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Working Paper No. 12
July 2013

FROM LIBOR TO HIBOR:

THE IMPLICATIONS OF LIBOR SCANDAL ON THE BANKING REGULATION AND GOVERNANCE IN HONG KONG IN THE EXERCISE OF HIBOR FIXING

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4/1/2013

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I. From LIBOR to HIBOR

This writing seeks to explore the ramifications and implications from the 2009 LIBOR incident on HIBOR.

The London Interbank offered rate ("LIBOR") was described as "the world's most important number"[1]: its fundamental[2] importance stems in its "widespread" [3] use as an interest rate benchmark utilized by transactions amounting to "an estimated $800 trillion-worth of financial instruments" from simple mortgages to interest-rate derivatives [4] internationally. After years of investigation since 2009, Barclays[5] and UBS[6] were fined large sums of penalty by the relevant authorities for manipulation and false reporting of LIBOR following reports of contributing banks' suspected misreporting[7] and manipulation of LIBOR in 2012. This "significant corporate governance failure…in a highly regulated industry"[8] triggered investigations and review into the adequacy of the interbank offered rate systems worldwide[9], which "may be susceptible to [similar manipulating] opportunities as [the] LIBOR [scandal]"[10].

As LIBOR and HIBOR share some essential characteristics, the LIBOR incident highlighted "how big banks are driven to r

ecklessness and even illegal conduct by the pursuit of trading profits, to the detriment of bank soundness and the public interest"[11], there is a need to envisage the appropriate regulatory role over the banks, in particular, how banks should conduct their interbank bank offered rate submissions, as banks dominated the important task of managing the payments and finance system of a society[12].

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[1] Money Week, "LIBOR: the world's most important number" 10/10/2008 (online version)
[2] Callaghan, "The LIBOR Scandal – the UK's legislative response" (2013) *JIBLR* 160
[3] Kiff, "What is LIBOR? The London interbank rate is used widely as a benchmark but has come under fire" (2012) *Finance & Development* 32
[4] Banksters, "How Britain's rate-fixing scandal might spread – and what to do about it" *The Economist* 7/7/2012 (online version)
[5] US Commodity Futures Trading Commission (2012) *Press Release: CFTC Orders Barclays to pay $200m Penalty for Attempted Manipulation of and False Reporting concerning LIBOR and EURIBOR Benchmark Interest Rates* http://www.cftc.gov/PressRoom/PressReleases/pr6289-12 (assessed 3/4/2013)
[6] Peston, "UBS fined $1.5bn for LIBOR rigging" *BBC News* 19/12/2012 (online version)
[7] Mollenkamp, "Study Casts Doubt on Key Rate: WSJ Analysis suggests banks may have reported flawed interest data for LIBOR" *Wall Street Journal* 29/5/2008 (online version)
[8] Abrantes-Metz, "The Lessons from LIBOR for Detection and Deterrence of Cartel Wrongdoing" (2012) 3 *Harvard Business Law Review* 10
[9] Investigations include that of TIBOR (Tokyo), HIBOR (Hong Kong), SIBOR (Singapore), STIBOR (Stockholm), EURIBOR (European Union) etc.: Satter (2012) *Regulators Question Interest Rates from Sweden to Singapore* http://www.advisorone.com/2012/07/19/regulators-question-interest-rates-from-sweden-to (3/4/2013)
[10] HM Treasury (2012) *The Wheatley Review of LIBOR: initial discussion paper* http://www.hm-treasury.gov.uk/d/condoc_wheatley_review.pdf, [7.5]-[7.9]
[11] Rosenthal, "Rigging the Financial System" *The New York Times* 4/12/2012 (online version)
[12] Goodhart, *Financial Regulation: Why, How, and Where Now?* Routledge 1998, 11

It is acknowledged that the LIBOR incident and subsequent reform proposals by Wheatley are intuitive for strengthening the present regulation and governance of HIBOR. In this essay, the basic principles of regulation and technical definitions will be considered first, followed by a comparative analysis of reform options proposed for the LIBOR and HIBOR (and other global benchmarks), and finally to discuss whether the relevant proposals will be effective in improving the existing regulation of HIBOR-setting in Hong Kong.

II. Definitions of LIBOR and HIBOR

In a nutshell, LIBOR (in London) and HIBOR (in Hong Kong) represent the interest rates at which banks are willing to lend in a certain interbank market in a specified currency.

By definition, LIBOR is calculated from submissions quoted by the 6-18 contributing banks by answering the question "at what rate could you borrow funds, were you to do so by asking for and then accepting inter-bank offers in a reasonable market size just prior to 11am?"[13], whereas reference banks in HIBOR[14] provides their "estimated offer rates at which deposits in HKD are quoted to prime banks in the Hong Kong interbank market at 11am"[15]. Thus, one fundamental difference between the rates is that HIBOR "reflects the rate a prime bank has to pay…as estimated by the [reference] banks while contributing banks for LIBOR are required to submit rates that reflect their own borrowing costs in the interbank market"[16]

Not only do LIBOR and HIBOR share the calculation methodology of "trimmed mean" averaging submissions from specified contributing/reference banks, the two rates are also similar in that these rates can be said to be "purely hypothetical" as banks are not compelled to trade at their submitted rates[17]. As the LIBOR scandal has shown, this could be open to abuse where there is loopholes in existing regulation over rate-submission activities.

III. Modes of Regulation

"Regulation" in the context of banking arena is to promote fairness of market competition and to protect interests of different stakeholders, including investors as well as the stability of the banking and financial system as a whole[18].

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[13] British Bankers' Association ("BBA"), *bbalibor: The Basics* (2013) http://www.bbalibor.com/bbalibor-explained/the-basics (4/4/2013)
[14] Defined by the Hong Kong Associate of Banks ("HKAB")
[15] Treasury Markets Association, *Report on the Review of Hong Kong Interbank Offered Rate* (2012) http://www.tma.org.hk/PubFile/HIBOR%20Review%20Report%20-%20English.pdf (29/1/2013)
[16] Lau, *Interbank Interest Rate Fixing Mechanism* (2012) http://www.hkma.gov.hk/eng/key-information/insight/20120803.shtml (28/3/2013)
[17] Sveriges Riksbank, *The Riksbank's Review of STIBOR* (2012) http://www.riksbank.se/Documents/Rapporter/Riksbanksstudie/2012/rap_riksbanksstudie_stibor_121128_eng.pdf (17/4/2013)
[18] Hsiao, *International Banking and Finance Law: Principles and Regulations* Sweet & Maxwell 2011, [1.007]

Traditionally, the two distinct forms of regulation were respectively government intervention and self-regulation by the market: “the Government may intervene in a market or industry in the form of law, administrative rules, taxation or moral suasion [whereas] self-regulation could be imposed through industry associations and codes of conduct”[19]. The main advantage of government regulation is to serve public interest by ensuring a fair and open competition in the market, protecting small and less well-informed consumers, and ensuring systemic stability[20], whilst that of self-regulation by industry are perceived to be more flexible, cost-effective and could enhance “voluntary obedience”[21].

More recently, Omarova suggested that a more comprehensive

scheme of financial regulation required merging market and governmental regulation, so that the benefits of business efficacy of market regulation could be retained, and be further supplemented by the government acting as a “credible threat…to force private market participants to self-regulate and to keep them committed to such a self-regulatory system” by legitimately exercising its powers of inspection, investigation and enforcement when necessary[22].

As a general remark, relevant considerations in devising a regulatory framework most appropriate for a certain financial benchmark include market dynamics of the interbank market, economic and monetary policy, as well as the legal framework. As recommended by the International Organization of Securities Commissions (IOSCO) consultation report on financial benchmarks, a “one-size-fits-all approach [to enhanced oversight of benchmark activities] may not be appropriate”[23]. The report sets out the characteristics or qualities a credible benchmark should possess, that is, being:

(i) representative of the economic realities;
(ii) based on reliable data and bona fide submission of quotations;
(iii) sufficiently transparent in the methodology of deriving, calculation of and limitations inherent in the benchmark; and
(iv) “subjected to clear governance and accountability mechanisms”[24]

In balancing enhanced regulation/governance by the governmental bodies and the changing market conditions, the regulatory scheme should be capable to provide for

[19] Sheng, *Financial Regulation* (2011) http://www.hkma.gov.hk/eng/key-information/speech-speakers/altsheng/speech_080597b.shtml (4/4/2013)
[20] *supra* n12, 4
[21] Miller, “Self-Regulation of the Securities Markets: a critical examination” (1985) 42 *Washington and Lee Law Review* 853, 855-959
[22] Omarova, “Wall Street as Community of Fate: Toward Financial Industry Self-Regulation” (2011) 159 *U.Pa.L.Rev.* 411, 486
[23] IOSCO (2013) *Financial Benchmarks: Consultation Report* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD399.pdf (4/4/2013)
[24] *ibid*

strengthened statutory control of benchmark-fixing activities by contributing/reference banks, yet encouraging market players to draw up and more willing to be bound by a code of conduct. Such legal framework should be able to protect and maintain the aforesaid characteristics of credible benchmarks.

IV. Loopholes and Manipulation of LIBOR and its implication on HIBOR

In order to tackle the loopholes and avoid reoccurrence of LIBOR manipulation, the Wheatley Review of LIBOR[25] ("the Wheatley Review") made a "ten-point plan for the comprehensive reform of LIBOR" which is highly instructive for any feasible reform of HIBOR, in particular, the principles and rationale for the proposed measures aimed at strengthening regulation and governance of contributing/reference banks' exercise of making submissions to compile the rates and institutional reform are particularly important and generally applicable in HIBOR.

As regards LIBOR, it is worth noting that there is a need for introducing specific measures aimed to preclude the risk of future manipulation of LIBOR, which essentially concerns the mechanism and responsibility of LIBOR-fixing. As to the context of HIBOR, it is generally acknowledged that the risk of manipulation of HIBOR-fixing is unlikely for the following reasons:

(i) The impact of the global financial crisis on the rates were different: LIBOR "carried higher risk premiums…but [HIBOR] did not suffer large losses"[26];

(ii) Definition of the rates: LIBOR involved a submission on a contributing bank's own funding costs which potentially carries a labeling effect of a bank's reputation risk[27], leading to a higher incentive to misreport. This is unlikely to occur in HIBOR as the submissions of the reference banks' estimate of funding costs by prime banks in Hong Kong do not necessarily reflect their own funding costs[28]; and

(iii) Differences in market: The risk of collusion by reference banks in HIBOR is "much less" than that in LIBOR, as "trading in HKD interest rate derivatives are not as active as [that] of USD interest rate derivatives"[29].

Having the benefit of the Wheatley Review, the Treasury Markets Association[30] ("TMA") in 2012 subsequently made reform proposals for HIBOR. In addition to adopting

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[25] HM Treasury (2012) *The Wheatley Review of LIBOR: Final Report* http://cdn.hm-treasury.gov.uk/wheatley_review_libor_finalreport_280912.pdf (4/4/2013)
[26] Devereux, *The Dynamics of Asian Financial Integration: Facts and Analytics* Routledge 2011, 126
[27] *supra* n16
[28] *supra* n15, 4
[29] *supra* n16
[30] *supra* n15

recommendations from the HIBOR Report, the Hong Kong Monetary Authority[31] ("HKMA") envisaged a number of measures to further strengthen the regulation and governance of HIBOR-fixing. The table below highlights five important areas of and summarizes the main proposals for which HIBOR may borrow from the LIBOR lesson for strengthening its existing regulation and governance[32]:

	LIBOR	**HIBOR**
A. Statutory regulation	Introduction of Financial Services Act 2012 to regulate the administration of, and submission to LIBOR	Issuance of Guideline under s7 Banking Ordinance; "serious consequence" on bank and senior management for non-compliance
B. Rate Submission Guidelines & Code of Conduct	Introduction of LIBOR Administrator and Oversight Committee to develop: (i) Rate submission guidelines to be endorsed by the Financial Services Authority[33]; and (ii) An industry-led code of conduct"	(i) Development of Rate Submission Guidance with industry's comments, to be submitted to HKMA for comments and endorsement. (ii) A Code of Conduct be developed to facilitate oversight by reference banks, administrator and the HKMA
C. Reduced Scope of Fixing	Confining the scope of LIBOR/HIBOR fixing to tenors/currencies for which there is market demand and sufficient trade data	
D. Governance Structure	The administration of LIBOR and HIBOR be transferred to an independent party to avoid conflict of interest through self-governance by industry	
E. Market participation	(i) Encouraging wide participation by banks (not only contributing banks) in LIBOR-fixing (ii) Evaluation of use of LIBOR by market participants	(i) Encouraging voluntary participation by banks in HIBOR-setting; (ii) Review of terms in HIBOR-referencing contracts for standardization and further improvement to enhance clarity

[31] Hong Kong Monetary Authority (2012) *The HKMA Measures to strengthen the HIBOR fixing mechanism* http://www.hkma.gov.hk/media/eng/doc/key-information/press-release/2013/20130206e4a1.pdf (10/3/2013)
[32] The five areas of Statutory Regulation, Rate Submission Guidelines & Code of Conduct, Governance Structure, Reduced Scope of Fixing, and Market Participation are the main areas of reform in the HIBOR Report.
[33] The Financial Services Authority was an independent non-governmental body given statutory powers to regulate the financial services industry in the UK: Financial Services Authority (2013) *About the FSA* http://www.fsa.gov.uk/portal/site/fsa/menuitem.cf48810545916eaac4a69810a0a0a0a0/?vgnextoid=0c69f5a43b8f2310VgnVCM10000013c110acRCRD&vgnextfmt=default (9/4/2013). It is now abolished under the Financial Services Act 2012 which came into force on 1 Apr 2013: *supra* n2, 160

A Need for Reform of HIBOR

Apart from the abovementioned differences including the definitions and basis of rate submissions, the relative risks of manipulation of the rates in their markets, the varying extent of usage of the two rates and market dynamics, the characteristics of the Hong Kong financial market is also an essential consideration in drawing implications from the LIBOR incident on reform options for HIBOR.

As one of the top global financial centers in the world[34], Hong Kong's market is unique in that such a relatively small[35] market offers a "free, open and fast-paced business environment"[36] with "deep linkages with global financial networks"[37]. Specifically, the Hong Kong financial market is "characterized by a high degree of liquidity". Its interbank market is sizeable and active, with an average of daily turnover at HK$222 billion (August 2012)[38]. Thus, recommendations that were considered effective and appropriate for the LIBOR market may not necessarily be effective and suitable for the HIBOR market. Such recommendations should be critically assessed.

In essence, the five important areas of reform proposals (items A-E in the above table and below) by its nature incorporate "a framework of governance, methodological standards and operational controls [which] is essential to ensuring data integrity and accuracy in a benchmark process"[39]. The effectiveness and limitations of proposed reform will now be discussed in detail.

A. Strengthened Statutory Regulation

Unlike LIBOR, which was regulated by the British Banks Association ("BBA") but not governmental authorities[40], in Hong Kong "the HKMA in its role as bank regulator already has powers under the Banking Ordinance[41] to exercise oversight on HIBOR fixing activities, [so] there does not appear to be a strong case for creating a separate statutory regime for the

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[34] Hong Kong is ranked third (after London and New York) in 2012: Long Finance (2012) *The Global Financial Centers Index 12* http://www.longfinance.net/Publications/GFCI%2012.pdf (9/4/2013)

[35] Compared to London and New York: Cheung, "Measuring the position of Hong Kong as an International Financial Center" (2007) *Hong Kong Monetary Authority Quarterly Bulletin* 1, 5

[36] Tsang (2013) *Speech by Financial Secretary at joint Business Community Luncheon* http://www.info.gov.hk/gia/general/201303/18/P201303180350.htm (9/4/2013)

[37] Lai, "Differentiated Markets: Shanghai, Beijing and Hong Kong in China's Financial Center Network" (2012) 49 *Urban Stud* 1275, 1293

[38] HKSAR Government (2011) *Hong Kong: The Facts – Financial Services* http://www.gov.hk/en/about/abouthk/factsheets/docs/financial_services.pdf (9/4/2013)

[39] GFMA (2013) *Comment on IOSCO's Consultation Report on Financial Benchmarks* http://www.iosco.org/library/pubdocs/399/pdf/Global%20Financial%20Markets%20Association%20GFMA.pdf (7/4/2013)

[40] Dooley, "The LIBOR Scandal" (2012) 32 *Rev Banking & Fin. L.* 2, 3

[41] Cap. 155. The HKMA is a "government authority in Hong Kong responsible for maintaining monetary and banking stability": HKMA (2012) *About the HKMA* http://www.hkma.gov.hk/eng/about-the-hkma/hkma/about-hkma.shtml (24/4/2013)

regulation of [HIBOR]"[42]. The HKMA emphasized that it would issue guideline under s7 of Banking Ordinance[43].

(i) Powers of the HKMA

The HKMA derived its regulatory powers under the Banking Ordinance ("BO"), and is responsible under BO s7 for, *inter alia,* supervising compliance with provisions of BO, ensuring all authorized institutions are operated in a responsible manner, promoting and encouraging proper standards of conduct, suppressing illegal or improper business practices, and taking all reasonable steps to ensure that any banking businesses carried on by an authorized institution is carried on with integrity, prudence and the appropriate degree of professional competence. These responsibilities are especially essential in governing the submission of HIBOR quotations by reference banks.

The issuance of Guideline under BO s7 would likely be effective in regulating reference banks' submissions in HIBOR-fixing, as "non-compliance with guidelines could have serious consequence on the reference bank as well as its senior management [through affecting] the authorized institution's continued satisfaction of the minimum authorization criteria; and fitness and propriety of directors…and senior management"[44]. Further, HKMA's "wide powers of control over authorized institutions", including its power to give a direction to the effect that the affairs, business and property of the institution specified in the direction shall be managed by a Manager to be appointed by the HKMA[45] may be invoked[46] if there is a breach of guidelines specifying business practices which should not be engaged in by authorized institutions (such as the prohibition of intentional misreporting) under BO s82.

(ii) Issues of Criminal Liability

It would appear that both the TMA and HKMA did not envisage the introduction of criminal liabilities in relation to financial benchmarks activities even though doing so could provide powerful deterrence for future (attempted) manipulation. This is different from the situations in UK where the Financial Services Act 2012 was introduced, creating the criminal offences of misleading statements[47], misleading impressions[48], and misleading statements etc. in relation to benchmarks[49], or the European Union's proposal for a Directive on criminal sanctions for insider dealing and market manipulation[50].

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[42] *supra* n15, 7
[43] *supra* n31
[44] Roebuck, *Banking Law in Hong Kong: Cases and Materials* LexisNexis 2009, 11
[45] BO s52(1C)
[46] Chan, *Hong Kong Banking Law Handbook* LexisNexis 2008, 199
[47] s89
[48] s90
[49] s91
[50] European Commission (2012) *Amended Proposal for a Directive of the European Parliament and of the Council on criminal sanctions for insider dealing and market manipulation* http://ec.europa.eu/internal_market/securities/docs/abuse/20120725_directive_proposal_en.pdf (17/4/2013)

The German Banking Industry Committee, however, opined that "where the calculation of a benchmark depends on voluntary contributions, the legal framework should not act as a deterrent"[51]. This may suggest that HIBOR may not gain much additional benefit from introducing criminal liabilities for misreporting or market manipulation. In light of HKMA's existing extensive regulatory power, the fact that "HIBOR fixing has been performing well in reflecting the funding cost of prime banks"[52] and the prevailing view of unlikelihood of HIBOR manipulation, it appears that there exists no imminent necessity nor compelling need for criminal sanction as compared to the situation in UK where attempted LIBOR manipulation had actually occurred. Part of the reason for the introduction of these measures in UK was to "demonstrate to the rest of the world that the UK market will not tolerate manipulative behavior"[53].

Even if criminal liabilities were to be introduced for misreporting or manipulation of HIBOR rates in Hong Kong, there is no direct evidence that it could effectively prevent the occurrence of future misreporting or manipulation of HIBOR. This potential measure of imposition of criminal punishment on wrongdoings is in the meantime academic.

In HIBOR, rather than to impose criminal liability on infringing guidelines, code of conducts, or legal provisions, the main concern appears to be to strengthen the regulation and governance of reference banks' exercise of rate submission to tackle conflict of interests inherent in the existing rate-fixing mechanism as well as enhancing oversight of such activities by various parties: internal supervision or accountability by the bank's senior management, the industry (TMA) and the government authorities (HKMA). Thus, "changing the sanction regime alone may not be sufficient to improve the way in which benchmarks are produced and used"[54].

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[51] German Savings Bank Association (2013) *Response to EBA consultation paper 'Principles for Benchmarks-setting Processes in the EU* http://www.iosco.org/library/pubdocs/399/pdf/German%20Banking%20Industry%20Committee%20(sent%20their%20response%20to%20ESMA).pdf (17/4/2013)

[52] *supra* n15, 14

[53] *supra* n2, 164

[54] European Commission (2012) *Consultation Document On the Regulation of Indices: a possible framework for the regulation of the production and use of indices serving as benchmarks in financial and other contracts* http://ec.europa.eu/internal_market/consultations/docs/2012/benchmarks/consultation-document_en.pdf (17/4/2013)

B. Rate Submission Guidelines and Code of Conduct

The HKMA "sees the need to add more weight to the Rate Submission Guidelines ["RSG"] and Code of Conduct"[55], both measures are directed to the exercise of interbank offered rate fixing activities by contributing/reference banks, not only to provide guidance or promote best practices, but may be used by the regulators as a means of regulation, such as by requiring conformity with the provisions or through imposing sanctions (administrative costs, civil or criminal liabilities) for breaches of provisions in RSG and code of conduct.

(i) Rate Submission Guidelines

Where the methodologies of LIBOR and EURIBOR[56] (similar definition with HIBOR) are compared, it was suggested that despite the different definitions of the rates, both LIBOR and EURIBOR/HIBOR are nonetheless "subjective estimates": LIBOR contributing banks have to submit an estimate of its own funding costs which "may be verifiable to the extent that the bank has engaged in actual transactions" whereas EURIBOR/HIBOR incorporates a "prime bank" element[57] which makes it "even less verifiable since it relates to a notional 'prime bank'"[58].

As mentioned earlier, inherent subjectivity in the definition and the exercise of expert judgment required in arriving at the quotations to be submitted by banks could be open to abuse if there were insufficient regulation over the rate-submission exercise. There is thus a need for clear guidance (such as the proposed RSG) on making such "estimated" submissions for the calculation of the important interbank interest rates.

In relation to necessary considerations or elements in RSG, the IOSCO suggested that "methodology criteria, processes and policies which govern the construction of the benchmark should be clearly defined" and the need for "rigorous control framework and appropriate governance arrangements"[59]; the Global Financial Markets Association ("GFMA") emphasized that the methodology of constructing financial benchmarks should be

[55] *supra* n31

[56] Euro Interbank Offered Rate is "the rate at which Euro interbank term deposits are offered by one prime bank to another prime bank within the [European Monetary Union] zone, and is published at 11:00am (CET) for spot value (T+2)": European Banking Federation (2012) *About Euribor* http://www.euribor-ebf.eu/euribor-org/about-euribor.html (11/4/2013)

[57] Note that the "prime bank" element does not necessarily in itself creates subjectivity, for example, the Australian Bank Bill Swap Reference Rate has "performed well as a benchmark for many years, in large part reflecting its substantive base in market transactions" for it involved trading in homogeneous prime bank paper: Australian Financial Markets Association (2013) *AFMA BBSW: A Guide to the Bank Bill Swap Reference Rate* http://www.afma.com.au/afmawr/_assets/main/lib90012/afma%20bbsw%20guide.pdf (17/4/2013). It has also been suggested that "transactions, committed quotes and expert judgments are merely a difference in the definition, and do not directly affect the level of credibility": Japanese Bankers Association (2013) *Comments on the IOSCO Consultation Report on Financial Benchmarks* http://www.iosco.org/library/pubdocs/399/pdf/Japanese%20Bankers%20Association,%20Tokyo.pdf (17/4/2013)

[58] *supra* n54, 6

[59] *supra* n23, 19

based on "sound and transparent data [with] sufficient weight to data reflecting either executed transactions…or executable bids and offers to enter into such transactions" and further noted the need to allow the exercise of judgment by banks in making submissions[60]. In this aspect, the Australian bank bill swap (BBSW) reference rate[61] shows that the more heavily actual transaction data is relied upon, the more accurate the compiled rate would be[62].

As regards the issue of "estimated" data submissions, both the HIBOR Report and Wheatley Review enunciated the need for submissions be "explicitly and transparently supported by transaction data": a clear guideline of "hierarchy of transaction types" is prescribed and exercise of expert judgment in circumstances of absent/insufficient transaction data is provided[63].

It is suggested that the proposal for HIBOR could be seen as providing a further layer of strengthening the regulation of reference banks' exercise of making HIBOR-submissions through mechanisms of documentation (rationale, techniques employed in the exercise of expert judgment by reference banks) and such exercise be subjected to regular reviews by regulator. The RSG would also be commented on and be endorsed by the HKMA to signify its importance. The accumulative effect of these elements would allow the RGS be used as an effective guideline as well as means of formal legal regulation.

After the LIBOR incident, a "Committed LIBOR" ("CLIBOR") methodology was proposed[64], which was suggested to be a better alternative to LIBOR, that by requiring participating banks to "conduct transactions within their bid-ask ranges", reference banks would unlikely manipulate quotes as they would have to commit to their submissions (otherwise a penalty would be imposed) and submissions are verifiable by transactions that actually took place after daily submissions are made[65]. In the case of WIBOR (Warsaw Interbank Offered Rate), a "contracting obligation" is imposed on the partner-banks[66]. In the case of STIBOR (Stockholm Interbank Offered Rate), the authority was prepared to adopt such a framework by requiring its panel banks to be bound by the quotations they made, so as

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[60] GFMA (2012) *Principles for Financial Benchmarks* http://www.gfma.org/correspondence/item.aspx?id=383 (17/4/2013)

[61] The Australian BBSW rate is the "trimmed average of mid-rates observed by survey panelists (the panel is up to 14) at exactly 10.00am on a Business Day for AFMA Prime Bank paper [traded on a homogenous basis] that has a remaining maturity of between one and six months": BBSW Guide (*supra* n57)

[62] Myles, "AFMA: What LIBOR can Learn from Australia's Benchmark Rate" (2012) 7 *IFLR* 1

[63] The HIBOR Report also expressed that the need for expert judgment was to "ensure the submission is representative of the HIBOR definition": HIBOR Report, *supra* n15, 21-22; Wheatley Review, *supra* n25, 27-30

[64] The Wheatley Report, however, concluded that "moving to a committed quote-based model is not a viable in the short-term": Wheatley Review, *supra* n25, 65

[65] Abrantes-Metz (2012) *Replacing the LIBOR with a Transparent and Reliable Index of Interbank Borrowing: Comments on the Wheatley Review of LIBOR Initial Discussion Paper* http://www.law.uchicago.edu/files/file/620-de-libor.pdf (27/3/2013)

[66] Erhart, "Reasons for the LIBOR Review and its Effects on International Interbank Reference Rate Quotations" (2013) *Mangyar Nemzeti Bank Bulletin* 23, 26

to increase the banks' "incentive to maintain a high level of precision when determining STIBOR"[67]. This would act as an effective means of ensuring reference banks to be "responsible" in the rate-submission exercise.

Where there is no such obligation or commitment on reference banks to trade at their submitted quotations, the risk of manipulation would be higher as "quotes may not indicate where trades would occur but may be influenced by private financial incentives"[68]. Though effective in ensuring responsible submission by reference banks, this mechanism may potentially hinder voluntary participation[69] by reference banks (to be further discussed in Part E below).

(ii) Code of Conduct

The general problem of a voluntary Code of Conduct is that these codes are not "grounded in effective, enforceable and sanctionable legal rules, [and] lack an independent enforcement mechanism"[70]. The self-regulatory[71] Code of Banking Practice[72] in Hong Kong ("the Code"), however, seems to be an operative exception and has "proved effective" and thus similar regulatory mechanisms could be put in place into the proposed code of conduct.

A few factors which attribute to the success of the Code of Banking Practice may be similarly incorporated into the Code of Conduct to be complied with by reference banks and at the same time act as a "handle for oversight"[73] by the regulatory bodies:

(1) Nature and Status of the Code: albeit being a "non-statutory code issued on a voluntary basis" by the industry associations, authorized institutions are expected to comply[74] with the Code; the HKMA will endorse and "monitor compliance as part of its regular supervision"[75];
(2) HKMA's monitoring of compliance: the HKMA presently "considers compliance with the Code as part of its regular supervisory process [and] follows up [by taking] appropriate action when breaches of the Code come to light"[76].

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[67] *supra* n17
[68] *supra* n23, 14
[69] *supra* n54, 13
[70] *supra* n23, 30
[71] HKMA, "Self-Regulation through the Code of Banking Practice" (1997) *Quarterly Bulletin* 14, 14
[72] HKAB (1997) Code of Banking Practice http://www.hkma.gov.hk/media/eng/doc/key-information/press-release/2001/cbp_eng.pdf (19/4/2013)
[73] *supra* n15, 27
[74] This in effect meant that institutions regulated by the Code "must comply with the Code of Banking Practice": Ma (2003) *LCQ11: Banks must comply with Code of Banking Practice* http://www.info.gov.hk/gia/general/200305/21/0521155.htm (22/4/2013)
[75] Clause 1 of Code of Banking Practice
[76] Kemp (2010) *Guidelines & Circulars (Ref: B1/1C)* http://www.hkma.gov.hk/eng/key-information/guidelines-and-circulars/circulars/2010/20100104-1.shtml (assessed 22/4/2013)

Apart from building on the Code of Banking Practice model, the TMA's proposal also put in place mechanisms to further provide tighter regulation, both in the content of Code of Conduct as well as enhanced regulation by different stakeholders. Having considered the Wheatley Review and the GFMA report on principles of financial benchmarks, the TMA's proposal appears to be substantially comprehensive, covering governance structure within the reference banks, effective system of control by administrator or regulator, and ethical standards of personnel. The Code of Conduct, to operate at "(a) reference banks internally, (b) administrator at industry level, and (c) the HKMA at regulatory level"[77], would be added another safeguard through the recognition by the HKMA, which would supervise and ensure compliance with the Code of Conduct by the reference banks.

C. Reduced Scope of Fixing

Whilst recognizing the importance of transaction data and the need to allow contributing banks' exercise of expert judgment to a certain extent in making submissions, the Wheatley Review recommended to reduce the number of currencies and tenors of which there lack sufficient trade data to support submission of quotations and those that are not heavily used in the market[78]. Similar recommendations were also made for HIBOR[79].

Although these were "sensible" measures, Grossman opined that reducing those rarely-used currencies and tenors supported with very few transaction data were nonetheless insufficient safeguard against future manipulation, as the LIBOR incident revealed the "fundamental flaw" of LIBOR – that "in stressed situations like the global financial crisis, banks do not lend to each other"[80] such that "estimates and quoted rates are used precisely because objective data is not readily available"[81] – the only possible effective measure that could prevent future manipulation is perhaps "replacing [LIBOR] with a market-determined indicator"[82], one that is based on actual transactions.

Despite of the call for the use of actual transaction data and EURIBOR's move to a "more transaction-based, market-determined" approach which is considered to be beneficial[83], HIBOR should not blindly follow this trend. Instead, the "definition, nature, development status and intended use of benchmarks"[84] should be thoroughly considered. Therefore, given

[77] *supra* n15, 27
[78] *supra* n25, 36
[79] HIBOR Report, *supra* n15, 39
[80] Weinberger, "Proposed LIBOR fixes May Open the Door to New Benchmark" (2012) *Law360* http://wesinthenews.blogs.wesleyan.edu/files/2012/10/GrossmanLaw360.pdf (13/4/2013)
[81] *supra* n54, 11
[82] Grossman (2012) *LIBOR Needs to be Scrapped – Not Reformed* http://unsettledaccount.com/2012/10/04/libor-needs-to-be-scrapped-not-reformed/ (12/4/2013)
[83] European Central Bank (2013) *Eurosystem's Response to IOSCO's Consultation Report on Financial Benchmarks* http://www.iosco.org/library/pubdocs/399/pdf/European%20Central%20Bank.pdf (12/4/2013)
[84] *supra* n57

that reference banks in Hong Kong are fairly unlikely to manipulate HIBOR rates by misreporting, reference banks uses methods that are "consistent in principle with the recommendations made in the Wheatley Review" in arriving at their submission quotation and back-testing results revealed "no noticeable anomaly in HIBOR fixing"[85], a clear Rate Submission Guidance and Code of Conduct seem to be sufficient safeguard to prevent future manipulation. To substantially change the current definition of HIBOR to be based on actual transaction data would be too radical an approach, it may perhaps be one step that would only be taken in very exceptional cases as last resort.

Further, the currencies, tenors and maturities for the interbank offered rate fixing should be subjected to regular review to ensure there is sufficient market activity and data upon which reference banks may rely on to make submissions.

D. Governance Structure

Having discussed and analyzed how the HIBOR may beneficially learn from the LIBOR incident on aspects of regulating reference banks' making submission for HIBOR-fixing, the next step would be to supplement such regulation with a comprehensive governance structure for oversight of the exercise of these activities. A comprehensive and effective governance structure is of paramount importance in HIBOR-fixing, because conflict of interests could potentially "distort the production of contributor of the data if the contributor of the data has a financial or other interest in the use of the benchmark", particularly where HIBOR (similar to EURIBOR) involved exercise of discretion in making "estimated" submissions[86].

Similar to LIBOR, HIBOR is administered by the industry of banks (or trade associations). This raises the issue of conflicts of interests, because essentially, the industry-administrator (representing the interests of its member banks whose "members are typically the most active participants in the underlying markets and often carry large positions on products linked to the benchmark"[87]) is regulating itself (reference banks as contributors). There is thus clearly a need to increase the independence of Administrator from the reference banks and to remove the risk of conflict of interests to ensure effective governance. Any governance or supervisory framework in place should be transparent enough and be monitored as to its effectiveness[88].

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[85] *supra* n15, 13-19
[86] *supra* n54, 12
[87] *supra* n23, 23
[88] *ibid*

Recommendations on reform of HIBOR from the TMA and HKMA are very extensive and all-embracing, providing structured governance mechanisms to mitigate conflict of interests on three levels:

(1) Reference banks internally: the HKMA will "specify that Managers as defined under the Fourteenth Schedule of the Banking Ordinance who are responsible for treasure business, risk management, and compliance are accountable to the robustness of HIBOR submissions made by their bank. This supervisory approach would also…ensure strong management oversight of banks' rate submission activities"[89]; and

(2) Administrator level: similar to the Wheatley Review[90], in transferring the administration responsibility from the HKBA to a more independent Administrator, further measures include[91]:

    (a) Enhancing the independence of Administrator: (i) the new Administrator be endorsed by the HKMA; (ii) reasonably diverse membership representing different stakeholders; (iii) establishment of Surveillance and Governance Committee (membership be endorsed and subjected to review by HKMA) with balanced representation and reference banks unlikely form a majority; and

    (b) Roles of administrator: day-to-day supervision by the Surveillance and Governance Committee, review of HIBOR-fixing by the Benchmark Review Committee, direct reporting powers to the HKMA where there were irregularities or anomalies arising from HIBOR-fixing, and periodic review.

(3) Supervision of the administrator: going further than the Wheatley Review, the HKMA introduced the requirement of obtaining "external assurance on the adequacy of the Administrator's systems of control in managing the fixings"[92] in additional to the overall supervisory role to be undertaken by the HKMA in the above listed measures.

E. Market Participation

As recommended in the Wheatley Review, it was important that voluntary participation in LIBOR panel should be encouraged, and statutory power to compel banks to participate is expressly reserved[93], so as to ensure representativeness and as an additional measure to reduce the risk of manipulation. Similar recommendations were made in the context of HIBOR[94].

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[89] *supra* n31
[90] *supra* n25, 8
[91] HIBOR Report, *supra* n15, 33-36; HKMA Proposed Measures, *supra* n31
[92] *supra* n31
[93] *supra* n25, 82
[94] *supra* n31

The importance of continued voluntary participation by a larger panel of contributing/ reference banks is that:

(1) Voluntariness: the problem with voluntary participation as a contributing/reference bank is "the potential for selective reporting" leading to "a distortion" of the compiled data[95]

(2) Size and composition of a panel of reference banks: these factors may "undermine a benchmark's integrity if it is not representative of the underlying market", and cessation by a significant number of contributing banks would threaten the "viability and continuity" of the benchmark

  (a) Size of panel: as recognized by the Wheatley Review, it is more difficult for banks to collude in larger panels as individual submissions would have limited effect on the compiled rate[96]. Quantitative analysis also revealed that:

    (i) Manipulation attempt by just one single bank can have a significant impact on the compiled rate[97] given that the rates are referenced by huge volumes of trade. The coordination of five banks in a panel of 16 banks "can be *guaranteed* to be able to move the rate"[98]; and

    (ii) Markets with "larger panels reduce the incentive for individual banks to manipulate the final rate"[99].

  (b) Composition of contributors: as observed by the IOSCO, different methodologies may have to be devised for "a concentrated market with few significantly active players [and] markets that have a large number of equally sized buyers and sellers"[100] as significant active players can easily manipulate the market by making biased submissions of quotations.

As regards the government authority's reserved statutory power to compel submission by banks, direct effects and advantages include an increase the number of contributing/reference banks, higher representativeness, and smaller risk of collusion. As suggested by ING, if contribution is made as a regulated activity, such "regulatory nature of contributions by the panel banks will impact the credibility and importance that firms and individuals attach to the index submissions being accurate and reliable"[101]. A minor concern

[95] IOSCO (2012) *Principles for Oil Price Reporting Agencies: final report* http://www.csrc.gov.cn/pub/csrc_en/affairs/AffairsIOSCO/201210/P020121010499030150053.pdf (17/4/2013)
[96] *supra* n25, 38
[97] Eisl (2013) *Are Interest Rate Fixings Fixed? An analysis of LIBOR and EURIBOR* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2201013 (17/4/2013)
[98] Abrantes-Metz, "Will the Wheatley Recommendations Fix LIBOR?" (2012) 2 *CPI Antitrust Chronicle* 1, 4
[99] The manipulation effect of 3 colluding banks are tested on the reference rates of Australian Dollar LIBOR (7 banks), US Dollar LIBOR (18 banks) and EURIBOR (43 banks). Statistical results showed that "the manipulation effect is largest in the case of AUD LIBOR, at 3.47bp…and smallest in the case of EURIBOR, at 0.55bp": Eisl, at 22 (*supra* n97)
[100] IOSCO Consultation Report, *supra* n23, 14
[101] ING (2012) *ING Response to the EC Consultation on the Regulation of Indices* http://ec.europa.eu/internal_market/consultations/2012/benchmarks/registered-organisations/ing-bank_en.pdf (17/4/2013)

may be "risks and costs associated with this course of action for benchmarks derived from a traded market"[102].

Further, the HKMA agreed that "the composition of the panel of reference banks should be reviewed every year instead of two years", and further proposed that it will "establish objective and fair criteria for identifying major players" as well as taking into account "banks' HKD assets, level of activities in relevant markets"[103]. These proposals, similar to that suggested in the reform of EURIBOR, could increase the transparency of criteria for choosing reference banks to serve on the interbank offered rate fixing panel. In the context of EURIBOR, it was revealed that "the membership criteria should be clarified to ensure that eligibility is based on money market activity parameters and less on credit criteria… [and] that the panel of banks needs to be regularly and effectively reviewed to ensure that it is composed only of banks that remain eligible"[104].

Given the importance of submissions being based on actual transactional data (or expert judgment to be exercised according to the Rate Submission Guidelines) and the merits of a larger panel size for compilation of rates, a balance need be carefully struck so as not to significantly reduce the number of reference banks in identifying suitable banks to serve on the benchmark-fixing panel according to the assessment criteria to avoid adversely affecting the representativeness of market and reducing market transparency.

It is accepted that HKMA's proposal to establish criteria for identifying banks to serve on the HIBOR-fixing panel would be beneficial. However, by adding that the identified banks "would be regarded as having a strong moral obligation to provide voluntary contributions for the common good of the industry"[105] may be problematic and unrealistic, especially when the psychology of the market players are considered. As vividly pointed out by Toomey, because of the sense of insecurity borne by all traders, "the first thing on every trader's mind each morning is not how do I avoid my profession being criticized today, it is how do I make a profit"[106]. Further, one of the most prominent lessons that HIBOR should have learned from the LIBOR scandal is that generally, where there exists no obligation nor regulatory mechanism in place to regulate contributing bank's conduct in making submissions, there is "no incentive (beyond 'goodwill') to report an accurate rate"[107].

[102] Lynch (2013) *Public Comment on Financial Benchmarks* http://www.iosco.org/library/pubdocs/399/pdf/AFMA,%20Australian%20Financial%20Markets%20Association.pdf?v=1 (17/4/2013)
[103] *supra* n31
[104] European Central Bank (2012) *European Commission's Public Consultation on the Regulation of Indices: Eurosystem's response* http://www.ecb.int/pub/pdf/other/ecconsultation-regulationofindices-eurosystemreplyen.pdf (17/4/2013)
[105] *supra* n31
[106] Toomey, "LIBOR" (2012) 9 *JIBFL* 538, 539-540
[107] *supra* n98, 4

V. **Conclusion**

The LIBOR scandal exposed how contributing banks had by individually misreported and/or colluded with other contributing banks manipulated LIBOR by taking advantage of the inherent weaknesses in, or rather the lack of, a comprehensive and effective regulatory and governance framework that, if existed, could have precluded manipulation by contributing banks. Following the LIBOR incident, the Wheatley Review's "proposals around governance, oversight and the extension of the regulatory perimeter to include LIBOR are steps in the right direction"[108].

Following the LIBOR incident, apart from UK, other international financial markets also reviewed the benchmark fixing and regulatory frameworks. The international financial community has also sought to develop a set of principles and best practices for benchmark setting and regulation. The TMA and HKMA also grasped the opportunity to review HIBOR shortly after the LIBOR incident. With the benefit of hindsight, whilst international best practices[109] and reform proposals from other markets[110] may be highly instructive, in the course of reforming HIBOR, due regard must be given to the precise definition of HIBOR and the unique market dynamics of the Hong Kong financial market, noting that "one of the significant considerations in deciding on the form and intensity of regulatory oversight is the economic impact of the benchmark in question"[111].

Ultimately, the integrity of HIBOR is primarily and crucially founded upon the reliability and veracity of the rates submitted by reference banks, and that HIBOR is "essentially a market-driven product"[112].

Whether or not any of the five proposed areas need to be further improved, and notwithstanding the merits of governmental and/or market regulation, excessive regulation on the HIBOR-fixing by reference banks may nonetheless undermine the utility of HIBOR in the dynamics of the Hong Kong financial market, particularly because excessive regulation, governmental and/or industry, imposed on reference banks' conduct in making submissions may eventually "force banks to provide quotes according to particular guidelines set out by regulators [and as such the HIBOR-fixing] process may well reduce the incentive to provide the most accurate quotes, replacing them with 'the least risky quotes'"[113].

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[108] Gracia, "Fixing the Benchmark: Wheatley considers LIBOR overhaul" (2012) *Financial Regulation International* 1, 8

[109] *See* for example, the IOSCO Consultation Report on Financial Benchmarks (*supra* n23) and the GFMA Principles for Financial Benchmarks (*supra* n60)

[110] *See* for example, European Banking Authority (2013) *Report on the Administration and Management of EURIBOR* http://www.esma.europa.eu/system/files/eba_bs_2013_002_annex_1.pdf (17/4/2013); Review of STIBOR (*supra* n17); Australian BBSW Guide (*supra* n57)

[111] HKMA (2013) *Public Comment on Financial Benchmarks* http://www.iosco.org/library/pubdocs/399/pdf/Hong%20Kong%20Monetary%20Authority%20HKMA.pdf (17/4/2013)

[112] *supra* n15, 10

[113] *supra* n98, 8

Bibliography

Legislation
1. Banking Ordinance (Cap. 155)
2. Financial Services Act 2012 (UK)

Books
1. Chan, *Hong Kong Banking Law Handbook* LexisNexis 2008
2. Devereux, *The Dynamics of Asian Financial Integration: Facts and Analytics* Routledge 2011
3. Goodhart, *Financial Regulation: Why, How, and Where Now?* Routledge 1998
4. Hsiao, *International Banking and Finance Law: Principles and Regulations* Sweet & Maxwell 2011
5. Roebuck, *Banking Law in Hong Kong: Cases and Materials* LexisNexis 2009

Journal articles
1. Abrantes-Metz, "The Lessons from LIBOR for Detection and Deterrence of Cartel Wrongdoing" (2012) 3 *Harvard Business Law Review* 10
2. Abrantes-Metz, "Will the Wheatley Recommendations Fix LIBOR?" (2012) 2 *CPI Antitrust Chronicle* 1
3. Callaghan, "The LIBOR Scandal – the UK's legislative response" (2013) *JIBLR* 160
4. Cheung, "Measuring the position of Hong Kong as an International Financial Center" (2007) *Hong Kong Monetary Authority Quarterly Bulletin* 1
5. Dooley, "The LIBOR Scandal" (2012) 32 *Rev Banking & Fin. L.* 2
6. Erhart, "Reasons for the LIBOR Review and its Effects on International Interbank Reference Rate Quotations" (2013) *Mangyar Nemzeti Bank Bulletin* 23
7. Gracia, "Fixing the Benchmark: Wheatley considers LIBOR overhaul" (2012) *Financial Regulation International* 1
8. HKMA, "Self-Regulation through the Code of Banking Practice" (1997) *Quarterly Bulletin* 14
9. Kiff, "What is LIBOR? The London interbank rate is used widely as a benchmark but has come under fire" (2012) *Finance & Development* 32
10. Lai, "Differentiated Markets: Shanghai, Beijing and Hong Kong in China's Financial Center Network" (2012) 49 *Urban Stud* 1275
11. Miller, "Self-Regulation of the Securities Markets: a critical examination" (1985) 42 *Washington and Lee Law Review* 853
12. Myles, "AFMA: What LIBOR can Learn from Australia's Benchmark Rate" (2012) 7 *IFLR* 1
13. Omarova, "Wall Street as Community of Fate: Toward Financial Industry Self-Regulation" (2011) 159 *U.Pa.L.Rev.* 411
14. Toomey, "LIBOR" (2012) 9 *JIBFL* 538
15. Weinberger, "Proposed LIBOR fixes May Open the Door to New Benchmark" (2012) *Law360*

Online articles
1. Abrantes-Metz (2012) *Replacing the LIBOR with a Transparent and Reliable Index of Interbank Borrowing: Comments on the Wheatley Review of LIBOR Initial Discussion Paper*
2. Eisl (2013) *Are Interest Rate Fixings Fixed? An analysis of LIBOR and EURIBOR*
3. Long Finance (2012) *The Global Financial Centers Index 12*

Consultation Papers and Other Documents
1. European Banking Authority (2013) *Report on the Administration and Management of EURIBOR*
2. European Central Bank (2012) *European Commission's Public Consultation on the Regulation of Indices: Eurosystem's response*
3. European Central Bank (2013) *Eurosystem's Response to IOSCO's Consultation Report on Financial Benchmarks*
4. European Commission (2012) *Amended Proposal for a Directive of the European Parliament and of the Council on criminal sanctions for insider dealing and market manipulation*
5. European Commission (2012) *Consultation Document On the Regulation of Indices: a possible framework for the regulation of the production and use of indices serving as benchmarks in financial and other contracts*
6. Hong Kong Associate of Banks (1997) Code of Banking Practice
7. German Savings Bank Association (2013) *Response to EBA consultation paper 'Principles for Benchmarks-setting Processes in the EU*
8. Global Financial Markets Association (2013) *Comment on IOSCO's Consultation Report on Financial Benchmarks*
9. Global Financial Markets Association (2012) *Principles for Financial Benchmarks*
10. Hong Kong Monetary Authority (2013) *Public Comment on Financial Benchmarks*
11. Hong Kong Monetary Authority (2012) *The HKMA Measures to strengthen the HIBOR fixing mechanism*
12. HM Treasury (2012) *The Wheatley Review of LIBOR: initial discussion paper*
13. HM Treasury (2012) *The Wheatley Review of LIBOR: Final Report*
14. ING (2012) *ING Response to the EC Consultation on the Regulation of Indices*
15. IOSCO (2012) *Principles for Oil Price Reporting Agencies: final report*
16. IOSCO (2013) *Financial Benchmarks: Consultation Report*
17. Japanese Bankers Association (2013) *Comments on the IOSCO Consultation Report on Financial Benchmarks*
18. Lynch (2013) *Public Comment on Financial Benchmarks*
19. Treasury Markets Association (2012) *Report on the Review of Hong Kong Interbank Offered Rate*
20. Sveriges Riksbank (2012) *The Riksbank's Review of STIBOR* (2012)

Newspaper articles

1. Banksters, "How Britain's rate-fixing scandal might spread – and what to do about it" *The Economist* 7/7/2012
2. Mollenkamp, "Study Casts Doubt on Key Rate: WSJ Analysis suggests banks may have reported flawed interest data for LIBOR" *Wall Street Journal* 29/5/2008
3. Money Week, "LIBOR: the world's most important number" (10/10/2008)
4. Peston, "UBS fined $1.5bn for LIBOR rigging" *BBC News* 19/12/2012
5. Rosenthal, "Rigging the Financial System" *The New York Times* 4/12/2012

Websites

1. Australian Financial Markets Association (2013) *AFMA BBSW: A Guide to the Bank Bill Swap Reference Rate*
2. British Bankers' Association ("BBA"), *bbalibor: The Basics* (2013)
3. European Banking Federation (2012) *About Euribor*
4. Financial Services Authority (2013) *About the FSA*
5. Grossman (2012) *LIBOR Needs to be Scrapped – Not Reformed*
6. HKSAR Government (2011) *Hong Kong: The Facts – Financial Services*
7. Kemp (2010) *Guidelines & Circulars (Ref: B1/1C)*
8. Lau, *Interbank Interest Rate Fixing Mechanism* (2012)
9. Ma (2003) *LCQ11: Banks must comply with Code of Banking Practice*
10. Satter (2012) *Regulators Question Interest Rates from Sweden to Singapore*
11. Sheng, *Financial Regulation* (2011)
12. Tsang (2013) *Speech by Financial Secretary at joint Business Community Luncheon*
13. US Commodity Futures Trading Commission (2012) *Press Release: CFTC Orders Barclays to pay $200m Penalty for Attempted Manipulation of and False Reporting concerning LIBOR and EURIBOR Benchmark Interest Rates*