RECENT FINANCIAL SECTOR CONSPIRACIES AND MANIPULATIONS: HOW TO PREVENT FUTURE SIMILAR CONDUCT?

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I. DEFICIENT STRUCTURES FACILITATING ILLEGAL BEHAVIOR

A veritable "who's who" of high profile financial benchmarks have been under investigation for years now, and likely for years to come. The interest on USD LIBOR ("LIBOR") started in 2008, with Wall Street Journal articles by Carrick Mollenkamp and Mark Whitehouse.[2] I and co-authors Albert Metz, Michael Kraten and Gim Seow followed with an August 2008 paper extending the analysis further back in time, and first pointed to the possibility of collusion and manipulation having started well before the financial crisis.[3] But at the time, the overall evidence on possible LIBOR abuse available to the general public by all sources was mixed. For example, an October 2008 report by the International Monetary Fund provided supporting

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[2] C. Mollenkamp & L. Norman, *British bankers group steps up review of widely used Libor*, W. S. J., C7 (April 17, 2008); C. Mollenkamp & M. Whitehouse, *Study casts doubt on key rate; WSJ analysis suggests banks may have reported flawed interest data for Libor*, W.S.J., A1 (May 29, 2008).
[3] R. Abrantes-Metz, M. Kraten, A. Metz, & G. Seow, LIBOR Manipulation? 36 J. BANKING & FINANCE 136-150 (2012), first publicly available in August 2008 at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1201389.

evidence that LIBOR had not been abused.[4]

Only in March 2011 it became public that LIBOR investigations had started, at least for UBS, and in June 2012 we learned of the first direct evidence of LIBOR manipulation contained in Barclay's settlement with authorities. Later that year in December, the first evidence of collusion among various institutions to rig LIBOR was made public through UBS' settlement with authorities.

Investigations on USD LIBOR extended to other "Ibors" including Euribor, Yen LIBOR and TIBOR. To date, many banks have already settled claims totaling several billions of dollars, and it may not be over yet, especially given that conspiracy claims by plaintiffs have been revived by the most recent LIBOR decision.[5]

After the "Ibors" came foreign exchange ("FX"), when in 2013 Bloomberg presented evidence of a possible abuse. Applications of screening by Bloomberg reporters Liam Vaughan and Gavin Finch helped trigger worldwide investigations on FX, a market of more than 5 trillion dollars a day. They reported the possibility that traders at some of the world's biggest banks had been rigging benchmark WM/Reuters rates, according to current and former dealers with knowledge of the practice. In their August 2013 article,[6] they screened the FX market for possible manipulation and collusion affecting a selected group of exchange rates, identifying abnormal spikes in these rates around 4 p.m. London time WM/Reuters fixing. In January 27, 2014, Vaughan and Finch followed up with another screening of this market. They showed that after news came out that regulatory bodies and competition authorities began investigating the FX market, the frequency and magnitude of these abnormal spikes had been reduced, evidence which is consistent with a possible break of a cartel.

My own work on FX was contained in a December 2013 complaint filed in New York which extended Bloomberg's analysis and showed further evidence of highly anomalous price spikes at key times of the day when certain indices are set.[7] In 2015 I also developed evidence consistent with artificiality in FX futures prices, in particular, in the CME price settlement procedure that takes place during a very narrow window of time of just 30 seconds, and which determines the benchmark futures settlement price for the day.[8] To date, FX settlements have also totaled several billions of dollars.

The London Gold and Silver Fixings were next. In December 2013, I wrote an opinion

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[4] International Monetary Fund, *Financial Stress and Deleveraging, Macrofinancial Implications and Policy*, 77-81 (October 2008).

[5] In Re: Libor-based financial instruments antitrust litigation. United States Court of Appelas for the Second Circuit (May 23, 2016), available at http://blogs.reuters.com/alison-frankel/files/2016/05/052316-2nd-Cir-Libor-decision.pdf.

[6] L. Vaughan and G. Finch, *Currency Spikes at 4 P.M. in London Provide Rigging Clues*, Bloomberg (Aug. 27, 2013), available at www.bloomberg.com/news/2013-08-27/currency-spikes-at-4-p-m-in-london-provide-rigging-clues.html.

[7] Class action complaint filed on behalf of Prudent Forex Fund, LLC and Prudent Capital Management, LLC, by Lowey Dannenberg Cohen & Hart, LLC, Cohen Milstein Sellers and Toll, PLLC, and Gold Bennett CERA & Sidener, LLP, (13-CV-9237) (December 31, 2013).

[8] Class action complaint filed on behalf of Jeffrey Sterk, Kimberly Sterk, and Michael Melissinos, by Quinn Emanuel Urquhart & Sullivan, LLP and Grant & Eisenhofer, PA., (15-CV-2705), (April 7, 2015).

article arguing that the large price declines I observed around the time of the London gold pm fixing, when the "price of gold" for the day is determined for the purposes of many derivative contracts, were consistent with collusion to manipulate this benchmark. I provided similar evidence for silver.[9] A Bloomberg article followed in February 2014 which described additional results from my research on gold.[10] Immediately after, approximately thirty law suits were filed in the United States alone. I conducted additional analyses of the gold and silver London fixings contained in two class action complaints, showing results consistent with sustained conspiracy and manipulation of these benchmarks over many years.[11] In May 2014 the UK's FCA fined Barclays on gold manipulation. And last April, Deutsche Bank settled with both gold and silver plaintiffs.

Moving on to yet more benchmark rigging, in early 2013 Bloomberg reported that the U.S. Commodity and Futures Trading Commission ("CFTC") had found evidence of manipulation of ISDAfix, the key swaps benchmark. My collusion analysis on ISDAfix, contained in the class action complaint filed in September by Alaska Electrical Pension Fund, showed that once again, banks likely coordinated to move this benchmark price.[12] Four days after this complaint was filed, Bloomberg reported that the CFTC had found evidence of criminal behavior.[13] Since then both Barclay's and Citigroup have settled with authorities on claims of manipulation of ISDAfix, and seven banks have also settled claims with plaintiffs. In addition, last March the complaint survived a motion to dismiss also on conspiracy claims, added by the empirical evidence provided by screens.[14]

Allegations of wrongdoing have also been made with respect to the warehousing of metals such as aluminum and zinc, focusing on whether some large institutions have colluded to drive up the price of these metals. In aluminum, the debate centers on the role of a specific set of warehouses, which are located in the Midwest and are part of a network approved by the London Metal Exchange ("LME"). The LME warehouse system was set up to act as a buffer, absorbing aluminum when producers' supply exceeded demand and releasing the metal in times of shortage. The question is whether the LME warehouse system has been

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[9] R. Abrantes-Metz, *How to Keep Banks from Rigging Gold Prices,* Bloomberg (December 19, 2013), available at http://www.bloomberg.com/news/2013-12-19/how-to-keep-banks-from-rigging-gold-prices.html.

[10] L. Vaughan, *Gold Fix Study Shows Signs of Decade of Bank Manipulation*, Bloomberg (February 28, 2014), available at http://www.bloomberg.com/news/2014-02-28/gold-fix-study-shows-signs-of-decade-of-bank-manipulation.html.

[11] In Re Commodity Exchange, Inc., Gold Futures and Options Trading Litigation, class action complaint filed by Quinn Emanuel Urquhart & Sullivam, LLP, and Berger & Montage, PC, (14-MD-2548 (VEC)), (March 16, 2015); and In Re London Silver Fixing, LTD. Antitrust litigation, class action complaint filed by Lowey Dannenberg Cohen & Hart, PC and Grant & Eisenhofer, PA, (14-MD-02573-VEC), (January 26, 2015).

[12] Class action complaint filed on behalf of Alaska Electrical Pension Fund; Genesee County Employees' Retirement System; County of Montgomery, Pennsylvania; County of Washington, Pennsylvania; and City of New Britain, Connecticut, by Quinn Emanuel, Urquhart & Sullivan, LLP, Robbins Geller Rudman & Dowd LLP, and Scott+Scott, Attornmeys at Law, LLP, (14-cv-7126 (JMF), 14-cv-7907 (JMF), 14-cv-8342 (JMF), 14-cv-8365 (JMF), and 14-cv-8576 (JMF), (February 12, 2015).

[13] M. Leising and T. Schoenberg , *CFTC Said to Alert Justice Department of Criminal Rate Rigging,* Bloomberg (Sep. 9, 2014), available at http://www.bloomberg.com/news/articles/2014-09-08/cftc-said-to-alert-justice-department-of-criminal-rate-rigging-i2z7ngfn.

[14] Opinion and Order issued on March 28, 2016 (14-CV-7126 (JMF)).

playing its proper role in recent years, particularly after a number of banks and trading firms gained control of a large portion of LME warehouses.

According to aluminum buyers, some banks and traders have been preventing metal from leaving the warehouses, resulting in long waits for delivery of metal since the date it is requested for release by the metal owner. The wait time moved from just a few weeks to well over one year. This induces larger storage fees and higher prices. In a July 2013 opinion article I put forward concerns with this warehousing setting,[15] and I followed with a paper from September 2013 providing the first preliminary analysis consistent with possible artificiality in aluminum premiums.[16] In addition, I also argued that given the flawed structure of this setting, the incentives at play, the conflicts of interest, the large concentration of stored metal in a few warehouses, and the empirical evidence consistent with artificiality, that abuse may have occurred. I conducted additional analyses of artificiality in this market which are contained in the class action complaint by indirect aluminum purchasers.[17]

II. WHY HAS SO MUCH ILLEGAL BEHAVIOR OCCURRED?

Is this an epidemic of illegal behavior in the financial sector? Is the likelihood of abuse routinely underestimated? Is that preventing more proactive reforms of deficient benchmark structures and other market structures? And are regulatory authorities too complacent, preferring for the most part to "sit back and wait" for wrongdoers to come forward so that a leniency application can be filed, rather than also proactively screening markets for suspicious pricing patterns?

The question of whether manipulation of a financial benchmark, rate or price will occur depends on whether someone is both willing and able to effectively move prices. The question of "willingness" is generally outside the control of authorities; it is just human nature, and while most people will not try, some others will, given the incentive. Usually the incentive is also outside of the control of authorities, and it is directly related to the potential gains from manipulation: as long as those gains are significant, the incentive will be there to engage in manipulation, and some will end up bieng attracted into undertaking such abuse. Instead, authorities and benchmark administrators should focus on the design of structures to reduce the ability for abuses to occur.

Let's look at LIBOR more closely. For decades, LIBOR was a daily report of the interest rate at which large banks could borrow in the interbank market. There are literally trillions of dollars in transactions and derivatives benchmarked to LIBOR, making it one of the most important financial rates in the world and creating an obvious (and arguably irreducible) incentive to manipulate it. But what allowed the manipulation of LIBOR to be as prolonged and successful as it was rests with the structure of its setting. Historically it was based on a

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15 Rosa M. Abrantes-Metz, *Banks' Role in Metal Trade Deserves Scrutiny,* Bloomberg, July 31, 2013, available at http://www.bloomberg.com/news/2013-07-31/banks-role-in-metal-trade-deserves-scrutiny.html.

16 Rosa M. Abrantes-Metz, "Aluminum Market Dislocation: Evidence, Incentives and Reform," September 18, 2013, Working Paper, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2328902.

17 In Re Aluminum Warehousing Antitrust Litigation, filed by Kessler, Topaz, Meltzer & Check, LLP, Girard Gibbs, LLP, Cuneo, Gilbert, LaDuca, LLP, (13-md-02481-KBF), March 12, 2014.

simple trimmed average of rates *reported* by the participating banks, information voluntarily supplied by banks with deeply vested interests in the ultimate outcome. It was administrated by the British Banking Association, essentially the banks themselves. It is not surprising that abuse was rampant.

Unfortunately, these sorts of structural deficiencies are not limited to LIBOR, but are instead more commonplace than we might hope. For example, the London gold fixing was set twice a day by five competing banks who participated in private undisclosed calls during which they entered into a live auction to buy and sell gold while simultaneously trading in the public exchanges and over the counter. The benchmark administrator was again the banks themselves through the London Gold Market Fixing, with no independent oversight. The auction prices of these private calls among competitors determined the AM and PM fixings, on which many hundreds of billions of dollars in transactions and derivatives were based. Silver worked similarly, with only three banks involved and one daily benchmark.

ISDAfix is another important financial benchmark which was based only on a survey. The structure of this benchmark had always been flawed, facilitating abuse. A small number of banks submitted quotes to broker ICAP reflecting their individual views of the relevant market price at 11 a.m. ET. They had the option to either accept a proposed reference rate put forward by ICAP at that time (which was supposedly based on current transactions and in principle representative of the market), or instead submit their own quotes. And no one was obliged to trade at their quoted values.

Moreover, participants had 15 minutes to submit and revise their submissions, which facilitated signaling and coordination. There was a direct conflict of interest since the benchmark administrator's clients are the market players themselves. The administrator had a direct financial interest in the value taken by ISDAfix, as the banks — ICAP's clients — had derivatives indexed to this number which could benefit many millions of dollars from just a couple of basis points of rigging. Additionally, and as in all benchmark rigging cases uncovered to that, there was a lack of independent oversight in this setting. So is it really so surprising that manipulation did occur?

On the metals warehousing concerns, metal storage became a very profitable business, and the more metal is held in the warehouse, the more profitable it is. The incentives to slow the release of aluminum from the warehouses are clear. To start, by keeping the aluminum in for longer they collect more rents, and the LME receives a portion of the fees collected by its affiliated warehouses. In addition, the accumulation of inventories in these warehouses makes aluminum relatively less available elsewhere and increases the opportunity cost of aluminum to producers, potentially inducing inflated prices and consequently higher production, which is then stored in these warehouses, generating further rents collection. Moreover, many of the warehouse owners are also traders in aluminum markets and are potentially benefiting from a manipulation of the supply of aluminum. In any event, by controlling the warehouses the players gain important inside information potentially providing them the edge in these markets. It should be noted that unlike equities, trading on this type of private information for commodities is legal.

Having these warehouses owned by parent companies which, until recently, also owned the LME while at the same time being main traders in this market, represents a conflict of interest. At the end of the day, the question is why did regulators authorize a few large institutions to control, in many cases, commodity warehousing, distribution, trading, and sometimes production as well? Isn't this a recipe for trouble? The verdict is not out yet on whether illegal behavior has in fact occurred, but why increase the risk by allowing such a flawed structure to operate?

III. WHERE ELSE SHOULD WE PREVENT AGAINST THIS TYPE OF BEHAVIOR?

There is no doubt that there was widespread failure to recognize the means, motive and opportunity to rig key financial benchmarks and other structures. That can perhaps be dismissed as a mistake of the past. Many of these benchmarks have already been reformed, though some more robustly than others. The question now is what other structures may present similar deficiencies making them highly susceptive of abuse, and what can be done to deter and detect such conduct?

Auction bid rigging is the most frequent cartel offense, but why? Because many procurement structures are defective, easily enabling coordination among a small number of powerful bidders with completely aligned interests, and lacking independent oversight. This describes the bond auction market even today. New debt is often financed through the issuance of bonds sold to interested parties through auctions, though not all bond issuance is subject to auctions. Typically there are a fairly small number of large participants in these auctions obtaining correspondingly large shares of these bonds. These entities have an obvious interest in buying the bonds as cheaply as possible. There is nothing wrong with that as long as the parties do not manipulate prices artificially away from market fundamentals.

In June 2015 we learned of an investigation into the possible bid-rigging of US Treasuries by primary dealers, the large financial institutions who, along with other market participants, bid in these auctions. Primary dealers often keep more than half of the newly auctioned securities and have a common interest in buying them at the lowest possible prices. When dealing with such large volumes, even a very small price movement can generate enormous additional profits. It is not clear that any entity is responsible for routinely screening each auction for possible abuse. Empirical evidence that I prepared contained in class action complaints filed in 2015 and 2016,[18] shows that Treasury auction prices may have been too low at least since 2007, that this effect is increasing with the participation of the large primary dealers in the auctions, and that these patterns suddenly changed when an investigation by the Department of Justice became public. All this suggests a possible break of coordination among dealers.

IV. WHAT LESSONS MUST WE LEARN AND IMPLEMENT?

While investigations into Treasury auctions, FX, ISDAfix, and others are still ongoing, and more recently additional focus by regulators has been given to possible collusion and manipulation in bid-ask spreads in bonds markets for supranational, sub-sovereigns and agencies, bid-ask

[18] See for example, class action complaint filed by Quinn Emanuel Urquhart & Sullivan, LLP and Cohen Milstein Sellers & Toll, PLLC, (MDL No. 2673), (February 16, 2016).

spreads in foreign exchange, and maybe even other spreads manipulations in other markets, we should learn the lessons from LIBOR and other benchmarks.

We must recognize deficient structures so that we can proactively reform them, minimizing the likelihood of abuse. And to enhance deterrence and detection of illegal behavior, we must screen these markets regularly: screens have historically flagged many of the largest financial scandals and they can continue doing so into the future. Indeed, our detection methods must become more sophisticated, unless we are willing to rely on the wrongdoers to continue leaving incriminatory emails and text messages detailing their collusive and manipulative efforts. On the contrary, they have surely learned their lessons from LIBOR and other cases; they now know they can get caught and their own messages can "hang them."

Authorities need to face the reality that direct evidence will be harder to come by, and that proactive reform of deficient structures is needed, coupled with active market screening. It is passed time we learned our lessons.