

UNITED STATES BANKRUPTCY COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION

IN RE:

Chapter 9

Case No. 13-53846

City of Detroit, Michigan,

Debtor.

---

**PARTY IN INTEREST DAVID SOLE'S RESPONSE TO  
DEBTOR'S MOTION TO EXCLUDE TESTIMONY OF SAQIB BHATTI (DOCKET 944)**

NOW COMES Party in Interest David Sole, by and through his attorneys, Jerome D. Goldberg, PLLC, and for his Response to Debtor's Motion to Exclude Testimony of Saqib Bhatti (Docket 944), states as follows:

**INTRODUCTION/BACKGROUND**

The Interest Rate Swaps between the City of Detroit and Bank of America and UBS on the 2006 Pension Obligation Certificates have already been a tremendous drain on the City's finances, taking desperately needed funds for services, wages and pensions and diverting them to the banks. The forbearance agreement, for which the City of Detroit seeks approval in its motion, would continue this pattern by diverting hundreds of millions of dollars more in City funds to two of the banks that played a role in creating the economic crisis that plagues the city.

The Interest Rate Swaps obligate the City of Detroit to pay Bank of America and UBS 6.323% interest on \$800 million in bonds, when the actual rate on the bonds is a floating rate of 0.34% plus LIBOR. **See Objection of David Sole with Exhibits attached, Docket 361.** The banks presented this deal as beneficial to the City on the bases that it would allow the City to know what it owed every month, and that the difference between the fixed interest rate paid to the banks and the actual floating rate on the bonds would even out over time.

However, beginning in 2008 and continuing through the present, there was a precipitous decline in the three-month LIBOR rate that is used as the index for the floating rate bond calculation. By mid-2009, the rate declined to less than 1% and as of August 2013 was at 0.2656%. That means that as of August this year, the City of Detroit was paying UBS and Bank of America 6.323% interest on bonds where the actual interest rate was 0.6%. **Docket 361-6.**

As a result, UBS and Bank of America have been raking in a bonanza on the Interest Rate Swaps. In his deposition dated August 30, 2013, Emergency Manager Kevyn Orr acknowledged that for the years 2008-2012 the City of Detroit paid Bank of America \$247.5 million for the interest rate swaps on the Pension Obligation Certificates. **Exhibit 1, Orr deposition, p 313. Exhibit 2, Financial Report to Creditors, p 34.**

Under the Forbearance Agreement between the City of Detroit and Bank of America and UBS, the City of Detroit has the option of terminating the Swaps at a slightly reduced amount, 75% of negative fair market value, by October 31, 2013, and going up to 77% and later 82% if the City terminates within the next six months. According to EM Orr's June 14, 2013, Financial Report to Creditors, the negative fair market value of the Swaps was \$343.6 million as of May 31, 2013. **Exhibit 2, p 28.** Using that figure, terminating the Swaps as of that date would mean the City of Detroit would be paying an additional \$264 million to Bank of America and UBS.

Orr acknowledged that the City does not have cash on hand to terminate the Swaps and would have to obtain financing to do so, and does not have access to the 0% loans floated by the Federal Reserve to the banks under Qualitative Easing. **Exhibit 1, pp 318-320.** In addition to the \$200 million or greater amount paid to UBS and Bank of America, the City of Detroit will be paying hundreds of millions more in interest to cover the termination costs.

In his deposition, Orr acknowledged that there are issues as to the ISDA Fix, the calculations used to estimate the cost of terminating interest rate swaps. Orr acknowledged awareness of “questions raised regarding the LIBOR for certain financial institutions.” **Id. p 321.**

Orr testified he was aware that UBS has been sued by the Securities and Exchange Commission for rigging municipal bonds in past years. He testified he knew that Bank of America has been investigated for potential rigging with regard to the municipal bond market. **Id. pp 322, 323.** Orr testified that his team calculated and analyzed the possibility that there may be issues surrounding potential concerns in connection with the Swap Agreements. However, he relied on the opinion of his counsel, Jones Day, to investigate potential wrongdoing in the context of the Swap Agreements. In his deposition, Orr acknowledged that Jones Day represents Bank of America as one of its clients. Jones Day also has represented UBS in bond deals. **Id. pp 324, 325.**

Orr further testified that he was aware there have been prosecutions of UBS executives who were involved in their municipal bond divisions. **Id. p 326.** In response to a question as to why he has not conducted a criminal investigation to look into potential misconduct with regard to the Swap Agreements tied to Detroit’s Pension Obligation Certificates, Orr testified that in fact there were matters under investigation that may or may not implicate criminal wrongdoing by UBS. **Id. at 328.**

#### **I. PROPOSED WITNESS TESTIMONY OF SAQIB BHATTI**

Saqib Bhatti is a Fellow at the Nathan Cummings Foundation where his job is to research the role that municipal finance deals play in public budget crises. Prior to that fellowship, Mr. Bhatti worked as a Senior Financial Analyst with the Service Employees International Union

(SEIU) where his work focused on municipal finance and the housing crisis. **Exhibit 3, Bhatti affidavit dated September 17, 2013.**

In his deposition testimony, Mr. Bhatti testified that he examined 1,100 swap transactions, in which he calculated the dollar amount of the spread that was paid by public entities based on the difference between the variable interest rate paid on the bonds and the fixed interest rate paid to the banks. He examined numerous court cases and newspaper reports to develop a narrative tied to the calculations. Based on this data, Mr. Bhatti determined that the swaps became most costly in the aftermath of the financial crisis of 2007-2008. At that time, the Federal Reserve slashed interest rates in response to the collapse of Lehman Brothers and the financial crisis caused by banks' predatory lending practices and increasingly risky investments. **Ex. 4, Bhatti deposition, pp 38-40, 46-48.**

Mr. Bhatti further testified that in his position as a Nathan Cummings Fellow, on a daily basis he monitors the financial industry with regard to interest rate swaps, including news reports, federal regulatory filings and enforcement actions relative to Swap Agreements. **Exhibit 5, Bhatti Affidavit dated Sept. 20, 2013.**

With regard to LIBOR manipulation, Mr. Bhatti testified that there is a well-established study dated April 2012 entitled "Does LIBOR reflect banks' borrowing costs?". The study estimates the degree to which the LIBOR index was manipulated during different time periods. The study has been utilized to establish the existence of LIBOR manipulation and the amount of manipulation in over a dozen lawsuits across the United States. Mr. Bhatti's research has applied the methodology in that study to calculate the LIBOR manipulation in over a dozen locations in the U.S. He has applied the study to quantify the losses suffered by the City of

Detroit as a result of its being placed in Swap Agreements based on the LIBOR index by UBS and Bank of America/SBS. **See Exhibit 5. Exhibit 6, attached.**

## **II. MR. BHATTI'S TESTIMONY IS ADMISSIBLE**

Mr. Bhatti is not being qualified as an expert in this case. He is not being asked to give opinion testimony as to whether or not there was any wrongdoing or fraud in connection with the Swap Agreements in the present case. He is not being asked to give an opinion as to whether the Forbearance Agreement should be allowed or disallowed.

The issue at this stage of the proceedings is whether this honorable Court should approve a Forbearance Agreement that removes the Swap Agreements from the bankruptcy proceedings based on a cost to the City of Detroit of hundreds of millions of dollars, and a profit to UBS and Bank of America of \$200 million to \$260 million, on top of the \$247 million these banks have already netted on this deal.

Interested Party David Sole is arguing that because of documented wrongdoing in the municipal bond markets, a fact conceded by Emergency Manager Orr, it would at least behoove the City to conduct a proper investigation into whether or not there was wrongdoing in the securing of the Swap Agreements in the present case. Pursuant to the Bankruptcy Code, if such wrongdoing was uncovered, the City of Detroit could potentially save desperately-needed funds by having UBS and Bank of America's swap claims equitably subordinated or disallowed.

Evidence is relevant if: (a) it has any tendency to make a fact more or less probable than it would be without the evidence; and (b) the fact is of consequence in determining the action. FRE 401.

Mr. Bhatti's testimony, based on his review and personal knowledge of more than 1,100 swap agreements nationwide, will aid the Court in gaining a proper perspective on swaps as they

relate to the present case. Based on Mr. Bhatti's daily monitoring of the financial industry relative to swap agreements, he can present to the Court testimony on the extent of regulatory filings nationwide as well as reports documenting wrongdoing in the financial industry relative to swap agreements. This will assist the Court in making a determination of whether further investigation of the Swap Agreements in the present case is warranted before approving a forbearance agreement that removes the Swaps from the review of the Bankruptcy Court. Mr. Bhatti's testimony, based on his personal knowledge concerning LIBOR manipulation, may assist the Court in deciding whether the Swap Agreements in the instant case merit a closer examination of this issue before the Forbearance Agreement is approved or not.

Moreover, Interested Party Sole contends that another factor that must be examined in making this determination is the role that UBS and Bank of America, well-known and well-established subprime mortgage lenders, played in the mortgage foreclosure crisis which has devastated Detroit. Emergency Manager Orr cynically testified that he did not know whether the subprime lending crisis was a major contributor to Detroit's financial crisis. **Exhibit 1, p 332.**

Orr's statement flies in the face of a City of Detroit study in 2009 which documented that from 2004-2006, 73% of new mortgages in Detroit were high-cost loans, defined as loans with interest rates at least 3% above the standard interest rate. The study states: "The exorbitant numbers of high cost loans in Detroit is disturbing. From 2005 to 2007 [the period in which the Swap Agreements were taken out], Detroit experienced an astounding 67,000 foreclosures, more than 20% of all household mortgages. There were 4,600 tax foreclosures in the first six months of 2008 with over \$25 million in taxes due on these properties. Early estimates indicate that at least two-thirds of tax or mortgage foreclosed properties stand vacant causing tremendous problems for Detroit on many levels." The study reflects that foreclosed properties lose cities

\$20,000 per home in lost property taxes, unpaid utility bills, property upkeep, sewage and maintenance. “High foreclosure rates also cause disinvestment by nearby residents, which contributes to neighborhood decline, affects surrounding property values, and leads to population loss and increased crime.” **Exhibit 7, attached.**

Mr. Bhatti’s testimony is relevant to rebut EM Orr’s statements that it is unclear that the subprime mortgage crisis was a cause of Detroit’s financial problems. As Mr. Bhatti stated in his deposition, based on his study of 1,100 swap agreements, he can testify that the swap agreements became very costly to cities and other public bodies in the aftermath of the financial crisis that occurred in 2007 (when Lehman Brothers collapsed), and when interest rates became reduced to almost 0%. This was the consequence of the housing bubble resulting from the subprime mortgage crisis bursting. As stated above, Detroit was one of the cities most impacted by the subprime crisis.

It would be a travesty for this honorable Court to okay a forbearance agreement which benefits two of the very same banks, UBS and Bank of America, whose predatory mortgage practices helped create the financial crisis in Detroit that has precipitated this bankruptcy. To the extent Mr. Bhatti’s testimony is helpful on this issue, it should be allowed.

WHEREFORE: Interested Party David Sole respectfully requests that this honorable Court deny Debtor’s Motion to Exclude the Testimony of Saqib Bhatti. Interested Party Sole concurs in Debtor’s Motion for an Expedited Hearing on this Motion (Docket 947).

Respectfully submitted,

JEROME D. GOLDBERG, PLLC

By: /s/ Jerome D. Goldberg

Jerome D. Goldberg (P61678)

Attorney for David Sole, Party in Interest

2921 East Jefferson, Suite 205

Detroit, MI 48207

Phone: 313-393-6001

Fax: 313-393-6007

Email: apclawyer@sbcglobal.net

DATED: September 20, 2013



## INDEX OF EXHIBITS

1. Kevyn Orr Deposition Extracts
2. Excerpts of Kevyn Orr June 14 Financial Statement to Creditors
3. September 17, 2013 Affidavit of Saqib Bhatti
4. Deposition Excerpts Saqib Bhatti
5. September 20, 2013 Affidavit of Saqib Bhatti
6. Article on Libor Manipulation
7. City of Detroit Study on Subprime Lending

# **EXHIBIT 1**

**In The Matter Of:**

*City of Detroit*

---

*Kevyn Orr*

*August 30, 2013*

---

 **BIENENSTOCK**  
NATIONWIDE COURT REPORTING & VIDEO  
[www.bienenstock.com](http://www.bienenstock.com)

**Bingham Farms/Southfield • Grand Rapids**  
Ann Arbor • Detroit • Flint • Jackson • Lansing • Mt. Clemens • Saginaw

*Original File ORR\_KEVYN.txt*

***Min-U-Script® with Word Index***

1 entered into, correct?

2 **MR. JURGENS:** Objection to form.

3 **MR. SHUMAKER:** Objection, form.

4 **A.** Here again, as I've said a couple of times today, I'm

5 going to stay away from legal conclusions as to

6 whether or not a lien would or would not have existed.

7 There are equitable liens that arise ex contractu

8 outside of law. There are other issues, but suffice

9 it to say this agreement seemed to impose a lien as a

10 matter of the agreement on the casino revenue.

11 **BY MS. GREEN:**

12 Q. Okay. You're not claiming any equitable lien?

13 **MR. JURGENS:** Objection.

14 **A.** We're not claiming a lien. We've done an analysis,

15 and there have been several memos that have gone back

16 and forth from counsel analyzing a number of different

17 issues at law and at equity. We -- there's -- me,

18 personally, under our agreement, there's no -- been no

19 assertion of an equitable lien.

20 **MS. GREEN:** I have nothing further then.

21 **THE WITNESS:** Sure.

22 Do you need -- you need this, don't you?

23 Is this -- did you -- excuse me. Did you mark this?

24 **MS. GREEN:** We can mark it as an exhibit.

25 I don't know that anyone has marked it yet. We can

1 left the deposition at 3:21 p.m.)

2 (Back on the record at 3:22 p.m.)

3 **VIDEO TECHNICIAN:** We are back on the

4 record at 3:22 p.m.

5 **EXAMINATION**

6 **BY MR. GOLDBERG:**

7 Q. How are you doing, Mr. Orr?

8 **A.** Hello, Mr. Goldberg. How are you?

9 Q. We met before. I'm Jerome Goldberg. I represent

10 David Sole, who's an interested party, he's a retiree.

11 along with his wife, who's also a retiree.

12 **MR. GOLDBERG:** First of all, I want to just

13 go on the record and thank Kirkland & Ellis and the

14 other attorneys for their patience and their working

15 with other attorneys in this case, and especially

16 someone like me who represents a very different point

17 of view and that they were objective and fair their --

18 in accommodating all the objectives here.

19 **BY MR. GOLDBERG:**

20 Q. Let me begin by asking just a few questions just so we

21 can put some of this into perspective. I want to call

22 your attention to Exhibit 3.

23 **A.** Yes. Okay.

24 Q. On page 34 of Exhibit 3, there's a chart here that

25 references expenditures from the years 2008 to 2012?

1 mark it as Exhibit 7.

2 **MARKED FOR IDENTIFICATION:**

3 **DEPOSITION EXHIBIT 7**

4 3:20 p.m.

5 (Discussion off the record at 3:20 p.m.)

6 (Back on the record at 3:20 p.m.)

7 **MS. GREEN:** I thought maybe it was earlier

8 and I just didn't know.

9 **THE WITNESS:** No, I don't think it was.

10 **MS. GREEN:** It's hard to hear down there.

11 **THE WITNESS:** We talked about the

12 collateral agreement.

13 **MS. GREEN:** We did. Okay.

14 **VIDEO TECHNICIAN:** Do we need to go off the

15 record for the second or are we staying on? Are you

16 asking questions?

17 **MS. GREEN:** Oh, were we on?

18 **THE WITNESS:** We can shut up.

19 **MR. SHUMAKER:** Why don't we go off for one

20 minute to get ourselves together.

21 **VIDEO TECHNICIAN:** All right. Thank you.

22 The time is 3:20 p.m. We are off the

23 record.

24 (Recess taken at 3:20 p.m.)

25 (Whereupon Lally Gartel and Stephen Hackney

1 **A.** Yes.

2 Q. And it indicates -- first of all, I just had a

3 question. Under the POCs, it has POC Swap GF, I

4 assume that means general fund?

5 **MR. SHUMAKER:** Counsel, I think you may be

6 pointing to a different page than the witness has in

7 front of him.

8 **BY MR. GOLDBERG:**

9 Q. It's page 34 in mine. Which one did I give you? I'm

10 talking about the June 14th, 2013.

11 **MR. SHUMAKER:** Yeah, there's an executive

12 summary and then there's a bigger one. Are you

13 looking at the bigger one?

14 **MR. GOLDBERG:** I have copies of what I'm

15 looking at.

16 **A.** These are the executive summaries.

17 **MR. GOLDBERG:** Why don't I mark these and

18 that will make it easier.

19 **THE WITNESS:** And the larger one is this

20 one.

21 **MR. SHUMAKER:** The larger one is Orr

22 Number 6. Take a look at that.

23 **MR. GOLDBERG:** Sure. Yeah, this is the one

24 I'm looking at.

25 **THE WITNESS:** That's the one, the larger

1 one.

2 **BY MR. GOLDBERG:**

3 Q. Okay. So Exhibit Number 6.

4 A. Okay. Mr. Goldberg, which page were you at?

5 Q. Page 34.

6 A. Of the original document?

7 Q. Yes.

8 A. Okay.

9 Q. Here we go, that chart, 34. And it's a chart that  
10 says study that -- lists for fiscal years ended actual  
11 expenditures for 2008 to 2012; is that correct?

12 A. Yes.

13 Q. I just want to be clear. It has under POC Swaps GF.  
14 That means general fund?

15 A. Yes.

16 Q. EF, is that enterprise fund?

17 A. Enterprise fund excluding department of  
18 transportation.

19 Q. And I'm trying to understand, does that mean that part  
20 of the POC Swaps are paid -- a small part is paid from  
21 the enterprise fund?

22 A. Yes. You'll see the corresponding numbers show for  
23 those categories.

24 Q. Okay. And I totaled up the years from 2008, 2012. It  
25 appears that \$247.5 million was paid on for the POC

1 to pay the Swap counterparties, correct?

2 A. Yes --

3 **MR. SHUMAKER:** Objection to form.

4 A. -- as we discussed earlier today.

5 **BY MR. GOLDBERG:**

6 Q. Just so I'm clear, the -- what we're talking about  
7 with the optional termination event. The exhibit --  
8 the same exhibit you're referencing -- let's just get  
9 this -- I want to call your attention to page 28.

10 A. Of the same exhibit?

11 Q. Same exhibit.

12 A. Okay.

13 Q. Am I correct in the -- that that reflects that as of  
14 May 31, 2013, according to your proposal for  
15 creditors, the negative fair value of the Swaps was  
16 \$343.6 million?

17 A. That's what it says. Recent valuations established  
18 the negative fair value --

19 **COURT REPORTER:** I'm sorry. You're reading  
20 way too fast.

21 **THE WITNESS:** I'm sorry.

22 A. Recent valuations established. The negative fair  
23 value of the Swaps at approximately 343.6 million as  
24 of May 31st.

25 **BY MR. GOLDBERG:**

1 Swaps during those years.

2 A. I don't have that total in front of me, but I'm going  
3 to take it that that's the accurate number.

4 Q. It appears that it's usually about between 45 to 50  
5 million a year.

6 A. Right, if you average 5, 10, 15, 20.

7 Q. Just so we're clear, I mean, that 247 million, none of  
8 that went to turn on any lights in the City of  
9 Detroit, did it?

10 **MR. SHUMAKER:** Object to the form.

11 A. It was legacy expenditures, debt service.

12 **BY MR. GOLDBERG:**

13 Q. It basically went to UBS and to Bank of America. It  
14 was their reward for betting correctly on a hedge bet,  
15 right?

16 **MR. JURGENS:** Objection to form.

17 **MR. SHUMAKER:** Objection to form.

18 A. Yeah, I'm going to stay away from characterizing it as  
19 a reward. There were payments made pursuant to  
20 existing certificates of participation at that time.

21 **BY MR. GOLDBERG:**

22 Q. And it was based on, as we talked about before, that  
23 the difference between the interest rate on the  
24 floating rate Swaps -- on the floating rate COPs and  
25 the fixed rate that the -- that the City was obligated

1 Q. So in the optional termination policy that's part of  
2 the forbearance agreement, if the City was to pay the  
3 initial payment, the City would still owe 264 -- we'd  
4 be paying 264 million approximately on the Swaps?

5 **MR. SHUMAKER:** Objection to form.

6 **BY MR. GOLDBERG:**

7 Q. We'd be paying 75 percent of whatever the termination  
8 amount is at that point?

9 A. Well, it's 75 percent of termination amount at that  
10 point, which I believe has since declined from  
11 May 31st.

12 Q. Why do you say it's declined?

13 A. Because interest rates have shifted, and so at any  
14 given time we'd have to value the interest rate  
15 formula at the time you choose to exercise the  
16 optional termination provision of the forbearance  
17 agreement.

18 Q. The interest rate that we're talking about on the Swap  
19 is linked to the LIBOR; isn't that correct?

20 A. Yes.

21 Q. The three-month LIBOR?

22 A. Yes. I believe so.

23 Q. I pulled the three-month LIBOR historical index. It  
24 indicated that as of -- might as well as mark this as  
25 an exhibit.

1 **MR. GOLDBERG:** Can you mark this as an  
2 exhibit?  
3 **MARKED FOR IDENTIFICATION:**  
4 **DEPOSITION EXHIBIT 8**  
5 3:29 p.m.  
6 **BY MR. GOLDBERG:**  
7 Q. It appears that as of August of 2013, the three-month  
8 LIBOR rate was .2655 percent?  
9 **MR. SHUMAKER:** Objection, foundation.  
10 A. Is there -- if you're talking about --  
11 **BY MR. GOLDBERG:**  
12 Q. Under 2013.  
13 A. 2013, a specific category in August which reads  
14 0.26550.  
15 Q. Right. So it's actually gone down since July of 2013  
16 according to this chart.  
17 A. Yes. Did I say up before?  
18 Q. You had indicated that the interest rates -- right,  
19 that the -- I mean, if it goes down, the City owes  
20 more; isn't that correct?  
21 A. Right.  
22 Q. Just so we're clear again, that 200 -- whatever --  
23 whether the figure is 247 million or 200 million, the  
24 optional termination payment is not going to be -- the  
25 City gets no direct benefit from that payment?

1 yesterday due to an illness of my wife, but --  
2 A. Oh, I'm sorry.  
3 Q. -- they were talking about a \$350 million bond of some  
4 kind that is being looked into being floated, correct?  
5 A. Here again, I want to be careful. It's unclear  
6 whether or not it is a bond.  
7 Q. Okay.  
8 A. What is clear is there's some post petition financing  
9 proposal which are quite sensitive, but that number is  
10 not an unreasonable number and it has been mentioned  
11 about in the press.  
12 Q. And is it reasonable to say that that 2 -- 350 million  
13 is not going to come free to the City?  
14 A. No. The City will have to finance it in some fashion.  
15 Q. I mean, I did a little research myself and looked up a  
16 bond in Ann Arbor that was recently financed for  
17 340 million at 4 percent which is, I would think we  
18 both agree, was a good interest rate --  
19 A. Um-hm.  
20 Q. -- and the -- Ann Arbor would be paying 230 million in  
21 interest on that bond over a 25-year period.  
22 A. Here again, Mr. Goldberg, I want to be very careful.  
23 Without representing or agreeing that the post  
24 petition financing that's being discussed will take  
25 the characteristic of a bond.

1 **MR. JURGENS:** Objection.  
2 **MR. SHUMAKER:** Objection to form.  
3 A. Well --  
4 **BY MR. HACKNEY:**  
5 Q. Let me be -- strike that question.  
6 No lights get turned on from that money.  
7 That's money that comes out of the City budget.  
8 **MR. SHUMAKER:** Same objection.  
9 A. Well, it's money -- yeah, I would say that it's money  
10 that the City is obligated to pay in some fashion, but  
11 to the extent we get a discount, the City benefits.  
12 **BY MR. GOLDBERG:**  
13 Q. I heard before the testimony, and I think it's pretty  
14 obvious, that the City does not have the money on hand  
15 to pay that termination amount, correct?  
16 **MR. JURGENS:** Objection to form.  
17 A. Yes, I'm told that is correct.  
18 **BY MR. GOLDBERG:**  
19 Q. And to do so it's going to have to float another bond  
20 or some kind of loan?  
21 A. Well, it would have to in some fashion derive some  
22 funding from the capital markets, yes.  
23 Q. Okay. I read something, and I heard the same figures  
24 floated here. I read an article in the Detroit News  
25 and I heard the same -- I wasn't able to come

1 Q. No problem. But either way, we are in agreement that  
2 that financing -- we don't have -- the City does not  
3 have a source for -- it doesn't have a relationship  
4 with the Fed that the banks have where it gets a zero  
5 qualitative easing and zero percent loans, does it?  
6 A. The City does not -- is not a qualified financial  
7 institution to go to the Fed discount window nor does  
8 it have an extra several hundred million dollars in  
9 its funds.  
10 Q. Let me ask another question. I want to call your  
11 attention to the forbearance agreement.  
12 A. Yes.  
13 Q. Which exhibit is that?  
14 A. That's Exhibit 2.  
15 Q. Let me call your attention to page 14.  
16 A. Yes.  
17 Q. And it indicates under mid-market amount --  
18 A. Yes.  
19 Q. -- am I reading it correctly to say that the -- when  
20 the optional termination goes into effect, assuming it  
21 goes into effect, that the calculation on what's owed  
22 on the Swap that's the basis for the termination is  
23 based on the ISDA fix 3?  
24 **MR. SHUMAKER:** Objection to form. The  
25 document speaks for itself.

1 **BY MR. GOLDBERG:**  
 2 Q. Okay.  
 3 A. Yeah, here again, the document speaks to itself and it  
 4 says methodology that is agreed to by the City and  
 5 based upon the present value as it speaks to the rest  
 6 of the document, yes.  
 7 Q. Have you looked into the fact that there's a lot of  
 8 literature out now that's exposing a pretty large  
 9 scandal with reg -- regard to the ISDA fix that  
 10 involves and implicates both Bank of America and UBS?  
 11 **MR. JURGENS:** Object to form.  
 12 A. Without characterizing the nature of the literature, I  
 13 think it's safe to say that I am aware of some issues  
 14 that have been discussed regarding ISDA, fixed.  
 15 **BY MR. GOLDBERG:**  
 16 Q. Are you aware also of issues that have come out with  
 17 regard to the LIBOR, specifically with regard to UBS  
 18 and Bank of America in the setting of using the LIBOR  
 19 as a standard?  
 20 **MR. JURGENS:** Objection to form.  
 21 A. I am aware that in the past years there have been some  
 22 questions raised regarding the LIBOR for certain  
 23 financial institutions, yes.  
 24 **BY MR. GOLDBERG:**  
 25 Q. Has that affected your analysis of how to deal with

1 A. I had heard that. I have not read the final judgment.  
 2 Q. Well, I'd be glad to pass you down a copy.  
 3 **MR. GOLDBERG:** Why don't we mark this.  
 4 **MARKED FOR IDENTIFICATION:**  
 5 DEPOSITION EXHIBIT 9  
 6 3:36 p.m.  
 7 **BY MR. GOLDBERG:**  
 8 Q. Are you also aware that Bank of America has been  
 9 investigated for potential rigging with regard to the  
 10 municipal bond market?  
 11 **MR. JURGENS:** Objection to form.  
 12 A. I am aware that Bank of America has been investigated.  
 13 The exact specifics of the investigation I am not  
 14 aware of.  
 15 **BY MR. GOLDBERG:**  
 16 Q. In light of these investigations that deal with  
 17 rigging of the municipal bond market, was that taken  
 18 into consideration by the City in how to approach the  
 19 question of this forbearance agreement and potential  
 20 action on these Swaps?  
 21 A. Perhaps you could be more specific in what way you're  
 22 asking whether that was taken into consideration.  
 23 Q. I mean, if there, in fact, was fraud -- based on the  
 24 fact there's at least an indication of fraudulent  
 25 activity by both Bank of America and UBS within the

1 the Swap counterparties in terms of the -- the  
 2 forbearance agreement?  
 3 A. No.  
 4 Q. The fact that it's potential fraud was involved in the  
 5 setting of these --  
 6 **MR. JURGENS:** Objection to form.  
 7 **MR. SHUMAKER:** Objection to form.  
 8 A. Mr. Goldberg, I'm going to defer from accepting the  
 9 characterization of potential fraud. It is -- it is  
 10 as reported.  
 11 **BY MR. GOLDBERG:**  
 12 Q. Okay. That's fine.  
 13 Are you also aware that the -- that UBS  
 14 was -- let me find that.  
 15 Are you aware that UBS has been sued by the  
 16 Securities and Exchange Commission for rigging in  
 17 regard to municipal bonds?  
 18 A. In past years?  
 19 Q. That there was a final judgment -- yes, in past years.  
 20 A. Yes.  
 21 Q. Are you aware of the final judgment that was -- there  
 22 was a final judgment on a case that was filed on --  
 23 it's 112539 -- that -- and that one of the bonds that  
 24 actually was involved in that case was the Detroit  
 25 water and sewage bond case?

1 municipal bond market, has there been any  
 2 investigation as to whether or not that was the case  
 3 with -- with regard to the Swaps associated with the  
 4 POCs?  
 5 **MR. JURGENS:** Objection to form.  
 6 **MR. SHUMAKER:** Objection to form,  
 7 foundation.  
 8 A. Yeah, first, it's not clear that there was fraud with  
 9 respect to POCs. I think your prior question  
 10 concerning Bank of America concerned bonds at DWSD  
 11 that as my understanding are not implicated by this  
 12 process, meaning the forbearance agreement, but have  
 13 we calculated and analyzed the possibility that there  
 14 may be issues surrounding potential concerns in  
 15 connection with the Swap agreement, the answer is yes.  
 16 **BY MR. GOLDBERG:**  
 17 Q. And who was -- who were those discussions with in  
 18 terms of whether or not to pursue that?  
 19 A. I would have had discussions with my counsel.  
 20 Q. When you say your counsel, who do you mean?  
 21 A. My attorneys.  
 22 Q. Jones Day, is that --  
 23 A. Well, Jones Day. We also have local counsel that's  
 24 involved that's sitting here, Pepper Hamilton, and  
 25 others.

1 **BY MR. GOLDBERG:**

2 Q. Okay.

3 A. Yeah, here again, the document speaks to itself and it  
4 says methodology that is agreed to by the City and  
5 based upon the present value as it speaks to the rest  
6 of the document, yes.

7 Q. Have you looked into the fact that there's a lot of  
8 literature out now that's exposing a pretty large  
9 scandal with reg -- regard to the ISDA fix that  
10 involves and implicates both Bank of America and UBS?

11 **MR. JURGENS:** Object to form.

12 A. Without characterizing the nature of the literature, I  
13 think it's safe to say that I am aware of some issues  
14 that have been discussed regarding ISDA, fixed.

15 **BY MR. GOLDBERG:**

16 Q. Are you aware also of issues that have come out with  
17 regard to the LIBOR, specifically with regard to UBS  
18 and Bank of America in the setting of using the LIBOR  
19 as a standard?

20 **MR. JURGENS:** Objection to form.

21 A. I am aware that in the past years there have been some  
22 questions raised regarding the LIBOR for certain  
23 financial institutions, yes.

24 **BY MR. GOLDBERG:**

25 Q. Has that affected your analysis of how to deal with

1 A. I had heard that. I have not read the final judgment.

2 Q. Well, I'd be glad to pass you down a copy.

3 **MR. GOLDBERG:** Why don't we mark this.

4 **MARKED FOR IDENTIFICATION:**

5 DEPOSITION EXHIBIT 9

6 3:36 p.m.

7 **BY MR. GOLDBERG:**

8 Q. Are you also aware that Bank of America has been  
9 investigated for potential rigging with regard to the  
10 municipal bond market?

11 **MR. JURGENS:** Objection to form.

12 A. I am aware that Bank of America has been investigated.

13 The exact specifics of the investigation I am not  
14 aware of.

15 **BY MR. GOLDBERG:**

16 Q. In light of these investigations that deal with  
17 rigging of the municipal bond market, was that taken  
18 into consideration by the City in how to approach the  
19 question of this forbearance agreement and potential  
20 action on these Swaps?

21 A. Perhaps you could be more specific in what way you're  
22 asking whether that was taken into consideration.

23 Q. I mean, if there, in fact, was fraud -- based on the  
24 fact there's at least an indication of fraudulent  
25 activity by both Bank of America and UBS within the

1 the Swap counterparties in terms of the -- the  
2 forbearance agreement?

3 A. No.

4 Q. The fact that it's potential fraud was involved in the  
5 setting of these --

6 **MR. JURGENS:** Objection to form.

7 **MR. SHUMAKER:** Objection to form.

8 A. Mr. Goldberg, I'm going to defer from accepting the  
9 characterization of potential fraud. It is -- it is  
10 as reported.

11 **BY MR. GOLDBERG:**

12 Q. Okay. That's fine.

13 Are you also aware that the -- that UBS  
14 was -- let me find that.

15 Are you aware that UBS has been sued by the  
16 Securities and Exchange Commission for rigging in  
17 regard to municipal bonds?

18 A. In past years?

19 Q. That there was a final judgment -- yes, in past years.

20 A. Yes.

21 Q. Are you aware of the final judgment that was -- there  
22 was a final judgment on a case that was filed on --  
23 it's 112539 -- that -- and that one of the bonds that  
24 actually was involved in that case was the Detroit  
25 water and sewage bond case?

1 municipal bond market, has there been any  
2 investigation as to whether or not that was the case  
3 with -- with regard to the Swaps associated with the  
4 POCs?

5 **MR. JURGENS:** Objection to form.

6 **MR. SHUMAKER:** Objection to form,  
7 foundation.

8 A. Yeah, first, it's not clear that there was fraud with  
9 respect to POCs. I think your prior question  
10 concerning Bank of America concerned bonds at DWSD  
11 that as my understanding are not implicated by this  
12 process, meaning the forbearance agreement, but have  
13 we calculated and analyzed the possibility that there  
14 may be issues surrounding potential concerns in  
15 connection with the Swap agreement, the answer is yes.

16 **BY MR. GOLDBERG:**

17 Q. And who was -- who were those discussions with in  
18 terms of whether or not to pursue that?

19 A. I would have had discussions with my counsel.

20 Q. When you say your counsel, who do you mean?

21 A. My attorneys.

22 Q. Jones Day, is that --

23 A. Well, Jones Day. We also have local counsel that's  
24 involved that's sitting here, Pepper Hamilton, and  
25 others.



Page 325

Page 327

1 Q. I mean, isn't Jones Day -- doesn't Jones Day represent  
2 this Bank of America as one of its clients on its Web  
3 site?  
4 **A. Yes, Jones Day does represent Bank of America.**  
5 Q. How could Jones Day investigate one of its own clients  
6 for potential fraud?  
7 **MR. SHUMAKER:** Objection, form.  
8 **MR. JURGENS:** Objection, form.  
9 **A. I am today, Mr. Goldberg, a client of Jones Day. The**  
10 **specific practices of Jones Day regarding its**  
11 **investigations, I would suggest that you refer to**  
12 **them.**  
13 **BY MR. GOLDBERG:**  
14 Q. Okay. I'm just saying you utilize them --  
15 **A. Yes, I do.**  
16 Q. -- for their -- for their advice on whether or not to  
17 conduct such an investigation. I'm trying to ask you  
18 as your -- in your independent position as emergency  
19 manager, wouldn't you think that a law firm that  
20 represents the precise person you're asking to  
21 investigate for fraud could not give you an  
22 objective appraisal?  
23 **A. No.**  
24 **MR. JURGENS:** Objection to form.  
25 **MR. SHUMAKER:** Objection to form.

1 financial crisis in Detroit?  
2 **A. Yes. To be clear, under 436 I have no independent**  
3 **prosecutorial authority, but I do have the authority**  
4 **to make criminal referrals to appropriate**  
5 **prosecutorial authorities.**  
6 Q. In light of the cost to the City of the Swaps and the  
7 continuing costs, which we all acknowledge will be  
8 substantial even in light of the forbearance  
9 agreement, have you made any referral to at least do  
10 a -- conduct an investigation based on the evidence  
11 that, that -- I'm not accusing them of criminal  
12 activity in these activities. I have no basis for  
13 doing that, but on the other hand that fact that  
14 their -- some of their top executives in this area  
15 have been convicted would at least lead me to want to  
16 take a look at that in light of Detroit's situation.  
17 **MR. JURGENS:** Objection to form.  
18 **MR. SHUMAKER:** Objection, form.  
19 **A. Yeah, it is a run-on question, Mr. Goldberg, but let**  
20 **me say this. We are -- we have an -- analyzed to the**  
21 **degree and looked at everything significantly related**  
22 **to this transaction. Any --**  
23 **BY MR. GOLDBERG:**  
24 Q. Have or have not? I'm sorry.  
25 **A. We have. We have.**

Page 326

Page 328

1 **A. No. In my experience, having worked now at three**  
2 **different law firms, I have seen situations where law**  
3 **firms are fully capable of investigating clients, yes.**  
4 **BY MR. GOLDBERG:**  
5 Q. Are you aware that three executives of UBS were in --  
6 recently jailed that -- who were involved in municipal  
7 bond division were recently jailed?  
8 **A. I'm aware that there were prosecutions related to UBS.**  
9 **I wasn't aware of the exact number or who they are.**  
10 Q. Okay. I do have -- now, I'm not privy to much on that  
11 either, but I do have articles that do cite that.  
12 **A. Okay.**  
13 Q. And they cited three people who were just convicted in  
14 July of this year.  
15 **A. Okay.**  
16 Q. Are you aware that Bank of -- an executive of Bank of  
17 America in its municipal bond division was indicted in  
18 2012?  
19 **A. I don't recall if I was aware of that.**  
20 Q. Okay. Let me just ask under -- pursuant to the Public  
21 Act 436 section 13 -- section 16, aren't you mandated  
22 to conduct a criminal investigation, or at least to  
23 refer potential suspicion of criminal investigation to  
24 the Attorney General in connection with -- if there's  
25 any kind of criminal activity associated with the

1 Q. Okay.  
2 **A. If there appears to be a basis for making a criminal**  
3 **referral of any kind related to anything that falls**  
4 **under my purview of 436, I will do that.**  
5 Q. But at this point nothing -- there hasn't even been a  
6 request for such an investigation?  
7 **A. I would be careful about -- I -- I have asked -- there**  
8 **are matters that are under investigation that may or**  
9 **may not implicate the subject matters you're talking**  
10 **about. I'm going to defer to speak about them**  
11 **further.**  
12 Q. Okay. Are you familiar with the circumstances that  
13 led to the 2005 Swap?  
14 **A. I'm familiar with what I've read. I wasn't here in**  
15 **the City at the time.**  
16 Q. Do you know why Moody's -- not Moody's -- Fitch and  
17 Standard & Poor's would have been at the table along  
18 with UBS when this -- when this was discussed?  
19 **A. First, I don't know that they were at the table and,**  
20 **secondly, if they were, I do not know why they would**  
21 **have been.**  
22 Q. Well, I do have a photograph of them at the table  
23 which I'd be glad to share with you --  
24 **A. Okay.**  
25 Q. -- from the Michigan Citizen. It was taken at that

Page 329

Page 331

1 time. Let me see if I can find that.  
 2 **MR. GOLDBERG:** Here, I can mark this.  
 3 **MARKED FOR IDENTIFICATION:**  
 4 DEPOSITION EXHIBIT 10  
 5 3:43 p.m.  
 6 **BY MR. GOLDBERG:**  
 7 Q. This is a photograph taken by the -- it was in the  
 8 Michigan Citizen July 31st, 2005, it reflects a  
 9 picture of Sha -- Sean Werdlow, Stephen Murphy of  
 10 Standard & Poor -- Poor's, Joe Keefe -- Joe O'Keefe of  
 11 Fitch, the Deputy Mayor, Anthony Adams, and the -- and  
 12 the -- and -- and the representative of SBS at the  
 13 table.  
 14 **MR. SHUMAKER:** Is there a question?  
 15 **BY MR. GOLDBERG:**  
 16 Q. Sure. I was asking why would Moody -- why would  
 17 Standard & Poor and Fitch be at the table?  
 18 **MR. SHUMAKER:** Objection, foundation, form,  
 19 document speaks for itself.  
 20 **A. Yeah, Mr. Goldberg, this purports to be a document**  
 21 **showing some of these members at counsel table. I**  
 22 **have no idea -- I wasn't here, and I have no idea what**  
 23 **the discussions were and whether or not it's**  
 24 **accurately represented to be something related to**  
 25 **this. This document speaks for itself.**

1 **MR. SHUMAKER:** Object to form, foundation.  
 2 **A. I wasn't here in the City at the time. I have no**  
 3 **idea.**  
 4 **BY MR. GOLDBERG:**  
 5 Q. Okay. That's fine.  
 6 Have you approached the Securities and  
 7 Exchange Commission to conduct any kind of  
 8 investigation of the Swaps in light of their extensive  
 9 investigations of UBS and Bank of America?  
 10 **MR. JURGENS:** Objection to form.  
 11 **A. Yeah, here again, any -- your question is have I? I**  
 12 **think I can answer your question. I think the answer**  
 13 **is no.**  
 14 **BY MR. GOLDBERG:**  
 15 Q. Okay. And you haven't approached them to intervene in  
 16 the bankruptcy which they have a right to do as we  
 17 both know under the bankruptcy code?  
 18 **A. I would hazard a guess that the Security and Exchange**  
 19 **Commission is aware of Detroit's bankruptcy.**  
 20 Q. But you have not approached them to aid you in doing a  
 21 proper investigation of the Swaps?  
 22 **A. No. I -- I think they're fully capable of determining**  
 23 **what they should do within their mission.**  
 24 Q. Have you looked into the mortgage practices of Bank of  
 25 America that -- in light of the financial crisis of

Page 330

Page 332

1 **BY MR. GOLDBERG:**  
 2 Q. So you haven't done really any substantive  
 3 investigation on what the circumstances were that --  
 4 that: why -- that put the City into the pension  
 5 obligations with certificates and Swap --  
 6 **MR. SHUMAKER:** Objection to form.  
 7 **BY MR. GOLDBERG:**  
 8 Q. -- when they first were initiated in 2005?  
 9 **A. Yeah, all I can say is this -- this picture appears to**  
 10 **be what it purports to be and speaks for itself. I**  
 11 **don't know if it's accurate or not.**  
 12 Q. Let me just ask one quick -- that I was kind of  
 13 curious about, personally. It appears that there  
 14 was -- the first COP and Swap was in 2005. Then they  
 15 were terminated and a new one -- new COPs and Swaps  
 16 were placed in 2006. Is that your understanding?  
 17 **A. I don't know if that's my understanding. I know there**  
 18 **were -- there were two series that went on. I'm going**  
 19 **to be careful with the question of replacing them, but**  
 20 **let's go with your question.**  
 21 Q. Okay. I guess my curiosity is why the banks would pay  
 22 a termination fee of 2.7 million, according to those  
 23 documents, to the City to then have them  
 24 renegotiate -- replaced?  
 25 **A. Mr. Goldberg --**

1 Detroit?  
 2 **MR. JURGENS:** Objection to form.  
 3 **MR. SHUMAKER:** Objection to form.  
 4 **MR. ESSAD:** Objection to relevance.  
 5 **A. I don't think my duties under 436 would specify to**  
 6 **look into the mortgage crisis, so the answer is no.**  
 7 **BY MR. GOLDBERG:**  
 8 Q. But you would agree with me that the mortgage crisis  
 9 and the subprime lending crisis is a major contributor  
 10 to Detroit's financial crisis, would you not?  
 11 **MR. SHUMAKER:** Objection to form,  
 12 foundation.  
 13 **A. Mr. Goldberg, I don't know if it was or wasn't.**  
 14 **BY MR. GOLDBERG:**  
 15 Q. You don't know if it was or it wasn't?  
 16 **A. No. I've -- I've heard reports that there was**  
 17 **disproportionate mortgage foreclosures and so on and**  
 18 **so forth, but I've made no conclusion as to whether or**  
 19 **not that was a major contributor to Detroit's**  
 20 **financial crisis.**  
 21 Q. I've got you. Well, let me -- let me run this --  
 22 (Whereupon Vincent Marriott and Matthew  
 23 Summers left the Deposition at 3:47 p.m.)  
 24 **MS. ENGLISH:** Can we go off the record for  
 25 one second, please?

1 **VIDEO TECHNICIAN:** We are off the record.  
 2 The time is 3:47.  
 3 (Recess taken at 3:47 p.m.)  
 4 (Back on the record at 3:48 p.m.)  
 5 **VIDEO TECHNICIAN:** Back on the record at  
 6 3:48 p.m.  
 7 **BY MR. GOLDBERG:**  
 8 Q. I'm sorry, I didn't bring that report with me.  
 9 So your public -- your statement to me is  
 10 you're not clear whether the subprime mortgage crisis  
 11 in Detroit was a factor in Detroit's financial crisis?  
 12 **A. No. My statement --**  
 13 **MR. SHUMAKER:** Objection to form.  
 14 **A. My statement to you -- I believe your question was,**  
 15 **was it a major factor, and I said I understand there**  
 16 **have been reports, allegations, and stories that there**  
 17 **was disproportionate mortgage foreclosure in the City**  
 18 **of Detroit. I don't know if that was a major factor**  
 19 **in its financial crisis.**  
 20 **BY MR. GOLDBERG:**  
 21 Q. And you haven't looked into that issue independently?  
 22 **A. No, I've not looked into it independently.**  
 23 Q. Even though the banks -- the same banks that are  
 24 claiming all these Swaps were directly involved in the  
 25 subprime mortgage crisis?

1 **overcharges or obligations that it has to other --**  
 2 **other organizations and entities.**  
 3 Q. Are you aware that chargebacks specifically deal with  
 4 chargebacks to the County that the County buys -- pays  
 5 the City for foreclosed tax -- foreclosed properties,  
 6 then sells them, and the City is responsible for the  
 7 difference between what they're sold for and what  
 8 the -- what originally was paid to the City?  
 9 **A. Yes, as I said --**  
 10 **MR. SHUMAKER:** Objection, form, foundation.  
 11 **A. As I said, it's a process by which the City has**  
 12 **obligations to other organizations and entities.**  
 13 **BY MR. GOLDBERG:**  
 14 Q. Are you aware that the state has hundreds of -- at  
 15 least 200 million dollars available in the Hardest --  
 16 Helping Hardest Hit funds that could be used to pay  
 17 off delinquent property taxes?  
 18 **A. I've heard that representation before in terms of the**  
 19 **Hardest Hit funds. What I am aware of is that the**  
 20 **City is entitled to get 52 million dollars of the**  
 21 **late -- latest one hundred million dollar transfer of**  
 22 **the Hardest Hit funds for blight remediation.**  
 23 Q. That's true. Which affects -- affects your general  
 24 proposal in terms of the cost of blight, correct?  
 25 **A. Well, it helps us in terms of getting at the cost of**

1 **MR. JURGENS:** Objection to form.  
 2 **A. Here again, your characterization was directly**  
 3 **involved. My mission in this forbearance agreement is**  
 4 **look at whether or not this is in the best interest of**  
 5 **the City at the time.**  
 6 **BY MR. GOLDBERG:**  
 7 Q. Sure.  
 8 **A. It seems to be as you and I have discussed before,**  
 9 **several times now, that you have expressed concerns**  
 10 **about a broader issue regarding banks involvement with**  
 11 **the mortgage foreclosure crisis in the City of**  
 12 **Detroit. In my opinion, that's not directly related**  
 13 **to the issue that we have at hand in the forbearance**  
 14 **agreement.**  
 15 Q. Let me just ask you one other question. We've been  
 16 talking about alternative sources of financing.  
 17 You're familiar with the last CAFR?  
 18 **A. Yes.**  
 19 Q. Are you familiar with the -- what the 82 million in  
 20 chargebacks means in this CAFR that the City is  
 21 paying?  
 22 **A. Yes, I think I have some understanding.**  
 23 Q. What is your understanding of it, sir?  
 24 **A. That there's a certain obligation on the City to pay**  
 25 **some money out based upon an analysis of either**

1 **blight as quickly as possible.**  
 2 Q. But my question was a little different on that.  
 3 **A. Um-hm.**  
 4 Q. Have you intervened with Governor Snyder who you --  
 5 who you're -- your appointor --  
 6 **A. Right.**  
 7 Q. -- to secure the release of these Hardest Hit funds to  
 8 pay off property taxes which would both stabilize  
 9 communities to keep people in their homes and  
 10 stabilize the City budget by avoiding the need to pay  
 11 80 million in chargebacks?  
 12 **MR. SHUMAKER:** Objection, foundation.  
 13 **A. It is not -- it is not -- it has been made clear to me**  
 14 **that it is not clear to me that, one, we'd have access**  
 15 **to those funds and that those funds can be**  
 16 **appropriately used for that purpose.**  
 17 **BY MR. GOLDBERG:**  
 18 Q. It's not?  
 19 **A. It's -- it's not clear. That's --**  
 20 Q. Well, I'll send you some literature on that so you can  
 21 clarify that.  
 22 **A. Okay.**  
 23 **MR. GOLDBERG:** Okay. Okay. Thank you very  
 24 much.  
 25 **THE WITNESS:** Thank you very much.

## **EXHIBIT 2**

CITY OF DETROIT  
**PROPOSAL FOR CREDITORS**

JUNE 14, 2013

This proposal is based on numerous projections and assumptions concerning future uncertain events including estimates of tax revenues and forecasts of future business and economic conditions in the city, all of which are beyond the control of the city. Actual results may differ from the assumptions and projections presented herein, and such differences could be material.

Additional data are being gathered or developed, and various critical financial and operational analyses remain in process. Thus, this proposal remains subject to material change.

OK  
8 + 6

# DETROIT FACES STRONG ECONOMIC HEADWINDS

## DETERIORATING MACROECONOMIC CONDITIONS.

During the past several decades, the City of Detroit (the "City") has experienced changes that have adversely affected the economic circumstances of the City and its residents.

**Declining Population.** The City's population has declined 63% since its postwar peak, including a 26% decline since 2000:

- June 1950: 1,849,600
- June 1990: 1,028,000
- June 2000: 951,270
- June 2010: 713,777
- December 2012: 684,799

**High Unemployment.** Despite some recent improvement, the City's unemployment rate has nearly tripled since 2000:

- June 2000: 6.3%
- June 2010: 23.4%
- June 2012: 18.3%

### Number of Detroit Residents Employed.

	2000	2010	2012
Labor force	381,498	361,538	343,856
Employment	353,813	278,063	279,960
Unemployment	27,685	83,475	63,896
Unemployment rate	7.3%	23.1%	18.6%

### **The City is Not Paying Its Debts as They Come Due.**

- The City is not making its pension contributions as they come due. The City has deferred payment of its year-end Police and Fire Retirement System contributions (and finances such deferrals at a rate of 8%). As of May 2013, the City had deferred approximately \$54 million in pension contributions related to current and prior periods and will defer approximately \$50 million on June 30, 2013 for current year PFRS pension contributions. Therefore, by fiscal year end the City will have deferred over \$100 million of pension contributions.
- The City will not make the scheduled \$39.7 million payments due on its pension-related certificates of participation on June 14, 2013.

### **Plummeting Credit Ratings.**

The City's credit ratings have continuously declined during the past decade and are well below investment grade. No major U.S. city has lower credit ratings.

### **Ratings on the City's Uninsured General Obligation Bonds**

	Standard & Poor's			Fitch
	Moody's			
June 30, 2003	Baa1	A-		A
June 30, 2004	Baa1	A-		A
June 30, 2005	Baa1	BBB+		BBB+
June 30, 2006	Baa2	BBB		BBB
June 30, 2007	Baa2	BBB		BBB
June 30, 2008	Baa2	BBB		BBB
June 30, 2009	Ba2	BB		BB
June 30, 2010	Ba3	BB		BB
June 30, 2011	Ba3	BB		BB-
June 30, 2012	B3	B		CCC

- The City estimates that, as of June 30, 2013, the City will have \$121.5 million in other outstanding installment notes and loans payable related to various public improvement projects.
  - \$87.8 million in notes payable, which notes were issued in connection with the "Section 108" HUD Loan Guarantee Program and are secured by future "Block Grant" revenues.
  - \$33.7 million in loans payable (\$33.6 million of which is a non-interest bearing unsecured loan payable to the Downtown Development Authority as general operating funds become available).
- On August 23, 2012, the City issued \$129.5 million of LTGO bonds at a \$9.1 million premium (generating \$137 million in proceeds after issuance costs) in part to defease short term bonds issued March 2012. The remaining proceeds of this issuance were set aside with a trustee bank in an escrow account to provide funds for reforms and liquidity in FY 2013. The current amount of the escrow is approximately \$80 million.
- A schedule of the secured general obligation bonds and secured notes and loans payable as of June 30, 2012 is attached hereto as Appendix D. A schedule of the unsecured general obligation bonds and unsecured loans payable as of June 30, 2012 is attached hereto as Appendix E. A chart setting forth the annual debt service on the foregoing general fund obligations (and other liabilities) is attached hereto as Appendix G.

#### **Certificates of Participation (Pension).**

- In 2005, service corporations established by the GRS and PFRS created a trust that issued the COPs. The proceeds of the COPs were contributed to the City's pension trusts.
- Principal and interest on the COPs is payable solely from payments made by the City to the service corporations pursuant to service contracts.
- The City estimates that, as of the close of FY 2013 (*i.e.*, June 30, 2013), the following amounts were outstanding under the COPs:
  - \$480.3 million in outstanding principal amount of \$640,000,000 Certificates of Participation Series 2005 A maturing June 15, 2013 through 2025; and
  - \$948.54 million in outstanding principal amount of \$948,540,000 Certificates of Participation Series 2006 A and B maturing June 15, 2019 through 2035.



- The City has allocated portions of the COP liabilities among the transportation, sewage disposal, water and library funds based on each fund's share of the aggregate UAAL determined at the time of issuance of the COPs.
- The City has identified certain issues related to the validity and/or enforceability of the COPs that may warrant further investigation.
- A schedule of the COPs and related swap liabilities as of June 30, 2012 is attached hereto as Appendix C.

#### **Swap Liabilities Related to Certificates of Participation.**

- In connection with the COPs, the City entered into eight pay-fixed, receive-variable interest rate swap contracts, effective as of June 12, 2006, with a total notional amount of \$800 million.
- Recent valuations establish the negative fair value of the swaps at approximately \$343.6 million (as of May 31, 2013).
- January 2009 — The City received notice from the swap contract counterparties that downgrading of the COPs and certain swap insurers would constitute an "Additional Termination Event" under the swap contracts if not cured.
- June 2009 — The City and the swap contract counterparties agreed on an amendment to the swap agreements, eliminating the Additional Termination Event and the potential for an immediate demand for a termination payment. Pursuant to the amendment:
  - The swap counterparties waived their right to termination payments; and
  - The City agreed to:
    - direct certain wagering tax revenues to a trust as collateral for the quarterly payments owing to the swap counterparties;
    - increase the interest rate of the swap agreements by 10 basis points effective July 1, 2010; and
    - include new termination events, including if COP ratings were withdrawn, suspended or downgraded.
- March 2012 — COPs were further downgraded which triggered another Termination Event; City and the swap counterparties are in negotiations regarding the Termination Event.
- March 2013 — Appointment of Emergency Manager constitutes an event of default triggering another Termination Event.

- Although this proposal reflects treating the swap obligations as special revenue debt secured by the wagering tax revenues, that treatment is still being reviewed by the Emergency Manager.
- A chart setting forth the annual debt service on the COPs and related swap liabilities is attached hereto as Appendix H.

## UNSUSTAINABLE RETIREE BENEFITS.

### **OPEB Liabilities Are Large and Unfunded.**

- The OPEB plans consist of the Health and Life Insurance Benefit Plan and the Supplemental Death Benefit Plan.
- As of June 30, 2011 (the most recently published actuarial valuation), there were 19,389 retirees eligible to receive benefits under the City's OPEB plans. The number of retirees receiving benefits from the City is expected to increase over time.
- 99.6% of the City's OPEB liabilities are unfunded.

#### **Health and Life Insurance Plan**

- Defined benefit plan providing hospitalization, dental care, vision care and life insurance to current employees and substantially all retirees.
- City generally pays for 80% to 100% of health care coverage for eligible retirees.
- \$5,718,286,228 in actuarial liabilities as of June 30, 2011. An updated actuarial valuation based on more recent census data is currently being developed by third party professionals.
- The Health and Life Insurance Plan is 0% funded; financed entirely on a "pay-as-you-go" basis.
- \$177,460,627 cost to the City on account of retiree benefits during FY 2012 provided under the Health and Life Insurance Plan.
- City's contribution is in addition to \$23,516,879 in FY 2012 contributions by retirees.

# Steady State Projection of Legacy Expenditures (assuming no restructuring)

	FISCAL YEAR ENDED ACTUAL					PRELIMINARY FORECAST				
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	(\$ in millions)									
Legacy expenditures										
Debt service (LTGO)	\$ (66.6)	\$ (106.2)	\$ (63.5)	\$ (64.5)	\$ (62.6)	\$ (70.8)	\$ (70.9)	\$ (61.8)	\$ (61.8)	\$ (38.5)
Debt service (UTGO)	(67.2)	(71.5)	(72.4)	(72.8)	(73.0)	(70.6)	(64.9)	(62.5)	(57.6)	(57.6)
POC - principal and interest (GF)	(24.6)	(20.9)	(23.6)	(33.5)	(33.0)	(46.8)	(51.4)	(53.3)	(55.0)	(56.9)
POC - principal and interest (EF, excl. DDOT)	(1.8)	(1.4)	(1.5)	(1.8)	(2.0)	(5.3)	(5.9)	(6.1)	(6.4)	(6.6)
POC - principal and interest (DDOT)	(3.5)	(2.8)	(3.0)	(3.6)	(4.0)	(3.3)	(3.7)	(3.8)	(3.9)	(4.1)
POC - swaps (GF)	(38.6)	(43.9)	(44.7)	(44.7)	(44.8)	(42.9)	(42.8)	(42.8)	(42.7)	(42.7)
POC - swaps (EF, excl. DDOT)	(2.3)	(2.0)	(2.0)	(2.0)	(2.0)	(4.8)	(4.8)	(4.8)	(4.9)	(4.9)
POC - swaps (DDOT)	(4.5)	(4.0)	(4.0)	(4.0)	(4.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)
Pension contributions - Public Safety	(58.9)	(31.4)	(32.8)	(81.6)	(49.8)	(46.1)	(139.0)	(163.0)	(180.0)	(198.0)
Pension contributions - Non-Public Safety	(10.6)	(27.0)	(11.1)	(28.3)	(25.4)	(19.9)	(36.9)	(42.5)	(47.7)	(53.1)
Pension contributions - DDOT	(6.8)	(7.3)	(6.9)	(9.5)	(10.9)	(12.3)	(23.6)	(27.7)	(31.2)	(34.8)
Health benefits - retiree - Public Safety	(73.7)	(80.2)	(70.4)	(79.6)	(90.6)	(91.5)	(88.6)	(95.2)	(101.7)	(108.0)
Health benefits - retiree - Non-Public Safety	(47.4)	(51.6)	(50.6)	(49.0)	(49.2)	(49.7)	(38.8)	(41.5)	(44.6)	(47.7)
Health benefits - retiree - DDOT	(8.2)	(11.8)	(11.2)	(11.1)	(10.3)	(10.4)	(13.3)	(14.3)	(15.3)	(16.3)
Total legacy expenditures	\$ (414.6)	\$ (462.0)	\$ (397.9)	\$ (486.1)	\$ (461.6)	\$ (477.3)	\$ (587.6)	\$ (622.4)	\$ (655.9)	\$ (672.3)
Total revenues (excl. financing proceeds)	\$1,397.7	\$1,363.3	\$1,291.0	\$1,316.8	\$1,196.9	\$1,121.9	\$1,082.8	\$1,046.2	\$1,041.5	\$1,041.4
Total legacy expenditures as a % of total revenues	29.7%	33.9%	30.8%	36.9%	38.6%	42.5%	54.3%	59.5%	63.0%	64.6%

## **EXHIBIT 3**

**AFFIDAVIT OF SAQIB BHATTI**

STATE OF MICHIGAN     )  
                                      ) SS  
COUNTY OF WAYNE     )

1. I Saqib Bhatti, do affirm and state as follows:

2. I am a Fellow at the Nathan Cummings Foundation researching the role that municipal finance deals play in public budget crises. Prior to my fellowship, I analyzed the financial industry for six years as a Senior Financial Analyst with the Service Employees International Union (SEIU). During this time, my work focused on two primary areas: municipal finance and the housing crisis.

3. I have established myself as an expert on interest rate swaps in particular, leading a team of researchers that has uncovered more than 1,100 swap deals and quantified the costs of each to taxpayers. Through this research, I have been able to draw clear connections between interest rate swaps and budget deficits in cities and states across the country.

4. This work has also allowed me to understand the rampant fraud in the municipal derivatives industry. I have studied the London Inter-Bank Offered Rate (LIBOR) manipulation scandal and helped analyze the State of Oregon's potential losses stemming from the illegal manipulation of LIBOR. I am also familiar with the municipal derivatives bid-rigging scandal, the International Swap Dealers Association's ISDAfix scandal, and other instances of criminal corruption in the industry, like the fraudulent interest rate swaps that bankrupted Jefferson County, Alabama.

5. I have met with numerous public officials and/or their staff in more than ten states, including treasurers, attorneys general, comptrollers, mayors, city managers, chief financial officers, finance directors, state legislators, and city councilmembers to present my research and offer policy recommendations. My work has led to policy considerations in more

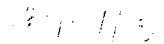
thar. 20 cities across the country, and it has been covered by major US and international press outlets, including the *Wall Street Journal*, *New York Times*, *Financial Times*, and *American Banker*. I am frequently consulted by financial reports writing stories about interest rate swaps as an expert for background research.

6. I was awarded the highly competitive Nathan Cummings Foundation Fellowship in recognition of my work in the area of municipal finance to work with economists, academics, industry experts, public officials, and nonprofit organizations to develop and advocate for alternate models for government financing that are not dependent on risky financial instruments like interest rate swaps.

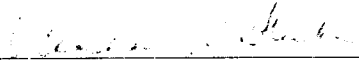
7. My testimony will speak specifically to the impact that the illegal manipulation of LIBOR had on the City of Detroit's interest rate swaps. It will also focus on known instances of fraud, corruption, and criminal behavior that have been uncovered in the municipal derivatives market elsewhere in the country, including the bid-rigging scandal, the ISDAfix manipulation scandal, and the corruption scandal in Jefferson County.

FURTHER AFFIANT SAYETH NOT.

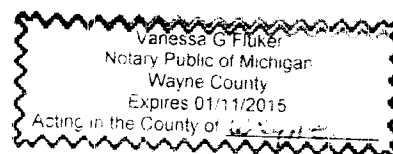
  
SAQIB BHATTI

  
Date

Subscribed and sworn to before me this 17<sup>th</sup> day of September, 2013

  
Notary Public; Vanessa G. Fluke, Wayne County Michigan.

My commission expires: 01/11/2015



## **EXHIBIT 4**

1 UNITED STATES BANKRUPTCY COURT  
2 EASTERN DISTRICT OF MICHIGAN  
3 SOUTHERN DIVISION  
4  
5 \_\_\_\_\_  
6 In re: ) Chapter 9  
7 )  
8 CITY OF DETROIT, MICHIGAN, ) Case No. 13-53846  
9 )  
10 Debtor. ) Hon. Steven W. Rhodes  
11 \_\_\_\_\_ )  
12  
13

14 VIDEO DEPOSITION  
15  
16

17 DEPONENT: SAQIB BHATTI  
18 DATE: Wednesday, September 18, 2013  
19 TIME: 11:03 a.m.  
20 LOCATION: Pepper Hamilton, LLP  
21 Suite 1800  
22 4000 Town Center  
23 Southfield, Michigan 48075  
24 REPORTER: Michele E. French, CSR-3091, RMR, CRR  
25



Page 38	Page 40
<p>1 You said small business. What was the one prior to 2 that -- or after that? 3 A. Was it municipal finance? 4 Q. Municipal finance. What did you do 5 there? 6 A. We looked through -- so there was no 7 central repository of interest rate swap deals that 8 exists publicly, and so we culled through hundreds 9 of financial reports from governmental entities 10 across the country. 11 Q. Is this the one where you said you 12 categorized 1,100 swap transactions? 13 A. Yes. 14 Q. Okay. We started to talk about that. 15 Why don't we talk about it a little bit further. 16 So you categorized 1,100 transactions. 17 swap transactions. What did you do? You took the 18 variable rate and looked at the variable rate and 19 the fixed rate? 20 A. Correct. 21 Q. And then what did you do after you did 22 that? 23 A. Multiplied it by the notional amount. 24 Q. Okay. And came up with a dollar amount 25 on the spread; correct?</p>	<p>1 the one in Florida for the School District of Palm 2 Beach County. State of Illinois. This report 3 that's listed, "Illinois Banks and Corporations' 4 Impact on the State's Economic and Budget Crisis." 5 Q. Well, let's start with the -- let's take 6 them one at a time. 7 The Florida one, you said I believe 8 earlier in your testimony that there you just 9 presented the cost of the swap to them? 10 A. Correct. 11 Q. And did you make any other findings or 12 determinations? 13 A. Yeah. What we determined was that the 14 swaps became most costly in the aftermath of the 15 financial crisis when the Federal Reserve slashed 16 interest rates in response to the collapse of Lehman 17 Brothers. 18 Q. Okay. Any other -- any other findings 19 you made based upon your analysis, besides that? 20 A. No. 21 Q. Okay. The next one you started was 22 number 5 on your CV, which is the "Illinois Banks 23 and Corporations' Impact on the State's Economic and 24 Budget Crisis." Correct? 25 A. Correct.</p>
Page 39	Page 41
<p>1 A. Correct. 2 Q. And then what did you do? 3 A. In which case? 4 Q. After you -- after you did this analysis 5 or research on the 1,100 swaps, what was the next 6 step you used the report for? 7 Did the report have anything -- let me 8 strike that. 9 Did the report have anything more in it 10 than those things that you just described? 11 A. So there was no report we issued with 12 the data on 1,100. 13 Q. Okay. So you never issued a report on 14 those 1,100 swap transactions that you did a -- or 15 did an analysis of; correct? 16 A. No. It was not one -- the research was 17 not for one big report. 18 Q. Okay. What was the research for, then? 19 A. The research was to figure out what's 20 happening locally in different places and then, 21 based on that, we did reports in specific places. 22 Q. And where did you do report -- what 23 specific places did you do reports in? 24 A. So the ones that I, myself, wrote that 25 touch on interest rate swaps were in -- so Florida.</p>	<p>1 Q. And what was that report that you 2 prepared? 3 A. I mean, so, that report looked at a 4 number of different ways that Wall Street had an 5 impact on the economy within Illinois. It looked at 6 small business lending. It looked at foreclosures. 7 It also looked at interest rate swaps. 8 Q. Let's concentrate on the portion that 9 dealt with the interest rate swaps. What did you 10 report on? 11 A. It was the same as with the School 12 District. Looking at the spread between the 13 variable and fixed rate and putting a dollar amount 14 on it. 15 Q. So is it -- and what's the next one you 16 did? 17 A. Actually, the first one we skipped over. 18 the "Riding the Gravy Train." 19 Q. Okay. And that was -- was that given to 20 some jurisdictional unit? 21 A. That was -- that covered 12 different 22 places. 23 Q. And that -- once again, was that the same 24 type of report, where you did the calculation of the 25 cost of the swap?</p>

11 (Pages 38 to 41)

Page 42	Page 44
<p>1 A. The additional thing that was in that one 2 that was not in the other reports was that we also 3 put dollar amounts to the impact of LIBOR 4 manipulation on these interest rate swaps. 5 Q. Okay. And what study did you do on LIBOR 6 manipulation? 7 A. That one. 8 Q. Did you -- how do you know there was 9 LIBOR manipulation? 10 A. It's been widely reported in the press 11 and there have been a number of settlements already 12 between regulators and banks. 13 Q. Have you done any independent research on 14 LIBOR manipulation? 15 A. Yes. 16 Q. And what studies have you done? 17 A. So in Oregon, we analyzed the State of 18 Oregon's investments to determine the impact of 19 LIBOR manipulation on -- 20 Q. I'm not asking the impact of LIBOR 21 manipulation. I'm asking what studies or research 22 you have done personally in regard to determining 23 whether there was LIBOR manipulation in.... 24 A. None. 25 Q. Okay. So you were relying on other</p>	<p>1 Q. Yes. 2 A. -- was based on studies that have been 3 done -- both studies that have been done and 4 admissions by banks. UBS in particular has pleaded 5 guilty to LIBOR manipulation. 6 Q. In Oregon? 7 A. Well, the rate -- it's a global rate. If 8 the rate is -- it's a global rate based out of the 9 U.K. It's -- the same rate affects investment tied 10 to LIBOR everywhere. 11 Q. And tell me how did you calculate the 12 likely loss in Oregon at \$110 million? 13 A. We put in an information request to the 14 State of Oregon. They produced for us a document 15 that quantified the estimated losses for every basis 16 point of manipulation. And we took the prevailing 17 numbers from studies that were done by the 18 researchers at the University of Minnesota and UCLA 19 on the amount of manipulation that took place during 20 different time periods and -- 21 Q. Well, I'm confused. You say you took the 22 analysis that the State of Oregon had done on the 23 manipulation? 24 A. Yes. 25 Q. So they had already calculated what they</p>
Page 43	Page 45
<p>1 people's work and findings in regard to LIBOR 2 manipulation? 3 A. Correct. 4 Q. And you did no independent analysis or 5 investigation into whether, in fact, there was LIBOR 6 manipulation and the impact the LIBOR manipulation 7 had? 8 A. On the first part, no. On the second 9 part, yes. 10 Q. Okay. 11 A. We did do research on the impact. 12 Q. And what type of research did you do? 13 A. Quantifying the financial -- the 14 financial losses to the State of Oregon from the 15 manipulation. 16 Q. Okay. And when you say "quantifying," 17 what do you mean by that? 18 A. We determined that the State of Oregon 19 likely lost \$110 million as a result of LIBOR 20 manipulation. 21 Q. And what did you base your findings on 22 that there was LIBOR manipulation in Oregon, or that 23 impacted Oregon? 24 A. The findings that there was LIBOR 25 manipulation --</p>	<p>1 believed the loss was through the LIBOR 2 manipulation? 3 A. No. So what they calculated is what the 4 loss would have been for every basis point of 5 manipulation. 6 Q. Okay. And then you just took their 7 numbers, and based upon what there was reported of 8 LIBOR manipulation, you did a mathematical 9 calculation? 10 A. Correct. 11 Q. Okay. You did no independent research of 12 any of these issues, then? 13 A. No. 14 Q. Okay. What did you do to test whether 15 the calculation that was done by the State of Oregon 16 was correct or not correct? 17 A. Consulted CFAs who worked for labor 18 unions, who looked at that and said that it seemed 19 plausible to them. 20 Q. Okay. So you didn't -- you relied on 21 someone else telling you that they did this? 22 A. Correct. 23 Q. Did you review their work product? 24 A. The State of Oregon's? 25 Q. No, the CF -- what did you call it?</p>

12 (Pages 42 to 45)

Page 46	Page 48
<p>1 The --</p> <p>2 A. CFA.</p> <p>3 Q. CFA. Did you review their work product</p> <p>4 on how they made the mathematical determination?</p> <p>5 A. No.</p> <p>6 Q. Okay. You're not a mathematician, are</p> <p>7 you?</p> <p>8 A. No.</p> <p>9 Q. Okay. How long were you in this position</p> <p>10 that you started in 2009?</p> <p>11 A. Four years.</p> <p>12 Q. So you maintained that 'til the end of</p> <p>13 your employment or until your leave to go to the</p> <p>14 Nathan Foundation?</p> <p>15 A. Correct.</p> <p>16 Q. And what other things did you do besides</p> <p>17 the -- you said you did analysis of municipal</p> <p>18 finance, healthcare. And under the municipal</p> <p>19 finance, you looked at swap transactions; correct?</p> <p>20 A. Correct.</p> <p>21 Q. What else did you do in regard to swap</p> <p>22 transactions in municipal finance, besides this</p> <p>23 study we just went over?</p> <p>24 A. We did -- and beside this particular</p> <p>25 study or -- I mean, we cataloged swap transactions</p>	<p>1 A. Right, which is something that hasn't</p> <p>2 been done in other places.</p> <p>3 Q. But when you say you wrote the narrative,</p> <p>4 you wrote the narrative based upon reading what was</p> <p>5 in the Wall Street Journal, the Financial Times, and</p> <p>6 the New York Times and other newspapers; is that a</p> <p>7 fair statement?</p> <p>8 A. Not entirely, no.</p> <p>9 Q. Okay. Was that -- how much impact did</p> <p>10 that have on your narrative, those type of</p> <p>11 newspapers and periodicals?</p> <p>12 A. The analysis that we raised, the critique</p> <p>13 that we raised about interest rate swap deals was</p> <p>14 not advanced by any of the other papers prior to us.</p> <p>15 Since then, other papers have started reporting on</p> <p>16 it.</p> <p>17 But this -- the fact that the financial</p> <p>18 crisis actually had an impact on interest rate swap</p> <p>19 deals and caused them to backfire and caused the net</p> <p>20 payments on them to skyrocket was something that was</p> <p>21 not reported in the press prior to us covering it.</p> <p>22 And that's why we actually got a lot of coverage in</p> <p>23 the Wall Street Journal and the Financial Times and</p> <p>24 the New York Times based on the work that we did on</p> <p>25 it because it had not been done before.</p>
Page 47	Page 49
<p>1 in a number of places and did a number of reports</p> <p>2 that either I directly wrote or other folks on the</p> <p>3 team or a supervisor or others wrote.</p> <p>4 Q. And all of these reports were really</p> <p>5 just -- and tell me if my characterization is</p> <p>6 wrong -- were just mathematical calculations of the</p> <p>7 impact of the different fluctuations of the LIBOR</p> <p>8 rate against the fixed rate?</p> <p>9 A. Mathematical calculations as well as</p> <p>10 looking at what had been reported in the press and</p> <p>11 in court cases to develop some of the narrative</p> <p>12 around what happened with interest rate swaps.</p> <p>13 Q. So you relied on newspapers, the press,</p> <p>14 to help you in doing your narrative around the</p> <p>15 mathematical calculations; is that correct?</p> <p>16 A. Correct.</p> <p>17 Q. And what press did you rely on?</p> <p>18 A. Wall Street Journal, New York Times,</p> <p>19 Financial Times. All the major newspapers.</p> <p>20 Q. But you didn't do any independent</p> <p>21 research that, for example, the Wall Street Journal</p> <p>22 would do when it writes an article; correct?</p> <p>23 A. I mean, the independent research we did</p> <p>24 was on cataloging the deals in a number of places.</p> <p>25 Q. Just taking the numbers and cataloging?</p>	<p>1 Q. Okay. And when you say that it was --</p> <p>2 all you were doing were reporting the numbers;</p> <p>3 correct?</p> <p>4 A. Correct, along with analysis of why it</p> <p>5 happened.</p> <p>6 Q. And what was -- what type of analysis did</p> <p>7 you do to determine why it happened?</p> <p>8 A. State the fact that the only reason why</p> <p>9 interest rates were low was because the banks had</p> <p>10 crashed the economy.</p> <p>11 Q. And what analysis did you do to determine</p> <p>12 that the banks had crashed the economy, as you call</p> <p>13 it? What independent research did you do on that?</p> <p>14 A. On our team, we did do research that</p> <p>15 showed that the banks took on increasingly risky</p> <p>16 investments.</p> <p>17 Q. And how did you go about doing that</p> <p>18 analysis to determine that the banks had taken on</p> <p>19 increasingly risky investments?</p> <p>20 A. So this was done by one of the other</p> <p>21 researchers on our team, but we actually looked</p> <p>22 at --</p> <p>23 Q. But you were the senior person; right?</p> <p>24 A. With this particular thing I'm about to</p> <p>25 say, this was -- I was not.</p>

13 (Pages 46 to 49)

## **EXHIBIT 5**

**AFFIDAVIT OF SAQIB BHATTI**

STATE OF MICHIGAN     )  
                                      ) SS  
COUNTY OF WAYNE     )

1. I Saqib Bhatti, do affirm and state as follows:

2. In my current position as a fellow with the Nathan Cummings Foundation, and in my previous employment as Senior Financial Analyst with SEIU, on a daily basis I monitor the financial industry specifically with regard to Interest Rate Swaps. I monitor news reports relative to Swap Agreements, as well as federal regulatory filings and enforcement actions by Federal regulators relative to Swap Agreements.

3. Based on this knowledge, I am prepared to help the court in getting a picture of the extent of regulatory filings nationwide as well as anecdotal evidence documenting wrongdoing in the financial industry relative to Swap Agreements that may assist the court in making a determination of whether further investigation of the Swap Agreements in the present case would be warranted before approving a forbearance agreement that removes these agreements from the review of the bankruptcy court.

4. I can testify based on my first hand review of more than 1100 Swap Agreements nationwide on the financial impact of these Agreements on municipalities including Detroit which again may aide the Court in gaining a proper perspective on Swaps as they relate to the present case.

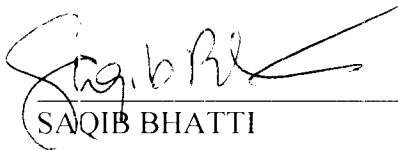
5. With regard to LIBOR manipulation, there is a well established study dated April 2010, entitled "Does LIBOR reflect banks' borrowing costs?" by Connan Snider and Thomas Youle, from the Departments of Economics at UCLA and the University of Minnesota. The study estimates the degree to which the LIBOR index was manipulated during different time periods. I have applied that study to quantify the losses suffered by the City of Detroit as a result

of its being placed in Swap Agreements based on the LIBOR index by UBS and SBS (the SBS Swap is backed by Bank of America). That study has been utilized to establish the existence of LIBOR Manipulation and the amount of manipulation in over a dozen lawsuits across the U.S. including cases brought by the City of Baltimore, San Diego County, City of Philadelphia, University of California, East Bay Municipal Utilities District, New Britain, CT Firefighters and Police Benefit Fund among others.

6. I am prepared to testify to the estimated cost of LIBOR Manipulation to the City of Detroit applying the data from this study to the City's Swap deals. My research team has applied the methodology in that study to calculate LIBOR manipulation in over a dozen locations in the US, including the states of Illinois and Oregon, the New York Metropolitan Transportation Authority and the City of Philadelphia, PA.

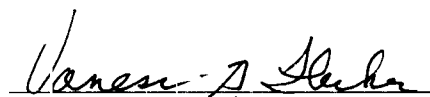
7. LIBOR is a standard rate, so the cost of potential manipulation similarly is standard to every entity that uses the index in its calculation of interest rates in swap agreements.

FURTHER AFFIANT SAYETH NOT.

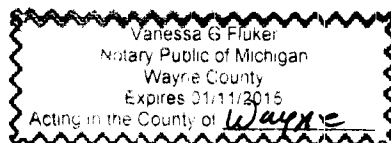
  
SAQIB BHATTI

9/20/13  
Date

Subscribed and sworn to before me this 20<sup>th</sup> day of September, 2013

  
Notary Public; Vanessa G. Flucker, Wayne County Michigan.

My commission expires: 01-11-2015



## **EXHIBIT 6**

# Does the LIBOR reflect banks' borrowing costs?

Coman Snider\*  
UCLA

Thomas Youle†  
University of Minnesota

April 2, 2010

## Abstract

The London Interbank Offered Rate (Libor) is a vital benchmark interest rate to which hundreds of trillions of dollars of financial contracts are tied. Recently observers have raised concerns that the Libor may not accurately reflect average bank borrowing costs, its ostensible target. In this paper we provide two types of evidence that this is the case. We first show that bank quotes in the Libor survey are difficult to rationalize by observable cost measures, including a given bank's quotes in other currency panels. Our second type of evidence is based on a simple model of bank quote choices in the Libor survey. The model predicts that if banks have incentives to affect the rate (as opposed to simply reporting costs), we should see bunching of quotes around particular points and no such bunching in the absence of these incentives. We show that there is strong evidence of the predicted bunching behavior in the data. Finally, we present suggestive evidence that several banks have large portfolio exposures to the Libor and have recently profited from the rapid descent of the Libor. We conjecture that these exposures may be the source of misreporting incentives.

---

\*Department of Economics, UCLA. snider@econ.ucla.edu, ph: (310) 794-7104.

†Department of Economics, University of Minnesota. youle001@umn.edu, ph: (612) 298-4807.



# 1 Introduction

The London Interbank Offered Rate (Libor) is a widely used benchmark interest rate, intended to reflect the average rate at which banks can borrow unsecured funds from other banks. The rate is set each day by taking a truncated average of the reported borrowing costs of a panel of 16 large banks. Since its introduction in 1986, the Libor has steadily grown in importance and is now among the most widely used benchmark rates in financial contracting. The British Bankers Association (BBA) estimates that \$10 trillion of loans and \$350 trillion of swaps alone are indexed by the Libor. Since the upheaval in financial markets that started around August of 2007, the Libor has diverged from many of its historical relationships causing market observers to question its proper functioning. An influential article by Mollenkamp and Whitehouse (2008) argued that the Libor was too low in this period and suggested that banks in the panel were intentionally quoting low rates in order to burnish the markets' perception of their riskiness.

In this paper we provide three types of evidence that banks' Libor quotes may not reflect true borrowing costs. First, we corroborate the Mollenkamp and Whitehouse (2008) finding that bank Libor quotes are very weakly related to other measures of bank borrowing costs, in particular to the price of default insurance. Second, we find it is common for pairs of banks who participate in multiple currency-Libor panels to have different rank orderings in different currencies. This implies that the quoted rates cannot be expressed as the sum of currency specific variables and bank specific variables. Yet most of the variables we would consider important for pricing debt either do not vary across banks, such as the expectations for future inflation, or do not vary across currencies, such as the probability a given bank will default.

The third type of evidence comes from the intraday distribution of Libor quotes. We present a simple model of bank quote submission in which members may or may not have incentives to misreport. The model predicts, in the presence of misreporting incentives, we should see "bunching" of quotes at particular points. This prediction is due to the form of the rate setting mechanism, which averages the middle eight quotes of the sixteen. If a given bank has incentives to change the Libor (as opposed to simply reporting costs) and it knows the exact location of the pivotal fourth and twelfth quotes, its own quotes will tend to cluster around these pivotal quotes. This is because the marginal impact of that bank's quote on the overall rate, and thus the marginal benefit of changing the rate, goes to zero at these pivotal points. Quotes of banks without these misreporting incentives, should not exhibit this clustering behavior.

We find strong evidence of quote bunching behavior consistent with the model. We also show that the intraday distribution of other measures of bank borrowing costs do not exhibit this bunching pattern. Under the reputational theory of misreporting, a bank cares about how the market perceives its own quote and not the Libor fix itself. It therefore, does not predict that banks will bunch around the pivotal quotes. In this sense, we present evidence in favor of our hypothesis

and against the reputation hypothesis and discuss the different policy implications of our results. Moreover, using more recent data, we find evidence of misreporting is stronger in the period *since* markets have calmed somewhat from their recent upheaval.

After establishing our arguments for the existence of misreporting incentives, we go on to explore the magnitude of the quote skewing and the sources of the incentives. To get a sense of the magnitude of skewing we compare the behavior of Libor quotes with the behavior of actual market lending rates in the Eurodollar market. We assume that in a benchmark (pre-financial crisis) period there was a relationship, similar to a bid-ask spread, between the Eurodollar rate and the Libor and that banks were truthfully reporting their costs in this period. We then measure the degree of skewing as the divergence in this relationship after the benchmark period. By this measure, we find that the magnitude of skewing is upwards of 40 basis points for some banks.<sup>1</sup>

Finally, we present suggestive evidence that the misreporting incentives are partially driven by member bank portfolio positions. We find that several banks in the U.S. Libor panel have very large interest rate derivative portfolios, have significant unhedged exposures to U.S. interest rates, and have profited from their interest rate derivative portfolios during the rapid descent of the Libor during 2009. We also argue the direction of bank skewing behavior is consistent with these portfolio incentives. We then examine banks included in several currency Libor panels who have financial incentives to raise some of the Libor rates and to lower the other rates. We find, as our model predicts, that they simultaneously submit quotes near the upper and lower pivotal points in the respective currencies.

The rest of the paper proceeds as follows: In section 2 we present evidence of the apparent lack of relationship between bank quotes and measures of bank costs as well as evidence of cross currency rank reversals. Section 3 presents our evidence of strategic behavior suggested by the simple model we lay out in the appendix. We also present our Eurodollar bid rate-based counterfactual analysis in this section. Section 4 presents our evidence that several panel banks have large Libor positions and have recently profited from a low Libor. Section 5 concludes.

## 2 Libor Quotes and Bank Borrowing Costs

In a competitive interbank lending market, banks' borrowing costs should be significantly related to their perceived credit risk.<sup>2</sup> If the Libor quotes express true, competitively determined borrowing costs, then we should expect the quotes to be related to measures of credit risks, such as the cost of default insurance. Mollenkamp and Whitehouse(2008) were the first to point out the anomalous

---

<sup>1</sup>We also emphasize the limitations of this, at best, back of the envelope exercise. There has also been some concern that the Eurodollar Bid rate data is unreliable.

<sup>2</sup>When credit risk is private information, it is possible for credit to be rationed and for risky and safe borrowers to receive the same interest rates, as in Stiglitz and Weiss (1981). Here we focus on risk measures that are public information, such as market prices for default insurance.

behavior of bank Libor quotes with respect to bank risk measures, credit default swap (CDS) spreads in particular.<sup>3</sup>

Figure 1 shows the 12 Month U.S. Libor quotes for Citigroup and the Bank of Tokyo-Mitsubishi along with their corresponding 1 Year Senior CDS spreads. The first puzzling fact is that while Citigroup has a substantially higher CDS spread than Mitsubishi, it submits a slightly lower Libor quote. The CDS spreads suggest that the market perceives Citigroup as riskier than Mitsubishi, as it is more expensive to insure against the event of Citigroup's default. The Libor quotes, however, tell the opposite story. If Citigroup and Mitsubishi were truthfully reporting their costs, then the quotes suggest that market participants view lending to Citigroup as slightly safer than Mitsubishi.

A second puzzling pattern is the *level* of Citigroup's CDS spreads relative to its Libor quotes. Given that purchasing credit protection for a loan makes the loan risk free, one would expect difference between the loan rate and the CDS spread to roughly equal the risk free rate. This corresponds to the idea that a loan's interest rate contains a credit premium, here measured by the CDS spread. If loan rates contain other premia, such as a liquidity premium to compensate for the illiquidity of loans, then the loan rate should *exceed* the sum of the CDS spread and the risk free rate. In figure 1??, however, we see that Citigroup's quote is often significantly below its CDS spread. This implies that there were interbank lenders willing to lend to Citigroup at rates which, after purchasing credit protection, would earn them a guaranteed 5 percent loss.

The Mollenkamp and Whitehouse analysis and figure 1 paint a picture somewhat at odds with the findings of Taylor and Williams (2008a, 2008b) who find evidence that, at the level of the Libor fix, increasing bank risk *does* explain much the behavior of the rate. Table 1 displays the results of regressions similar to those performed in Taylor and Williams, now including more recent data up to October 2009. The dependent variable in the first specification is the spread between the 3 month U.S. Libor and the 3 month rate on Overnight Index Swaps (OIS).<sup>4</sup> Regressing the overall Libor fix on the Median CDS spread delivers a coefficient of 0.621 which is within the range of coefficients found by Taylor and Williams in their earlier period.

In the next four specifications the dependent variable is the spread of a bank's submitted Libor quote over the OIS rate, and is regressed on the bank's corresponding CDS spread. Now, at the bank level, we find a smaller effect. Controlling for bank-level heterogeneity in the spreads reduces the coefficient further and it becomes negligible once we control for serial correlation in the error

---

<sup>3</sup>Credit default swaps are bilateral agreements where one party, the Guarantor, will pay another, the Beneficiary, if a particular reference entity defaults. The Guarantor will pay  $(1 - R)V$  where  $R$  is the recovery rate of the obligations determined in bankruptcy, so that, if the Beneficiary has  $V$  amount of obligations owed by the reference entity, the return in the event of default is  $RV + (1 - R)V = V$ . Purchasing an equal amount of CDS protection makes the debt risk free. In return for this protection the Beneficiary periodically pays  $rV$  to the Guarantor, where  $r$  is the 'CDS spread'.

<sup>4</sup>Overnight Index Swaps (OIS) are agreements where one party pays a fixed rate in return for a series of floating payments based on an index such the federal funds rate. As the most that can be lost in the event of default is the foregone payments accruing over a short period, they are considered to be considerably safer than bonds and their spread usually considered risk free.

Table 1: Bank-level 3 Month LIBOR-OIS Spreads					
	LIBOR	Bank-level LIBOR quotes			
		Pooled OLS	Random Effects	Random Effects AR(1)	Fixed Effects Error
Median	0.621				
CDS	(0.035)				
CDS		0.474 (0.102)	0.373 (0.098)	0.039 (0.009)	0.038 (0.009)
Constant	0.173 (0.020)	0.112 (0.036)	0.333 (0.067)	0.505 (0.085)	0.921 (0.001)
$N$	581	19235	7839	7839	7824
$R^2$	0.296	0.372			
Within $R^2$			0.199	0.199	0.002
Between $R^2$			0.001	0.001	0.005
$\rho$				0.995	0.995

terms. The estimated serial correlation is reported as  $\rho$  and is very large, as might be expected when working with daily frequency data. After controlling for serial correlation, CDS spreads are unable to explain the Libor quote variation between banks as well as the Libor quote changes within a bank through time.

The BBA has maintained that, in times of crisis, CDS spreads are not necessarily a better measure of bank borrowing costs than Libor quotes (Mollenkamp and Whitehouse 2008). More evidence can be found by looking at bank behavior in other currency Libor's.

Many banks participate in multiple Libor mechanisms and presumably there is some relationship between a bank's costs in these different markets. It is common for a bank included in multiple currency Libor panels to simultaneously quote a higher rate than another bank in one currency panel and lower rate in another currency. Figure 2 shows the differences in bank quotes in two currencies for four pairs of banks. We see that is is common for Bank of America to quote a lower rate than the Bank of Tokyo-Mitsubishi in the yen-Libor while submitting a lower quote in the US-Libor. Since the same bank is participating in each currency, the credit risk is the same for loans in either currency.<sup>5</sup> This shows that differences in banks' Libor quotes are not primarily due to differences in credit risk, something we would expect of their true borrowing costs.

The significance of these rank reversals is it that they show that either Libor quotes cannot be expressed as the sum of bank specific variables and currency specific variables, or banks cannot be

<sup>5</sup>While bankruptcy laws vary across countries they do not vary across the currency denomination of the obligations.

reporting true costs.<sup>6</sup> In contrast, most of the variables that we would expect to be important for pricing debt either do not vary across banks or do not vary across currencies. If banks were truly reporting their costs, then there must be large and persistent bank-currency specific risks concerning lenders. While it is possible there could be such effects, such as bank-currency specific liquidity risks, it is less clear that they are important enough to rationalize the magnitude and persistence of the reversals we observe in figure 2. An alternative explanation would be that in some currencies banks are submitting quotes that are too low. In our earlier discussion, if Citigroup was submitting a quote in the U.S. Libor that was below their true borrowing costs, while submitting a correct quote in the Yen Libor, this could appear as a rank reversal if Bank of Tokyo quoted true costs in both currencies. We return to this example later.

### 3 Quote Bunching

Our final source of evidence comes from the intraday distribution of bank quotes. First we find that, relative to CDS spreads, Libor quotes are closely clustered together. Prior to August 2007, banks in the U.S. Libor panel submitted similar, often identical quotes. In this pre-crisis period, the CDS spreads for panel banks have also been similar and low. This behavior changed with the onset of the financial crisis in 2007, with the intra-day variation of both Libor quotes and CDS spreads increasing from their historical levels. The intra-day variation of CDS spreads, however, grew considerably larger than that of Libor quotes. Figure 3 shows histograms of 12 month Libor quotes, normalized by subtracting the value of the day's fourth highest quote for each bank quote. An identical procedure is performed for 1 year CDS spreads.<sup>7</sup> Libor quotes are much more clustered around the day's fourth lowest quote than CDS spreads are of the fourth lowest spread. If banks were truthfully quoting their costs, however, we would expect these distributions to be similar.

There are several possible explanations for the bunching of quotes around the fourth lowest. The one that we pursue here is that some banks have incentive to alter the rate of the overall Libor and the bunching is a result of these incentives interacting with the rate setting mechanism. In the model that we lay out formally in the appendix, a bank's payoff, vis a vis its quote, is the sum of two terms. The first term is proportional to the Libor fix and captures the bank's incentives to change the rate. The second term is the "cost" of misreporting, for example the cost of a BBA investigation, which is triggered by unusual quotes. Bank incentives interact with the truncated averaging mechanism of the Libor. Consider a Libor panel member that knows the quotes of the

<sup>6</sup>Formally, suppose that costs are given by  $c_{itm} = \alpha_{it} - \alpha_{mt} + \epsilon_{itm}$ , where  $c$  denotes borrowing costs, and  $i, m$ , and  $t$  denote bank, market and time respectively. Differencing differences in bank quotes across markets gives:  $(c_{itm} - c_{jtm}) - (c_{itm'} - c_{jtm'}) = \epsilon_{itm} - \epsilon_{jtm} - \epsilon_{itm'} + \epsilon_{jtm'}$ . If the bank-currency specific shocks are such that the  $\epsilon$ 's are mean zero and i.i.d, we should see no rank reversals on average.

<sup>7</sup>We drop the day's fourth lowest quote and CDS spread from the data, in order to avoid spurious bunching around zero due to the fact that there is always a fourth lowest quote

15 other members on a given day.<sup>8</sup> Figure 5 shows graphically that bank's optimal quote problem, which requires equating the marginal benefits of changing the Libor with the marginal cost of misreporting. The marginal benefits function, which assumes the hypothetical bank's payoff is decreasing in the Libor, is a step function with a discontinuity at both pivotal quotes. The optimal quote is the intersection of the marginal cost curves and this step function, which bunches quotes representing a wide interval of true borrowing costs at (in this case) the lower one pivotal point.

There may be other explanations for why Libor quotes might be more closely clustered together than other measures of bank borrowing costs. The first is that, in this period, banks faced large reputational risks - bank runs on Northern Rock, Bear Stearns, and others were allegedly fueled by rumors of difficulty of raising funds from other banks. As suggested by Mollenkamp and Whitehouse (2008), an otherwise healthy bank submitting a high quote in the Libor panel might appear to have such problems and, by the same token a bank that actually has these problems might have incentive to submit low quotes to convince the market otherwise.

It is important to note different banks may have different net exposures to the Libor. Some banks may profit from a higher overall Libor rate, others may profit from a lower overall rate, and others still might be perfectly hedged. With this in mind, we examine the clustering behavior of individual banks, four of which are shown in figure 6. Here we see that Citigroup and Bank of America tend to submit quotes that are identical to the fourth lowest quote of the fifteen other banks, while this is not the case for WestLB. This is consistent with Bank of America and Citigroup having incentives, potentially stemming from their possession of Libor-indexed contracts, to lower the overall Libor rate, while WestLB does not have such incentives.

### 3.1 Constructing the Correct Libor: Eurodollar Bid Rate

The Eurodollar Bid Rate is a market rate for eurodollar deposits. Eurodollars are dollars held by banks outside of the United States, and have historically been an important source of funding for large American banks. We also show that the Eurodollar Bid Rate has had a historically tight relationship with the Libor. Prior to August 2007, indeed for the whole history of the Libor prior to then, the banks submitted quotes between 6 to 12 basis points above the Eurodollar Bid Rate. Banks were treating the Libor, the London Interbank *Offered* Rate, as their perception of the ask rate corresponding to the listed bid rate for Eurodollars. The Eurodollar Bid Rate-Libor spread of 6-12 basis points was then simply something like a bid-ask spread. Since 2007, for the first time the Libor descended below the Eurodollar Bid Rate and at times quite dramatically. Figure 7 shows the Eurodollar-Libor spread which is slightly positive prior to August 2007 and then drops dramatically once the Libor drops below the Eurodollar rate.

---

<sup>8</sup>Simple forecasting models do an excellent job in predicting the levels of Libor quotes during 2009. This is because Libor is administered with a daily frequency and Libor quotes move in a slow and predictable manner. We also note that the basic insight of the model can be extended to the case where there is uncertainty about the exact location of the pivotal quotes.

In table 2 we perform a structural break test to show the collapse of this historic relationship. We can see that, both in levels and in differences, the previous days Eurodollar Bid Rate was more important for determining the following days Libor than the previous Libor rate. This suggests that, prior to the crisis, banks simply observed the preceding days Eurodollar Bid Rate and added a fixed spread. After the crisis, however, the Eurodollar Bid Rate has much less predictive power on the following days Libor. The lagged Libor rate instead becomes much more important as it drops below the Eurodollar rate. The chow test statistic is for a test of the null of no structural break in August of 2007.<sup>9</sup>

Table 2: Structural Break Test		
	U.S. Libor	
	Levels	Differences
Eurodollar Bid Rate	0.608 (0.033)	0.696 (0.031)
U.S. Libor	0.392 (0.033)	-0.123 (0.032)
Eurodollar Bid Rate * <b>1</b> (After August 2007)	-0.605 (0.034)	-0.589 (0.034)
U.S. Libor * <b>1</b> (After August 2007)	0.600 (0.034)	0.586 (0.034)
N	1911	1392
R <sup>2</sup>	1.000	0.423
Chow Test Statistic	175.07	148.5

Dependent variable is the current days Libor. All right hand side variables are lagged.

In their recent study, Abrates-Metz et. al. (2008) investigate the possibility of collusion among Libor panel banks in the post August 2007 period. A commonly used screen for collusion tests for whether cross sectional prices-or quotes in this case-have lower variance during the suspected collusion period relative to a benchmark period. They find that the variance is substantially *lower* in the benchmark pre-August 2007 period. Our results suggest the answer for this is that in the benchmark period, banks are coordinating on the previous days Eurodollar rate. Though, the cross sectional variance in costs presumably also increased dramatically in the period after August 2007.

The above results suggest an obvious counterfactual to construct: What would Libor quotes have been had banks continued to follow their pre August 2007 rule? We first calculate this rule

<sup>9</sup>The statistic follows an  $F(4, 2999)$  distribution.

by running the regression in table 2, bank by bank. To give a sense of the magnitudes of skewing generated by this model, table 3 shows the average and standard deviation of bank quote “skewing”, assuming the pre-August 2007 rule gives the correct quotes. Again, it is evident that measures of manipulation are stronger in the period when market turmoil had partially subsided. Manipulation is not the only explanation for the break between the Eurodollar rate and Libor quotes. Cassola, Hortacsu, and Kastl (2009) point out that, because of the lack of actual transactions in the interbank market during the crisis period, Libor quotes were uninformative as the banks themselves had little information. However, it is unclear, from this theory why quotes would be biased downward, or why banks would abandon the Eurodollar Bid Rate as a coordination mechanism. An alternative explanation is that the lack of market data lowered the cost of misreporting as market observers had fewer, accurate benchmarks with which to compare Libor quotes. We also note that the break is broadly consistent with the reputational explanation for misreporting but, again, it is puzzling that quote behavior has not started to revert to past behavior despite the calming of markets.

Table 3: Average Magnitude of Quote Skewing: Eurodollar Bid Rate - Libor Quote

Bank	Pre Aug. 07		Aug. 07 - Aug. 08		Post Jan. 09	
	mean	sd.	mean	sd.	mean	sd.
Barclays	.02	.01	-.081	.10	-.37	.13
Bank of America	.02	.02	-.11	.10	-.393	.14
Bank of Tokyo-Mitsubishi	.029	.01	-.095	.10	-.320	.14
Citigroup	.022	.01	-.118	.10	-.400	.13
CSFB	.022	.01	-.097	.10	-.370	.13
Deutsche Bank	.02	.01	-.106	.10	-.412	.14
HBOS	.023	.01	-.111	.10	-.382	.13
HSBC	.022	.01	-.11	.10	-.51	.13
J.P. Morgan	.023	.01	-.111	.11	-.434	.13
Lloyd's	.022	.01	-.108	.11	-.381	.13
Norin	.03	.02	-.090	.10	-.31	.14
Rabo Bank	.022	.01	-.111	.10	-.403	.13
RBOS	.019	.01	-.097	.10	-.301	.12
Royal Bank of Canada	.015	.01	-.119	.10	-.345	.10
UBS	.022	.01	-.111	.10	-.361	.11
WestLB	.022	.01	-.098	.10	-.333	.17



## 4 Sources of Misreporting Incentives

Having established evidence of misreporting, we now turn our attention to the sources of misreporting incentives. We argue bank portfolio exposure to the Libor is a good candidate for generating these incentives. In general, these portfolio positions are opaque and for this reason we focus our analysis on the three American bank holding companies. These banks are required to provide information about their interest rate derivatives and net interest revenue in the quarterly Reports on Conditions and Income (Call Reports) to the FDIC. The level of detail is still not as fine as would be necessary to perform a thorough analysis, so we emphasize the suggestive nature of the results presented in this section and hope they will lead to a more complete analysis.

Interest rate swaps are a very popular type of interest rate derivative and these three banks hold many of them.<sup>10</sup> Table 4 shows the notional value of the interest rate swaps held by these banks. The Libor is the most commonly used floating rate for swaps, with the 3 month and 6 month U.S. Dollar Libor being the most popular for U.S. Dollar interest rate swaps. Given the large notional values, a small unhedged exposure to the Libor can generate large incentives to alter the overall Libor. If J.P.Morgan, for example, had a swap position with just a 1% net exposure to the Libor in the fourth quarter of 2008, then its costs on its contracts would be proportional to \$540 billion. If it was to succeed in modifying the Libor by 25 basis points in a quarter it would make  $1/4 * 540 * .025 = 0.337$  or \$337 million in that quarter. If it had a 10 percent net exposure it could make \$3.37 billion.<sup>11</sup>

---

<sup>10</sup>An interest rate swap is an agreement between two parties, where one pays a fixed interest (the Payer) rate in return for a floating or variable rate from the other party (the Receiver). If  $f$  is the fixed rate and  $L_t$  is the floating rate at a payment period  $t$  for such a contract, then the Payer receives  $(L_t - f)V$  and the Receiver receives  $(f - L_t)V$  where  $V$  is the *notional value* of the contract. While similar to a principal, the notional value is never exchanged and exists solely for computing payments.

<sup>11</sup>Note we are focusing solely on swaps, a contract which has a payout that is linear in the Libor. These banks also participate heavily in other more complex derivatives, such as 'swaptions' - options to purchase swaps, whose payoffs may be substantially nonlinear in the Libor.

Table 4: Notional value of Interest Rate Swaps (millions)

Quarter	Citigroup	Bank of America	JPMorgan Chase
2007.1	15,712,307	19,305,479	43,357,920
2007.2	16,133,587	19,873,919	49,287,878
2007.3	18,371,402	22,339,658	59,919,028
2007.4	16,955,132	22,472,948	52,097,878
2008.1	19,585,284	25,261,266	55,188,126
2008.2	18,732,046	26,162,587	59,821,075
2008.3	17,360,100	26,230,767	54,907,116
2008.4	15,859,923	26,577,385	54,524,046
2009.1	14,177,696	49,717,209 <sup>a</sup>	49,282,465
2009.2	15,613,216	49,577,518	48,914,118
2009.3	15,230,030	48,676,584	48,893,217

Source: Bank Holding Company FR Y-9C Reports.

a. Bank of America completes merger with Merrill Lynch.

Many interest rate derivatives held by banks are held for the purpose of hedging other items on the balance sheet, so notional portfolio sizes can be misleading. Perhaps the best picture of aggregate exposure is given by aggregate revenue that banks earn from their derivative portfolios. Table 5 shows the net interest revenue banks have made over the last 2 years, including the contribution of trading revenue on interest rate derivatives. Notably each of the three banks experience large net revenue increases in the first quarter of 2009, when the Libor fell dramatically.

Table 5: Net Interest Revenues (\$m)

Quarter	Citigroup	Bank of America	JPMorgan Chase
2007.1	12.129	9.182	6.887
2007.2	13.032	8.683	7.455
2007.3	13.774	7.026	8.961
2007.4	14.046	3.803	6.561
2008.1	12.366	10.394	7.567
2008.2	13.664	11.725	8.760
2008.3	11.527	11.832	6.084
2008.4	7.728	12.888	11.271
2009.1	18.248	14.034	15.214
2009.2	12.355	15.078	14.081
2009.3	13.741	11.042	14.189

Source: Bank Holding Company FR Y-9C Reports. The shown values are the sum of reported Net Interest Revenue and Trading Revenue on Interest Rate Derivatives.

The bunching on the lower discontinuity shown earlier in figure 6 suggests that some banks like Citigroup may have incentives to alter the rate while others may not. Table 6 shows Citigroup's reported counterfactual gains from movements in interest rates for several different currencies. In the first quarter of 2009 Citigroup reported it would make \$936 million in net interest revenue if interest rates would fall by 25 basis points a quarter over the next year and \$1,935 million if they were to fall 1 percent instantaneously. In terms of exposure to Yen interest rates however, Citigroup reports it would make \$122 million if Yen interest rates were to rise gradually and \$195 million if they rose by 1 percent instantaneously. Citigroup's exposure to the Euro switches signs and is generally low. Figure 8 shows Citigroup's quotes relative to the upper and lower discontinuities in all three currencies. Citigroup's U.S. quotes are bunched on the lower discontinuity of the U.S. Libor while its Yen quotes are bunched on the *upper* discontinuity in the Yen Libor, consistent with the direction the model and table 6 would suggest. Further, Citigroup's Euro quotes appear to bunch less on the discontinuities, which is consistent with its apparently smaller incentives to alter Euro rates.

Table 6: Citigroup's Counterfactual Net Interest Revenues (\$m)

	1% Instantaneous Increase			1% Instantaneous Decrease		
	U.S. Dollar	Euro	Yen	U.S. Dollar	Euro	Yen
2009.3	-1,193	52	228	1,427	-4	NM
2009.2	-1,767	-29	215	1,935	21	NM
2009.1	-1,654	11	195	1,543	-12	NM
2008.4	-801	-56	172	391	57	NM
2008.3	-1,811	-52	142	893	52	NM
2008.2	-1,236	-71	131	1,170	71	NM

Instantaneous means a 'parallel instantaneous 100bp change in rates.'

	1% Gradual Increase			1% Gradual Decrease		
	U.S. Dollar	Euro	Yen	U.S. Dollar	Euro	Yen
2009.3	-563	12	135	526	-12	NM
2009.2	-1,005	-35	122	936	35	NM
2009.1	-888	12	122	660	-12	NM
2008.4	-456	-43	51	81	43	NM
2008.3	-707	-41	72	490	41	NM
2008.2	-756	-51	73	633	51	NM

Gradual means 'a more gradual 100bp (25bp per quarter) parallel change in rates.'

NM - Not Meaningful; a 100bp reduction would result in negative rates.

Source: Citigroup's 10-K and 10-Q reports.

## 5 Conclusion

In this paper we have presented new evidence corroborating concerns that Libor panel banks may be understating their true borrowing costs. Previous analysis of the problem have suggested the cause of this misreporting is the desire of panel banks to appear strong, especially during the recent banking crisis. In contrast, our theory of misreporting incentives points to a more fundamental source, namely that bank portfolio exposure to the Libor give them incentives to push the rate in a direction favorable to these positions. Our theory, then, suggests that the rate may perform badly even in times of market calm, whereas the reputation theory suggests that we may only have to worry during periods of severe market stress.

The nature of the Libor mechanism, which averages the middle eight quotes out of sixteen, helps us formulate a novel strategy for testing the theory. When the location of the "pivotal" quotes are highly predictable, as they appear to be in our sample, banks with incentive to manipulate the

Libor fix bunch around these quotes because the marginal change in the fix drops discontinuously there. Borrowing costs, on the other hand, presumably have no relationship with these pivotal points and so neither should quotes from banks with no incentives to manipulate the fix.

Understanding the sources of misreporting incentives has important policy implications. Concerns about the Libor's accuracy has led a large money market broker ICAP to recently launch the 'New York Funding Rate' which is intended to replace the Libor. The primary innovation of the New York Funding Rate is that submitted quotes are anonymous. This reflects the view that the primary motive for banks to submit downward or misleading quotes is to signal their strength or soundness. If, in addition, a major incentive for banks to misreport their true borrowing costs is to influence the overall rate of the Libor, as we suggest, anonymity may actually make it easier for banks to misreport. Though there may be many other reasons for it, it is interesting to note that the New York Funding Rate has often been lower than the Libor throughout 2009.

As in the reputation enhancement story of misreporting, the primary problem our theory points to is that in the Libor, and similar indexes derived from surveys, participants face little in the way of costs for submitting false or misleading quotes. Creating a system that properly incentivizes truthful reporting would require major changes and possible unintended consequences would have to be carefully weighed. On the other hand, our theory suggests a simple approach based on diminishing the incentives for misreporting by adding more banks to the panel. Just as adding firms to a market (usually) makes a market more competitive by reducing the impact any one firm has on price, adding banks to the panel would lower the marginal impact any one bank would have on the rate.

## Appendix

We now introduce a simple model of how member banks submit their quotes. Let  $i = 1, \dots, 16$  be the banks in the Libor panel for a given currency and tenor. Let  $t = 1, \dots, T$  denote the days where the Libor was administered. We let  $q_{it} \in [0, \bar{q}]$  denote the quote of bank  $i$  at date  $t$ . The Libor fix,  $L_t = L(q_{it}, q_{-it})$ , is then the average of the middle 8 quotes. The true borrowing costs of each bank is denoted  $c_{it} \in \mathbf{R}_+$  and the profile of costs  $c_t$  is distributed according to the joint distribution  $F_t$ . We write the net "profit" accruing to bank  $i$  in period  $t$  as:

$$\Pi_{it}(q_{it}, q_{-it}, c_{it}) = v_{it}L(q_{it}, q_{-it}) + \pi_{it}(q_{it}, q_{-it}, c_{it})$$

where  $v_{it}$  is the bank's portfolio exposure to the Libor and  $\pi_{it}$  captures the reputational motives of the bank. We allow the reputational concerns reflected in  $\pi_{it}$  to depend on the quotes of other panel banks and its true borrowing cost,  $c_{it}$ . This is consistent with our favored interpretation that bank portfolio positions give them an incentive to manipulate the Libor, but they face reputational or other costs for being too far away from other banks and, potentially, for setting quotes too far

from their actual costs of borrowing. Note that they are subscripted by bank and time, so we allow for incentives to vary due to, for example, changing bank portfolios.

We choose to model a bank's payoffs as linear in the Libor as the majority of contracts have linear payouts. Adjustable rate mortgages, futures, forwards, swaps and corporate loans all have linear payouts in their underlying reference index, often the Libor. A portfolio composed entirely of these contracts would itself have a payout linear in the Libor, and although these banks likely do possess a small amount of nonlinear contracts, we consider linearity to be a good approximation. We also assume that  $\pi_{it}$  is continuously differentiable, strictly concave in  $q_{it}$  and  $\frac{\partial^2 \pi_{it}}{\partial c_{it} \partial q_{it}} > 0$ . These latter assumptions reflect our view that banks suffer reputational penalties for submitting increasingly 'extreme' quotes and for quotes that are far away from their true costs. We also assume that  $F_t$  is absolutely continuous and has full support on  $\mathbf{R}_+^{16}$ .

Let  $\ell(q_{-it})$  denote the fourth lowest quote of  $q_{-it}$  and  $r(q_{-it})$  is the fourth highest. From  $i$ 's perspective, these are the points where the marginal response of the Libor changes discontinuously. We now state a proposition that forms the basis of our prediction we should see bunching around the pivotal quotes  $\ell(q_{-it})$  and  $r(q_{-it})$ .

**Proposition 1** *Let  $q_{-it}$  be such that  $\ell(q_{-it}) < r(q_{-it})$ . Then if  $v_{it} < 0$  ( $> 0$ ) there is an interval of costs where  $i$ 's best response is to quote  $q_{it} = \ell(q_{-it})$  ( $= r(q_{-it})$ ). Moreover, the width of this interval is increasing in  $|v_{it}|$ .*

**Proof:** Suppose that  $v_{it} < 0$ . Whenever costs are such that

$$(1) \quad -\frac{v_{it}}{8} > \frac{\partial \pi_{it}(q_{it}, q_{-it}, c_{it})}{\partial q_{it}} \Big|_{q_{it}=\ell(q_{-it})}$$

$$(2) \quad 0 < \frac{\partial \pi_{it}(q_{it}, q_{-it}, c_{it})}{\partial q_{it}} \Big|_{q_{it}=\ell(q_{-it})}$$

then  $\ell(q_{-it})$  is a local optimum. If, further

$$(3) \quad 0 > \frac{\partial \pi_{it}(q_{it}, q_{-it}, c_{it})}{\partial q_{it}} \Big|_{q_{it}=r(q_{-it})}$$

then  $\ell(q_{-it})$  is a global optimum. This follows from the concavity of  $\pi_{it}$  in  $q_{it}$  which ensures  $\partial \pi_{it} / \partial q_{it}$  is decreasing in  $q_{it}$ . The other discontinuity,  $r$ , is not a local equilibrium. Our assumption on the cross derivatives ensures that  $\partial \pi_{it} / \partial q_{it}$  is strictly increasing in  $c_{it}$  and is thereby invertible in  $c_{it}$ . Inverting equations (2) - (4) conditional on  $q_{it}$  and  $q_{-it}$  defines an open interval of costs which is weakly increasing in  $-v_{it}$ . A symmetric argument follows for the case when  $v_{it} > 0$ .  $\square$

This proposition, combined with the absolute continuity and full support of  $F_t$ , will deliver a point mass at  $r(q_{-it})$  or  $\ell(q_{-it})$  in the distribution of  $q_{it}$  conditional on  $q_{-it}$ . This logic extends to a perfect information game as well.

**Proposition 2** *Let  $v_{it} < 0$  for some bank  $i$  and let  $c_t = (c_{1t}, \dots, c_{16t})$  be a given profile of borrowing costs. If there is a Nash equilibrium  $q_t^*$  where  $q_{it}^* = \ell(q_{-it}^*) < r(q_{-it}^*)$  then there is an interval  $(c^l, c^u)$  of costs for  $i$  such that for any  $\tilde{c}_{it} \in (c^l, c^u)$ ,  $q_t^*$  remains a Nash equilibrium for the new cost profile  $\tilde{c}_t = (c_{1t}, \dots, \tilde{c}_{it}, \dots, c_{16t})$ .*

**Proof:** If  $q_{it}^* = \ell(q_{-it})$  is optimal, it is necessarily a local equilibrium, so equations (5) and (6) must hold for  $q_{it}^*$ . The only possible other optimal solution is  $\tilde{q}_{it} > r(q_{-it})$  that satisfies the first order condition  $\partial \pi_{it} / \partial q_{it} = 0$ . As  $q_{it}^*$  is optimal, it must be  $\Pi(q_{it}^*, q_{-it}, c_{it}) \geq \Pi(\tilde{q}_{it}, q_{-it}, c_{it})$  or equivalently,

$$(4) \quad -v_{it}[r(q_{-it}) - \ell(q_{-it})] \geq \int_{\ell(q_{-it})}^{\tilde{q}_{it}} \frac{\partial \pi_{it}}{\partial q_{it}} dq_{it}$$

As  $\partial \pi_{it} / \partial q_{it}$  is increasing in  $c_{it}$  for each  $q_{it}$ , the right hand side of (8) is increasing in  $c_{it}$ . So for any  $\tilde{c}_{it} < c_{it}$ , (8) is satisfied, and if  $\tilde{c}_{it}$  satisfies (5) and (6) as well then it remains optimal for  $i$  to quote  $q_{it}^*$  for costs in this interval. As  $i$  quotes the same, and no other cost has changed, it remains a best response for every other bank to quote  $q_{-it}$  and  $q_t^*$  remains an equilibrium for the new cost profile containing  $\tilde{c}_{it}$ .

## References

- [1] M. Kraten A. Metz Abrantes-Metz, R. and G. Seow. Libor manipulation? Mimeo, August 2008.
- [2] C. Mollenkamp and M. Whitehouse. Study casts doubt on key rate:wsj analysis suggests banks may have reported flawed interest data for libor. *The Wall Street Journal*, May 28, 2008.
- [3] A. Hortacsu N. Cassola and J. Kastl. The 2007 subprime market crisis through the lens of european central bank auctions for short term funds. University of Chicago Working Paper. July 2009.
- [4] J. Taylor and J. Williams. A black swan in the money market. *American Economic Journals: Macroeconomics*. 1:58–83. 2009.





Figure 1: One Year LIBOR Quotes and CDS Spreads

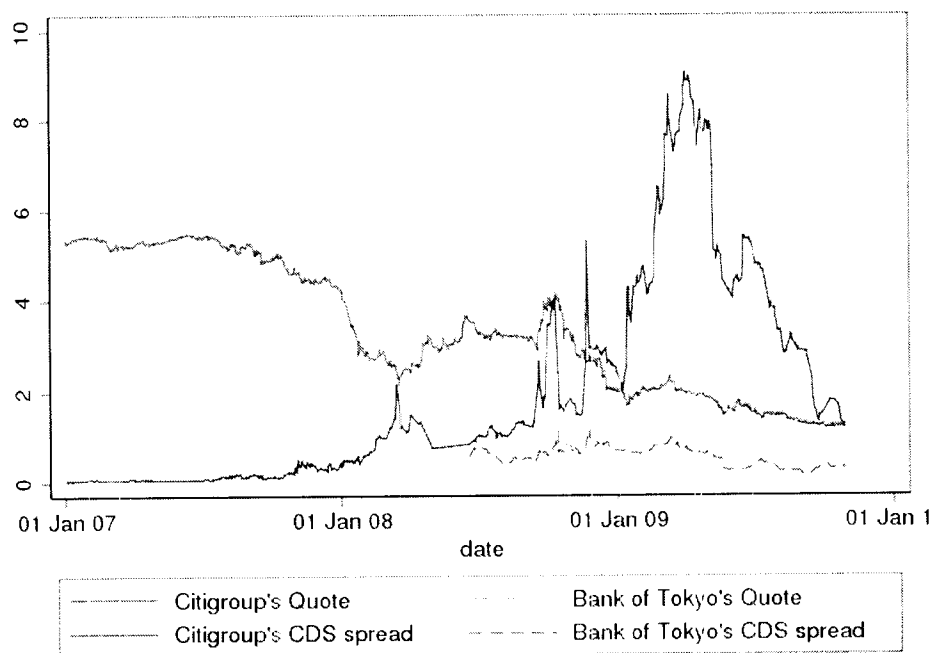


Figure 2: Cross Currency Bank Reversals

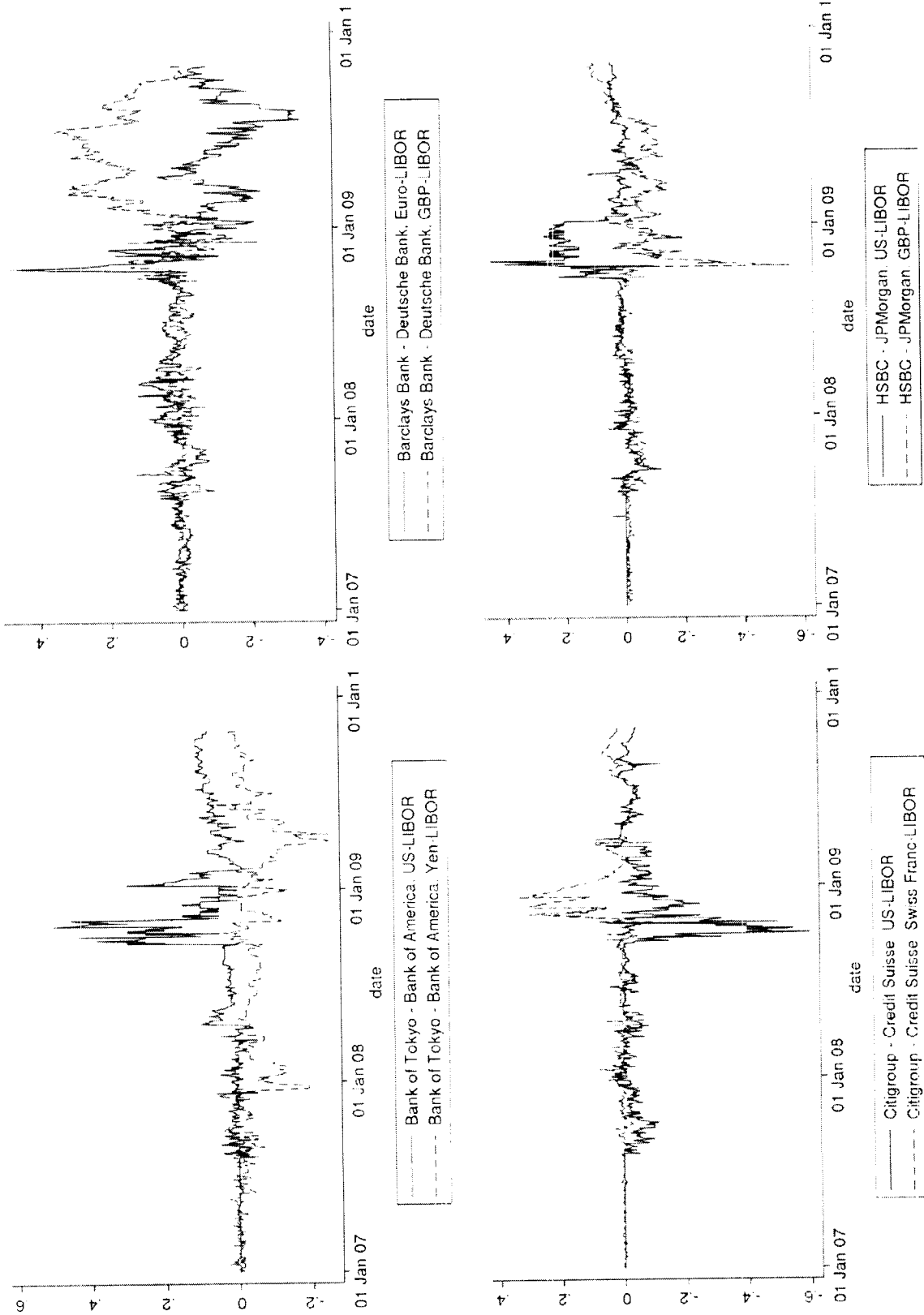
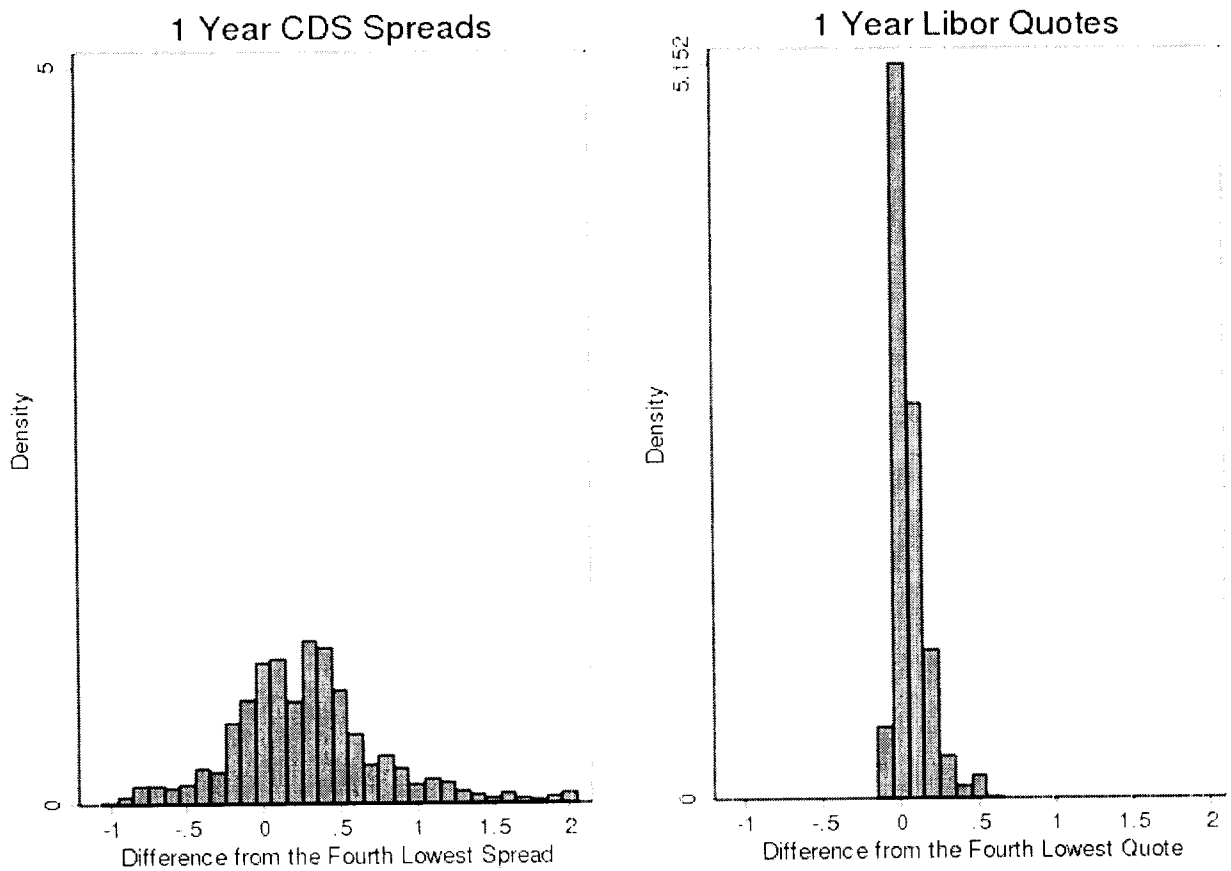
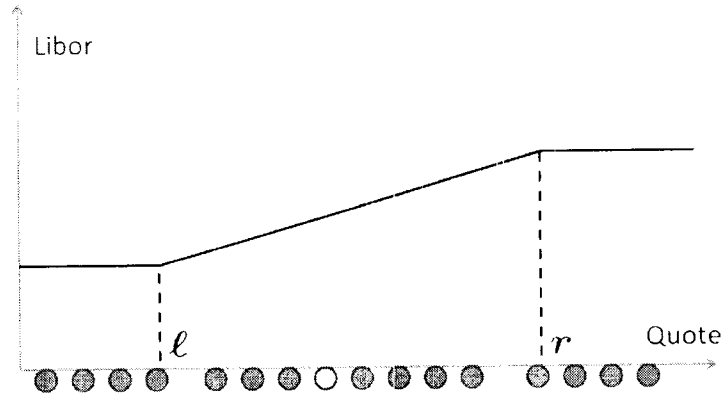


Figure 3: Distribution of Libor Quotes and CDS Spreads



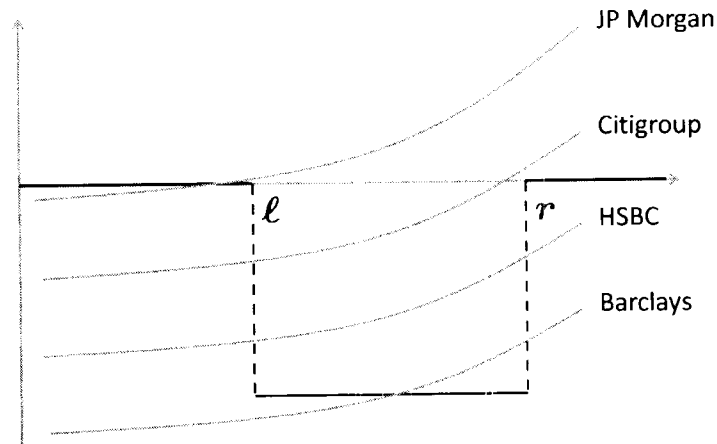
12-Month U.S. Libor quotes and 1-Year Senior CDS spreads.

Figure 4: Responses in the Libor to a Bank's Quote



The circles represent the quotes of the 16 banks. The four highest and four lowest quotes are dropped and the average of the remaining eight quotes determines the Libor rate. Shown is the counterfactual Libor rate if one of the middle eight banks were to change their quote.

Figure 5: Discontinuities in the Marginal Response of the Libor



Shown is the marginal benefit and cost curves for banks whose portfolios are such that they profit from a lower overall rate of the Libor.

Figure 6: Clustering of Libor Quotes around Discontinuities in the 3 Month U.S. Libor

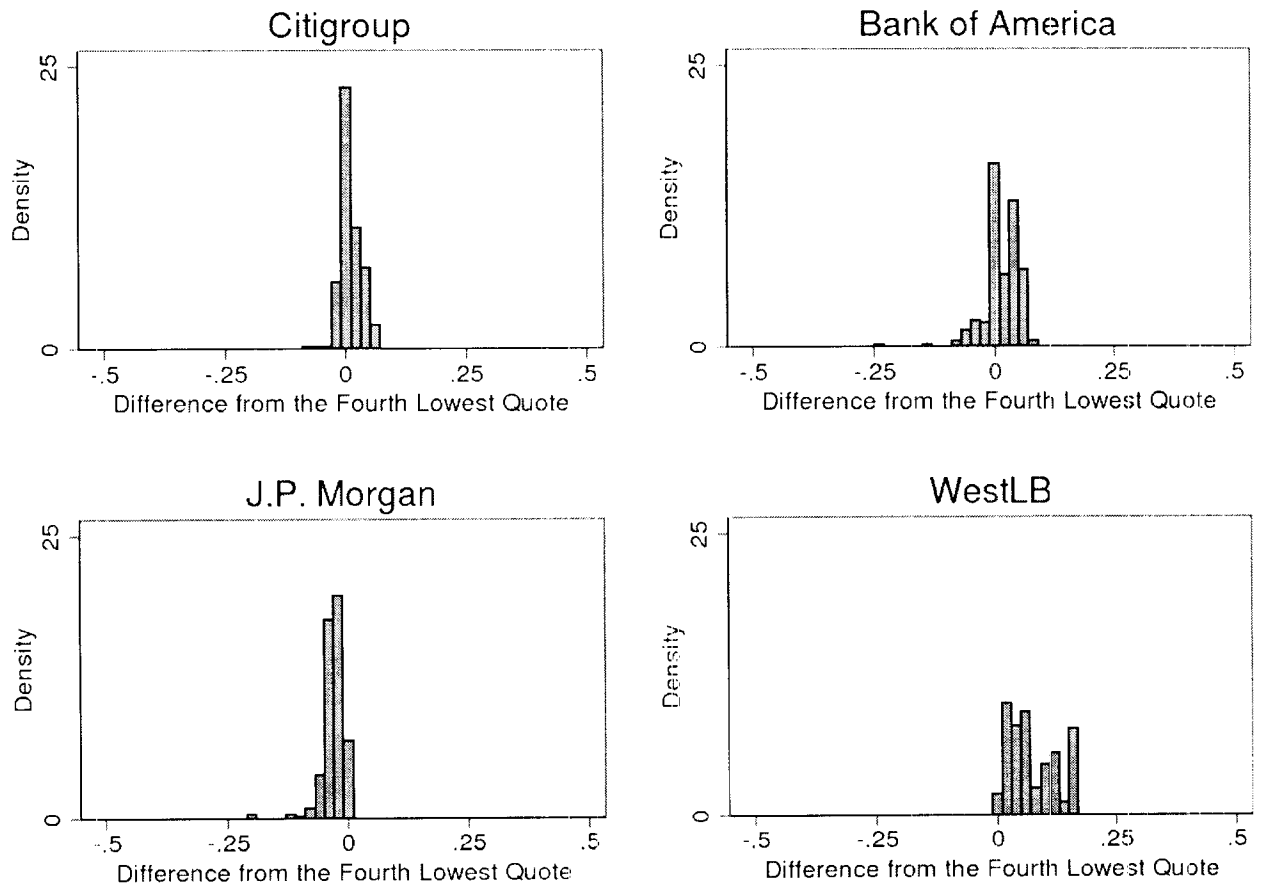


Figure 7: 3 Month Eurodollar - U.S. Libor Spread

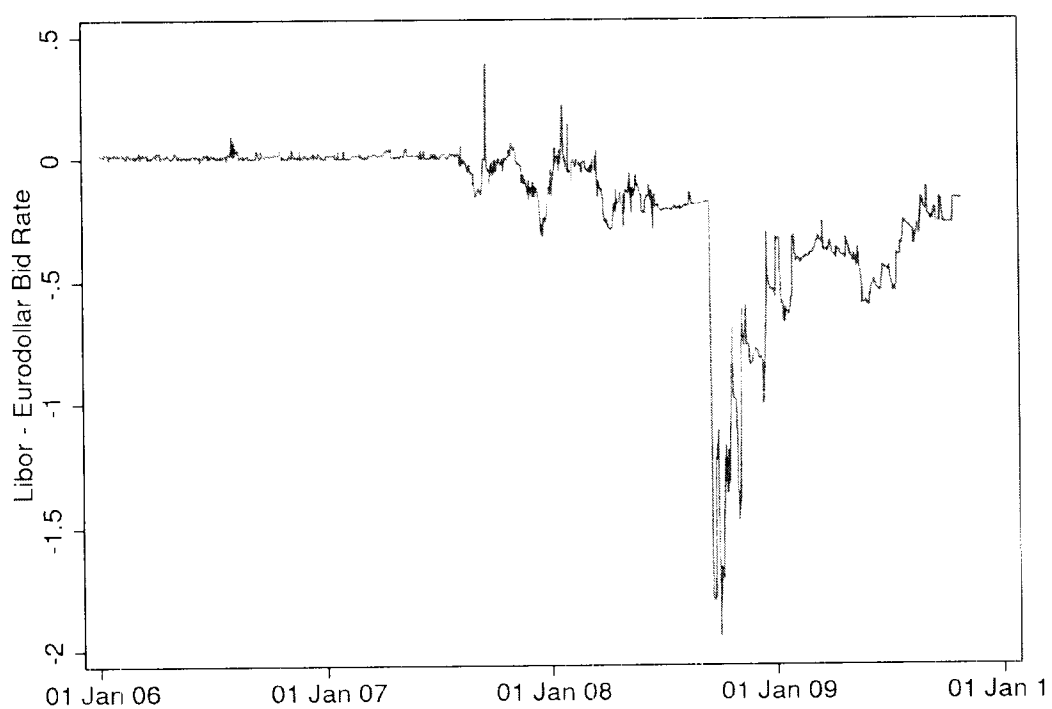
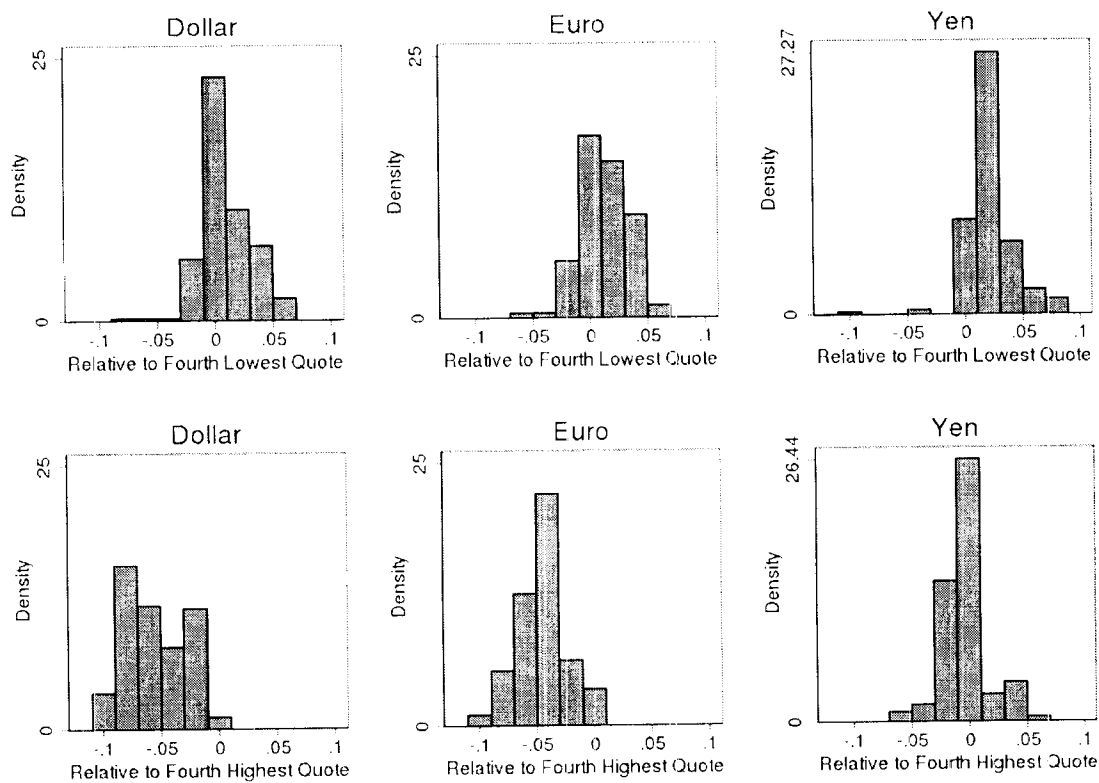


Figure 8: Citigroup's Quotes Across Currencies



Citigroup's quotes are clustered on the lower discontinuity in the U.S. dollar Libor while clustered on the upper discontinuity in the Yen Libor. As shown in table 6, Citigroup profits from lower U.S. interest rates and a higher Yen interest rates.



## **EXHIBIT 7**

City of Detroit  
Kenneth V. Cockrel, Jr. Mayor

Planning and Development Department  
Neighborhood Stabilization Program Plan



Douglass J. Diggs, Director  
Marja M. Winters, Deputy Director

City of Detroit NSP rev 01/09

- Invest in select neighborhoods to achieve greater impact with limited resources especially neighborhoods targeted by LISC, Skillman, the Community Foundation and NDNI
- Protect recent investments by public and private partners
- Attract other public/private financing to leverage NSP funds minimally on a 2:1 basis
- Create new jobs and stimulate small business development
- Demolish existing structures to accommodate future development or alternative uses.

### **Foreclosure Problem**

As evidenced by Detroit's NSP award amount, which was allocated under a formula developed by the Department of Housing and Urban Development taking into account the numbers of foreclosures, subprime loans and defaults in each jurisdiction, Detroit has the highest home foreclosure rate among the nation's 100 largest metropolitan areas, making it one of the cities hardest hit by the national foreclosure and sub-prime lending crisis. The impact of not dealing aggressively with this crisis would have tremendous implications for the economic survival and social viability of the city. Moreover, the toll on Detroit citizens and families will be devastating as once stable neighborhoods are faced with increased blight, vacant properties and diminished housing values. Thus, it is imperative that we strategically focus our resources to achieve the greatest outcomes and thwart further decline.

Statistics on local foreclosure activity speak volumes about the crisis in Detroit. From 2004 to 2006, there were approximately 330,000 mortgages originated in Detroit. During the same time, 38,000 new mortgages were sold representing 11% of total mortgages. About 27,500 or 73% of new mortgages were high cost loans defined as loans with interest rates at least 3% above Treasury securities. Refinances accounted for 15% of new mortgage loans. As of 2006, about 29,000 adjustable rate mortgages or 9% of all existing mortgages reset, triggering higher payments for loan recipients. An additional 16,000 mortgages are scheduled to reset from 2008 to 2010. These statistics clearly demonstrate that additional resources will be needed to prevent future foreclosures and the number of Detroit homeowners that are expected to be impacted by the nearing reset activity.

The result of the exorbitant numbers of high cost loans in Detroit is disturbing. From 2005 to 2007, Detroit experienced an astounding 67,000 foreclosures, more than 20% of all household mortgages. There were 4,600 tax foreclosures in the first six months of 2008 with over \$25 million in taxes due on these properties. Early estimates indicate that at least two-thirds of tax or mortgage foreclosed properties stand vacant causing tremendous problems for Detroit on many levels.

A foreclosed property that stays on the market for an extended period of time can become an administrative and economic drain on a city; a study by the Homeownership Preservation Foundation found that a city can lose about \$20,000 per home in lost property taxes, unpaid utility bills, property upkeep, sewage and maintenance. High foreclosure rates also causes disinvestment by nearby residents, which contributes to neighborhood decline, affects surrounding property values, and leads to population loss and increased crime.

City of Detroit NSP rev 01/09