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## LIBOR: Its Cessation and the Challenges ahead

Yashmitha Manjunath<sup>a</sup> Salini Augusty<sup>b</sup>

<sup>a</sup>CHRIST University, Bangalore, India <sup>b</sup>CHRIST University, Bangalore, India

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*The global financial market is immensely diverse due to the disparate domestic market conditions, which creates the need to establish financial benchmarks. One such widely used benchmark in financial transactions is the London Interbank Offer Rate (LIBOR). LIBOR emerged as a key benchmark out of a flourishing Eurodollar market. It was established in 1986 and grew to dominate the market as the most widely accepted benchmark for interest rates globally. However, the lacunae in its computation methodology led to its manipulation by those in control, and soon the flaws were exposed. This ultimately led to the decision for its discardure. This article sheds light on the predicaments of LIBOR's cessation and elucidates the measures undertaken in the United States and the United Kingdom to adopt an alternative. Furthermore, it discusses the steps India has taken towards entering into a LIBOR-free economy, and the way forward.*

**Keywords:** *market, libor, financial benchmark.*

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### INTRODUCTION

At the global level, financial markets function in a très complex manner. Its participants are from diverse domestic markets that have their own set of regional regulations and idiosyncrasies. Therefore, benchmarks serve as standardized indexes against which market conditions can be scrutinized to determine the competitiveness and credibility of the interest

rates. Benchmarks are required for various reasons; they promote efficiency, help reduce information asymmetry among the participants, and the misemployment of such information. LIBOR is extensively used to determine the interest rates for loans and serves as reference rates in contracts for various financial instruments.<sup>1</sup> Due to the widespread usage and the crucial role that it plays,<sup>2</sup> LIBOR was dubbed by some as ‘the world’s most important number’.<sup>3</sup>

LIBOR is estimated to govern financial transactions that are valued at a worth exceeding 260 trillion USD.<sup>4</sup> At its peak, LIBOR-linked contracts were valued at an estimated \$700 trillion. However, in the year 2008,<sup>5</sup> amidst the financial crisis, shocking revelations were made about the legitimacy of the LIBOR rating system. Reports exposed that the LIBOR rating system was being manipulated. Since then, regulatory authorities have attempted to reform the LIBOR mechanism and slowly transition away from LIBOR usage in financial transactions towards other fool-proof alternatives. In 2017, the Financial Conduct Authority officially announced the cessation of publishing LIBOR rates post-December 31, 2021, and USD Libor rates post June 2023.<sup>6</sup> The reason for an extended deadline was to ensure the smooth execution of a large number of contracts,<sup>7</sup> that are heavily dependent on USD LIBOR.<sup>8</sup>

In this paper, Section II explains the history of LIBOR: on how it came into existence.<sup>9</sup> Section III presents the method used to calculate LIBOR. It highlights the evolution and the changes in its computation methodology until the method currently employed in the financial market. Section IV discusses the uses and importance of LIBOR. Section V highlights the

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<sup>1</sup> David Hou and David Skeie, ‘LIBOR: Origins, Economics, Crisis, Scandal and Reform’ (*Federal Reserve Bank of New York- Staff Report*, March 2014)

<[https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr667.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr667.pdf)> accessed 01 June 2021

<sup>2</sup> *Ibid*

<sup>3</sup> David Enrich and Max Colchester, ‘Before Scandal, Clash Over Control of Libor’ (*The Wall Street Journal*, 11 September 2012) <<https://www.wsj.com/articles/SB10000872396390443847404577631404235329424>> accessed 01 June 2021

<sup>4</sup> ‘A Big Milestone for Benchmark Reform’ (*ISDA*, 27 January 2021) <[https://www.isda.org/2021/01/27/a-big-milestone-for-benchmark-reform/?\\_zs=LeKTO1&\\_zl=Dnx86](https://www.isda.org/2021/01/27/a-big-milestone-for-benchmark-reform/?_zs=LeKTO1&_zl=Dnx86)> accessed on 05 June 2021

<sup>5</sup> *Ibid*

<sup>6</sup> ‘ICE LIBOR – Benchmark Statement’ (*ICE Benchmark Administration*, 14 May 2018)

<[https://www.theice.com/publicdocs/LIBOR\\_Benchmark\\_statement.pdf](https://www.theice.com/publicdocs/LIBOR_Benchmark_statement.pdf)> accessed 01 June 2021

<sup>7</sup> *Ibid*

<sup>8</sup> ‘Roadmap for LIBOR Transition’ (*Reserve Bank of India*, 08 July 2021)

<<https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=12128&Mode=0>> accessed 23 July, 2021

<sup>9</sup> *Ibid*

manipulations that took place at a vulnerable time, which inadvertently led to LIBOR's misuse and ultimately, its cessation. Section VI discusses the repercussions the world faces as a result of said manipulations. Section VII outlines the reforms observed around the world, namely the United States and the United Kingdom, to mitigate the risks and ensure a smooth transition. Section VIII expounds on the impact LIBOR's misuse had on India and Indian financial markets. It also explains the steps taken by the Indian Government and Reserve Bank of India towards a smooth transition as the deadline for cessation nears. The article concludes with suggestions and recommendations by the authors on measures to be undertaken for an unhindered transition into a LIBOR free market.

## ORIGIN OF LIBOR

In the 1960s, owing to the Geopolitical conditions amidst the tensions of war and the restrictive regulatory framework in the American Financial Market, a liberal Eurodollar currency market began to grow rapidly.<sup>10</sup> Eurodollar refers to US Dollar deposits beyond the territory of the United States of America (USA), thus outside the jurisdiction of the Federal Reserve Bank. Initially, such deposits were made solely in the European nations, hence it was labeled as Eurodollar.<sup>11</sup> Presently they are held by banks all across the world. In the years' post World War II, England liberalised its market regulations to facilitate faster economic recovery. At the same time in the United States, financial regulations were rigidified and a limit was established on interest rates payable on deposits. Until the year 1963, the maximum interest that could be paid on a ninety-day long deposit was two and a half percent and on a thirty-day long deposit, the cap was one percent.<sup>12</sup>

Meanwhile, inflation in the domestic market led to banks in England offering high rates of interest on deposits made with them. This encouraged overseas dollar deposits and thus London emerged as a leading Financial Centre.<sup>13</sup> Furthermore, Arab and Soviet Union-based

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<sup>10</sup> Catherine R Schenk, 'The Origins of the Eurodollar Market in London: 1955 – 1963 [1998] Explorations in Economic History 221, 221

<sup>11</sup> *Ibid*

<sup>12</sup> *Ibid* 222

<sup>13</sup> Gary Burn, *The Re-Emergence of Global Finance* (Palgrave Macmillan 2006) 15

institutions in America moved their deposits to London banks in fear of sanctions and confiscation of funds.<sup>14</sup> Therefore, many American banks had opened their branches in London to cater to the growing demand. These funds were then used to provide loans to third parties within the United Kingdom (UK) as well as internationally.<sup>15</sup> Thus, Eurodollar formed a new and vast source of International Capital. However, the interest rates payable on the loans so extended were highly non-uniform, varying from bank to bank.<sup>16</sup>

As the market grew, the demand for massive loans was frequented. In order to mitigate the risks of extending huge loans, banks resorted to syndicated loans. They formed a consortium of banks that could share the risks and pool the funds for such loans. However, since interest rates on deposits and inflation were on the rise, charging a fixed rate of interest on loans was too risky and not viable. Thus, the need for floating interest rates on loans was identified in order to transfer the risks of the changing market conditions onto the borrowers. This led to the birth of the London Interbank Offer Rate.

LIBOR was first quoted in 1969 by a consortium of London-based banks in a syndicated loan agreement that was extended to the Shah of Iran.<sup>17</sup> The amount sought was USD 80 million. It was not feasible for a single firm to extend the whole amount.<sup>18</sup> Therefore, a syndicated loan was arranged, which was led by Manufacturers Hanover (a firm, now part of JP Morgan).<sup>19</sup> The nomenclature and formula for LIBOR are credited to Minos Zombanakis, a Greek banker at Hanover.<sup>20</sup> The weighted average of the cost of funding by the reference banks in the syndicate was recalculated every few months. The borrower would then be charged with a variable rate of interest which would be reflective of the market conditions. This transaction represented one of the first loans with variable rates of interest that varied subjective to market

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<sup>14</sup> *Ibid*

<sup>15</sup> Fred Klopstock, *The Euro-dollar Market: Some Unresolved Issues* [1968] *Essays in International Finance* 1, 3

<sup>16</sup> *Ibid*

<sup>17</sup> Kirsten Ridley and Huw Jones, 'Insight: A Greek Banker, the Shah and the Birth of Libor' (*Thomson Reuters* 2012) <<https://cn.reuters.com/article/instant-article/idUSBRE87702320120808>> accessed 02 June 2021

<sup>18</sup> *Ibid*

<sup>19</sup> Vasudev Hemachandran, 'LIBOR: The Rise and Fall' (*Reserve Bank of India Bulletin*, November 2020) <<https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/6LIBORTHERISEE3D392AFFB274D638E86916FEDFA86C3.PDF>> accessed 2 June 2021

<sup>20</sup> *Ibid*

conditions. The syndicated loan market based on LIBOR rates thereafter mushroomed and soon the other half of the market also caught up. However, the nonuniformity among the rates offered which arose due to the loans being linked to different reference banks remained a big hurdle to the efficiency of the market.<sup>21</sup>

The usage of LIBOR as a benchmark rate escalated in leaps. The transactions using LIBOR had steadily expanded to cover mortgages, derivatives, student loans, etc. valued at trillions of dollars. The enormity and variety of transactions using LIBOR increased its complexity and risks.<sup>22</sup> The entrenchment of LIBOR as an eminent benchmark and the need for a more systematic index led to its governance being taken over by British Bankers' Association (BBA)<sup>23</sup> and thus it was formally established as an interbank interest rate benchmark in the year 1986.<sup>24</sup>

## HOW IS LIBOR CALCULATED?

LIBOR rates represent the cost of funding by the banks.<sup>25</sup> Over the years the methodology for the calculation of LIBOR has undergone numerous changes.<sup>26</sup> It has evolved significantly since the ICE Benchmark Administration (IBA) took over administration from the British Bankers' Association (BBA). LIBOR is currently published daily for five currencies and seven maturities. The currencies are the US dollar, the EURO, the Swiss Franc, the Pound Sterling, and the Japanese Yen. The different maturities that are covered are overnight/spot next, one week, one month, two months, three months, six months, and twelve months.<sup>27</sup> In this manner, every day, thirty-five LIBOR rates of seven different maturities are published across five

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<sup>21</sup> Michael R Koblenz and others, 'LIBOR: Everything You Ever Wanted to Know but Were Afraid to Ask' (2013) 6 *The Journal of Business, Entrepreneurship & the Law* 281, 283

<sup>22</sup> *Ibid*

<sup>23</sup> Miranda Marquit, 'What Is Libor and Why Is It Being Abandoned?' (*Forbes Advisor*, 2020) <<https://www.forbes.com/advisor/investing/what-is-libor/>> accessed 02 June 2021

<sup>24</sup> *Ibid*

<sup>25</sup> Aurelio Fernandez Bariviera and others, 'A Permutation Information Theory Tour Through Different Interest Rate Maturities: the Libor Case' (2015) 373 *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* 1, 3

<sup>26</sup> *Ibid*

<sup>27</sup> 'LIBOR' (*ICE Benchmark Administration*, 2021) <<https://www.theice.com/iba/libor>> accessed 03 June 2021

currencies.<sup>28</sup> At its peak, LIBOR was published for fifteen maturities across ten currencies.<sup>29</sup> The most commonly used rate is the three months US Dollar rate.<sup>30</sup>

The contributing banks constitute a panel of eleven to sixteen banks for each of the five currencies,<sup>31</sup> which regularly provide data to IBA. IBA then determines the LIBOR rate based on the submissions.<sup>32</sup> The banks that constitute the panel are large and internationally active banks that satiate the LIBOR Contributor Bank Criteria.<sup>33</sup> Important factors of the criteria are bank size, the volume of transactions, expertise, geographical reach, etc. These criteria help ensure that the data submitted by the banks are a true representative of market reality.

### A. Libor Methodology Under the British Bankers Association

Prior to LIBOR administration being taken over by IBA, LIBOR rates were determined by the BBA via a poll. The poll would be conducted every day where the participating banks would submit their answer to the question “At what rate could you borrow funds were you to do so by asking for and then accepting interbank offers in a reasonable market size just prior to 11 a.m.?”<sup>34</sup> The submissions denoted the lowest rate at which banks perceived they could acquire funds from the interbank market.<sup>35</sup> Taking into consideration the possibility that individual banks could manipulate LIBOR rates by submitting high or low-value inputs,<sup>36</sup> approximately 25% of the extreme top and bottom values would be discarded and a trimmed mean of the remaining submission would be published as the LIBOR rate.<sup>37</sup> Unfortunately, this mechanism

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<sup>28</sup> *Ibid*

<sup>29</sup> John Kiff, ‘LIBOR: World Reference Point’ [2012] 49 Finance and Development 32, 33

<sup>30</sup> Darrell Duffie and Jeremy C Stein, ‘Reforming LIBOR and Other Financial Market Benchmarks’ (2015) 29 Journal of Economic Perspectives, American Economic Association 191

<sup>31</sup> *Ibid*

<sup>32</sup> ‘Panel Bank Criteria’ (*ICE Benchmark Administration*, 2021)

<[https://www.theice.com/publicdocs/Policy\\_Composition\\_ICE\\_LIBOR\\_Panels.pdf](https://www.theice.com/publicdocs/Policy_Composition_ICE_LIBOR_Panels.pdf)> accessed 02 June 2021

<sup>33</sup> *Ibid*

<sup>34</sup> David Hou and David Skeie, ‘LIBOR: Origins, Economics, Crisis, Scandal and Reform’ (*Federal Reserve Bank of New York- Staff Report*, March 2014)

<[https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr667.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr667.pdf)> accessed 02 June 2021

<sup>35</sup> K Subramanian, ‘Love and Loathing of LIBOR’ [2012] 47 Economic and Political Weekly 12

<sup>36</sup> *Ibid*

<sup>37</sup> James McBride, ‘Understanding the LIBOR Scandal’ (*Council on Foreign Relations*, 12 October 2016)

<<https://www.cfr.org/backgrounder/understanding-libor-scandal>> accessed 02 June 2021

wasn't foolproof either. In 2014 amidst unfolding scandals of LIBOR rigging, its administration was taken over by IBA.<sup>38</sup>

## **B. The Reformed Libor Methodology under IBA**

IBA incorporated a waterfall methodology for submission of rates to ensure that the submissions are based on actual transactions as far as possible so that they remain non-subjective wherever feasible.<sup>39</sup> In order to create uniformity in the methodology for submissions, IBA made available ICE LIBOR Output Statements to the panel banks. The LIBOR panel banks were required to submit their rates as per the Output Statement.<sup>40</sup> The output statement provided for submissions to be made at different levels.

Level 1 (Transaction-Based) submission is made by the banks that have carried out eligible transactions. When such transactions have been made, the volume-weighted average price must be submitted. Level 2 (Transaction-Derived) submission is undertaken when the banks do not have enough eligible transactions to make a submission of level 1. Here, the submission must be made based on eligible transactions made in the past adjusted with the market movements. Similarly, Level 3 (Expert Judgement) submission is made when the bank lacks in quantity of eligible transactions to make a level 1 or level 2 submission. At level 3, the panel bank will submit the rate at which it could fund itself in the wholesale funding market in an unsecured transaction.<sup>41</sup>

Under the administration of BBA,<sup>42</sup> LIBOR rates were dependent solely on the interbank market. However, post the financial crisis, when the activity in that market decreased significantly, IBA was prompted to include non-financial corporations as eligible entities. It

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<sup>38</sup> *Ibid*

<sup>39</sup> Methodology (ICE Benchmark Administration, 2021)

<[https://www.theice.com/publicdocs/ICE\\_LIBOR\\_Methodology.pdf](https://www.theice.com/publicdocs/ICE_LIBOR_Methodology.pdf)> accessed 02 June 2021

<sup>40</sup> *Ibid*

<sup>41</sup> 'Output Statement' (ICE Benchmark Administration, 3 March 2017)

<[https://www.theice.com/publicdocs/ICE\\_LIBOR\\_Output\\_Statement.pdf](https://www.theice.com/publicdocs/ICE_LIBOR_Output_Statement.pdf)> accessed 02 June 2021

<sup>42</sup> *Ibid*

began accepting transactions with corporations also as a basis for the submission of rates.<sup>43</sup> Furthermore,<sup>44</sup> IBA has set up an oversight committee comprising of contributor banks, relevant experts, independent non-executive directors of IBA, benchmark users, etc.<sup>45</sup> The objective of the committee is to oversee activities around LIBOR.<sup>46</sup> It monitors and enforces compliance of IBA and the contributors with the established rules and procedures.<sup>47</sup> It also reviews and assesses the computation methodologies and the market conditions.<sup>48</sup>

IBA asks the major banks which constitute its panel for LIBOR to provide input on what the cost of borrowing is to them. The submissions are mostly a judgment-based opinion of the perceived cost of funding of the panel banks, and less frequently based on real-time transactions. This was due to the low volume of transactions in the inter-bank borrowing market, which has been displaying a diminishing trend.<sup>49</sup> Such transactions are not frequently undertaken by banks, but the rates needed to be published every day. Based on the submissions made by the panel banks, the trimmed mean is published as LIBOR rate on each day at 11:55 am GMT.<sup>50</sup> The rates submitted by the banks are made public, but with a lag of three months. This was undertaken in the aftermath of the financial crisis when banks lowballed their costs of funding to appear creditworthy.<sup>51</sup> Even under circumstances that revealed the risks of manipulation of LIBOR rates, it is the plethora of benefits and

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<sup>43</sup> Roadmap for ICE LIBOR (*ICE Benchmark Administration*, 18 March 2016)

<[https://www.theice.com/publicdocs/ICE\\_LIBOR\\_Roadmap0316.pdf](https://www.theice.com/publicdocs/ICE_LIBOR_Roadmap0316.pdf)> accessed 02 June 2021

<sup>44</sup> *Ibid*

<sup>45</sup> ICE Benchmark Administration: Governance & Oversight (*ICE Benchmark Administration*, 2021)

<<https://www.theice.com/iba/governance>> accessed 02 June 2021

<sup>46</sup> ICE LIBOR Code of Conduct (*ICE Benchmark Administration*, 21 May 2021)

<[https://www.theice.com/publicdocs/LIBOR\\_Code\\_of\\_Conduct\\_Issue\\_8.pdf](https://www.theice.com/publicdocs/LIBOR_Code_of_Conduct_Issue_8.pdf)> accessed 02 June 2021

<sup>47</sup> Terms of Reference (*ICE Benchmark Administration*, July 2020)

<[https://www.theice.com/publicdocs/LIBOR\\_Oversight\\_Committee\\_Terms\\_of\\_Reference.pdf](https://www.theice.com/publicdocs/LIBOR_Oversight_Committee_Terms_of_Reference.pdf)> accessed 02 June 2021

<sup>48</sup> *Ibid*

<sup>49</sup> Andrew Bailey, 'Libor: Entering the Endgame' (*Bloomberg Webinar, London and New York*, 13 July 2020)

<<https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/libor-entering-the-endgame---speech-by-andrew-bailey.pdf?la=en&hash=26FF64120E62077B52C879CE4BEAD13315101485>> accessed 01 June 2021

<sup>50</sup> *Ibid*

<sup>51</sup> Carrick Mollenkamp and Mark Whitehouse, 'Study Casts Doubts on Key Rate' (*Wall Street Journal*, 2008)

<<https://www.wsj.com/articles/SB121200703762027135>> accessed 02 June 2021



convenience that it offers, which makes a departure from LIBOR rates a dilemma to the market participants.<sup>52</sup>

## **BENEFITS OF LIBOR AS A BENCHMARK**

Indexes and benchmarks play a crucial role in the economy. They are indicators of market conditions and thus can assist the participants to make informed decisions. Reliable Benchmarks play a vital in the smooth functioning of trading.<sup>53</sup> It aids as well as increases the participation of agents who aren't particularly well educated on the instrument being traded. Some of the following benefits offered by LIBOR are the main factors that have led to the far-reaching adoption of LIBOR by the Financial Market.<sup>54</sup>

### **A. Uniformity**

Institutions across the world use the LIBOR rate as a benchmark for determining interest rates on loans as well as other debt instruments. They fix a spread of basis points which may vary from firm to firm and individual transactions. It is the norm that this spread of basis points is what is negotiated upon and never the LIBOR rate itself.<sup>55</sup> A hundred basis points equate to 1%.<sup>56</sup> The spread may vary depending upon the costs incurred by the issuer and the creditworthiness of the customer.<sup>57</sup> A few legislations in India even specify caps on the basis of spread points (bps) that can be charged by firms.<sup>58</sup> For example; the Reserve Bank of India via its master direction provides an upper limit on the interest that can be paid for External Commercial Borrowings as the benchmark rate plus 450 bps spread.<sup>59</sup> Benchmarks, therefore,

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<sup>52</sup> *Ibid*

<sup>53</sup> Darrell Duffie and Jeremy C Stein, 'Reforming LIBOR and Other Financial Market Benchmarks' (2015) 29 *Journal of Economic Perspectives*, American Economic Association 191

<sup>54</sup> *Ibid*

<sup>55</sup> K Subramanian, 'Love and Loathing of LIBOR' [2012] 47 *Economic and Political Weekly* 12

<sup>56</sup> *Ibid*

<sup>57</sup> Report of the Working Group on Pricing of Credit (*Reserve Bank of India*, 10 April 2014) <<https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=764>> accessed 03 June 2021

<sup>58</sup> *Ibid*

<sup>59</sup> RBI Master Direction – External Commercial Borrowings, Trade Credits and Structured Obligations, FED Master Direction No.5/2018-19

act as an anchor for interest rates and rid the economy of disparities among interest rates paid by borrowers.<sup>60</sup>

### **B. Bridging the Information Asymmetry**

When it comes to Financial Instruments, the dealers have comparatively more information on the costs involved than the traders. The more transparency a market offers, the more it encourages participation. In every transaction executed by a dealer, the cost includes both a dealer-specific cost and a cost that is common to all dealers in that market. When benchmarks are established, it depicts the common cost involved.<sup>61</sup> LIBOR rates represent this common cost that dealers incur in acquiring funds, which is then used to charge interest on various instruments such as loans, mortgages, etc.<sup>62</sup> As the common cost is made public, participants can now discern the dealer-specific cost and the profit margins. The borrowers or traders can then compare and scrutinise the prices offered by various dealers to determine if the offer price is competitive.

### **C. Reducing Search Cost**

In the absence of interest rate benchmarks like LIBOR, cautious market participants will have to undertake an extensive gathering of information to be able to recognise a competitive interest rate. Research has to be undertaken based on various factors such as past interest rate trends, approaching multiple dealers to know the current range of offered interest rates, the profit margin involved, etc. LIBOR highly reduces the search cost involved as it establishes a fixed rate to which the interest rates offered by dealers across the market are anchored.<sup>63</sup> It thereby eliminates the need for individuals to discover for themselves what are the costs involved and what might be a competitive interest rate and hence saving valuable time. When markets function under established benchmarks, the dealers tend to give quality offers as

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<sup>60</sup> *Ibid*

<sup>61</sup> Darrel Duffie and others, 'Benchmarks in Search Markets' (2017) 72 *The American Finance Association* 1983, 1984

<sup>62</sup> *Ibid*

<sup>63</sup> Darrell Duffie and Jeremy C Stein, 'Reforming LIBOR and Other Financial Market Benchmarks' (2015) 29 *Journal of Economic Perspectives*, American Economic Association 191

borrowers and traders will opt for the low-cost service providers, thereby increasing market efficiency.<sup>64</sup>

These factors along with several more such as the provision of liquidity, stability, etc. have led to LIBOR rates forming the basis for transactions and contracts worth trillions. The colossal size of the market attracted more and more participants and creation of various financial instruments dealing with LIBOR rates. At some point amidst the evolution of the LIBOR market and shift of traditional banking towards alternative means of profits, LIBOR rates lost the integrity that is assured to the borrowers and traders. Reports of major banks had colluded to manipulate LIBOR rates began circulating and the methodology for determination of LIBOR rates stood weak before the allegations. By the end of the year 2008, LIBOR rates were knee-deep in scandals and allegations of misrepresentation and deceit.

## DOWNFALL OF LIBOR

When the financial crisis struck the market in the year 2006-2007, the Banks were at the far end of the spectrum of being highly vulnerable. The creditworthiness of Banks was at high stakes, and in order to hide their weaknesses from the eyes of the public, the Banks manipulated the data that they submitted to the LIBOR poll.<sup>65</sup> The manipulations were also a result of greed by banks that sought to profit from their investments in the derivatives market. At the time when the economy was worsening by the day,<sup>66</sup> suspicions arose on the reliability LIBOR, which continued to publish stellar rates as though unaffected by the economic crisis.<sup>67</sup> It became evident to consistent observers of the market that quotes put forth by LIBOR were merely guesswork and were tampered with.<sup>68</sup>

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<sup>64</sup> *Ibid*

<sup>65</sup> Sharon E Foster, 'LIBOR Manipulation and Antitrust Allegations' (2013) 11 DePaul Bus & Comm LJ 291

<sup>66</sup> *Ibid*

<sup>67</sup> Mollenkamp C, 'Bankers cast doubt on key rate amid crisis' (*The Wall Street Journal*, 16 April 2008)

<<https://www.wsj.com/articles/SB120831164167818299>> accessed 26 May 2020

<sup>68</sup> Connan Snider and Thomas Youle, 'Does the LIBOR Reflect Banks' Borrowing Costs?' (SSRN, 19 March 2010)

<[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1569603](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1569603)> accessed 26 May 2020

The manipulations occurred on both ends, externally as well as internally.<sup>69</sup> The internal manipulation was caused by the Banks when they fed false data to the LIBOR poll. This misrepresentation of input data ultimately resulted in an increase or decrease in the interest rate. This was done to ensure that the LIBOR rates would profit the Banks.<sup>70</sup> On the external front, manipulation occurred when the Banks received requests from traders of other banks mostly via emails.<sup>71</sup> Prior to the market being struck with a financial crisis, the rates were increased falsely to surge profits.<sup>72</sup> One of the first banks that was found involved in these manipulations was the British Multinational Universal Bank called Barclays PLC.<sup>73</sup> In the year 2007,<sup>74</sup> Barclays was in a position to make nearly \$40 million worth of profits based on the small changes made to LIBOR.<sup>75</sup> When the financial crisis hit the market, banks were actively involved in the manipulation of LIBOR by submitting low rates to portray their creditworthiness and protect themselves. Lower rates painted the picture that the banks were stable.<sup>76</sup> A change as small as 0.01 % would result in nearly a “couple of million dollars” worth of profit or loss.<sup>77</sup>

After the allegations surfaced, an investigation was launched to determine the truth behind LIBOR rates.<sup>78</sup> In 2012, it was uncovered that the manipulations were indeed taking place. Barclays admitted to the manipulations in collusion with other traders and banks,<sup>79</sup> and they arrived at a settlement to pay a fine of \$450 million.<sup>80</sup> Through the investigation held by the

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<sup>69</sup> *Ibid*

<sup>70</sup> *In re Barclays PLC* (2012) 32 Comm Fut L Rep LEXIS 234

<sup>71</sup> *Ibid*

<sup>72</sup> ‘The Rotten Heart of Finance’ (*The Economist*, 07 July 2012) <<http://www.economist.com/node/21558281>> accessed 31 May 2021

<sup>73</sup> ‘Tracking the Libor Scandal’ (*NY Times DealBook*, 23 April 2015) <<https://www.nytimes.com/interactive/2015/04/23/business/dealbook/db-libor-timeline.html>> accessed 31 May 2021

<sup>74</sup> *Ibid*

<sup>75</sup> *Ibid*

<sup>76</sup> James McBride, ‘Understanding the Libor Scandal’ (*Council on Foreign Relations*, 12 October 2016) <<https://www.cfr.org/background/understanding-libor-scandal>> accessed 31 May 2021

<sup>77</sup> *Ibid*

<sup>78</sup> Milson C Yu, ‘Libor Integrity and Holistic Domestic Enforcement’ (2013) 98 *Cornell L Rev* 1271

<sup>79</sup> *Ibid*

<sup>80</sup> Office of Public Affairs, ‘Five Major Banks Agree to Parent-Level Guilty Pleas’ (*United States Department of Justice*, 20 May 2015) <<https://www.justice.gov/opa/pr/five-major-banks-agree-parent-level-guilty-pleas>> accessed 31 May 2021

Department of Justice, United States it was revealed that the manipulations may have prevailed as a constant routine stretching back to as far as 2005.<sup>81</sup> Following the Barclays settlement, soon after United Bank of Switzerland (UBS) reached a settlement amount of \$1.5 Billion.<sup>82</sup> The settlement uncovered that a trader in UBS had been bribing his colleagues and employees of four other banks for several years.<sup>83</sup> In the year 2009, he raised \$116 million in profits for UBS owing to the manipulations.<sup>84</sup> Overall,<sup>85</sup> approximately \$9 billion was levied from various banks for their involvement in the manipulation of LIBOR.<sup>86</sup>

The aftermath of these manipulations resulted in a myriad of chain reactions that affected all parties who relied heavily on LIBOR rates.<sup>87</sup> When LIBOR rates escalate, the interest rates on loans increase, similarly when LIBOR decreases the interest rate tends to decrease. Such adverse effects were observed in the derivatives market as well. As a result, investments that were made, observed reduced returns because of the tampered LIBOR rates.<sup>88</sup> Mortgage companies based in the US<sup>89</sup> called Fannie Mae and Freddie Mac fell victim to the repercussions of the manipulation and lost nearly \$3 Billion.<sup>90</sup>

Another market sector that took a big hit was the municipal bond market.<sup>91</sup> The bonds consisted of debts offerings from an array of bodies ranging from universities and non-profits

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<sup>81</sup> *Ibid*

<sup>82</sup> Joshua Gallu, 'Barclays LIBOR Fine Sends Stocks Lower as Probes Widen' (*Bloomberg*, 28 June 2012) <<https://www.bloomberg.com/news/articles/2012-06-28/barclays-451-million-libor-fine-paves-the-way-for-competitors>> accessed 31 May 2021

<sup>83</sup> *Ibid*

<sup>84</sup> Halah Touryalai, 'Libor Scandal Just Took A Nasty Turn, Collusion Findings Should Make Banks Very Nervous' (*Forbes*, 19 December 2021) <<https://www.forbes.com/sites/halahtouryalai/2012/12/19/libor-scandal-just-took-a-nasty-turn-collusion-findings-should-make-banks-very-nervous/?sh=5d457e5118d3>> accessed 30 May 2021

<sup>85</sup> *Ibid*

<sup>86</sup> Vasudev Hemachandran, LIBOR: The Rise and Fall (*Reserve Bank of India Bulletin*, November 2020) <<https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/6LIBORTHERISEE3D392AFFB274D638E86916FEDFA86C3.PDF>> accessed 2 June 2021

<sup>87</sup> *Ibid*

<sup>88</sup> Kirsten Grind, 'What Libor Means for You' (*The Wall Street Journal*, 3 August 2012) <<https://www.wsj.com/articles/SB10000872396390443545504577565120728037852>> accessed 26 May 2021

<sup>89</sup> *Ibid*

<sup>90</sup> David Enrich & Jean Eaglesham, 'UBS Admits Rigging Rates in "Epic " Plot' (*The Wall Street Journal*, 20 December 2012) <<https://www.wsj.com/articles/SB10001424127887324407504578188342618724274>> accessed on 26 May 2021

<sup>91</sup> C Cowden W Rayburn, 'The LIBOR Scandal and Litigation: How the Manipulation of LIBOR

to states and cities.<sup>92</sup> The variable rate that these bonds used in calculating their fixed rate were LIBOR.<sup>93</sup> The manipulations resulted in varied unreliable fluctuations, that resulted in borrowers paying more than their bonds had projected.<sup>94</sup> Student loans that used variable rates also implemented LIBOR in their calculations, and inadvertently suffered severities. However, despite the cascade of ill effects brought forth by reliance on LIBOR, regulatory authorities were mindful that the market was incapable of departing from it immediately and hence focused on reforming it instead.

### ATTEMPTS TO SALVAGE LIBOR

During the year 2011-2012, a series of reforms were said to be brought about to LIBOR in attempts to make it immune from further manipulation. The review committee which recommended the reforms recognized the need for LIBOR and suggested that it should be severely reformed as opposed to being eradicated.<sup>95</sup> The International Organization of Securities Commissions (IOSCO)<sup>96</sup> outlined the set of principles that were needed to be implemented for the standards of benchmarks.<sup>97</sup> The principles elucidated the methodology and governance for benchmarks as well as appropriate accountability mechanisms in case of a dispute. It recognized the importance of preserving the integrity of benchmarks.<sup>98</sup> The principles acted as a guiding mechanism for the global financial market. It aimed at preparing stakeholders to prepare in case of cessation and possess a viable alternative on that event.<sup>99</sup>

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Could Invalidate Financial Contracts' (2013) 17 NC Banking Inst 221

<sup>92</sup> *Ibid*

<sup>93</sup> Nathaniel Popper, 'Rate Scandal Stirs Scramble for Damages' (*N.Y. Times Dealbook*, 10 July 2012)

<<https://dealbook.nytimes.com/2012/07/10/libor-rate-rigging-scandal-sets-off-legal-fights-for-restitution/>> accessed 25 May 2021

<sup>94</sup> *Ibid*

<sup>95</sup> 'The Wheatley Review of Libor: Final Report' (*HM Treasury UK Gov*, 20 October 2011) <<

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/191762/wheatley\\_review\\_libor\\_finalreport\\_280912.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf)> accessed 31 May 2021

<sup>96</sup> *Ibid*

<sup>97</sup> 'Review of the Implementation of IOSCO's Principles for Financial Benchmarks' (*International Organization of Securities Commissions*, February 2015) <<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD474.pdf>> accessed 01 June 2021

<sup>98</sup> *Ibid*

<sup>99</sup> 'Principles for Financial Benchmarks' (*International Organization of Securities Commissions*, July 2013)

<<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>> accessed 01 June 2021

Meanwhile, the most significant reform that was made to LIBOR itself was shifting bench administration duties to IBA.<sup>100</sup> Unfortunately, despite the proactive steps taken to rectify the blatant lacunae, the issue of insufficient transactions persisted. The mechanism which entirely depended upon the Bank's discretion and genuineness still carried a large risk of probable manipulation.<sup>101</sup> In 2017,<sup>102</sup> the Chief Executive of the Financial Conduct Authority, Andrew Bailey announced that the majority of LIBOR rates will cease to be published past 2021 owing to the risks posed by LIBOR.<sup>103</sup> Owing to the massive volume of LIBOR-based transactions, a sudden and quick departure was not viable. Hence sufficient notice time had to be provided even though the risks of LIBOR reliance had already prompted several countries to identify and establish alternatives.<sup>104</sup>

## THE PREDICAMENTS OF LIBOR CESSATION

LIBOR has been deeply ingrained into the financial market. Numerous contracts formed with LIBOR rates as its foundation, do not contain a clause that provides for an alternate mechanism upon LIBOR's demise. In order to protect the parties and mitigate the costs of the trade organization, International Swaps and Derivatives Association (ISDA) amended its template to include a comprehensive fallback mechanism.<sup>105</sup> The changes were implemented on January 25, 2021.<sup>106</sup> This implies that the contracts that parties would enter pursuant to their 2006 definitions would automatically include the amended version.<sup>107</sup> Along with this the committee in charge of overseeing the transition,<sup>108</sup> the ARRC released a model fallback

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<sup>100</sup> *Ibid*

<sup>101</sup> 'The Wheatley Review of Libor: Final Report' (*HM Treasury UK Gov*, 20 October 2011) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/191762/wheatley\\_review\\_libor\\_finalreport\\_280912.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf)> accessed 31 May 2021

<sup>102</sup> *Ibid*

<sup>103</sup> Andrew Bailey, 'The Future of LIBOR' (*Financial Conduct Authority*, 27 July 2017) <<https://www.fca.org.uk/news/speeches/the-future-of-libor>> accessed 25 May 2021

<sup>104</sup> *Ibid*

<sup>105</sup> 'Benchmark Reform and Transition from LIBOR' (*International Swaps and Derivatives Association*, 11 May 2020) <<https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/#consultations>> accessed 31 May 2021

<sup>106</sup> *Ibid*

<sup>107</sup> 'ISDA Board Statement on Adherence to the IBOR Fallback Protocol' (*International Swaps and Derivatives Association*, 29 July 2020) <<https://www.isda.org/a/pFmTE/ISDA-Board-Statement-on-Adherence-to-the-IBOR-Fallback-Protocol.pdf>> accessed 31 May 2021

<sup>108</sup> *Ibid*

language that parties could include in their contracts as well.<sup>109</sup> However, the transition can be deleterious when it comes to tough Legacy Contracts. These are contracts that cannot be easily amended to refer to ARRs or to include a fallback clause. Owing to the upcoming cessation of LIBOR, contracts that don't possess a fallback language would cease to function and may end up caught in legal disputes. Such disruptions over a large scale would be detrimental to the economy.<sup>110</sup>

LIBOR rates and RFRs are fundamentally different, hence the transition from LIBORs to RFRs will be a complex undertaking. Therefore, to protect tough legacy contracts from the otherwise fateful demise, synthetic LIBOR rates will be published. Another challenge the transition will bring forth is technical changes that banks and other institutions will have to implement to adapt to the transition. The mechanics involved in undertaking the transition is technically difficult and costly. Every system that implemented LIBOR would need to be altered. Furthermore, the liquidity and demand that RFRs offer are minuscule compared to the LIBOR market. Only a huge momentum in transitions to RFRs can achieve LIBOR-like market conditions for RFRs. The exposure of the market to LIBOR is too vast and only a more forceful combined effort by regulatory authorities and participants themselves can achieve an on-time transition into a much more reliable LIBOR free market that depends on RFRs.<sup>111</sup>

## REFORMS AROUND THE WORLD

Regulatory bodies around the world began the quest for viable alternative Risk-Free Rates (RFRs) after the LIBOR mishap began. The risks of LIBOR rates misrepresenting actual market conditions had become evident. Many countries including the USA, UK, Singapore, Japan, etc. have established their RFRs to provide alternatives to transition from the usage of LIBOR. The objective commonly embraced in the creation of these Alternative Reference Rates (ARRs) was to create benchmarks that are essentially based on the real transaction than on judgement.

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<sup>109</sup> 'The LIBOR Transition' (Congressional Research Service, 19 April 2021)

<<https://fas.org/sgp/crs/misc/IF11315.pdf>> accessed 31 May 2021

<sup>110</sup> *Ibid*

<sup>111</sup> *Ibid*



However, as most of the ARRs are overnight transactions they lack both; banks' credit risk and a tenor component.<sup>112</sup>

### A. Measures Undertaken in the USA

In the USA the lookout for an alternative began in the year 2014. The Federal Reserve formed a committee called the Alternative Reference Rates Committee (ARRC), which was assigned with the responsibility to identify an alternate reference rate.<sup>113</sup> In 2017,<sup>114</sup> the Committee identified an alternative rate called Secured Overnight Funding Rate (SOFR), which is based on the US Treasury Market.<sup>115</sup> It was selected by ARRC as the most suitable alternative to transition from LIBOR.

The SOFR is published daily by the Federal Reserve Bank of New York (NY Fed). As the name suggests the rate is based on 'secured' transactions in the repo market. It represents the costs incurred in securing loans overnight which are collateralized by treasury securities.<sup>116</sup> Compounded averages of SOFRs are also published by NY Fed as Average SOFRs for the tenors 30 days, 90 days, and 180 days along with a SOFR Index for determination of compounded average rates for custom tenors.<sup>117</sup> Average rates even out day-to-day fluctuations in the market by depicting the movement of overnight rates over a period of time.<sup>118</sup> However, overnight SOFR is more apt than average SOFRs for the majority of transactions relying on IBORs.<sup>119</sup>

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<sup>112</sup> Vasudev Hemachandran, 'LIBOR: The Rise and Fall' (*Reserve Bank of India Bulletin*, November 2020) <<https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/6LIBORTHERISEE3D392AFFB274D638E86916FEDFA86C3.PDF>> accessed 02 June 2021

<sup>113</sup> 'ARRC Announces the Formation of an Advisory Group' (*Federal Reserve Bank Of New York*, 16 November 2016) <<https://www.newyorkfed.org/arrc/announcements>> accessed 26 May 2021

<sup>114</sup> *Ibid*

<sup>115</sup> 'Secured Overnight Financing Rate Data' (*Federal Reserve Bank Of New York*, 1 March 2016) <<https://www.newyorkfed.org/markets/reference-rates/sofr>> accessed 26 May 2021

<sup>116</sup> *Ibid*

<sup>117</sup> 'Calculation Methodology for the SOFR Averages and Index' (*Federal Reserve Bank of New York*, 14 April 2021) <[https://www.newyorkfed.org/markets/reference-rates/additional-information-about-reference-rates#sofr\\_ai\\_calculation\\_methodology](https://www.newyorkfed.org/markets/reference-rates/additional-information-about-reference-rates#sofr_ai_calculation_methodology)> accessed 04 June 2021

<sup>118</sup> *Ibid*

<sup>119</sup> 'Interest Rate Benchmark Reform: Overnight Risk-Free Rates and Term Rates' (*Financial Stability Board*, 12 July 2021) <<https://www.fsb.org/wp-content/uploads/P120718.pdf>> accessed 30 May 2021

Unlike the LIBOR rates which are based on a small depleting interbank market,<sup>120</sup> SOFR is based on a robust US Treasury repo market with daily transaction volumes valued at approximately \$1 trillion.<sup>121</sup> Since its first publication on April 3, 2018,<sup>122</sup> the usage of SOFR has steadily caught up in the market and the SOFR-based debt issued is now worth more than \$750 billion.<sup>123</sup> Furthermore, in order to facilitate the shift toward SOFR in the US, the New York Governor passed the LIBOR discontinuance bill into Law.<sup>124</sup> The Senate Bill's main objective was to reduce the uncertainties that may arise due to the cessation.<sup>125</sup> The statute addresses two crucial aspects<sup>126</sup>;

- It states that parties to contracts based on LIBOR cannot rid themselves of their contractual obligations, sue for breach of contract or damages when LIBOR rates cease to be published.
- It also provides for a safe haven for the 'Determining person'<sup>127</sup> within the state of New York,<sup>128</sup> from litigation when such person unilaterally transitions the contract to SOFR from LIBOR.<sup>129</sup>

The ARRC and NY Fed along with other authorities and institutions are consistently undertaking various measures to promote the transition to ARRs, particularly to SOFR.<sup>130</sup>

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<sup>120</sup> *Ibid*

<sup>121</sup> 'Reforming Major Interest Rate Benchmarks: 2020 Progress Report' (*Financial Stability Board*, 20 November 2020) <<https://www.fsb.org/wp-content/uploads/P191120.pdf>> accessed 04 June 2021

<sup>122</sup> 'Secured Overnight Financing Rate' (*Thomson Reuters*, 2021) <[https://ca.practicallaw.thomsonreuters.com/w-020-9763?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://ca.practicallaw.thomsonreuters.com/w-020-9763?transitionType=Default&contextData=(sc.Default)&firstPage=true)> accessed 04 June 2021

<sup>123</sup> *Ibid*

<sup>124</sup> *Ibid*

<sup>125</sup> 'ARRC Welcomes Passage of LIBOR Legislation by the New York State Legislature' (*Federal Reserve Bank of New York*, 24 March 2021) <<https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/20210324-arrc-press-release-passage-of-libor-legislation>> accessed 03 June 2021

<sup>126</sup> *Ibid*

<sup>127</sup> 'Senate Bill S297B' (*NY Senate Government*, 2021) <<https://www.nysenate.gov/legislation/bills/2021/S297>> accessed 31 July 2021

<sup>128</sup> *Ibid*

<sup>129</sup> Marc Gottridge and others, 'New York Paves the Way for LIBOR Transition' (*Thomson Reuters*, 27 April 2021) <[https://www.engage.hoganlovells.com/knowledgeservices/attachment\\_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAXqape3EJzSjkiaqyfKhZnj&fromContentView=1&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQuf6KjHLHOBw%3D&attdocparam=pB7HEsg%2FZ312Bk8OIuOIH1c%2BY4beLEAexQ9ZhbdoBw0%3D](https://www.engage.hoganlovells.com/knowledgeservices/attachment_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAXqape3EJzSjkiaqyfKhZnj&fromContentView=1&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQuf6KjHLHOBw%3D&attdocparam=pB7HEsg%2FZ312Bk8OIuOIH1c%2BY4beLEAexQ9ZhbdoBw0%3D)> accessed 05 June 2021

<sup>130</sup> *Ibid*

## B. Measures Undertaken in the UK

In the quest for replacing LIBOR rates from the market, the Sterling Overnight Index Average (SONIA) was identified as the most suitable alternative.<sup>131</sup> Sterling Overnight Index Average (SONIA) was first published in the year 1997<sup>132</sup> by the Whole Sale Market Brokers Association and has been in use since then.<sup>133</sup> The Bank of England took over its administration in the year 2016 and 2018 they reformed the methodology of its calculation in compliance with IOSCO principles.<sup>134</sup>

SONIA is based entirely on transactions unlike how LIBOR functioned.<sup>135</sup> It is measured by collecting data from major banks and calculating the weighted average of interest rates on all eligible sterling-based transactions of one-day maturity.<sup>136</sup> However, unlike SOFR, SONIA is based on ‘unsecured’ transactions.<sup>137</sup> The SONIA Oversight Committee reviews the methodology and monitors the data used for the calculation of the rate. A whistle-blowing mechanism has also been established as a safeguard against any potential misconduct. In an attempt to make the transition from LIBOR to SONIA smoother and harmonious, the Working Group on Sterling Risk-Free Reference Rates (RFRWG) along with relevant authorities have created a road map of milestones to be achieved. It guides transition to RFRs as well as to create liquidity in the SONIA-based markets.<sup>138</sup>

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<sup>131</sup> ‘Record of the Financial Policy Committee Meeting on 20 September 2017’ (*Financial Policy Committee Bank of England*, 20 September 2017) <<https://www.bankofengland.co.uk/-/media/boe/files/record/2017/financial-policy-committee-meeting-september-2017>> accessed 01 June 2021

<sup>132</sup> ‘The SONIA Interest Rate Benchmark’ (*Bank of England*, 26 November 2020) <<https://www.bankofengland.co.uk/markets/sonia-benchmark>> accessed 31 May 2021

<sup>133</sup> ‘Administration of SONIA’ (*Bank of England*, 02 December 2020) <<https://www.bankofengland.co.uk/markets/sonia-benchmark/administration-of-sonia>> accessed 05 June 2021

<sup>134</sup> *Ibid*

<sup>135</sup> ‘Sonja: Key Features and Policies’ (*Bank of England*, 04 August 2020) <<https://www.bankofengland.co.uk/markets/sonia-benchmark/sonia-key-features-and-policies>> accessed 26 May 2021

<sup>136</sup> ‘The Reform of SONIA: Consultation Feedback and the Design of SONIA’ (*Bank of England*, 30 March 2017) <<https://www.bankofengland.co.uk/paper/2017/the-reform-of-sonia-consultation-feedback-and-the-design-of-sonia>> accessed 26 May 2021

<sup>137</sup> *Ibid*

<sup>138</sup> *Ibid*

Other nations have also embarked on securing a timely transition from IBORs to RFRs. Countries like Singapore, Switzerland, Japan, Thailand, etc. have identified Singapore Overnight Rate Average (SORA), Swiss Average Rate Overnight (SARON), Tokyo Overnight Average Rate (TONA), and Thai Overnight Repurchase Rate (THOR) respectively as an alternative to transition away from the IBORs. In order to catalyse the transition to RFRs, the ISDA has made available several tools such as<sup>139</sup>; 'ISDA Create' for electronic negotiation of contracts,<sup>140</sup> fallback protocol, transition checklist,<sup>141</sup> roadmaps,<sup>142</sup> amendments to the 2006 ISDA definitions,<sup>143</sup> etc.<sup>144</sup> These tools which assist the transition to an alternate reference rate are to promote more participation in the RFR-based markets to attain sufficient liquidity for them. Active measures are undertaken by authorities and periodic consultations with market participants are carried out in order to track and determine the progress and to steer ahead of the transition. Suggestions, opinions, and the difficulties faced by the various participants are taken into account in order to determine the further measures to be undertaken.

## THE AFTERMATH IN INDIA

After the LIBOR manipulation and its reforms, the Reserve Bank of India began actively following developments around the globe relating to the transition from LIBOR to an ARR. In the year 2013, RBI formed a Committee on Financial Benchmarks as a way to preserve the uprightness of the Indian benchmarks.<sup>145</sup> Pursuant to the recommendations from this committee,<sup>146</sup> the calculation of the Mumbai Interbank Offer Rate (MIBOR) was altered to be

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<sup>139</sup> 'ISDA Create InfoHub' (ISDA, 10 September 2020) <<https://www.isda.org/2020/09/10/isda-create-infohub/#benefits>> accessed 05 June 2021

<sup>140</sup> *Ibid*

<sup>141</sup> 'IBOR Global Benchmark Transition Report June 2018' (ISDA, June 2018) <<https://www.isda.org/a/OqrEE/IBOR-Transition-Report.pdf>> accessed 05 June 2021

<sup>142</sup> *Ibid*

<sup>143</sup> 'Amendments to the 2006 ISDA Definitions to include new IBOR Fallbacks' (ISDA, 21 January 2021) <<http://assets.isda.org/media/3062e7b4/23aa1658-pdf/>> accessed 05 June 2021

<sup>144</sup> *Ibid*

<sup>145</sup> 'Annual Report' (Reserve Bank of India, 21 August 2014) <<https://rbi.org.in/scripts/AnnualReportPublications.aspx?Id=1123>> accessed 3 June 2021

<sup>146</sup> *Ibid*

based entirely on transactions, to avoid possible manipulations.<sup>147</sup> MIBOR is the interest rate that banks charge on short-term loans they lend to other banks in India.<sup>148</sup>

Before the methodology in use currently, MIBOR was calculated using a similar method as LIBOR. Banks had to submit data to the poll and from the collective data, MIBOR would be computed. After the LIBOR manipulations surfaced, it exposed the lacunae of such computing mechanisms. RBI was prompted to make immediate changes transforming MIBOR rates to be entirely based on actual transactions. However, the drawback in this methodology is that the rates would depend highly on liquidity conditions in the market hence making them volatile and it would not be representative of the costs of borrowing incurred by banks.<sup>149</sup> Furthermore, RBI allotted the responsibility to find an alternative to the Indian Banks' Association (IBA). The main areas of focus for IBA are to arrange for a seamless transition to a post-LIBOR world, outreach to participants in the financial market in order to raise awareness amongst stakeholders, and determine methodology for a risk-free alternative. Several measures have been taken already in order to catalyze the transition such as raising awareness, assessing the various risks, fathoming the LIBOR exposures, and making available various tools.

RBI sent letters to all commercial banks in India in order to raise awareness among the stakeholders. The letter communicated the importance and urgency for the banks to be sensitized to the soon-to-come transition. Banks were vested with the task to identify their exposures to IBORs and to make a list of all the stakeholders that could be exposed to severities during the transition. Banks were also tasked with assessing their preparedness to brace for a LIBOR free market. As of November 2020, RBI had estimated that the exposure to LIBOR in India is nearly \$331 billion.<sup>150</sup> LIBOR exposures include government loans, trade contracts, commercial borrowings, foreign currency non-resident deposits, etc. The magnitude

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<sup>147</sup> 'Report of the Committee on Financial Benchmarks' (*Reserve Bank of India*, 7 February 2014) <<https://m.rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=761>> accessed 30 May 2021

<sup>148</sup> *Ibid*

<sup>149</sup> Report of the Working Group on Pricing of Credit (*Reserve Bank of India*, 10 April 2014) <<https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=764>> accessed 3 June 2021

<sup>150</sup> *Ibid*

or volume of transactions that are derived or dependent on LIBOR is not small and the transition could have a jarring impact if not prepared for.

The Mumbai Interbank Forward Offer Rate (MIFOR) is another benchmark rate followed by nearly one-fifth of the total Interest Rate Swap transactions that take place.<sup>151</sup> Its calculation is largely dependent upon LIBOR.<sup>152</sup> It is calculated using the USD LIBOR and forwards premium of INR and USD.<sup>153</sup> A significant portion of LIBOR exposures in India arises from referencing MIFOR rates. As the date for LIBOR cessation nears, the imminent need for transitioning to an alternate benchmark other than MIFOR is heightened.<sup>154</sup> In order to accommodate legacy contracts, the 'adjusted MIFOR' rate is published by Financial Benchmarks India Pvt Ltd (FBIL).<sup>155</sup> Adjusted MIFOR is calculated as the sum of an "adjusted SOFR" and a spread adjustment instead of reliance on USD LIBOR. This would provide for a viable fallback and alternative that sustains the contracts even after the cessation.<sup>156</sup>

In January 2020 banks set up several committees whose members are the seniors of respective fields. These committees were put in charge of the evaluation of exposures, assets that could be compromised during or after the transition, and tax implications that arrive upon the cessation.<sup>157</sup> On July 08, 2021,<sup>158</sup> the RBI released a Roadmap for LIBOR Transition<sup>159</sup> through which it urged the Banks to discourage the use of LIBOR in new contracts that parties entered into. Instead, it advised the banks to encourage the implementation of ARR, and educate the

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<sup>151</sup> 'LIBOR: Rise and Fall' (*Reserve Bank of India*, November 2020) <<https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/6LIBORTHERISEE3D392AFFB274D638E86916FEDFA86C3.PDF>> accessed 27 May 2021

<sup>152</sup> *Ibid*

<sup>153</sup> Buigut S and Rao V, 'International financial integration of the Indian money market' (2011) *International Journal of Economics and Finance* 170-180

<sup>154</sup> Subrahmanyam O V and Sivananth Ramachandran, 'Lessons for India from LIBOR Transition' (*CFA Institute*, 29 August 2020) <<https://blogs.cfainstitute.org/marketintegrity/2020/08/29/lessons-for-india-from-libor-transition/>> accessed 29 May 2021

<sup>155</sup> 'Cessation of LIBOR: Transition Arrangements' (*Reserve Bank of India*, 08 July 2021) <[https://www.rbi.org.in/Scripts/BS\\_PressReleaseDisplay.aspx?prid=51870](https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=51870)> accessed 17 July, 2021

<sup>156</sup> *Ibid*

<sup>157</sup> K Lai, 'Libor transition still at a nascent stage in India' (*International Financial Law Review*, 05 May 2020) <<https://www.iflr.com/article/b1lmx6j2jw44f4/libor-transition-still-at-a-nascent-stage-in-india>> accessed 17 July 2021

<sup>158</sup> *Ibid*

<sup>159</sup> 'Roadmap for LIBOR Transition' (*Reserve Bank of India*, 08 July 2021) <<https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=12128&Mode=0>> accessed 23 July 2021

parties of the importance and vitality of robust fallback clauses.<sup>160</sup> Reserve Bank of India strongly advised the Banks to evaluate the risk factors and begin preparation to mitigate the risks as much as possible.

## **A PROACTIVE TRANSITION**

As the cessation date nears, the market is gearing up for transition. USD LIBOR rate is the most widely relied on LIBOR rate in India. It is a matter of relief that USD LIBOR is scheduled to cease only in the year 2023. However, this should not be viewed as an incentive to delay the transition to RFRs. Promoting such transitions ahead of time can prevent last-minute hassles to execute the transition and increase liquidity in the RFRs market. Furthermore, to increase liquidity in RFRs, measures must be undertaken to inhibit execution of new contracts that seeks to refer to LIBORs, including USD LIBOR or new contracts must mandatorily include a fallback clause reliant on RFRs. This could further facilitate a smooth transition away from LIBOR.<sup>161</sup>

Contracts that will continue to subsist beyond the cessation date must necessarily be re-negotiated to refer to RFRs or amend the contracts to include fallback clauses. Parties may develop fallback clauses suitable to the specific needs of their contract or resort to standard fallback clauses published by agencies such ISDA, IBA, the Loan Markets Association, the Bankers Association for Finance and Trade, and Asia Pacific Loan Markets Association.<sup>162</sup> It is important to bear in mind while incorporating fallback clauses that the clauses must not create a reference to other LIBOR or LIBOR-based rates and that it must be clear on what constitutes the trigger event for the effectuation of the fallback rate. Moreover, to remain relevant in the long run, long-term contracts such as clauses must be drafted in a manner that can withstand possible institutional changes in accordance with the market and regulators.

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<sup>160</sup> *Ibid*

<sup>161</sup> *Ibid*

<sup>162</sup> 'Roadmap for LIBOR Transition' (*Reserve Bank of India*, 08 July 2021)

<<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12128&Mode=0>> accessed 17 July 2021

Furthermore, Parties to the contract must be disallowed from resorting to a cessation of LIBOR as a cause for termination of contracts, unless mutually agreeable to all the parties to contract. This can be especially difficult in contracts that have a large number of parties such as syndicated loan agreements. In such cases, a restriction on parties from refusing to perform their obligations only on the grounds of LIBOR cessation can prevent a flood of litigations. This can be undertaken by extending statutory protection via legislation, similar to that undertaken in New York.<sup>163</sup>

The New York Legislation acts as a fine example as to how the parties to contract to have a protective mechanism to resort to when RFRs cannot be fixated by mutual consensus. In the absence of such mechanisms, matters like this may lead to non-discharge of contractual obligations by parties.<sup>164</sup> Indeed, tough legacy contracts are one of the most vulnerable exposures to LIBORs. Stakeholders are at risk due to the uncertainties that will be brought about with the cessation which could result in increased stress on the execution of the contract. These contracts would need comprehensive resettlement and renegotiations,<sup>165</sup> which can be a heavy task, especially for global contracts.

Roadmaps, providing advisories, disseminating necessary information, establishing milestones, etc. are essential to assist the market transition in a well channelized and informed manner. Establishing milestones can help track the developments and help discern the progress left to be achieved. LIBOR transition is one of the largest market transitions to date in terms of volume and value. A smooth transition cannot be achieved by actions of regulatory authorities alone, parties must take up responsibility in actively taking measures to transition away from LIBOR towards RFRs.<sup>166</sup>

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<sup>163</sup> *Ibid*

<sup>164</sup> *Ibid*

<sup>165</sup> Golaka C Nath and others, 'Issues and Challenges in Computation of Benchmark Forward Premia and MIFOR Curve' (*Rakshitra*, 02 April 2018) <<https://www.ccilindia.com/Pages/default.aspx>> accessed 27 May 2021

<sup>166</sup> *Ibid*



## CONCLUSION

Over the span of the last two decades, the market on which LIBOR depended has reduced to a trickle. This acts as an indicator of how LIBORs could no longer be reliable as actual market representing rates. In addition, the LIBOR manipulations brought a slew of implications, the repercussions of which still linger in the financial markets. The diverse transaction relying on LIBORs are crucial to the economy and especially the banking sector. In order to ensure parties to LIBOR-based transactions are not wrong, it is necessary to resolve the issue in a manner that suffers the least friction. The transition to a post-LIBOR market has proven to be a necessary undertaking. The scandals of LIBOR shed light on the lacunae and possible misgivings that could take place that would inadvertently lead to larger impediments.

In contrast, RFRs are based on a robust market. Its reliance on actual transactions not only reduces the possibility of manipulations but also bridges the information asymmetry. However, to get to the desired risk-free market environment, the steps that the RBI, IBA, banks, and market participants individually as well as collectively are vital. India has begun taking active measures to brace for the cessation, but only active monitoring and channeling of efforts can help achieve a smooth transition. It still has vital measures to be undertaken in consonance with global developments. With the deadline approaching, proactively working towards building and establishing the risk-free alternative, assessing risks, and ensuring the impact is controlled and minimized has to be a priority.