷ should be used in benchmark production. Such transaction data should also represent the real economic realities in the market⁵⁸ and be capable of measuring performance of a representative group in the market.⁵⁹ This would require benchmark administrators to invest in adequate data collection and the development of a methodology to assimilate and use the data. Benchmark administrators are also compelled to introduce processes that ensure certainty and consistency in how data is used, such as a hierarchy of data input.⁶⁰ In order to mitigate opportunities for manipulative conduct, discretionary judgment on the part of administrators is minimised. For example, the European Regulation permits the use of expert judgment subject to transparent and clear guidelines,⁶¹ and requires that benchmark production methodology should be published publicly for scrutiny. The European Regulation is also prescriptive on when data integrity may be questioned and additional

⁵⁴ Art 7, 7a, EU Regulation at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

⁵⁵ Principles 6, 7.

⁵⁶ Para A.2, B.2, B.7, ESMA/EBA Guidelines.

⁵⁷ Rosa M. Abrantes-Metz and David S. Evans, 'Enhancing Financial Benchmarks: Comments on the OICU-IOSCO Consultation Report on Financial Benchmarks' (2013) at <http://ssrn.com/abstract=2216209>; Darrell Duffie and Jeremy C Stein, 'Reforming LIBOR and Other Financial-Market Benchmarks' (2014) at <http://ssrn.com/abstract=2506792>. But see Connan Snider and Thomas Youle, 'Does the LIBOR Reflect Banks' Borrowing Costs?' (2010) at <http://ssrn.com/abstract=1569603> arguing that transaction data can also be subject to prior manipulation.

⁵⁸ Eg Art 7a, EU Regulation.

⁵⁹ Eg Principle 6, IOSCO Guidelines.

⁶⁰ Principle 8, IOSCO Principles; Art 7, EU Regulation at <http://data.consilium.europa.eu/doc/document/ST-14985-2015-INIT/en/pdf>.

⁶¹ Art 7, EU Regulation.

safeguards are needed.⁶² The IOSCO principles do not however provide for the exercise of discretionary judgment in the data input process for benchmark production.

The emphasis on the use of actual transactions data is a response to the weakness of the previous LIBOR regime. In the LIBOR scandal, benchmark submitters played a key part. The benchmark was largely derived from quotes that were submitted by banks based on the hypothetical question ‘at what rate could you ... accept inter-bank offers in a reasonable market size just prior to 11 am?’ As actual transaction data had become sparse in the market,⁶³ the then-benchmark administrator, the British Bankers’ Association, relied exclusively on member banks’ submissions. Rogue individuals realised that these submissions could be manipulated and there would be little means of verifying them, and hence gaming the system became an infectious disease. Although the methodology used by the British Bankers’ Association would ignore outlier submissions in arriving at a trimmed average, the regime could not prevent or detect manipulative submissions. The regulatory response is therefore to move away from the use of submissions to the use of actual transactions data. This is also supported by prevailing research by independent scholars.⁶⁴ However, transactions data remains sparse in the inter-bank lending market. Further, the use of transactions data is not a panacea for addressing manipulative practices. The foreign exchange rigging scandal has shown that it is possible to attempt manipulation even where there is actual trade data.⁶⁵ In the foreign exchange rigging scandal, although the London WM Reuters 4pm fix is derived from transaction data, traders squeeze the close before the close of market in order to affect the exchange rate of currencies. Hence, even in a context where transaction data can be used to derive a benchmark, abusive practices can still find their way into the system. This brings into question how effectively proprietisation supported by regulation can really underscore benchmark quality where benchmark administrators do not have complete control over input factors and the quality of such inputs.

Oversight of Benchmark Submitters

Next, benchmark administrators are tasked to oversee benchmark submitters (or ‘contributors’ in the EU Regulation) where the latter are relevant to the benchmark production process. In the overall context, benchmark administrators are required to move away from relying on benchmark

⁶² such as where data is based largely on submissions or where a specific submitter contributes to more than 50% of the value of the submissions data, Art 7, EU Regulation.

⁶³ V Brousseau, A Chailloux and A Durré, ‘Fixing the Fixings: What Road to a More representative Money Market Benchmark?’ (IMF Working Paper 2013); Christoph Diehl, ‘The LIBOR mechanism and Related Games’ (2013) at <http://ssrn.com/abstract=2289992>.

⁶⁴ Darrell Duffie and Jeremy C Stein, ‘Reforming LIBOR and Other Financial-Market Benchmarks’ (2014) at <http://ssrn.com/abstract=2506792> on use of a wider range of transaction data; Alexander Eisl Rainer Jankowitsch and Marti G. Subrahmanyam, ‘The Manipulation Potential of Libor and Euribor’ (2014) at <http://ssrn.com/abstract=2201013> on enlarging panel size and use of a trimmed median method; Rosa M. Abrantes-Metz and David S. Evans, ‘Enhancing Financial Benchmarks: Comments on the OICU-IOSCO Consultation Report on Financial Benchmarks’ (2013) at <http://ssrn.com/abstract=2216209> with similar recommendations to above.

⁶⁵ FSB, *Foreign Exchange Benchmarks* (Sep 2014); Martin DD Evans, ‘Forex Trading and the WMR Fix’ (2014) at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2487991.

submissions. However, where submissions may remain relevant, at least in the immediate term, benchmark administrators are responsible for overseeing submitters as part of their internal control relevant to the benchmark production process.

There are limits to which regulatory intervention can be used to govern benchmark submitters, and reliance is placed on administrators to oversee submission conduct. This is partly due to the proprietisation approach that regards the oversight of submissions as falling within administrators' and not regulators' direct purview. Further, as benchmark submission is a voluntary activity, it is impracticable to extend direct regulatory reach over it. Such voluntary submission, unlike benchmark administration, is not susceptible to being a regulated activity⁶⁶ and the extension of regulatory governance to benchmark submission would just compel submitters to stop submitting in order to avoid compliance cost. This is counter-productive to the reliability of the benchmark as larger panels of submission are empirically proved to relate to more robust benchmarks.⁶⁷

The UK regulatory framework, IOSCO standards and European Regulation all provide that benchmark administrators are to develop a Code of Practice Standards for submitters⁶⁸ and have oversight responsibilities over them. The UK has prescribed certain rules of governance and conduct for benchmark submitters, such as robust internal control and the due management of conflicts of interest,⁶⁹ with the EU guidelines and Regulation going into greater prescriptive detail.⁷⁰ Further, the EU Regulation allows national regulators to scrutinise the sufficiency of the code of conduct and demand changes to be made if necessary.⁷¹ It is however questioned as to what extent national regulators may enforce against benchmark submitters directly, given the administrators' primary jurisdiction over them. The IOSCO and EU frameworks are clear that regulators have limited jurisdiction over benchmark submitters.⁷²

⁶⁶ Section 22(1A) of the Financial Services and Markets Act 2000 as amended by the Financial Services Act 2012 specifies that activity carried on by way of business relating to the setting of a benchmark' is regulated activity. That arguably covers benchmark administrators who finally set the benchmark and not benchmark submitters who contribute data. Further contributions of data may not be carried out 'in the course of business'. The Explanatory Notes to Clause 7 of the Financial Services Bill 2012 does not clarify, see <http://www.publications.parliament.uk/pa/bills/cbill/2012-2013/0002/en/2013002en.htm>.

⁶⁷ Alexander Eisl Rainer Jankowitsch and Marti G. Subrahmanyam, 'The Manipulation Potential of Libor and Euribor' (2014) at <http://ssrn.com/abstract=2201013>.

⁶⁸ FCA Handbook MAR 8.3.10; Principle 4, 14, IOSCO Principles, para B.10, ESMA/EBA Guidelines, Art 9, EU Regulation.

⁶⁹ FCA Handbook MAR 8.2; the IOSCO Principles are very reticent on what obligations can be imposed directly on submitters, see Principle 18 for example.

⁷⁰ Para C, ESMA/EBA Guidelines, Art 11, EU Proposal.

⁷¹ Art 9, EU Regulation.

⁷² It may be argued that it remains uncertain if benchmark submitters may have to be accountable to the FCA as it has general powers to carry out supervision and enforcement on the basis of its Handbook prescriptions, which apply directly to benchmark submitters. In which case it is unclear if administrators have primary

The conduct of submitters remains an uneasy regulatory lacuna, as submitter conduct can affect the integrity of benchmarks and administrators may not always be incentivised to discipline submitters or indeed have adequate capacity to oversee them. It is queried to what extent administrators will effectively police compliance with their Code. The oversight of submitters adds cost to benchmark administration, and it would be easy to rely on box-ticking for cosmetic compliance to demonstrate that administrators have discharged oversight. Moreover, what incentives do benchmark administrators have in taking disciplinary enforcement against benchmark submitters? Benchmark administrators undertake the hassle and cost of disciplining submitters and risk losing their voluntary participation. Further, if there is a case of suspected manipulation, this would likely be dealt with at the regulator and not administrator level. This lacuna is recognised and being addressed in the UK in the form of a general individual conduct regulatory regime, which will be discussed in Section 4. However, Section 4 will point out that the extent of regulatory governance over price-related financial benchmarks brings into question both the credibility and usefulness of the proprietisation approach.

(d) Designating Benchmark Administrators' Responsibilities in Managing the Benchmark, Including its Attrition and Transition

The UK regulatory framework requires that benchmark administrators take into account of the need to maintain 'continuity of the specified benchmark including the need for contractual certainty for contracts which reference the specified benchmark'⁷³ as part of their administration responsibilities. As a natural outworking of the proprietisation approach, benchmark administrators should be primarily responsible for managing the benchmark to meet market expectations and needs, including its entrenchment or its attrition. There is little regulatory guidance on market competition for benchmarks and whether administrators may entrench a benchmark. The EU Regulation provides that transparent and non-discriminatory access must be provided to users,⁷⁴ but this can surely be done even by a benchmark administrator who has a monopoly over a critical benchmark. There is also inadequate guidance on how administrators are to manage a situation where a benchmark may be subject to attrition. The IOSCO guidelines and EU Regulation provide some prescriptive procedures but the main responsibility is placed on administrators to carry out benchmark transition.⁷⁵

The UK and IOSCO frameworks leave it very much to benchmark administrators to manage the attrition of a benchmark. It may be argued that this is the right approach given the logic of the proprietisation approach. Whether or not a financial benchmark that is proprietised remains popular and viable should surely not be up to regulatory intervention. However, if a benchmark should be

disciplinary jurisdiction over submitters and whether there is an overlap between the FCA and administrators in disciplinary jurisdiction over submitters.

⁷³ FCA Handbook MAR 8.3.2.

⁷⁴ Art 13b, EU Regulation.

⁷⁵ Principle 13, IOSCO Guidelines on written policies and exhortation of users. The EU Regulation provides that administrators may decide on cessation of benchmarks usually subject to transferring administration, or winding down a benchmark which is no longer critical. See Art 13a, EU Regulation.

subject to attrition, there could be a crisis of confidence surrounding the benchmark and uncertainty in the market in relation to contractual outcomes that depend on such benchmarks. These may be situations of market instability or disruption. Thus, it is queried if the proprietisation approach is indeed the most appropriate to deal with such situations. Would benchmark administrators make arrangements with submitters so that participation is not truncated abruptly? Would administrators take leadership in designing standard transition clauses in contracts so that benchmark problems would not result in contractual uncertainty and disputes? The European guidelines are more sceptical of leaving to administrators to manage benchmark transitions, and try to avoid benchmark discontinuity altogether by recommending that administrators develop operational continuity for the benchmarks they administer and encourage submitters not to withdraw.⁷⁶ This has now been developed in the EU Regulation. The Regulation now provides for administrators to determine if benchmarks have ceased, either by transferring to another administrator or if the benchmark can be wound down for being no longer critical. As there are objective criteria for determining 'criticality' of a benchmark, the Regulation provides some safeguards against arbitrary decisions taken by administrators. However, the substantive decision to terminate or transition out of certain benchmarks rests in administrators' hands, consistent with the logic of proprietisation. Neither regulators nor users would be able to have a voice in such decision.

The EU Regulation allows regulators to exercise more powers in the event of benchmark transition in relation to critical benchmarks. The EU Regulation constrains submitters from ceasing to submit if the benchmark is critical,⁷⁷ by allowing national regulators to compel submission for no more than 4 weeks, or 12 or 24 months after review of the necessity to maintain the benchmark.⁷⁸

It may be argued that proprietisation provides sufficient incentives for benchmark administrators to prevent benchmark attrition from occurring. Such attrition may be unlikely if the quality of the benchmark is maintained and well-administered. Although the prevention of benchmark attrition is an easy way of preserving market stability, on the other hand, the entrenchment of benchmarks may stifle market innovation and distort the market for benchmarks. Further, the article is sceptical of the attempt to prevent benchmark attrition such as by compelling benchmark submission (as in the European Regulation). It may be futile and market-distorting to prevent market forces from operating in respect of moving away from certain benchmarks.

If benchmark attrition indeed occurs, a situation of market disruption and instability may entail. It is uncertain whether the EU Regulation's provisions for national regulators to constantly assess the market situation to compel continued benchmark submission is sufficient to address market needs. Ultimately this is an issue that requires thought and preparation on the part of benchmark administrators in anticipation of benchmark attrition. The regulatory approaches discussed do not address how regulators would ensure administrators carry this out adequately. The needs of market

⁷⁶ Paras B.2 and B.5.

⁷⁷ Defined as used directly, indirectly or in combination for financial instruments to a value exceeding 500 billion euros and is widely used outside of the principal jurisdiction of production or used directly, indirectly or in combination for financial instruments to a value exceeding 400 billion euros, has few substitutes and may result in adverse market impact if no longer available, see Art 13, EU Regulation.

⁷⁸ Art 13, EU Regulation.

stability may expose the limitations of the proprietisation approach in benchmark regulation after all. These will be discussed in the next Section.

4. Critically Evaluating the Proprietisation Approach in Regulating Price-related Financial Benchmarks

Achievements of the Proprietisation Approach

It may be argued that the proprietisation approach creates the right incentives for financial benchmarks to be duly produced and maintained. Benchmark administrators could deploy the revenues earned from licensing towards the institution of robust data collection and analytical systems in order to generate credible financial benchmarks. Such is key to maintaining market confidence and stability. In this way, regulators would achieve the public interest objective of market stability by co-opting the market-based governance provided by benchmark administrators. This is a form of ‘smart’ regulation,⁷⁹ where the alignment of regulatory and private interest objectives result in an effective form of market-based governance that also serves public interest needs.

However, the proprietisation approach entails certain tradeoffs. Benchmark administrators’ licensing regimes would make it more costly for users to access price-related financial benchmarks. It is noted that ICE does make historic LIBOR data available to the public 3 days late,⁸⁰ so it may be argued that a compromise has been reached in meeting benchmark administrators’ and users’ needs. However, the licensing scheme favours subscribers who can gain sooner access to LIBOR than other users. It is queried if this could give rise to opportunities for certain market participants to take advantage of others, largely retail users. In other words, although proprietisation may strengthen the governance of the benchmark, users’ interest in having an accessible transaction-cost reduction mechanism may be undermined.

Further, this article suggests that it is only apparent that ‘smart’ regulation is achieved. This is because benchmark administrators enjoy a high level of regulatory subsidy. This article argues that the regulatory subsidy not only brings into question the legitimacy of the extent of proprietisation, it also reinforces proprietisation in such a way as to bring about two other problems. One is that the benchmarks subject to administration may become entrenched, and this affects market innovation for benchmarks and distorts market competition. Second, benchmark administrators may become entrenched too and perhaps systemically important due to their impact on market stability. This could pose problems for the regulation and supervision of benchmark administrators.

Regulatory Subsidy Underlying Benchmark Administrators’ Proprietisation

We turn first to the nature of the regulatory subsidy for benchmark administrators. The key features of the regulatory subsidy are: (a) the regulatory framework for market transparency under the Markets in Financial Instruments Regulation 2014; (b) the criminal sanctions regime introduced by

⁷⁹ See for example Neil Gunningham and Peter Grabowsky, *Smart Regulation: Designing Environmental Policy* (Oxford: Clarendon Press 1999); Neil Gunningham and Darren Sinclair, ‘Smart Regulation’ OECD Working Paper 1998.

⁸⁰ <https://www.theice.com/marketdata/reports/170>.

the UK and EU for benchmark manipulation and (c) the individual conduct regime introduced in the UK such as the Senior Persons Regime, and the forthcoming individual conduct regime of wider application as recommended by the UK Fair and Effective Markets Review. In other words, benchmark administrators are heavily 'subsidised' by existing regulatory frameworks and supervision and it may be queried as to the extent of the true value added by administrators to justify their proprietisation.

Although benchmark administrators have to invest in information collection and analytical capabilities in order to generate benchmarks, they are greatly helped by the comprehensive framework for regulatory transparency.⁸¹ Since 2004,⁸² price transparency has been mandated for pre and post-trade information on all European exchanges, electronic trading facilities and systematic internalisers (firms that practice cancelling buy and sell orders within their trading book).⁸³ These measures were introduced in order to encourage the rise of market competition and to mitigate excessive fragmentation of markets.⁸⁴ After the global financial crisis 2007-9, market transparency obligations greatly expanded in European legislation in order to meet the needs of risk surveillance. The European Markets Infrastructure Regulation 2013 (EMIR) mandated central clearing of over-the-counter derivative and swap products in order to standardise them and create more transparency surrounding them. The Markets in Financial Instruments Regulation 2014 also brought a wider range of markets such as over-the-counter markets within its scope in order to comply with an expanded regime of mandatory market transparency.⁸⁵

Benchmark administrators benefit greatly from the existing regulatory framework for comprehensive and prescribed market transparency. For example, as ICE owns and operates equity and futures markets and exchanges including the LIFFE and New York Stock Exchange, and a number of clearing facilities, much of the data it needs for benchmark production is delivered in compliance with regulatory requirements.

⁸¹ Such as trade reporting requirements for pre and post trade by mainstream, alternative, electronic and over-the counter trading venues, and in systematic internalisations, see Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012. For a general critical assessment of the explosion of regulatory reporting, transparency and surveillance in the wake of the global financial crisis, see Iris H-Y Chiu, "Corporate Transparency and Reporting in Banks and Financial Institutions" in Iris H-Y Chiu and M McKee (consulting editor) (eds), *The Law on Corporate Governance in Banks* (Cheltenham, Edward Elgar, 2015); "Transparency Regulation in Financial Markets- Moving into the Surveillance Age?" (2011) 3 *European Journal of Risk and Regulation* 303.

⁸² The now-superseded Markets in Financial Instruments Directive 2004.

⁸³ See generally, Iris H-Y Chiu, "Delegated Regulatory Administration in EU Securities Regulation" (2007) 40 *International Lawyer* 737.

⁸⁴ See generally John Board, Charles Sutcliffe and Stephen Wells, *Transparency and Fragmentation: Financial Market Regulation in a Dynamic Environment* (Basingstoke: Palgrave Macmillan 2002).

⁸⁵ Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Arts 1, 3, 6, 8, 10, 12, 14, 18, 20, 26-32.

Further, the regulatory framework for sanctions against benchmark manipulation also provides a subsidy for benchmark administrators' proprietisation. The private property in benchmarks is protected by public enforcement, as criminal and administrative sanctions can be carried out against conduct that seeks to damage a benchmark. In the UK and EU, criminal sanctions and administrative penalty regimes have been introduced to deter those who tarnish financial benchmarks. The EU has included benchmark manipulation in its interpretation of 'market manipulation',⁸⁶ which is punishable by criminal and administrative sanctions. The scope of market abuse traditionally includes insider dealing and market manipulation, such conduct being regarded as anti-social behaviour that undermines market trust and efficiency.⁸⁷ The IOSCO report encourages benchmark manipulation to be credibly punished,⁸⁸ and the UK has gone further than the EU and IOSCO by proposing to extend market abuse sanctions to financial benchmarks in FICC markets,⁸⁹ where those are beyond the scope of markets covered by the EU Regulation.⁹⁰

To date, spectacular punishments have been meted out to institutions and individuals engaged in benchmark manipulation. Many financial institutions have been imposed with eye-watering fines.⁹¹ Benchmark manipulation is a symptom of underlying toxic culture⁹² in many financial institutions uncovered in the wake of the global financial crisis 2007-9, hence punishment for firms has been indisputably socially visible.⁹³ Further, as benchmark manipulation has largely been carried out by

⁸⁶ Art 12(1)(d), Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC (Market Abuse Regulation 2014).

⁸⁷ Eg see Harry McVea, "What's Wrong with Insider Dealing?" (1995) 15 *Legal Studies* 390.

⁸⁸ OICU and IOSCO, *Principles for Financial Benchmarks: Final Report* (July 2013) at pp. 7-8.

⁸⁹ P.89, *Fair and Effective Markets Review: Final Report* (June 2015).

⁹⁰ The scope of markets includes securities markets, over-the-counter markets for financial instruments, spot commodity markets and markets for emission allowances, see Art 2, Market Abuse Regulation 2014.

⁹¹ 'Big Banks Fined \$2.3B Over Illegal Libor Cartels, More Fines On The Way', *Forbes.com* (4 Dec 2013); 'Big Banks Slapped With £2.6bn FX 'Rate Rigging' Fines But Will They Ever Learn?', *Forbes.com* (15 Nov 2014).

⁹² John Gapper, 'Trading Floor Culture no longer Acceptable' *Financial Times* (London, 5 July 2012). Anthony Salz, *The Salz Review: An Independent Review of Barclays' Business Practices* (April 2013); Jeanne L. Schroeder, 'Mad Money: Wall Street's Bonus Obsession' (2012) 33 *Cardozo Law Review* 2307; House of Lords and House of Commons, *Changing Banking for Good* (Report of the Parliamentary Commission on Banking Standards) (12 June 2013), Michael A Santoro and Ronald J Strauss, *Wall Street Values: Business Ethics and the Global Financial Crisis* (Cambridge: Cambridge University Press, 2012), chapter 5, 'Bankers have tendency to lie for financial gain, say scientists', *Financial Times* (20 Nov 2014) reporting on psychology research that shows how banking conditions individual behaviour to behave more dishonestly than one may be predisposed to.

⁹³ This aspect of deterrent punishment for financial institutions has been discussed in Philip Rawlings, Andromachi Georgosuli and Costanza Russo, 'Regulation of Financial Services: Aims and Methods' (2014) at <http://www.ccls.qmul.ac.uk/docs/research/138683.pdf>, pp.47ff, and it is queried if the extent of punishment has tended towards excessive severity.

determined groups of individuals, individual prosecutions are also being mounted and secured.⁹⁴ Convicted individuals may expect to be punished in a deterrent manner, such as the imprisonment sentence of 14 years handed out to Tom Hayes.⁹⁵

Third, it is suggested that general individual conduct regimes such as the UK's Approved and Senior Persons regime and the wider individual conduct regime suggested by the Fair and Effective Markets Review would likely supersede benchmark administrators' role in overseeing and governing submitters. The FCA⁹⁶ and IOSCO's reviews of benchmark administrators conclude that there is ample room for improvement on administrators' part in overseeing submitters, hence the scepticism expressed earlier regarding administrators' capacity and incentives to oversee submitters seems supported by such survey results.⁹⁷ The enhancement of individual conduct regulation will likely exceed what administrators carry out in terms of standard setting, supervision and enforcement. This is a form of regulatory subsidy provided to support administrators in benchmark production, and one may query to what extent benchmark administrators should enjoy the benefits of proprietisation on the back of such regulatory subsidy.

The UK regulator has always maintained an individual conduct regime that sets broadly worded standards of integrity, care and accountability for individuals assuming 'controlled functions' in the financial sector.⁹⁸ In the wake of the global financial crisis, legislative reform was carried out to enhance the standards and responsibilities applicable to a wide scope of individuals working in the financial sector and in particular to senior persons.⁹⁹ As benchmark administration and submission

⁹⁴ 'SFO secures first LIBOR guilty plea', *Financial Times* (7 Oct 2014), culminating in the first successful prosecution and sentencing of trader Tom Hayes (see 'The Conviction of Tom Hayes', *The Economist* (4 August 2015)); also see 'UK charges former Tullett Prebon employee over Libor rigging', *Reuters* (28 Oct 2014); and other prosecution actions against former bank employees mentioned in 'Further Charges in LIBOR Investigation', 17 Feb 2014 at <http://www.sfo.gov.uk/press-room/latest-press-releases/press-releases-2014/further-charges-in-libor-investigation.aspx> that are ongoing. See also SFO's first arrest of a forex trader for manipulation, 'First arrest made in foreign exchange market rigging investigation', *The Guardian* (19 Dec 2014).

⁹⁵ 'The Conviction of Tom Hayes', *The Economist* (4 August 2015).

⁹⁶ For example, the FCA has surveyed the sub-optimal situation in firms participating in benchmark submission, and is of the view that much more improvements are needed in terms of the internal control of firm processes relating to benchmark submission and firm oversight, see FCA, *Financial Benchmarks: Thematic Review of Oversight and Controls* (29 July 2015).

⁹⁷ *Fair and Effective Markets Review: Final Report* (June 2015), at pp.15-16; International Organisation of Securities Commissions, *Review of the Implementation of IOSCO's Principles for Financial Benchmarks* (Feb 2015).

⁹⁸ Section 59, Financial Services and Markets Act 2000 and APER, FCA Handbook. These controlled functions related to senior management and directorial functions, functions relating to leadership in business lines, internal control and customer-facing roles.

⁹⁹ Pursuant to reforms suggested in House of Lords and House of Commons, *Changing Banking for Good* (Report of the Parliamentary Commission on Banking Standards) Vol 1 and 2 (June 2013).

now fall within the scope of regulated activities under the purview of the FCA,¹⁰⁰ individuals engaged in these activities would be subject to the standards under the Approved Persons Regime,¹⁰¹ and senior persons who have oversight of these activities would be subject to additional standards imposed via the FCA's senior persons regime or otherwise known as "accountable significant-influence functions" regime.¹⁰² The FCA now requires firms that make benchmark submissions to appoint a senior person to oversee submissions.¹⁰³

Approved persons are required to adhere to standards of integrity, due care, skill and diligence, observance of proper standards of market conduct and cooperativeness with regulators. Failure to adhere to these standards may result in enforcement action taken by the FCA which could culminate in monetary fines and disqualification from working in certain capacities or altogether in the financial sector.¹⁰⁴ As for senior persons, in addition to the conduct rules applicable to approved persons, they must ensure that the business of the firm for which they are responsible is effectively governed and controlled, compliance with regulations is achieved and that due care, skill and diligence is exercised such over any delegation of responsibilities.¹⁰⁵

It is observed that the FCA and its predecessor the FSA have over the years taken a number of high profile actions against senior persons for failure to adhere to standards of individual conduct.¹⁰⁶ The credible threat of personal liability under the senior persons regime would undoubtedly affect the incentives of senior persons in discharging their benchmark-related responsibilities.

Further, the Fair and Effective Markets Review has now proposed to extend the approved and senior persons regime for banks, insurers and investment firms to FICC firms so that individual conduct may be subject to the same high standards of integrity, care and accountability.¹⁰⁷ This recommendation brings conduct regulation for individuals to be on par with investment and securities markets, so introducing the same baseline across the financial sector. Hence, individuals in FICC markets involved in benchmark submission and administration activities will also be caught within the scope of the personal liability regimes discussed above. The Review also recommends the establishment of

¹⁰⁰ Paragraphs (ta) and (tb), Schedule 2, Financial Services and Markets Act 2000 as amended by the Financial Services Act 2012.

¹⁰¹ FCA Handbook APER 1.1A, 2.1A, 4.1-4.4.

¹⁰² FCA Handbook APER 1.1A, 2.1A, 4.1-4.7.

¹⁰³ FCA Handbook MAR 8.2.2, 8.2.3.

¹⁰⁴ See analysis and case studies in Iris H-Y Chiu, *Regulating (from) the Inside: The Legal Framework for Internal Control in Banks and Financial Institutions* (Oxford: Hart Publishing 2015).

¹⁰⁵ FCA Handbook, APER 4.5-4.7

¹⁰⁶ Iris H-Y Chiu, 'Regulatory Duties for Directors in the Financial Services Sector and Directors' Duties in Company Law- Bifurcation and Interfaces', (2016) *Journal of Business Law* forthcoming, at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2639174.

¹⁰⁷ *Fair and Effective Markets Review: Final Report* (June 2015), pp60-62.

a new FICC Standards Board to better govern trading conduct¹⁰⁸ and set professionalism qualifications and training requirements for FICC traders.¹⁰⁹ The comprehensive regulation of senior managers and individuals is likely to be the most promising way of addressing conduct deficits generally, and may in due course supersede the somewhat narrow existing framework for governing benchmark submitters.

In sum, the protection of the property in financial benchmarks is heavily underlined by regulatory obligations in market transparency, enforcement against benchmark manipulation and the regulation of individual conduct. As benchmark administrators are heavily 'subsidised' by existing regulatory frameworks and supervision, it may be queried as to the extent of the true value added by administrators to justify their proprietisation. It may be argued that the regulatory regimes discussed above should not be regarded as 'regulatory subsidies' as these exist anyway as part of the financial regulation fabric and are not brought in to support the regulation of financial benchmarks in particular. This argument may be true for the market transparency and individual conduct regulation discussed above, but the criminal and administrative regimes in market abuse certainly provide a major subsidy for benchmark administrators. It may even be argued that the protection of financial benchmarks by market abuse sanctions is contrary to the proprietisation approach which should incentivise the designated 'property owners' to pursue enforcement against those that attempt to damage such property. But the immediate sensibility of extending market abuse enforcement against benchmark manipulators is self-evident, as the anti-social behaviour of a few against the integrity of a collective market good should be punished at a social level. Here is where the limits of the proprietisation approach, which is based on a private market good characterisation of financial benchmarks, is revealed. The proprietisation approach neglects the essential collective nature of price-related financial benchmarks, and the need for forms of regulatory subsidy to protect the collective interest in such goods. Hence, the appropriate parameters of such proprietisation should be called into question.

Benchmark Entrenchment?

Next, we turn to the weaknesses and drawbacks in the proprietisation approach. We argue that the chief weaknesses are the entrenchment of benchmarks and the undermining of competition in the market for benchmarks, and the rising systemic importance of benchmark administrators.

With the introduction of licensing regimes for financial benchmarks, it may be argued that the user-pays regime will provide market discipline for benchmark administrators. Users could vote with their feet¹¹⁰ if benchmark administrators are not delivering the goods of credible and reliable financial benchmarks, and users could subscribe to alternative benchmarks. The threat of user migration may provide the necessary incentives for benchmark administrators to remain competitive in providing robust and credible benchmarks.

¹⁰⁸ *Fair and Effective Markets Review: Final Report* (June 2015), pp12-13.

¹⁰⁹ Above at p14, 66-67.

¹¹⁰ 'Banks Mull Bailing on Libor in Loans as ICE Adds Licensing Fees', *Bloomberg* (14 Aug 2014).

However, user discipline would only be effective if there is choice in the market for benchmarks. The market for price-related benchmarks is not competitive at the moment, and this is partly due to the proprietisation approach adopted in regulation. Administrators have every incentive to entrench their benchmarks as they incur significant sunk costs in governance and methodology investments and therefore would seek to protect their proprietisation. For example, the relatively low cost methodology in getting bank quotes for LIBOR submissions from a limited panel must give way to more sophisticated methods of combining wider panel bank quotes with real transaction data such as in overnight index swaps, repo markets etc. The investment in data collection and assimilation as well as methodological systems would be costly. The mandatory requirement to regularly review and perhaps back-test the credibility of benchmarks would also be costly. Such cost can only be recouped through rigorous exploitation of the proprietised benchmarks.

Further, the proprietisation approach, which is supported by regulatory governance, provides a favourable advantage to incumbent benchmark administrators as the regulatory regime underscores market confidence in benchmark quality. Users are likely to regard administrators' regulatory compliance as a proxy for benchmark quality and would support the entrenchment of the benchmark by sticking to its adoption.

The nature of price-related benchmarks is such that they also attract network effects, and so the market is inherently likely to be uncompetitive. With the bias towards incumbent benchmark administrators and barriers to entry created by regulation for new benchmarks, the landscape is made less favourable than perhaps necessary for market innovation and challengers to existing benchmarks.

Finally, it can be argued that even if the entrenchment of financial benchmarks compromises the user choice objective, benchmark stability promotes market stability. The objective of market stability may thus be contrary to the needs of user choice. Policy makers opted for benchmark preservation in the wake of manipulation scandals precisely because of the stabilising effects of such a move. The attrition of existing benchmarks is regarded as highly likely to introduce market disruptions, and such is adversely perceived by many market participants. Is market stability more desired by market participants than choice? The short termist nature of this measure is likely to be quickly revealed- if market innovation for alternative benchmarks is stifled, longer term developments in efficiency may become sacrificed for short term market stability. Further, as will be discussed in relation to systemic importance of benchmarks and administrators, the entrenchment of benchmarks is not a safeguard for long-term market stability either.

The FSB¹¹¹ has recognised the implications of benchmark proprietisation and the lack of market discipline for benchmark administrators. It is now seeking to encourage the development of alternative interest rate-based benchmarks by providing blueprints that can be further developed. This development seems like an afterthought to the introduction of elaborate regulatory regimes already achieved, and one wonders how effective this will be in mitigating the weaknesses discussed. The regulation of credit rating agencies,¹¹² in the wake of revelations regarding their failures to rate

¹¹¹ Financial Stability Board, *Progress in Reforming Major Interest Rate Benchmarks* (July 2015).

¹¹² Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies.

structured products accurately prior to the global financial crisis, also took the approach of introducing elaborate regulatory and accountability regimes for established agencies, and this could introduce moral hazard in terms of endorsing their ratings. Regulators are now embarking on a determined exercise to encourage less regulatory and industry reliance on credit ratings.¹¹³ Like the FSB's call for alternative benchmarks to be developed in light of regulatory regimes that favour entrenchment of existing benchmarks, regulatory measures do not seem consistent and it remains unpredictable what may be achieved.

The development of alternative benchmarks however serves another useful purpose besides introducing choice to users. The availability of alternative benchmarks may encourage reduced reliance on incumbent benchmarks, making them less of a systemic issue if any benchmark should be subject to attrition. Further, competition can be introduced among benchmark administrators so that administrators may not become systemically important and pose problems for regulatory governance over them.¹¹⁴ This article will examine how policy reforms may achieve this shortly.

Benchmark Attrition and Transition

The entrenchment of any particular financial benchmark will augment the risk of market disruption and instability should the benchmark become damaged or subject to attrition or transition. This prospect results in a vicious cycle where the fear of market instability would feed back into policy-making that supports the preservation and entrenchment of the financial benchmark concerned. As discussed above, the proprietisation approach that shapes current regulatory frameworks reposes the benchmark transition decision in administrators, and current regulatory frameworks provide minimal guidance on how the consequences of benchmark transition are to be managed. As such, we do not think current regulatory frameworks would necessarily be sufficient to safeguard market instability in the face of benchmark transition. We argue that more reform is needed in this area to overcome the weaknesses in current regulatory frameworks.

One way to address the fear of market instability would be to consider if regulators and not benchmark administrators, should have the leading role in managing benchmark crises. The proprietisation approach logically confers the power of managing benchmark crises to benchmark administrators- after all it is their responsibility to manage their property. Although the EU Regulation allows national regulators to intervene in critical benchmarks by compelling benchmark submissions to continue, this is a backward-looking and limited form of intervention power. There are no wider powers for regulatory intervention if critical benchmark transitions entail stressful consequences. This article argues that the management of benchmark crises is an area that exposes the fundamental limitations of the proprietisation approach.

Although it may be argued that benchmark administrators have every incentive not to bring about a benchmark crisis, we should not be unprepared for such a possibility. A financial benchmark may be compromised by undetected misconduct until very late, or be compromised if a methodology earlier

¹¹³ The Regulation, above as amended by Art 5a in 2013, and see Joint Committee of the European Supervisory Agencies, *The Use of Credit Ratings by Financial Intermediaries: Article 5(a) of the CRA Regulation* (Dec 2014). The author thanks Professor Iain MacNeil for raising this analogy at the Forum referred to in n*.

¹¹⁴ See discussion below.

trusted proves to be imperfect. We are concerned that that it would be inherently difficult for administrators to prepare a satisfactory contingency plan as they may not be able to grasp the full impact of a benchmark crisis. They may not be completely aware of the scope of the user base for the benchmark beyond the identified subscribers, and hence the needs to be met. In other words, benchmark administrators may not be able to deal with the systemic risk that flows from a benchmark crisis. The logic of the proprietisation approach in this case would fail to address the needs of market stability. In such a case, perhaps regulatory intervention is needed to manage such a crisis and uphold the wider objectives of market stability and confidence. This will be discussed shortly.

Systemic Importance of Benchmark Administrators?

This article also argues that the proprietisation approach could lead to the augmenting of administrators' importance and give rise to new issues of systemically important institutions. For example, ICE has already gained administration rights over LIBOR, ISDAFIX and the LBMA Gold Fix. Although there are potential attractions to installing benchmark administrators who enjoy economies of scale and network effects, benchmark administrators who manage a number of key price-related benchmarks may augment the distorting effects upon market competition for benchmarks and also become systemically important to the maintenance of market stability. Regulators have to beware that such benchmark administrators could become practically irremovable and this may create tensions and dilemmas in effective supervision. Further, benchmark administrators who become too important may have a disproportionate impact on market stability if their institutional stability or conduct comes into question.¹¹⁵ Dealing with systemically important benchmark administrators also puts regulators in a disadvantageous position as they may adopt more caution in supervisory dealings, and in potential enforcement.

A Balanced Approach to Mitigating the Consequences of Proprietisation

The above discussion raises questions as to what objectives are met in financial benchmark regulation and whether the proprietisation approach can meet them. In the wake of benchmark manipulation scandals, much emphasis has been placed on preserving market confidence in existing benchmarks and maintaining market stability. However, those objectives may only be met in the short term. Further, it is also important to ensure that users have access to efficient transaction-cost reducing mechanisms. It is arguable, drawing from the above discussion, that the regulatory framework has emphasised the needs of short term market stability over the needs of access and choice available to users. Further, although the proprietisation approach has at the moment successfully preserved trust in existing benchmarks and meets the needs of immediate term market stability, the drawbacks of the proprietisation approach may indeed compromise longer term market stability needs. The above discussion warns that entrenched benchmarks and systemically important administrators that are in crisis may create more severe market disruptions.

¹¹⁵ The UK FCA may already have foreseen this in requiring all benchmark administrators to be subject to general principles of financial regulation such as the broadly worded PRIN fundamentals and the regulation of systems and governance (SYSC). See FCA Handbook BENCH 2.

This article does not go as far as to suggest that the proprietisation approach is completely mistaken. Benchmark administrators do perform an important role in protecting and maintaining existing financial benchmarks without attracting the adverse perceptions that revolve around publicising a benchmark. However, as benchmark administrators' private interests may deviate from objectives that are important in the public interest, such as ensuring that users have choice and access to efficient transaction-cost reducing mechanisms, this article argues that the proprietisation needs to be balanced with appropriate regulatory intervention to provide for the objectives that are unlikely to be met by the proprietisation approach. The following sketches the contours of the adjustments we see as necessary for the existing regulatory regimes.

First, the scope of proprietisation may be adjusted considering the limits of the characterisation of financial benchmarks as private market goods. Although the article has no firm position on this, policy makers can explore ways of making designated outfits responsible for benchmark protection and quality maintenance without the full extent of commercialisation. For example, not-for-profit institutions can be designated to assume stewardship over certain financial benchmarks, supported by at-cost fees.¹¹⁶ In the alternative, for-profit organisations can be made subject to terms of licence circumscribing their proprietary freedoms and to wider accountability, scrutiny or participation by not-for-profit stakeholder groups. Such measures may introduce a public interest bent to the administration of benchmarks that addresses some of the weaknesses of proprietisation and commercialisation.

Further, it is suggested that regulatory intervention in financial benchmark regulation can be improved in two areas that are not currently addressed in the UK framework, the IOSCO's standards or the European initiatives.

First, the regulator can promote competition in the market for financial benchmarks, starting with the suggestions made by the Financial Stability Board.¹¹⁷ The UK Financial Conduct Authority is vested with a market competition objective¹¹⁸ and is actively using its mandate to ensure that consumer markets remain competitive,¹¹⁹ such as in retirement income,¹²⁰ cash savings¹²¹ and insurance add-on products,¹²² and in the wholesale sector.¹²³ We argue that such a mandate can also be extended to ensuring that the market for benchmark innovation remains competitive. The FCA should be watchful for barriers to entry for challengers of existing financial benchmarks. We are of the view that healthy market competition will also help mitigate the systemic importance of

¹¹⁶ The author is grateful to Professor Michel Tison for raising this point at the Forum mentioned in n*.

¹¹⁷ Financial Stability Board, *Progress in Reforming Major Interest Rate Benchmarks* (July 2015).

¹¹⁸ Section 1B(3), 1E Financial Services and Markets Act 2000 as amended by the Financial Services Act 2012.

¹¹⁹ Martin Wheatley, 'Competition in the Interests of Consumers', speech (17 Oct 2014).

¹²⁰ FCA, *Retirement Income Market Study* (26 March 2015).

¹²¹ FCA, *Cash Savings Market Study Parts I and II* (30 July 2015).

¹²² FCA, *General Insurance Add-Ons: Final Report* (10 June 2015).

¹²³ FCA, *Wholesale Sector Competition Review 2014-15* (Feb 2015).

incumbent financial benchmarks, and the systemic importance of certain benchmark administrators. The promotion of the competition objective in the financial benchmarks market will encourage diversity in the adoption of transaction-cost reduction mechanisms in financial contracts, and this could help achieve the twin objectives of improving user choice and reducing the systemic importance of certain benchmarks and their administrators.

Second, the regulator should also play a key role in managing benchmark attrition and transition, as such a role is important in providing a secure platform upon which benchmark competition can take place. In other words, benchmark competition can be promoted with confidence as there would be in place a framework for managing the consequences of benchmark attrition and transition. The current policy thinking in the UK and IOSCO that leaves benchmark administrators to manage benchmark attritions and transitions is arguably mistaken, as benchmark administrators are not incentivised to develop such a framework that could encourage market competition and damage their commercial interests. Hence, the framework for certainty and predictability in managing benchmark attrition and transition is a public good that needs to be provided by regulators.

Further, overseeing benchmark attrition and transition is arguably a form of crisis management which regulators are best placed to do in securing the public interest of market stability in those situations. Benchmark administrators' expertise lie in benchmark production, and such expertise does not necessarily lend itself to a capacity for managing crises of wider proportions. The proprietisation approach suffers from the fundamental limitation of being unlikely to incentivise benchmark administrators to respond to a benchmark crisis. Benchmark administrators dedicate their energies to entrenching and exploiting benchmarks, not managing benchmark crises. If a benchmark crisis should occur, regulatory intervention would be needed as immediate needs of market stability have to be met.

Regulators could, in a situation of a benchmark crisis, take over the temporary administration of a benchmark if a major benchmark becomes impeached or damaged, in order to regulate transitional matters for myriad transactions. This provides confidence and certainty for transactions, protects users, and allows regulators to exercise necessary powers to achieve the wider interest of market stability. However this power should be applied sparingly. This suggestion is unlikely out of line with the trend of developing regulator-managed paradigms for financial crisis management and resolution of financial institutions, as has come into place in the US,¹²⁴ Europe¹²⁵ and UK.¹²⁶

It may however be argued that benchmark transition and attrition cannot be dealt with by regulators as such would amount to 'nationalising' a financial benchmark. 'Nationalising' a

¹²⁴ Such as the Federal Deposit Insurance Corporation's powers to resolve and liquidate banks in danger of failing or default under the Dodd-Frank Wall Street Reform and Consumer Protection Act 2010, section 203ff.

¹²⁵ The Bank Recovery and Resolution Directive 2014; formally Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012, of the European Parliament and of the Council.

¹²⁶ The Banking Act 2009 and amendment in view of the Directive above.

benchmark could be perceived to be futile if the benchmark is systemically important beyond a domestic market, such as for the EU as a whole, and it would be inappropriate for any national regulator to administer it. The article suggests that where the EU is concerned, ESMA may be able to temporarily administer such an impaired benchmark due to systemic implications in Europe as it is a body that is building up administrative capacity in direct regulation and governance. Further, ESMA's regulatory objectives in prudential systemic risk oversight and consumer protection in the EU would be able to support such a role of benchmark crisis management.¹²⁷

However, what if the benchmark concerned originates from a third country outside of Europe? In such a situation, the regulatory administration of a benchmark would need cooperation from other major jurisdictions. The cross-border management of a benchmark crisis may require co-ordination from a number of regulators, but this difficulty is not a novel challenge given that all cross-border financial supervision suffers from the same challenge.¹²⁸ IOSCO could also play a coordinating role in such situations, boosting its profile as an international body that provides a platform for international dialogue and cooperation. Colleges of international supervisors could also be developed for key financial benchmarks, as consistent with the practices in cross-border cooperation in banking supervision.¹²⁹ In spite of challenges in securing pan-European or international regulatory action, it remains important that national, pan-European or international regulatory intervention is available in managing benchmark crises.

It is also important that the crisis management powers for regulators are proportionate and subject to transparent and accountable processes, so that the normalisation of benchmark administration can be returned to once stable conditions have been achieved. Like in other crisis management powers, it is a work in progress to achieve an appropriate and balanced suspension of market-based forces in favour of regulatory intervention. In view of the public interest benefits that can be achieved, regulatory intervention in benchmark crisis management should not be viewed with excessive unease.

The 'proprietaryisation' approach over-emphasises the market-based characteristics of price-related financial benchmarks and relies on commercial incentives and market discipline to ensure the protection of benchmark quality. However this characterisation is incomplete as price-related benchmarks are collective goods by nature which coalesce towards network effects. Hence, the proprietaryisation approach will fail to address the limits of market-based governance for such goods, which are discussed above. This article suggests that a more modest scope of stewardship over such benchmarks can be assumed by a non-regulatory body, as the full implications of proprietaryisation do not seem supported, in light of benchmark administration being heavily subsidised by regulatory supervision and enforcement, such as in market abuse enforcement. Moreover, moving away from

¹²⁷ Article 8, Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC.

¹²⁸ See for example, FSB, *Principles for Cross-Border Co-operation on Crisis Management* (2009) and BIS, *Principles for Effective Supervisory Colleges* (2010, 2014 amd).

¹²⁹ Basel Committee of Banking Supervision, *Principles for Effective Supervisory Colleges* (June 2014), at <http://www.bis.org/publ/bcbs287.htm>.

the full implications of proprietisation will allow more regulatory intervention to be developed in crucial areas such as benchmark transition and attrition where the public interest needs of market stability are unlikely to be met by private sector administration of such benchmarks.

5. Conclusion

This article argues that the key regulatory approach in addressing financial benchmark scandals in the wake of the LIBOR, foreign exchange and gold rigging episodes is that of appointing benchmark administrators to proprietise existing financial benchmarks in order to commercialise, protect and maintain them, thus restoring market confidence and stability. The article discusses the theoretical underpinnings and policy drivers for such an approach, and argues that the regulatory framework in the UK, IOSCO's standards and the European Regulation have all taken this approach although some differences in the detail of their frameworks can be detected. The proprietisation approach is matched by obligations imposed on benchmark administrators to comply with regulators' requirements in relation to internal governance and accountability, as well as prescriptions for the due production of benchmarks and the exercise of oversight of benchmark submitters.

The article critically queries the implications of such proprietisation. It questions whether, in light of massive regulatory subsidy, the extent of proprietisation is really matched by the value added by benchmark administrators. Although some benefits are achieved by the proprietisation approach, such as the avoidance of adverse perceptions surrounding the alternative approach of publicising key financial benchmarks, there are drawbacks to the proprietisation approach that relate to the possible limitation of user choice and entrenchment of benchmarks. These also entail other consequences such as the augmentation of the systemic importance of financial benchmarks and benchmark administrators, which are adversely related to the longer term needs of market stability.

The article observes that the FSB is embarking on nascent efforts to mitigate some of the drawbacks of benchmark proprietisation by introducing competition in the benchmark market and encouraging the development of alternative benchmarks. However, such may run counter to the current regulatory design and would need the support of more regulatory reform. The article suggests some readjustment to the proprietisation approach and a balance of appropriate regulatory intervention. Regulatory intervention is especially needed in order to safeguard market competition in benchmark innovation and in addressing benchmark transition and attrition. The current frameworks for governing financial benchmarks do not at the moment adequately address the above. The article does not argue that the proprietisation approach is mistaken but that it is important to reconsider its parameters and introduce an adequate measure of regulatory balance to address its fundamental limitations.

Appendix 1

Table for Comparison of the UK, IOSCO and EU approaches to regulating benchmark administrators:

	UK FCA MAR 8	OICU-IOSCO	EBA/ESMA guidelines/ proposed EU legislation
Governance structure	<p>Somewhat meta-regulatory¹³⁰ in nature: ‘effective organisational and governance arrangements’</p> <p>Appointment of benchmark administration manager responsible for compliance</p> <p>Regular review and surveillance of quality of benchmark submissions</p> <p>Institution of internal whistle-blowing procedures</p>	<p>‘credible and transparent governance and oversight’</p> <p>Expertise of benchmark administrators</p> <p>Institution of internal control framework for management of conflicts of interest and ensuring compliance</p> <p>Whistleblowing framework</p> <p>Internal control for data collection</p> <p>Appointment of internal or external auditor who is independent to periodically report on administrator’s compliance</p> <p>Record keeping of all data, submissions,</p>	<p>‘effective governance and compliance processes to ensure the quality of the benchmark’</p> <p>Appropriate criteria for appointment of members of governing bodies or compliance</p> <p>Internal control mechanisms for administrator, submitters and other third party outsources</p> <p>Internal control over quality of data submitted</p> <p>Whistle-blowing procedures</p> <p>Disciplinary procedures</p> <p>Record keeping of all oversight committee’s meetings with administrator, third parties etc for 5 years</p>

¹³⁰ This means that the mode of regulation is worded widely in terms of outcomes to be achieved but the implementation of the procedures in firms that are needed to achieve the outcomes is delegated to the regulated. See Sharon Gilad, “It Runs in the Family: Meta-regulation and its Siblings” (2010) 4 Regulation and Governance 485; Cristie Ford, “New Governance, Compliance, and Principles-Based Securities Regulation” (2008) 45 American Business Law Journal 1; Cary Coglianese and David Lazer, “Management-Based Regulation: Prescribing Private Management to Achieve Public Goals” (2003) 37 Law and Society Review 691.

		policies etc for 5 years	Record keeping of all data used for benchmark calculation to enable external audit Limitations on outsourcing unless adequate supervision of outsourcees can be put in place
Governance principles	Organisational and governance arrangements to identify and manage conflicts of interest Ensuring confidentiality of benchmark submissions	Management of conflicts of interest in prescribed detail down to staff reporting lines, segregation of responsibilities and staff remuneration Robustness of operations such as contingency measures for failures in inputs or markets or critical functions	Management of conflicts of interest
Accountability	Institution of oversight committee represented by submitters, markets and non-executive directors of the administrator Code of practice for benchmark submitters Determining scope, definition and methodologies for benchmark Review of benchmark submissions and quality	Institution of independent oversight function to review benchmark quality and methodology, outsourcing, commissioning internal or external audits Oversight committee to also monitor for benchmark manipulation, code of conduct for submitters	Oversight function or committee Committee has power to directly report irregularities to regulator Regulation: External audit

<p>Methodology</p>	<p>None prescribed</p>	<p>General principle of 'accurate and reliable representation of the economic realities of the Interest it seeks to measure, and eliminate factors that might result in a distortion of the price, rate, index or value of the Benchmark'</p> <p>Data sufficiency required, preference for transaction-based data in active markets, that are bona fides, arms-length transactions.</p> <p>Hierarchy of data input to be constructed, with preference for market data above but permitting quotes, bids and offer data</p> <p>Explicit setting out of methodology for calculation to be made at least to stakeholders, term undefined</p>	<p>General principle of 'Benchmark should represent adequately the market, strategy or interest to which it refers, and measure the performance of a representative group of underlying transactions in a relevant and appropriate way'</p> <p>Methodologies must be rigorous, systematic and continuous, similar to the regulation of credit ratings quality¹³¹</p> <p>Preference for transaction-based data, permitting non-transaction data</p> <p>Regulation: safeguards needed where input data is mainly not transaction-based data and any submitter contributes to more than 50% of value of transactions in market</p> <p>Regulation: Input data hierarchy to be clearly established</p> <p>Regulation: Expert judgment can be used subject to transparent and clear guidelines</p> <p>Methodologies to be</p>
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¹³¹ Iris H-Y Chiu, 'Regulatory Governance of Credit Rating Agencies in the EU: The Perils of Pursuing the Holy Grail of Rating Accuracy' (2013) European Journal of Risk and Regulation 199.

			<p>subject to regular review</p> <p>Methodologies subject to public transparency</p>
Oversight of third parties	<p>Not explicit but can be inferred from meta-regulatory provisions on effective organisational and governance arrangements in order to ensure due administration and publication of benchmark</p>	<p>Written policies and procedures to manage outsourced third parties</p> <p>Monitor third parties for compliance</p> <p>Contingency arrangements if third parties fail to deliver</p> <p>Transparency of third parties' identities to relevant regulators and stakeholders, term undefined</p>	<p>Regulation: Adequate supervision of outsourcees</p> <p>ESMA/EBA: Direct guidelines addressed to benchmark calculation agents and benchmark publishers in terms of having robust internal governance for compliance, conflicts of interest management, error detection and certification of compliance to administrator</p>
Transparency	<p>Only to regulator</p>	<p>To regulators, as per below</p> <p>To stakeholders, in terms of benchmark methodologies, third party outsources, conflicts of interest and policies, and transition policies for benchmarks</p> <p>Complaints procedure for benefit of stakeholders</p>	<p>EBA/ESMA: Disclosure of governance and compliance committee members to public</p> <p>Disclosure of benchmark methodology to public</p> <p>Regulation: Transparency of benchmark data subject to Commission delegated legislation</p> <p>EBA/ESMA: Certification of compliance to public</p> <p>EBA/ESMA: Complaints</p>

			<p>procedures but uncertain whether internal or external</p> <p>EBA/ESMA: Direct guidelines addressed to users viz users must use sufficient due diligence to ascertain that all parties in the benchmark production processes comply with guidelines; and that users must regularly assess the suitability and relevance of a benchmark</p>
<p>Relations with regulator</p>	<p>Notification to FCA of suspected breaches by administrator or submitter</p> <p>Notification to FCA of suspected benchmark manipulation</p> <p>Reporting to FCA daily on all benchmark submissions</p> <p>Providing FCA with quarterly aggregate statistics</p>	<p>All documents and audit trail to be available to regulator</p> <p>Disclosure of conflicts of interest and policies</p>	<p>Regulation: Registration system for benchmark administrators, recognition of third country administrators based on equivalence and allowing registered administrators to use third country benchmark based on equivalent supervision and arrangement in place with ESMA.</p> <p>Scrutiny over benchmark methodology</p> <p>EBA/ESMA: Scrutiny over audit trail and oversight committee's meetings</p> <p>EBA/ESMA: Reporting of suspected irregularities,</p>

			<p>Regulation will leave the specifics to delegated Commission legislation</p> <p>EBA/ESMA: Cooperation with regulators over any other query</p>
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Appendix 2

Table of Comparison between the UK, IOSCO and European Regulatory Regimes for Governing Benchmark Submitters

	UK FCA	OICU-IOSCO	EBA/ESMA guidelines and EU legislation
Governance structure	<p>‘effective organisational and governance arrangements’</p> <p>Appointment of benchmark manager to ensure compliance</p> <p>Responsibility for oversight of benchmark submission to reside with senior personnel</p> <p>Benchmark submitter to be based on UK</p> <p>Record keeping of benchmark submissions and relevant data for 5 years</p> <p>Appointment of independent auditor for yearly report on compliance (not explicit on whether internal or external auditor)</p>	<p>Internal systems and controls to deal with</p> <ul style="list-style-type: none"> -management of conflicts of interest -application of methodology -pre-submission validation by senior personnel -internal sign-off procedures for submission -whistleblowing policies -suspicious submission reporting policies -clear roles and responsibilities and reporting lines for key personnel <p>Record keeping</p> <p>Training of personnel in terms of compliance with market abuse regulation</p>	<p>Clear internal policies developed for submissions, internal control, training, record-keeping, compliance, internal audit, disciplinary procedures, complaints management and escalation</p> <p>Effective organisational and administrative arrangements to manage conflicts of interest, highly prescribed eg EBA/ESMA: as to exchange of information between staff, prevention of collusion or exercise of inappropriate influence and adequate remuneration policies</p> <p>Adequate internal control mechanisms</p> <p>EBA/ESMA: Senior personnel named individually responsible for oversight of benchmark</p>

			<p>submissions</p> <p>Staff in benchmark submissions to have adequate skills, knowledge and expertise and compliance training</p> <p>Effective whistle-blowing or internal reporting policies</p> <p>EBA/ESMA: Occasional external audits of submissions and procedures</p> <p>Record keeping for at least 5 years of</p> <ul style="list-style-type: none"> -procedures and methodologies -names of individuals responsible for submissions and oversight -communications with benchmark administrators or other third parties -substantial exposures of individual traders or trading desks to Benchmark related instruments; — any transaction reversing positions subsequent to a submission; — findings of external or internal audits related to Benchmark
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			<p>submission, remedial actions and progress in their implementation</p> <p>Note Proposed Directive is more skeletal and leaves details to Commission delegated legislation</p>
Governance principles	<p>Management of conflicts of interest by written policy</p> <p>Rigorous detection and reporting of suspected manipulation and collusion</p>	<p>Management of conflicts of interest</p> <p>Robust procedural internal control culture</p>	<p>Management of conflicts of interest</p> <p>EBA/ESMA: zero-tolerance policy, including disciplinary measures, for non-compliance with internal policies</p>
Duties of benchmark submitter	<p>Ensuring that benchmark submissions are credible and robust</p>	<p>In a Code that would be drawn up by benchmark administrator</p>	<p>ESMA/EBA: Compliance-based, to certify to benchmark administrator</p>
Methodology	<p>Effective methodology based on objective criteria and relevant information</p> <p>Qualitative criteria allowed such as expert judgment</p> <p>Review at least every quarter for robustness and credibility of methodology</p>	<p>Processes to determine input eligibility</p> <p>Bona fides of input important criteria</p> <p>Expert judgment can be used</p>	<p>Transaction-based verifiable data to be used</p> <p>Other input or qualitative judgment can only be used subject to internal control and guidelines eg: EBA/ESMA: with senior personnel approval</p>
Accountability	<p>Information on methodology and use of quantitative and qualitative criteria to be sent regularly to benchmark administrator</p> <p>Notification of</p>	<p>To benchmark administrator based on Code of Conduct</p> <p>Unclear as to where notification of suspicious activity goes</p>	<p>To benchmark administrator based on Code of Conduct, Proposed Directive: Code to be approved by regulator for critical benchmarks</p> <p>ESMA/EBA: To respond</p>

	<p>suspected manipulation or collusion to FCA</p> <p>Independent auditor for yearly report on compliance to be sent to FCA</p>		<p>to regulator if regulator makes queries directed at submitter</p>
<p>Relations with regulator</p>	<p>Unclear whether FCA has direct enforcement powers and in what form</p> <p>Unclear whether FCA has powers to directly investigate and call up documents but this may be subsumed within general powers FCA has under the Financial Services and Markets Act 2000</p>	<p>Unclear if there are any direct relations</p>	<p>ESMA/EBA: To respond to reasonable queries from regulator</p>