

Court File No. CV-08-365119CP

**ONTARIO  
SUPERIOR COURT OF JUSTICE**

BETWEEN:

**MICHAEL BROWN and BRIAN SINGER**

Plaintiffs

- and -

**CANADIAN IMPERIAL BANK OF COMMERCE  
and CIBC WORLD MARKETS INC.**

Defendants

**PROCEEDING UNDER THE CLASS PROCEEDINGS ACT, 1992**

**SUPPLEMENTARY AFFIDAVIT OF RICHARD DROGIN  
(Sworn 1/12/2011)**

I, **RICHARD DROGIN**, of the City of Berkeley, in the State of California, in the United States of America, **MAKE OATH AND SAY:**

1. Plaintiff's counsel retained me in the *Brown and Singer v. CIBC* case pending in the Ontario Superior Court of Justice to act as a statistical consultant. I have previously submitted an affidavit in this case dated April 23, 2010. I have been asked to prepare a supplemental affidavit to provide clarification and to expand on my earlier affidavit regarding my analysis and proposed methodology of the use of random sampling and an aggregate assessment of damages. My resume is attached hereto as Exhibit A. This affidavit is intended to be read in conjunction with my first affidavit.

2. In addition to the conclusions I stated in paragraph 4 of my first affidavit, it is my opinion that statistically sound and scientifically acceptable random sampling methods could also be applied in this case to estimate the percentage and total number of class members who do not perform managerial functions and would be eligible for overtime pay.

### **Random Sampling and Projecting to Population**

3. The *Reference Manual on Scientific Evidence* states, "... probability sampling ensures that, within the limits of chance, the sample will be representative of the sampling frame...."<sup>1</sup> Further, "[t]he use of probability sampling techniques maximizes the representativeness of the survey results and the ability to assess the accuracy of the estimates obtained from the survey."<sup>2</sup> In a probability sampling or random sampling the persons included are selected blindly, and everyone has the same chance of being selected for inclusion in the sample. Therefore it is likely that the sample will be representative of the population. An excellent discussion of random sampling and surveys is presented in *Reference Manual on Scientific Evidence*, Second Edition, published by the Federal Judicial Center, in the chapter on "Reference Guide on Survey Research", attached as Exhibit B. Also, I have attached page 101, referred to in footnote 1, attached as Exhibit C.

4. For example, determinations of average hours worked per week, based on a random sample, are expected to agree with the corresponding population value. The theory of probability allows the specification of how far the population values might differ from their sample estimates, and therefore the accuracy of the estimate can be calculated. Statisticians specify the accuracy of estimates in terms of a *confidence interval*. The glossary at the end of this affidavit gives a discussion of the basic concepts in random sampling. The estimate of average overtime hours worked per week by class members is computed as a *ratio estimate*, by taking the ratio of the total hours of unpaid

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<sup>1</sup> *Reference Manual on Scientific Evidence*, 2<sup>nd</sup> Edition, page 101.

<sup>2</sup> *Reference Manual on Scientific Evidence*, 2<sup>nd</sup> Edition, page 242.

overtime worked for each person in the sample, for all the weeks they worked during the liability period, divided by the total number of weeks worked during the liability period. This formula gives the weighted average of the average number hours overtime per week for each sample member, where the weights are the number of weeks they worked. For example, consider the following simple hypothetical: Person 1 works 10 overtime hours per week for 3 weeks, and Person 2 works 20 overtime hours for 1 week.

	<u>OT hrs/wk</u>	<u>Weeks Worked</u>	<u>Total OT Hours</u>
Person 1	10	3	30
Person 2	20	1	20
Total		4	50

Then ratio estimate of average hours overtime per week is:

$$\begin{aligned}
 \text{Average Hours overtime per week} &= (\text{Total OT Hours})/(\text{Total Weeks Worked}) \\
 &= 50/4 \\
 &= 12.5 \text{ OT hrs/wk}
 \end{aligned}$$

5. Calculating total aggregate damages for the class does not involve an assumption the defendant is liable to pay damages to all class members. In *Bell v. Farmers*, sampling showed that defendant was not liable to pay damages to all class members. Some of the sampled class members indicated that they had not worked any unpaid overtime. Data about these class members (i.e. "0" overtime) was factored into the statistical calculations of aggregate damages, yielding an estimate that reflected the fact that not all class members were entitled to compensation.

6. Similarly, the fact that a total class damage figure has been calculated does not necessitate that all class members receive damages. In *Bell v. Farmers*, sampled class members who indicated no unpaid overtime received no damages. Likewise, non-sampled class members who indicated no unpaid overtime on their claims forms also received no damages. The decision in *Bell* is attached as Exhibit E.

7. If the court finds that the percentage of the sample misclassified is not 0 or 100%, then the damage calculation can be adjusted accordingly. This is accomplished in

the computation of class wide aggregate damages by simply assigning 0 overtime hours to any person in the sample who is properly classified. Alternatively, if the court were to find that certain employees were performing primarily exempt duties in some weeks and non-exempt duties in others, then in the calculation of damages the value for number of overtime hours worked would be set to 0 in the weeks when a class member performed primarily exempt duties.

8. For example, if the court determined that 80% of the sample were misclassified as exempt from overtime pay, then it could be inferred that 80% of the class were misclassified. The number of persons in the class who are misclassified would then be estimated simply as 80% of the total number of persons in the class. By assigning 0 overtime hours to those in the sample who were performing primarily exempt duties, in the calculation of average overtime hours for the sample, the estimate of total aggregate damages would be appropriately diminished to account for the sample results that 80% of the sample were misclassified and 20% were properly classified.

#### **Additional Examples of Wage and Hour Cases Where Sampling was Used**

9. In my first affidavit I listed several cases litigated in the United States where random sampling was used to gather representative evidence, in which I served as a statistical expert. I attach these as Exhibits D and E. The following are some additional cases.

10. In *Pfizenmeier vs. Citifinancial Management Corporation*, County of San Diego Central, Superior Court of California, No. 37-2008-00084289-CU-OE-CTL the court certified a class of Branch Managers working in California branches of Citifinancial who were classified as exempt from overtime pay. In its order,<sup>3</sup> the court stated "... it is possible to determine whether the branch manager position is exempt based on, among other evidence, statistical sampling." A trial date has not yet been set as of the writing of this declaration.

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<sup>3</sup> Order issued April 16, 2010, page 2, signed by Stephen R. Denton. See Exhibit G

11. In *Chibber vs. Taco Bell Corp.* case pending in the County of San Diego Central, Superior Court of the State of California, No. GIC 870429 the court certified a class of Restaurant General Managers and Market Training Managers employed by Taco Bell Corp. in California who were classified as exempt from overtime pay. The court adopted random sampling as a procedure for selecting a representative group of witnesses, and stated "The first 25 randomly selected class members will comprise the representative group, and their testimony will be used by the Court and/or the jury to determine liability and, if necessary, damages."<sup>4</sup>

### **Possible Methodology**

12. In my first affidavit<sup>5</sup> I described a general sampling proposal that could be implemented in this case to obtain representative evidence regarding the percentage and the number of class members who were misclassified, and the consequent aggregate class wide damage amount. Counsel has asked me to provide a more detailed explanation of how such a random sampling proposal could be implemented.

13. I recommend that a two stage sample be implemented.<sup>6</sup> The first stage could be used to determine the percent and total number of class members exempt from overtime pay, and an estimate of average overtime hours worked. If necessary, an additional second sample could be taken to obtain estimates with a smaller margin of error.

14. I propose that an initial random sample of 25 class members be selected and designated as trial witnesses. These will be considered as a Representative Witness Group (RWG). The court will hear their testimony, along with other auxiliary evidence, and determine for each member of the RWG whether they were misclassified as exempt from overtime pay, and if so, the amount of unpaid overtime wages. These findings by the court for the RWG will then be projected to the entire class in order to estimate the proportion and number of the class who were misclassified, and to estimate the aggregate

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<sup>4</sup> Trial Order, dated October 28, 2010, page 6, lines 13-15. See Exhibit H.

<sup>5</sup> See paragraph 14.

<sup>6</sup> See paragraphs 6 and 7 on pages 9-10 of my first affidavit for discussion of two stage sampling.

classwide damage amount. Alternatively, it may be possible to gather the relevant information through a survey of these 25 class members, or through out of court examinations, avoiding the need to have them testify in court.

15. The class members included in the RWG can be selected by a simple procedure. Namely, create a list of all class members in an Excel spreadsheet, and append a column of random numbers to the spreadsheet. Then, sort the list by the values of the random numbers, thus creating a randomly ordered class list. To obtain a random sample of a specific size, say  $n$ , just take the first  $n$  class members on the list. If for some reason additional class members are required at a later time (e.g. if a second sample is needed), then simply continue down the list (in order) until the desired number are obtained.

16. The sampling proposal described above (except for sample size) was implemented successfully in the case of *Duran v. U.S. Bank*, No. 2001-035537, Superior Court of California, Alameda County, Northern Division.<sup>7</sup> In *Duran* the court simply selected its own random sample of 20 class members to testify at trial. The issue was whether the Defendant employer properly classified certain employees as exempt from overtime under the outside sales exemption rule. These class members were deposed, and then appeared as witnesses at trial. The court made a finding of liability, and determined the amount of damages in a Phase II proceeding.

17. The proposal I outlined in my earlier declaration<sup>8</sup> suggested a joint sampling plan conducted by both parties. However, if defendants do not want to participate in a joint plan, the above described proposal can still be implemented. The statistical theory applies whether defendants participate jointly in the sample selection or not. Ultimately, only the findings of fact found by the court for the sample of 25 will be necessary to make the statistical estimates of the percentage and total number of class members

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<sup>7</sup> *Duran v. U.S. Bank*, Superior Court of California, Alameda County, Case No. 2001-035537, Judgment Against U.S. Bank, and Statement of Decision for Phase II, both filed on May 20, 2009. Also, see Order Re: Statement of Decision for Phase I, filed on July 18, 2008. These are attached as Exhibit D.

<sup>8</sup> See paragraph 14 pages 6-7.

misclassified as exempt from overtime pay, and an estimate of consequent classwide damages.

18. The choice of sample size depends on the desired margin of error and the amount of resources available for implementing the sample plan. It is up to the user of the statistics (i.e. trier of fact) to decide on an acceptable confidence level and margin of error for estimating the percentage and total number of class members who were misclassified as exempt from overtime, and consequent unpaid overtime. Since larger sample sizes generally lead to a lower margin of error for a fixed level of confidence, the relation between sample size and margin of error is used to determine the sample size necessary to achieve a desired margin of error in the confidence interval.

19. As described above, I have proposed that a sample size of 25 be used in this case, at least initially for the estimating the percent of the class misclassified as exempt from overtime pay. I have suggested this number for the following reasons:

- a) The margin of error for estimating the proportion of class members misclassified will be relatively small, under the scenario where nearly all members of the RWG are determined to be properly classified, or the scenario where nearly all members of the RWG are determined to be misclassified as exempt from overtime pay.<sup>9</sup>
- b) A sample of 25 is consistent with the sample size of 20 that was successfully used in the *Duran v. U.S. Bank* case for determining liability and damages, and the sample size of 45 that was ordered by the court in the *Kastanos vs. Central Concrete*.<sup>10</sup> These sample sizes were considered to be manageable by the court.

20. The following table shows the lower bound in the 95% confidence interval for estimating the percentage of the class who are mis-classified, for possible sample sizes of 10, 20, and 30 RWGs, and possible results that might occur for the number of persons in the sample who are determined to be mis-classified. Each row of the table gives results for a different situation that might occur. Column (A) gives the sample size, 10, 20, or 30

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<sup>9</sup> See Table 1 below.

<sup>10</sup> A case pending in Superior Court of California, County of Alameda, Unlimited Jurisdiction. See Exhibit F.

RWGs. Column (B) gives a possible result for the number of persons mis-classified in the sample. Column (C) gives the best estimate for the percentage of class members who have been mis-classified, given the results in column (B). Finally, column (D) gives the lower bound of the 95% confidence interval for the percentage of class members mis-classified.

Table 1  
**Lower Bound of 95% Confidence Interval<sup>11</sup>**  
**For Estimating Percent Mis-Classified**  
 for Various Sample Sizes and Possible Results

(A)	(B)	(C)	(D)
Sample Size	Number Observed Mis-Class.	Estimate of % Mis-Class.	Margin of Error Lower Bound
10	10	100%	75.3%
10	9	90	61.9
10	8	80	50.5
10	7	70	40.2
20	20	100	86.6
20	19	95	79.4
20	18	90	73.2
20	17	85	67.0
20	16	80	61.9
20	15	75	55.7
30	30	100	91.8
30	28	93	82.5
30	26	87	74.2
30	25	83	70.1
30	24	80	66.0

### Second Stage Sampling

21. If the court finds defendant liable for damages due to unpaid overtime hours worked based on results from the first sample, an estimate of the average number of overtime hours worked per week, and consequent aggregate classwide damages, can be

<sup>11</sup> The calculation gives exact lower bound of 95% confidence interval, for sampling from a population of size 97.

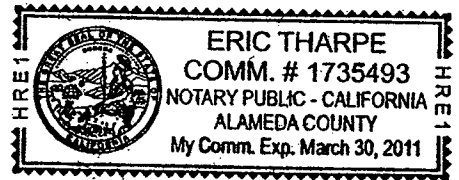
computed. Associated with the estimate will be the margin of error for the 95% confidence interval for estimating the average overtime hours per week. If the court determines that a smaller margin of error is necessary, then the size of a second (additional) sample can be determined for achieving that specified margin of error.<sup>12</sup>

SWORN BEFORE ME )  
At the City of Berkeley in )  
the State of California, in )  
the United States of America )  
this 12<sup>th</sup> day of January 2011 )  
\_\_\_\_\_ )  
\_\_\_\_\_ )  
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*Richard Drogin*  
RICHARD DROGIN

State of California, County of Alameda  
Subscribed and sworn to (or affirmed) before me on  
this 12 day of Jan, 2002011  
by Richard Drogin  
proved to me on the basis of satisfactory evidence  
to be the person(s) who appeared before me.

*[Signature]*



<sup>12</sup> This is the same as the procedure used in the *Bell* case.