

1 BRINK'S, INC.

1792

2 v.

80 Civ. 6975

3 THE CITY OF NEW YORK

4 June 1, 1982

9:30 a.m.

5
6 (Trial resumed)

7 (In open court - jury present)

8 THE COURT: All right, proceed, please.

9 MR. GLEN: The City calls Dr. William

10 Fairley.

11 Where is Mr. Meister?

12 MR. DEUTSCH: Your Honor, he is downstairs.

13 Brink's has a motion addressed to the testimony of Dr.
14 Fairley which we would like to present.

15 THE COURT: Where is he?

16 MR. DEUTSCH: I'm sorry, Mr. Meister?

17 THE COURT: Who's presenting the motion? You?

18 MR. DEUTSCH: I am, your Honor.

19 THE COURT: Well, I'll hear you out of the
20 presence of the jury.

21 MR. DEUTSCH: Thank you, your Honor.

22 (In the robing room)

23 THE COURT: What's the point of submitting a
24 memorandum to me now? How am I going to look at it while
25 you're arguing your motion?

1
2 MR. DEUTSCH: Well, unfortunately, your Honor,
3 we drafted it over the weekend. We could not prepare this
4 before we had heard Mr. Donoghue's testimony.

5 The point of the motion is to exclude Dr.
6 Fairley's testimony as not probative and as likely to mislead
7 the jury because many factors which are nonculpable, which
8 may have credibility or be the sole cause of the revenue
9 differences between the Brink's and CDC period have not
10 been excluded by the City's expert in parking.

11 The next witness is a statistician, and the City
12 has indicated no reason to believe that he can exclude those
13 nonculpable factors.

14 The authority on which we base this is the
15 Herman Schwabe, Inc. v. United Shoe Machinery case, the 1962
16 decision of Judge Friendly, a copy of which I am giving
17 your Honor now.

18 THE COURT: How do you expect me to pass upon
19 this at this point when the witness is about to be sworn?
20 What do I do, take time out to look up your authorities?

21 Why wasn't this presented earlier?

22 MR. DEUTSCH: Because we hadn't heard the
23 testimony of Mr. Donoghue until Friday, your Honor. We
24 expected, indeed that I believe that the City said in its
25 opening statement or said in the robing room that Mr.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1794

prlt

Donoghue would exclude all these nonculpable factors, leaving theft as the only reasonable explanation for this revenue difference. Instead, he did not. He explicitly said that he failed to consider important factors which could have contributed to part or all of this revenue differential, including the gasoline shortage, including the PATH strike, including hooding of meters, replacement of meters by construction, many factors which he himself stated had impact on revenues.

If the expert had so excluded, this motion would not have been necessary. But since he didn't, since he left this open, since he has not said -- and I believe the City has presented no evidence to show that these factors may have not been the sole cause of the revenue differential between Brink's and CDC, this motion is necessary.

What we ask the Court to do, your Honor, is to ask Dr. Fairley to make an offer -- or rather, to ask the City to make an offer of proof prior to the jury hearing this.

The Herman Schwabe case essentially says that where these factors havenot been excluded and where periods have not been shown to be comparable, then an expert's testimony for injury and damages is the subject of prejudicial overweight, is given much too much credence by the

1
2 jury and has a tendency to delude the jury in thinking
3 that both injuries and damages can be proved with
4 mathematical exactness.

5 THE COURT: Well, isn't it up to the jury to
6 decide the validity of his conclusion, taking into account
7 whether or not he's excluded or included certain factors?

8 MR. DEUTSCH: Well, that's not what the
9 Schwabe case says, your Honor. That's not what the leading
10 authority on the Circuit case says.

11 MR. GLEN: May I be heard, your Honor?

12 THE COURT: Yes.

13 MR. GLEN: As regards the factors, each one
14 that was mentioned by Mr. Deutsch this morning was in fact
15 testified to by Mr. Donoghue. He stated that in his
16 experience around the country the gas shortage had no effect
17 on parking meters. He was cross examined on whether he took
18 into account the gas shortage. He said yes, I took it
19 into account because in my experience it has no effect.

20 Mr. Deutsch may not agree with that statement,
21 and he can call an expert to testify that it would make a
22 difference. But he did take it into account.

23 MR. DEUTSCH: I disagree, your Honor.

24 If I may just interrupt on that one point.

25 Mr. Donoghue said, at Page 1704 of the

1 prlt

1796

2 transcript, that he admitted that he made not attempt to
3 quantify what the effect of gasoline shortage was on
4 parking.

5 MR. GLEN: He stated, your Honor -- I don't
6 have the exact cite --

7 MR. DEUTSCH: I have the transcript.

8 MR. GLEN: -- in his opinion, he had been in
9 West New York, New Jersey, that in his opinion, he expected
10 that it would have a difference but that it had no
11 difference. He made no attempt to quantify it. His
12 opinion was that it had no effect, but if it did have an
13 effect, he did not attempt to quantify it. I don't see why
14 the jury can't take that testimony as to what it's worth.

15 As regards the weather, he said the weather
16 can make a difference. He said that he had not examined
17 the weather reports and regulations.

18 Mr. Fairley has examined the weather regulations
19 and the effect of this. He'll make a statement to this
20 effect.

21 As regards strikes, Mr. Donoghue testified
22 that, in his opinion, a strike on the PATH service might
23 have a small effect or an insignificant effect.

24 MR. DEUTSCH: I believe that distorts the
25 witness' testimony.

1 prlt

1797

2 MR. GLEN: Might have a small effect on the meter
3 revenue situation. That's absolutely true. We don't
4 state that there is no factor other than theft that could
5 have one dollar's difference in this situation. Our
6 experts -- one has testified, one will testify -- that the
7 most reasonable explanation is theft and that the explana-
8 tion for the vast majority of the differential is theft.

9 More than that, I don't know how we can be
10 expected to prove it.

11 MR. DEUTSCH: Your Honor, Mr. Fairley is a
12 statistician, not an expert on parking, unless Mr. Glen
13 would like to state otherwise.

14 MR. GLEN: No, he's not an expert on parking.

15 MR. DEUTSCH: Therefore, the expert on parking
16 said it would be definitely important for someone -- then
17 I assume he meant himself, someone who knows parking --
18 to analyze this effect, and he had not been provided with
19 any of this information, and he refused to discount that
20 as a factor in this situation.

21 He admitted that the PATH strike, which covers
22 the CDC period, would increase revenues during the CDC
23 period. He admitted, among other things, that the increase
24 in the summonses between the Brink's and CDC period of
25 approximately 12 percent would be consistent with an increase

1
2 in parking during the same period of time.

3 All this goes to show that the City has not
4 met its initial burden, which is to exclude nonculpable
5 factors, before putting on an expert with charts, with
6 figures and with the impact that that inevitably has on a
7 jury.

8 MR. GLEN: Your Honor, if I may, the summonses
9 are a perfect example of the differences between Mr.
10 Deutsch and myself.

11 On direct examination our witness stated yes,
12 there was an increase in summonses, and in his expert
13 opinion an increase of that magnitude would not be perceived
14 by parkers as an increase in an enforcement campaign and,
15 therefore, in his expert opinion, would have no effect on
16 the meter revenues generated.

17 On cross examination he said: Well, of course
18 I can't exclude increases in summonses as having some
19 effect. But isn't that precisely the fact question that is
20 before the jury in this case?

21 MR. DEUTSCH: Again, your Honor, I think Mr.
22 Glen misses the point.

23 I don't wish to concentrate this argument on
24 the idea of summonses. But what Mr. Donoghue said in
25 cross examination was an increase of 20,000 summonses per

1 pelr

1799

2 month between the Brink's and the CDC period, an increase
3 of approximately 12 percent, was consistent with an increase
4 in parking, not an increase in enforcement, not an increase
5 in the public's perception of enforcement, but an increase
6 of people parking at meters.

7 The clear inference there is an increase in the
8 coins being put into meters, an increase in revenue.

9 Again, all I'm saying, your Honor, is that the
10 City has not excluded to date many important nonculpable
11 factors which the prior witness has testified were important
12 and should be taken into consideration in meter
13 differentials.

14 What we ask is that an offer of proof be made
15 as to Mr. Fairley in this situation so that it can be
16 determined whether he can exclude these nonculpable factors.

17 If he can, if his testimony does, then it can
18 go before the jury and the Schwabe situation is not present.
19 If he cannot -- and there are a number of these factors --
20 then we believe, your Honor, that the testimony should not
21 go before the jury and it should be excluded. -

22 THE COURT: Well, I understand his testimony is
23 being offered only with respect to statistics? -

24 MR. GLEN: Yes.

25 MR. DEUTSCH: He is not a parking expert.

1
2 MR. GLEN: He is only testifying as to statis-
3 tical inferences that he believes may properly be drawn from
4 the data that has been supplied to him by the City,
5 including -- on two issues -- data regarding changes, if
6 any, in the snow emergency days -- I guess that's the only
7 one that is not numerical data.

8 If I may say, Mr. Deutsch appears to have the
9 view that if the City were to put on an expert who states
10 nothing in the world could account for 100 percent of the
11 shortfall but theft, then I could put on a statistician.
12 But if I put on a witness that says: Given the complexity
13 of the New York City parking meter system and what went on
14 here, some part other than 100 percent might be attributable
15 to something else, then I can't put on a statistician. I
16 find that a remarkable position to take.

17 MR. DEUTSCH: I think that's an erroneous
18 statement.

19 The previous witness, the expert in parking,
20 provided by the City, presented a three-page list of factors
21 that, in effect, can affect parking meter revenue.

22 In fact, his testimony on the subject took almost
23 six hours, and he listed -- I do not recall, but it must
24 have been twenty factors. He said a number of them he
25 never considered; he said a number of them were important

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

prlt
1801
and he never considered them, and he admitted that several
of those factors would have had an impact. He did not
quantify the impact, but he said a significant impact,
if I'm not incorrect, on the meter revenue differentials.

THE COURT: What is your offer of proof with
respect to this witness?

(Continued on the next page)

la a.m.

2 MR. GLEN: Dr. Fairley will testify, your
3 Honor, that he made certain arithmetical calculations
4 from data provided which yielded to him a series of
5 figures representing the amounts of monies delivered
6 to the City in each of the two ten-month periods. He
7 has them two different ways.

8 THE COURT: Are they the same two ten-month
9 periods that the prior witness testified to?

10 MR. GLEN: Yes, your Honor, the same two
11 that the prior witness testified to.

12 He has then two ways: One is the amounts
13 delivered by each of the private contractors, the other
14 is the amounts delivered by the private contractors
15 together with the City's own people.

16 He will testify that, in his opinion, comparing
17 the amounts delivered by the contractors, not the amounts
18 delivered by the contractors plus, are the statistically
19 significant amounts.

20 He then will testify that through a statistical
21 modeling process -- before we get to the modeling.

22 He will testify that he analyzed the actual
23 collections by each private collector per meter per
24 day, taking into account, therefore, a great many factors
25 that affect the number of meters on the streets, the

1 2 PRjw

2 state of repair of the meters, differences in collection
3 practices, differences in times between collections,
4 all of which he eliminates, according to his testimony,
5 by measuring the actual amounts gathered in by area
6 over the number of meters in each collection period --
7 the actual periods between collections -- that are actually
8 operating and collected on the streets.

9 That takes into account about 90 percent
10 of the variables.

11 THE COURT: 90 percent of what?

12 MR. GLEN: The variables, all of his retimings
13 up and down and the -- the Court may recall that a big
14 point was made that in bad weather, Brink's can't collect
15 as frequently. True. But since we measure it by the
16 days between collections as against the meters on the
17 street, that factor falls out, he's going to testify
18 to that.

19 He then will testify that in his opinion
20 he is able to normalize the apparent seasonal variations
21 and come to certain statistical conclusions as to what,
22 if any, seasonal variations are applicable in collections
23 in the New York City parking meter plant. He then
24 compares that with the actual data and comes up with
25 seasonally -- what he calls deseasonalized or normal

1 3 PRjw

2 variations from one month to the next.

3 He then will testify that looking at the
4 seasonal variations and looking at the per meter rates,
5 there is a difference of approximately \$1.4 million
6 which can be explained on a hypothesis of theft by
7 Brink's employees and not theft by the CDC employees
8 during the applicable period.

9 But he cannot say, just like Donoghue can't
10 say, for example, that on one particular day in June
11 or May or September of some year a meter wasn't up or
12 down for some reason. There are hundreds of possible
13 reasons in a city of this size.

14 If we have to prove that every single dollar
15 of the difference was directly attributable to theft
16 by a particular Brink's employee, I tell the Court candidly
17 I can't prove that. I can only prove that statistically,
18 taking into account the variables that Mr. Donoghue
19 said were significant, we can demonstrate that theft is
20 an independently proved, in this case, reason for that
21 amount of this disappearance.

22 May I add just one point, your Honor?

23 The gasoline shortage. Mr. Donoghue believes
24 that in the New York City situation, the gasoline shortage
25 did not have a significant effect. Mr. Donoghue didn't

1 4 PRjw

2 study that in New York, and there are no facts or figures
3 on gas shortage compared with actual parking at meters.
4 There are some figures on bridge crossings and things.

5 I'm sure Mr. Deutsch will bring them in because
6 they happen to cut his way. The result of all that
7 may be that the jury will find that some portion of
8 the June 1979 reduction is in fact attributable to gas
9 shortage. I don't see why that does anything but reduce
10 the amount of damages in the case.

11 THE COURT: In other words, what you are
12 saying is the jury may determine for itself in the event
13 it finds damage to reduce the amount of damage taking
14 into account these other factors.

15 MR. GLEN: Yes.

16 THE COURT: And not attributing the entire
17 claimed loss to thefts?

18 MR. GLEN: And conversely, your Honor, we
19 also -- Dr. Fairley will also opine that some theft
20 in excess of the \$1.4 can be attributable to theft.

21 MR. DEUTSCH: Your Honor, May I just respond
22 to Mr. Glen?

23 THE COURT: It's twenty minutes from the
24 time we are supposed to start and here this motion is
25 made just as we are about to start. I'll have to give

1 5 PRjw

2 you the time, too.

3 Let's get started, please.

4 MR. DEUTSCH: Your Honor, very quickly,
5 what we are having now is a witness who is going to
6 attempt to quantify theft. He's going to put up figures
7 on a board, charts, numbers, exactitude, is clearly
8 what this witness is being presented for.

9 What we have in the previous witness is a
10 man who didn't analyze, who didn't quantify, who didn't
11 exclude, who didn't put any number on significant environ-
12 mental factors that affected both these ten-month periods.
13 The gasoline shortage which affected the first four
14 months of the Brink's periods and the Path strike which
15 increases revenues, as the prior witness said, during
16 the CDC's first three month period, June through September.

17 In other words, what we have is Mr. Donoghue's
18 belief which the jury can only speculate upon, compared
19 to Mr. Fairley's exact figures.

20 Now, what Mr. Glen is going to suggest the
21 jury can do is speculate. There is no evidence in the
22 case, they have presented no evidence to determine what
23 effect these significant factors have on the gasoline --
24 I'm sorry, on the revenue difference. I think that's
25 what the Herman Schwabe case is addressed to.

2 A jury should not be permitted to speculate
3 from an expert's figures when those factors which are
4 significantly contributory to a difference in revenues
5 and which are nonculpable have not been excluded to
6 a reasonable extent.

7 THE COURT: Well, of course, in a sense
8 you are arguing that the City has to submit evidence
9 that's fairly precise. This is not the law in this
10 type of case.

11 I think the Bigelow case clearly covers the
12 issues of damages here. I think it's asking for the
13 impossible to establish dollar for dollar any alleged
14 theft here.

15 I believe that the City is compelled -- and
16 it is a matter of necessity -- to rely upon certain
17 testimony, otherwise you would have the City put in
18 the position of offering direct evidence with respect
19 to each item of theft extending over a considerable
20 period of time. That's an utterly unrealistic position.

21 I understand you are arguing from a different
22 point of view, contending that this theft now becomes
23 speculative.

24 MR. DEUTSCH: Well, it's that, your Honor,
25 plus the fact in the Bigelow case, which your Honor

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

7 PRjw 1808

cited, the Court specifically said the decline in revenue and profits were shown not to be attributable to other causes. And indeed in Herman Schwabe, the Court contrasted Bigelow and that line of Supreme Court cases with the situation before the Court there were there was no such exclusion.

THE COURT: This motion having been presented as the witness is about to testify, the Court has not had an opportunity to look at the Schwabe case. The jury has been waiting now for almost a half hour. I'm not going to interfere with the trial going forward. The testimony will be taken subject to a motion to strike.

MR. DEUTSCH: Fine, your Honor.

MR. GLEN: I'll submit your Honor a copy of the cases.

MR. TUOZZO: Your Honor, might we request an opportunity to submit a response to the Brink's motion?

THE COURT: If you want to submit anything in addition to what's been said, you may.

MR. GLEN: Well, I would like to read the case. I'm not familiar with the Schwabe case.

MR. DEUTSCH: I'll provide it to you. I'm afraid I left it out in my briefcase.

(In open court)

1809

1 8 PRjw

2 THE COURT: All right, call the witness,
3 please.

4 MR. GLEN: Dr. Fairley, please.

5 W I L L I A M V . F A I R L E Y , called
6 as a witness, being first duly sworn, testified
7 as follows:

XXX

8 DIRECT EXAMINATION

9 BY MR. GLEN:

10 Q Dr. Fairley, could you briefly state for
11 the Court and jury your education, starting with the
12 most recently acquired degree?

13 A Yes.

14 I have a Ph.D. in statistics from the Depart-
15 ment of Statistics, Harvard University. I have a BA
16 from Swarthmore College.

17 Q When did you obtain your Ph.D. in statistics,
18 sir?

19 A 1968.

20 Q Would you trace your history of employment
21 from 1968 to the present, please?

22 A Yes.

23 I worked as a statistician for the New York
24 City -- for the First National City Bank of New York.
25 I worked as a statistician for the New York City Rand

1 9 PRjw

Fairley - direct

2 Institute, and I taught business administration at New
3 York City University. These were in the years 1978
4 through 1970.

5 In 1970 to 1976 I was an assistant and associate
6 professor of statistics in the Public Policy Program
7 of the Kennedy School of Government at Harvard.

8 1976 through 1979 I was an economist and
9 statistician with the Massachusetts Division of Insurance,
10 working for the Commissioner of Insurance on rate regulation
11 issues.

12 And since 1979 I have been the principal
13 and the president of a research and consulting firm,
14 Analysis and Inference Incorporated, in Boston. We
15 do economic, financial and statistical analyses for
16 government agencies, private firms and nonprivate groups.

17 Q Dr. Fairley, were you and your firm retained
18 by the City of New York to make any studies in connection
19 with this litigation?

20 A Yes, we were.

21 Q Did the studies -- what field did the studies
22 concern themselves with?

23 A It was concerned with the explanatory factors
24 involved in parking meter revenue collections and deliveries
25 in the City of New York.

1811

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

10PRjw

Fairley - direct

Q Over a particular period of time, sir?

A We looked, focused our analysis on the two periods of time during which the meters were collected by the contractor Brink's and by the contractor Coin Services Corporation.

Q Now, prior to your involvement with this analysis, had you personally ever had any experience in the field of parking meter regulation, parking meter revenue generation and any similar area?

A No, I had not.

endtlb

(Continued on next page)

1 RMjw Fairley - direct

1812

2 Q And had your firm, Analysis and Inference,
3 ever conducted any investigations into the area of parking
4 meter revenue generation or anything similar to that?

5 A No, it had not.

6 Q Were you supplied with any data by the City
7 of New York upon which you and your firm made your analysis?

8 A Yes.

9 Q Would you state to the Court and jury what
10 data you were supplied?

11 A We were supplied with a variety of data.
12 The first data we were supplied with was data on the
13 actual collections by day by Brink's and by CDC over
14 the period June 1979 through March of 1981.

15 Q In what form was that data supplied, sir?

16 A It was supplied to us in two forms, one in
17 the form of a computer tape containing the entries for
18 these collections and also, I should add, the dates
19 of the collections, the number of meters collected,
20 and the second form was in the form of the actual cash
21 folio sheets from the records of the New York City parking
22 meter division, giving by hand the entries on each day
23 for the collections, and this is by area.

24 Q Did you personally or did you cause someone
25 else -- strike that.

1 2 RMjw

Fairley - direct

1813

2 Did your firm cause the information from
3 these two sources, the computer tapes supplied by the
4 City and the actual folio sheets, to be entered into
5 a computer pursuant to a program designed by your company?

6 A Yes, we did.

7 Q Was a data base obtained from the computer
8 work done on the City computer tapes on the actual folio
9 sheets?

10 A Yes, it was obtained.

11 Q I show you Defendant City Exhibit FC for
12 identification and ask you if this is a printout of
13 the data base obtained by your company from the two
14 elements of data that you have described were supplied
15 to you by the City?

16 A Yes, this is the data base.

17 Q Prior to the beginning of trial a copy of
18 this data base was given to counsel for Brink's and
19 counsel for Brink's and the City entered into a stipulation
20 which as it pertains to this particular document reads
21 as follows:

22 "The data on the computer used by the City
23 accurately reflects the data recorded in the City Parking
24 Meter Division's daily folio records, showing the area,
25 date of collection, number of meters collected, the

1 3 RMjw

Fairley - direct

2 number of calendar days between the current collection
3 and the last previous collection and the revenues received
4 by the City from (A) each collection made by employees
5 of Brink's during the period June 1, 1979 through March
6 31, 1980 and (B) each collection made by employees of
7 CDC during the period June 1, 1980 through March 30,
8 1981 except (1) all collections of Area 1A were made
9 solely by City employees, and, (2) seven collections
10 made jointly by the City and CDC."

11 Based upon the stipulation and the testimony
12 of this witness, I move the admission of the printout
13 of the data base.

14 THE COURT: Is that based on the exhibit
15 as to which the stipulation was entered into?

16 MR. GLEN: This is a copy of the exhibit
17 on which the stipulation was entered.

18 MR. MEISTER: Subject to the matter brought
19 up in the robing room, we have a continuing objection.
20 We have no separate objection.

21 MR. CLYDE: I don't think any of the third-
22 party defendants are a party to the stipulation. We
23 have never seen the document. We object to it being
24 admitted as to the third-party defendants.

25 MR. GLEN: Your Honor, it is not moved in

1 4 RMjw Fairley - direct 1815
2 evidence against the third-party defendants by the City.

3 MR. MEISTER: Your Honor, I would point
4 out that the document is merely a restatement of the
5 document already in evidence as Exhibit O, the revenue
6 sheets, and for that reason Brink's --

7 THE COURT: It is a duplicate of the document
8 already in evidence?

9 MR. MEISTER: It is a codification and a
10 rearrangement of that data for reasons which I presume
11 the witness will explain, but the data in here was checked
12 by our people and is identical to the data in City Exhibit
13 O. It is admissible, therefore, against all parties,
14 under 1006.

15 MR. GLEN: An analogous body of data arranged
16 along different criteria but containing the same raw
17 data has been, by stipulation, prepared by Brink's for
18 use to be made --

19 THE COURT: The basic data is the same?

20 MR. GLEN: Yes, but this runs in a particular
21 form that will enable Dr. Fairley to make certain statements.
22 Brink's has a run in a different form and we stipulated
23 the accuracy of that run.

24 MR. MEISTER: We did provide our run to
25 some of the third-party defendants.

1 5 RMjw

Fairley - direct

1816

2 THE COURT: To some of them?

3 MR. MEISTER: To the ones who requested
4 it.

5 MR. SCHNEIDER: Well, we didn't know anything
6 about it.

7 THE COURT: Make copies available to those
8 who did not receive it previously.

9 (Defendant Exhibit FC received
10 in evidence)

11 MR. PERROTTA: Is that against all parties,
12 your Honor?

13 THE COURT: Yes.

14 BY MR. GLEN:

15 Q Did you or your company make any calculation
16 as to the actual revenues delivered to the City of New
17 York during the period June 1979 through March of 1980
18 by the Brink's collectors?

19 A Yes, we did.

20 Q Did you make a calculation as to the actual
21 amounts of revenue delivered to the City of New York
22 during the period June 1980 through March 1981 by the
23 CDC collectors?

24 A Yes, we did.

25 Q Did you also make a calculation of the total

1 6 RMjw Fairley - direct 1817
2 revenue delivered to the City of New York between the
3 period June 1979 and March 1980 by Brink's collectors
4 and City collectors?

5 A Yes, we did.

6 Q Did you make a similar calculation of total
7 revenues delivered for the period June 1980 through
8 March 1981 by CDC collectors and City collectors?

9 A Yes.

10 Q I show you Defendant City Exhibit FA in evidence
11 subject to connection, and ask if the figures in Columns
12 1 and 2 on this document represent the total collections
13 delivered to the City on a month by month basis during
14 the Brink's period of June 1979 through March 1980,
15 and the third column represents the total revenues to
16 the City of New York during the CDC comparable period,
17 June '80 through March '81?

18 A Yes, it does.

19 Q From what source did you obtain these figures?

20 A These figures were obtained from the cash
21 folio sheets or equivalently from the revenue tape under
22 which the revenue figures from the cash folio sheets
23 were placed.

24 MR. GLEN: I now move document FA in evidence,
25 your Honor.

7 RMjw

Fairley - direct

1818

2 MR. MEISTER: Voir dire, your Honor?

3 THE COURT: Yes.

4 VOIR DIRE EXAMINATION

5 BY MR. MEISTER:

6 Q Did you check the arithmetic, Dr. Fairley,
7 for the months listed in Exhibit FA?

8 A Yes.

9 Q You did, sir? Sir, I represented to you
10 that we checked the arithmetic and found that of the
11 20 months listed there there are arithmetic errors in
12 eight. Did you find that, in accordance with what you
13 did?

14 A No.

15 Q If I were to hand you, sir, a calculator
16 and the City revenue sheets from which this exhibit,
17 you say, was prepared and give you the months in which
18 we find differences, would you be willing to add them
19 and compare them?

20 A Yes.

21 MR. GLEN: I would suggest this is more in
22 the nature of cross examination, your Honor.

23 MR. MEISTER: Your Honor, I think it goes
24 to the accuracy of the document. The document was admitted
25 previously subject to someone showing that it was accurate

1819

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

8 RMjw Fairley - direct

and we are suggesting that it is inaccurate in eight of twenty months listed there.

THE COURT: I will allow the examination now.

Q Doctor, I hand you a calculator --

A I have one. Thank you.

Q I hand you the City daily revenue records, Exhibit O in evidence, and I would ask that you add the months of July, 1979, August 1979, November 1979, February 1980, July 1980, August 1980, September 1980, and March 1981.

MR. GLEN: Your Honor, may we have a very brief side bar?

THE COURT: Well, you know, these side bars are beginning to interfere with the trial, but if you represent it is important --

MR. GLEN: May I have 30 seconds to have a brief discussion with counsel?

THE COURT: All right. If you think the side bar is essential, I will grant it.

(At the side bar)

MR. MEISTER: These are the correct figures here. Counsel inquired what the magnitude of difference was in our additions, which I say we checked twice yesterday.

1 9 RMjw

Fairley - direct

1820

2 over the weekend, and our additions show in the aggregate
3 \$4,659 and some pennies, which are understated in the
4 Brink's period, and in the interest of accuracy, approxi-
5 mately \$43,000 which curiously enough is understated
6 in the CDC period.

7 I know that sounds contrary to my client's
8 interest, but all exhibits are prepared --

9 THE COURT: I think that more properly goes
10 to cross examination.

11 MR. GLEN: I am sure Dr. Fairley will be
12 on the stand for a while and I will have him recalculate
13 it in the recess.

14 THE COURT: Do that on cross examination.

15 (In open court)

16 BY MR. GLEN:

17 Q Dr. Fairley, I am going to ask you to move
18 that stack of papers in front of you now for a short
19 period.

20 Dr. Fairley, I show you a piece of paper
21 marked Defendant City Exhibit FD for identification
22 and ask you whether the second -- did you prepare this
23 document?

24 A Yes.

25 Q You earlier testified that you not only calculated

1 10RMjw

Fairley - direct

1821

2 the total revenue delivered by Brink's and City collectors
3 in its period, and CDC and City collectors in its period,
4 but you also calculated the revenues delivered by
5 Brink's alone and by CDC alone.

6 Does this document indicate the calculations
7 of Brink's deliveries excluding City deliveries and
8 CDC excluding City deliveries?

9 A Yes..

10 MR. GLEN: I move the document, your Honor.

11 MR. MEISTER: I object. The amount of money
12 Brink's was sent out to collect without comparable collect
13 from the City in the same period, compared to the CDC
14 deliveries without the City collections is not a relevant
15 item. That was a substantial difference in the amounts
16 of City collections during that period.

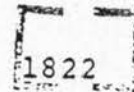
17 THE COURT: We are only concerned with the
18 monies collected by the private collectors.

19 MR. MEISTER: If it is used to show there
20 was a difference between the CDC collections and the
21 Brink's collections, unless that difference also reflects
22 the greater amount of monies delivered by the City collect
23 during the Brink's period, that difference is misleading
24 and inaccurate and irrelevant.

25 MR. GLEN: This witness will testify that

1 llRMjw

Fairley - direct



2 this is not misleading and inaccurate and in fact in
3 his expert opinion, it is more accurate.

4 THE COURT: If you think it is of significance,
5 I will allow you to submit the figures reflecting City
6 collections in a separate chart.

7 MR. GLEN: Chart FA is the totals, your
8 Honor, and Chart FD is the totals with the City collections
9 taken out.

10 THE COURT: The claim here is that the
11 Brink's employees were engaged in abstracting funds,
12 not that the City employees were. Let's not discuss
13 it further. I have ruled on it. I will allow you to
14 offer that evidence if you think it is significant or
15 relevant.

16 MR. MEISTER: My objection is overruled?

17 THE COURT: You always have an exception
18 to a ruling. You know that.

19 BY MR. GLEN:

20 Q Dr. Fairley, did you calculate arithmetically,
21 the total difference, according to your addition on
22 these, between money turned in to the City from both
23 sources, both from Brink's and from the City collections?

A Yes.

25 Q During the ten months of June 1979 through

1 12RMjw

Fairley - direct

1823

2 March 1980 and compare that with the total revenues
3 turned in by CDC and City collectors during the period
4 June '80 through March of 1981?

5 A Yes, I did.

6 Q What, if any, greater amount was turned in
7 during the CDC period than during the Brink's period?

8 THE COURT: It is a little late now, but
9 it would have been advisable for counsel, it seems to
10 me, representing all parties with respect to statistical
11 exhibits of this nature to have separate copies for
12 each member of the jury so that it could more readily
13 follow the figures.

14 If you are going to ask questions I suppose
15 you will give a summary of the difference, but it would
16 have been far more helpful to have a separate copy for
17 each member of the jury --

18 MR. GLEN: I will certainly have that, your
19 Honor --

20 THE COURT: It is a little late now.

21 MR. GLEN: I did not anticipate you would
22 allow me to do that.

23 THE COURT: I always allow counsel to do
24 that because the jurors can follow it more readily.

25 MR. GLEN: And I think some of our charts

1 13RMjw

Fairley - direct

1824

2 will be of use to the jury, your Honor.

3 THE WITNESS: I have an extra copy.

4 THE COURT: You don't have 12 extra copies.

5 Q Were you able, Dr. Fairley, to compute
6 arithmetically the total difference between CDC ten-
7 month collections and Brink's ten-month collections?

8 MR. MEISTER: Objection, unless it is clear
9 whether he means Brink's collected and CDC collections
10 or the total collections in those two periods.

11 MR. GLEN: I will rephrase the question.

12
13 (Continued on next page)
14
15
16
17
18
19
20
21
22
23
24
25

1 rmlt 1

Fairley-direct

2 Q Were you able to calculate the difference in
3 total revenues delivered to the City in the ten-month CDC
4 period we have been discussing and the ten-month Brink's
5 period?

6 A Yes.

7 Q According to your addition, what is that total
8 difference?

9 A \$980,358.

10 Q Were you also able to calculate the difference
11 between revenues turned over by CDC alone and revenues
12 turned over by Brink's alone?

13 A Yes.

14 Q What is the figure that represents that
15 difference?

16 MR. MEISTER: Same objection, your Honor.

17 THE COURT: I don't follow that. I thought
18 that was what the witness just testified to.

19 MR. GLEN: The first set of figures was total
20 revenues from both City and private collections. We
21 are now going to just Brink's against CDC.

22 THE COURT: I thought that was the \$980,000
23 figure.

24 MR. GLEN: No. That is the difference between
25 Brink's plus City and CDC plus City.

1 rmlt 2

Fairley-direct

2 THE COURT: That was the objection that Mr. -
3 Meister made a moment ago, that you were not including the
4 City.

5 MR. GLEN: I don't understand why he made
6 the objection. We had already put that evidence in.

7 However, now we would like to evaluate only
8 Brink's against CDC.

9 Q Did you make that calculation?

10 A Yes.

11 Q Comparing only Brink's against CDC without
12 the City collections, what is the difference?

13 MR. MEISTER: Objection, your Honor.

14 THE COURT: Overruled.

15 A The difference between the two contractors in
16 their regular collections, between these two ten-month
17 time periods, June 1979 to March 1980 for Brink's and
18 June '80 to March '81 for CDC, was \$1,212,084.

19 THE COURT: 1 million what?

20 THE WITNESS: 212,084 dollars.

21 THE COURT: I just want to make sure that
22 I understand it. Exhibit FA, Table 3, you say includes
23 the City collections?

24 THE WITNESS: Yes, it does.

25 THE COURT: And the difference there is

1 rmlt 3 Fairley-direct
2 \$980,358?

3 THE WITNESS: Yes.

4 THE COURT: If you eliminate the City
5 collections in each instance, then you say the difference
6 is \$1,212,084?

7 THE WITNESS: That's correct.

8 THE COURT: The other day I thought it was in
9 reverse, I must say.

10 All right.

11 Q Dr. Fairley, how did you select the two
12 comparison periods, June 1979 through March 1980 and June
13 1980 through March of 1981?

14 A The earliest month during which we could
15 examine data or CDC was June of 1980. I understand they
16 had begun their operations in May of 1980 and June was the
17 first month, however, in which a complete, normal operation
18 was sustained by the company, and we have looked at
19 frequency distributions of the days between collections
20 to find that that was similar to the distribution of days
21 between collections for February and March of 1980,
22 during which Brink's was still under contract with the City.

23 So June was the first normal month of operation
24 which I wanted to select together the revenue data for CDC.

25 We wanted to get as many months as possible

1 rmlt 4

Fairley-direct

2 data for both contractors. This meant that we could go
3 from June until March of 1981 for CDC and I began work on
4 this in August of 1981, and a little more data was
5 available at that time on CDC, but we cut it off at March
6 because we didn't want to pick up April and May of 1981
7 because those would then not be comparable to the peculiar
8 months of April and May of 1980.

9 I understand that Brink's contract was
10 suspended with the City on April 9th of 1980 and that
11 at that time the City itself began collections and then
12 at some subsequent date CDC and the City picked up and
13 eventually CDC took over completely.

14 So we have ten months of data from June of
15 1980 to March of 1981.

16 I want to take this same ten calendar months
17 for Brink's to compare that to CDC without the disturbing
18 influence of different seasonal factors in the comparison.

19 So I took the identical ten-month period from
20 June of 1979 to March of 1980 for Brink's and that defined
21 the two ten-month periods that were most comparable.

22 It might have been possible to gather data,
23 although the quality I was not certain of, for a prior
24 year of the Brink's contract. I did not do that.

25 First, the comparison in which we were

1 rmlt 5

Fairley-direct

2 interested, between Brink's and CDC, is most validly done
3 as close as you can get to the two companies. In fact,
4 the best time to look at the company differences due to
5 whatever causes in that period of transition from March
6 of 1980, which was the last month of regular collections
7 at Brink's and June of 1980 which was the first month of
8 regular collections by CDC.

9 I did not want to go back more than a year
10 from that transition period because we want to see
11 differences that can be most validly attributed to the
12 differences between the companies.

13 Q You just mentioned that you made certain
14 comparisons between the last full month of Brink's, March
15 of 1980, and the first full month of June, 1980; is that
16 correct?

17 A Yes.

18 Q Why did you do that?

19 A That is because those two months were nearest
20 in time, so that whatever other factors are influencing
21 the difference in performance of revenues delivered by the
22 two companies, the closest months are most apt to capture
23 simply the differences between the companies and not other
24 factors that might have been varying over time.

25 As we go away from those two months, in either

1 rmlt 6 Fairley-direct
2 direction, there are possibilities of trend factors or
3 special factors that would affect over a long period of
4 time and could create large cumulative differences between
5 the companies for other reasons.

6 Q In your experience as a statistician and in
7 your expert opinion, is the comparison of the most recent
8 time periods an optimal way, the best way to compare --
9 strike that.

10 In your expert opinion, is a comparison of the
11 two most recent periods the best way to check the effect
12 of a known change from one period to the next?

13 A Yes, it would be. It is the best we can do
14 here. Ideally, we would like to have an experiment in
15 which in March half of the meters in the City were randomly
16 assigned to Brink's and half of them randomly assigned to
17 CDC and then we could see how much money was delivered by
18 the two contractors, and there would be zero time difference
19 and zero opportunity for other factors to enter into it.

20 Given the situation in the real world, in which
21 you have to go over time from one contractor to the other,
22 this is the best we can do, to try to take the closest
23 months for comparison.

24 Q Did you conduct a second comparison of the
25 two closest months on either side?

1 rmlt 7 Fairley-direct

2 A Yes.

3 Q What was your reason for conducting that
4 comparison?

5 A Well, taking the single closest month is the
6 best from the point of view of controlling other factors.
7 However, it is only one month on each side and you might
8 be worried that there would be special factors in each
9 month.

10 You take two on each side and average those
11 and you get a stronger comparison in the terms of the amount
12 of data and experience you have to make the comparison.

13 Q The data you were comparing was the data
14 from the tables in evidence, the CDC collections and
15 the Brink's collections?

16 A Yes.

17 Q Did you prepare a chart to illustrate the
18 closest-month comparisons?

19 A Yes.

20 Q Does this chart illustrate the one month on one
21 month, two months on two months, three months on three
22 months comparisons?

23 A Yes, it does.

24 MR. MEISTER: I object to this being shown to
25 the jury before it is admitted in evidence, your Honor.

1 rmlt 8 Fairley-direct

2 THE COURT: Yes.

3 MR. MEISTER: And simply with the one right
4 behind it, your Honor.

5 Q Dr. Fairley, I show you a chart and ask if this
6 is the chart you prepared to illustrate the closest-month
7 comparisons, as you just defined them, on a month by month
8 basis.

9 A Yes.

10 MR. GLEN: I ask it be admitted in evidence,
11 your Honor.

12 VOIR DIRE EXAMINATION

13 BY MR. MEISTER:

14 Q Dr. Fairley, you just said that in comparing
15 one month and two month differences in a short period of
16 time on the factors, could influence the amount of
17 money collected, is that correct?

18 A Yes.

19 MR. MEISTER: I object on the grounds that
20 the witness' testimony doesn't exclude other factors.

21 THE COURT: You may cross examine as to other
22 factors.

23 MR. GLEN: I move the admission of the chart,
24 your Honor.

25 THE COURT: It may be received.

1 rmlt 9

Fairley-direct

2 (Defendant's Exhibit FH was received
3 in evidence)

4 THE COURT: These are charts based on Exhibits
5 FA and FD; is that correct?

6 THE WITNESS: Yes.

7 MR. MEISTER: Your Honor, I assume our
8 objections to FA and FB, which is still admitted subject
9 to motions to strike --

10 THE COURT: How many times do you have to
11 repeat that?

12 MR. MEISTER: I just want to make sure I
13 have a continuing objection.

14 THE COURT: Yes.

15 BY MR. GLEN:

16 Q Did you see the chart, Dr. Fairley?

17 A Yes.

18 Q Along the bottom of the chart there is a
19 straight line with the numbers 1 through 10.

20 What do those numbers represent?

21 A Those are the number of months for each of the
22 two contractors that are being compared, the closest
23 numbers of months.

24 For example, number 1, on the left, indicates
25 that we are comparing March of '80 to June of '80. That

1 rmlt 10 Fairley-direct

2 is one month for each contractor.

3 Number 2 indicates we are comparing February
4 and March of '80 with June and July of '80, and so on.

5 Finally, 10 indicates we are comparing the
6 entire ten-month period for each of the two contractors.

7 Q These figures represent total collections,
8 Brink's plus City, against total collections, CDC plus
9 City, is that correct?

10 A Yes.

11 Q Coming up the left-hand side of the chart,
12 you have a series of figures ranging from zero to 200.
13 What do they represent?

14 A That's \$200,000. That represents an average
15 monthly difference.

16 Q And the 200 represents 200,000 and the 100
17 represents \$100,000?

18 A Yes.

19 Q Drawing your attention to the dot that is at
20 the left-hand extremity of a line drawn on this chart,
21 what does that single dot represent?

22 A That represents total dollar difference in
23 revenues received by the City from any source between March
24 of '80 and June of '80.

25 Q And from reference to Exhibit FA, can you

1 rmlt 11 Fairley=direct

2 state the precise number of dollars that that dot represents
3 on this chart?

4 A I can do that by arithmetic. I happen to
5 know the answer, which is on another sheet, \$263,000.

6 Q That represents the difference between Brink's
7 March and CDC's June?

8 A That's correct.

9 Q Including the City collections?

10 A Yes.

11 Q The second dot from the left, over the figure
12 2, what does that dot represent?

13 A That represents the average monthly difference
14 between the two contractors for two months on either
15 side of the transition period, namely, February and March
16 average minus the June-July average.

17 Q Comparing Brink's March and February to
18 CDC's June and July, the average monthly differences,
19 roughly, how much?

20 A \$222,000.

21 Q In fact, just so that we all understand, if
22 you wanted to find out the total difference, comparing
23 Brink's March and February to CDC's June and July, you
24 would multiply --

25 MR. SCHNEIDER: I object at this point. May

1 rmlt 12

Fairley-direct

2 we have a question put instead of summing up?

3 THE COURT: Yes, put a question.

4 Q If one wished to ascertain, Dr. Fairley,
5 the total number of dollars turned in by CDC and the City
6 in June and July compared to the total number of dollars
7 turned in by Brink's and the City in February and March,
8 what arithmetical calculation would one perform from the
9 dollar value represented by each dot and the number on the
10 bottom of the chart?

11 A You would multiply the 222,000 by 2.

12 Q If we continue out this chart to the number 10,
13 there is a dot at the far right end of the line. What
14 does that dot represent, Dr. Fairley?

15 A That represents the average difference over
16 ten months of the differences between the two contractors
17 in revenues delivered, including that delivered by the
18 City.

19 Q Am I correct, Doctor, that if you multiply the
20 revenue represented by the dot at the far right by the
21 number 10, the ten months, you would come up with
22 precisely the figure on chart FA, the total difference in
23 the two comparison periods of \$980,000; is that correct?

24 A That's correct.

25 Q From this chart we have seen, have we not,

1 rmlt Fairley-direct

2 that even including --

3 MR. MEISTER: Objection.

4 Q -- the City revenues, to meet Mr. Meister's
5 objection, in the first comparison month, the last month
6 of Brink's against the first month of CDC, the difference
7 in revenues turned into the City exceeds \$260,000; is
8 that not true?

9 A Yes.

10 Q And that over the last two months of Brink's
11 compared with the first two months of CDC, the average is
12 something over \$220,000; is that your testimony?

13 A Yes.

14 (Continued on the next page)

15 End 2ba.m.

16

17

18

19

20

21

22

23

24

25

1 prlt

Fairley-direct

1838

2 Q Thank you, Dr. Fairley.

3 THE COURT: What do you say the average is
4 over the ten-month period?

5 THE WITNESS: 98,000 per month. It's the
6 \$980,000 total divided by ten.

7 THE COURT: And that includes the City
8 collections?

9 THE WITNESS: Including the City, yes.

10 Q But over the ten-month period if you exclude
11 the City collections as reflected on FD, what would be
12 the average per month?

13 MR. MEISTER: Same objection.

14 THE COURT: Overruled.

15 A 120,000 per month.

16 Q Now, Dr. Fairley, in addition to comparing
17 actual revenues turned in in each of the ten-month
18 periods and in addition to comparing actual revenues
19 turned in by each collector in each of the ten-month
20 periods, did you make another comparison between the
21 Brink's and the CDC collection periods?

22 A Yes.

23 Q And what basis did you choose for this third
24 comparison?

25 A I compared the revenues that were delivered

1 prlt

Fairley-direct

1839

2 per meter day by each of the contractors in each month.

3 Q Now, what do you mean by a meter day?

4 A Well, the idea is this:

5 If -- just to take a hypothetical example to
6 illustrate. If in one city 10,000 meters are collected
7 in one day, that's a 10,000-meter day. So that's
8 10,000 units for that meter to be filled up with coins.

9 Now, if on another day 20,000 meters were
10 collected, that would be 20,000 units for meters to be
11 filled up. If you knew nothing else, you would expect
12 that on the day on which 20,000-meter days were collected,
13 you'd get twice as much revenue as on the day when you
14 had 10,000.

15 So if you're comparing collection activity,
16 if you're comparing the performance of two contractors,
17 as we are here today, to be fair in that comparison, it's
18 important to say: Well, how many meter days of collection
19 opportunities did each contractor have?

20 That's also true for each month. If we are
21 interested, as we are, in seeing how the revenues varied
22 by month, we want to divide by the number of meter days.
23 If in, let's say, January, you had more crews go out,
24 it happened that there were more working days, if you had
25 fewer down meters, in general, per any reason, if there

prlt

Fairley-direct

1840

1
2 there were more meters on the street or if they collected
3 them over a long period of time -- maybe when they went
4 out in January the last collection in December had been
5 some time ago, so there had been more days elapsed, on
6 average, between the times the meters were collected.
7 Well, it's appropriate then to -- if you have more meter
8 days of opportunities collected in January -- to divide
9 that into the total revenues collected in January.

10 So you can get the performance in terms of how
11 well did they do for each meter day of opportunity that
12 they had.

13 That's the concept of the meter day.

14 Q Now, let me see if I understand this correctly,
15 Dr. Fairley.

16 Let's assume that in one meter there's a
17 collection on Monday and then the next day, on Tuesday,
18 there's another collection and the collector collects
19 \$5. What would the collection per meter day be on that
20 hypothetical?

21 A It would be \$5 a meter day. There is one day
22 and there's \$5 collected.

23 Q Now, let's assume on the same street, the next
24 meter down is collected on Monday and then it's collected
25 again on Wednesday, and again the collector finds \$5.

prlt

Fairley-direct

1841

1
2 What would the revenue per meter day be on the
3 second meter?

4 A That would be \$2.50, which is the \$5 divided
5 by two meter days.

6 Q Going on, if I may, if you had another
7 meter that was collected on a Monday and then it was
8 collected again on a Friday and again you got \$5, what
9 would the per meter day revenue from that meter be?

10 A It would be \$1.25. That's four day collection
11 opportunities divided into the \$5 obtained.

12 Q So on your meter day concept, Doctor, if you
13 know the number of meters collected and you know the time
14 between collections, then can you compare meter collections
15 at one period of time with meter collections at another
16 period of time on a per meter day basis?

17 A Yes, we can. You would simply find the number
18 of meters that were collected and multiply it since the
19 last collection, get the total meter days and divide it into
20 the total revenues.

21 Q Now, in doing this analysis, Doctor, did you
22 assume that there was the same number of operating meters
23 on the streets of New York throughout the entire period?

24 A No.

25 Q Well, how, if at all, did you control for chang

1 prlt

Fairley-direct

1842

2 in the number of operating meters on the City from one
3 collection period to another?

4 A Well, this is an advantage of using revenues
5 per meter day, because the meters that are actually
6 collected are counted on the cash folio sheets. This
7 would not include meters that had been removed or that were
8 down.

9 So that you have that number collected and then
10 you have the days since the last collection. And finding
11 these revenues then per meter day actually collected means
12 that you automatically control for the installations and
13 the removals of meters and for the maintenance of meters.

14 Q Well, did the data base that you created from
15 the folio sheets give you the number of meters collected
16 by each crew in each area that it collected?

17 A Yes.

18 Q And so to take an example, if in area 100 on the
19 first collection day there were 100 meters collected,
20 and on the second day, for whatever reason, 90 meters
21 were collected, then the per meter day would be calculated
22 on the basis of 90 meters rather than 100, is that correct?

23 A That's correct.

24 Q And it doesn't matter whether a meter was out
25 of repair, was removed or was installed, you measure the

1 prlt

Fairley-direct

1843

2 actual number of meters collected and divide by the number
3 of days between collections to find your per meter rate;
4 is that correct?

5 A That's correct.

6 MR. MEISTER: Objection; leading and
7 argumentative.

8 THE COURT: I'll allow it.

9 A That's correct.

10 Q Now, did you prepare, month by month, an
11 analysis of the per meter day revenue derived during each
12 month of the twenty months that we are discussing here?

13 A Yes, I did.

14 Q And did you plot that amount on a graph?

15 A Yes.

16 Q I show you a cardboard piece of paper about to
17 be marked Defendant City's FI for identification, and ask
18 you whether this graph contains each per meter -- for each
19 of the twenty months involved, a point representing the
20 per meter day revenue delivered by each contractor to the
21 City of New York?

22 A Yes.

23 MR. GLEN: I offer Defendant City's Exhibit
24 FI in evidence, your Honor.

25 MR. MEISTER: Voir dire, please?

1 prlt

Fiarley-direct

1844

2 THE COURT: Yes,

3 VOIR DIRE EXAMINATION

4 BY MR. MEISTER:

5 Q Dr. Fairley, how did you compute the revenues
6 per meter day?

7 A The revenues, the numerator, I obtained from
8 the cash folio sheets. These were the amounts delivered
9 in the regular collections by area on each day by each
10 contractor.

11 The number of meter days was computed by
12 taking the day of the collection and going back to the next
13 previous collection day for that area. That then for each
14 area was the days between collections.

15 Q Now, sir, if a meter area were collected on
16 Monday and then again on Friday, what would be the
17 number that you would use to make that division?

18 A Four.

19 Q Now, sir, if the meters were collected on
20 Monday and then again on the subsequent Monday, what would
21 be the number you would use?

22 A That would be 7.

23 Q And if it were collected two months later,
24 what would be the number you would use?

25 A 14.

1 prslt

Fairley-direct

1845

2 Q Did you make any allowance in your calculation
3 for the fact that meters do not operate seven days a week,
4 so that if the space between collections included days
5 that the meter did not operate, would not be an equal
6 comparison?

7 A I made an allowance in the sense that the
8 total number of meter days in the two time periods was
9 fairly close for the two contractors. There were some
10 162,000 meter days more collected by Brink's over CDC
11 and then noting that since we are taking ten-month time
12 intervals, we have exactly the same effect from this source
13 for both of these ten-month periods.

14 Q But on each given collection-- strike that.
15 This computation was done by computers,
16 wasn't it?

17 A It was done both by computers and then it
18 was checked by hand on the cash folio sheets.

19 Q And the computer calculation was based on
20 the data base, which is now City's Exhibit FC in
21 evidence?

22 A Yes.

23 Q Was the computer instructed to make any
24 allowance for whether the days between the collections
25 were days in which the meters were not functioning?

prlt

Fairley-direct

1846

1
2 A I'm sorry, could you repeat your question?

3 Q Surely.

4 Assume, Doctor, there has been testimony
5 here that some of the City meters are Monday through Friday
6 only and assume there has been other testimony that the
7 preponderance, the vast number of City meters are Monday
8 through Saturday.

9 In making the computation, did you hand or
10 program the computer to take into consideration that the
11 days between collections might include a Saturday or a
12 Sunday or a Saturday and a Sunday when meters were not
13 operating?

14 A Yes.

15 The computer takes that into account in the
16 sense that I earlier explained to you.

17 Q But on an individual basis it doesn't?

18 A What do you mean by an "individual basis"?

19 Q Well, in your hypothetical, sir, if the
20 meter were collected on Monday and then the same meter
21 were collected again the following Monday, you
22 testified that you would divide it by 7.

23 Is that correct?

24 A Yes.

25 Q If that group of meters operated only on Monday

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

prlt Fairley-direct
through Saturday, did you instruct the computer so that in
that case you would divide only by 6?

MR. GLEN: Your Honor, I object. This doesn't
go to whether or not the dots on the chart accurately
represent what he testified to.

THE COURT: I'll allow that objection.

A I did not, because I was not interested in
that kind of detail micro-comparison over a 5-, 6-, or 7-
day period. I was interested, in this instance, in monthly
aggregate comparisons over the entirety.

(Continued on the next page)

End3ad2h

1849

PRjw

Fairley - direct

2 Q And was any attempt done, sir, to do that
3 on an individual basis and then add up so you'd have
4 an accurate monthly comparison?

5 A The monthly comparisons I have I believe
6 to be accurate, because of what I explained to you earlier.
7 There are seven days in 1980 and there are seven days
8 in 1981. There are six days between Monday and Saturday.
9 So, in other words, you have the same phenomenon going
10 on exactly in this entire period.

11 Q But unless you know, sir, the collections
12 schedule and how they compare to the days the meter
13 operated, you can't tell whether that collection schedule
14 is the same, can you?

15 A We did a substantial analysis of the collection
16 schedules, and these are slowly varying over this entire
17 period and amount to a few percent of the total.

18 So that this would have a negligible impact
19 on these comparisons.

20 Q I'm sorry, I didn't hear. What percent
21 did you say, sir?

22 A Negligible.

23 Q No. You said it varied by a certain percent.
24 What was that percent?

25 A I can go into it if you'd like.

1845

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

2 PRjw Fairley - direct

THE COURT: I think this is really for cross examination.

MR. MEISTER: Your Honor, I think I object to the document on the grounds that it hasn't excluded other possibilities.

THE COURT: The objection is overruled.

(Defendant Exhibit FI was received in evidence)

BY MR. GLEN:

Q Dr. Fairley, so that we can make some comparison I'm going to show you --

THE COURT: Well, have one of your assistants or associates hold it.

MR. GLEN: Yes. Well, this one is not in evidence yet, your Honor.

THE COURT: All right.

Q Dr. Fairley, did you also plot on a chart the actual revenues delivered as set out on the tables already in evidence --

A Yes, I did.

Q -- on an actual basis, not on a per meter day basis?

A Yes.

Q And I show you Defendant City Exhibit FJ

xxx

1 3 PRjw Fairley - direct

2 for identification and ask whether the dots on this
3 chart represent the revenues actually received from
4 Brink's and CDC during the appropriate periods on an
5 actual dollar received basis?

6 A Yes.

7 They also include the City collections.

8 MR. GLEN: I move Defendant City Exhibit
9 FJ in evidence.

10 MR. MEISTER: Apart from my continuing objection,
11 I have no other objection.

12 THE COURT: Received.

13 (Defendant Exhibit FJ was received
14 in evidence)

15 BY MR. GLEN:

16 Q Now, on both of these charts, FI and FJ,
17 there's a line across the bottom and a lot of letters.

18 Now, what do those letters stand for, Dr.
19 Fairley?

20 A The letters stand for the months. From the
21 far left, it goes June, July, August, September, October,
22 November, December, January, February, March, and then
23 March, April, May and then it picks up again, June,
24 July, August.

25 Q Now, you plotted -- did you testify that

1 4 PRjw Fairley - direct

2 you plotted on each of these charts, on FJ a dot represent
3 the actual revenues turned into the City for the 20
4 months in issue and on Chart FI, the per meter day
5 revenues turned in to the City?

6 Is that correct?

7 A Yes.

8 Q Now, addressing yourself, Dr. Fairley, to
9 FJ for the moment.

10 A Yes, sir.

11 Q Were you able to determine an average amount
12 of revenue turned in during the ten months of the
13 Brink's, the last ten months of the Brink's collection
14 period?

15 A Yes.

16 Q And what is that average, in rough terms?

17 MR. MEISTER: Mr. Glen, you said FJ. You
18 mean FI?

19 MR. GLEN: No, I mean FI. That's the actual
20 list.

21 MR. MEISTER: Total?

22 A That average for the CDC period?

23 Q No, for the Brink's period first, please.

24 A Excuse me, the Brink's period first. 1,713,000.

25 Q And did you indicate that average on that

5 PRjw

Fairley - direct

2 chart?

3 A Yes.

4 Q And how is it indicated on that chart?

5 A By the dotted line.

6 Q Now, did you also obtain an average for CDC
7 actual deliveries --

8 A Yes.

9 Q -- during the comparable period?

10 A Yes.

11 Q And is that indicated on the chart?

12 A Yes, it is. That is 1,811,000. That's
13 indicated by the dotted line on the right-hand side
14 of the chart.

15 Q Now, drawing your attention to Chart FI,
16 did you obtain an average per meter day revenue during
17 the Brink's period?

18 A Yes.

19 Q And what was that average?

20 A 87.4 cents, I believe. Let me get the exact
21 number. Excuse me, it's 87.4 cents revenue per meter
22 day.

23 Q For the Brink's?

24 A Yes.

25 Q And did you obtain an average during the

1 6 PRjw Fairley - direct

2 CDC period?

3 A Yes.

4 That's 94.7 cents.

5 Q And are these averages likewise indicated
6 by a dotted black line on -- by two dotted black lines
7 on Chart FI?

8 A Yes, they are.

9 Q Now, the meter day controls, you testified,
10 did you not, for installations, removals, state of repair
11 of the plant, time between collections and who made
12 the collections; is that correct?

13 A Yes.

14 Q And did you obtain a difference on a per
15 meter day basis between the CDC level of collections
16 and the Brink's level of collections?

17 A Yes.

18 Q What is that difference?

19 A 7.3 cents.

20 Q And this is the difference on a per meter
21 day basis, taking into account the various factors you
22 have testified to; is that correct?

23 A Yes, it is.

24 And you can understand it as representing
25 the difference in revenues obtained by the City for

1 7 PRjw Fairley - direct

2 each meter day of operation for the City. So for each
3 meter that's out there for a day collecting money in
4 the CDC period, it obtained 7.3 cents more per meter
5 day.

6 Q And that's comparing the meters that CDC
7 actually collected against the meters that Brink's actually
8 collected; right?

9 A That's correct.

10 Q Now, if you wanted to ascertain the difference
11 in performance between Brink's and CDC, is there a
12 mathematical computation that you could engage in involving
13 total meter days collected and the differences in per
14 meter day rates between Brink's and CDC?

15 A Well, the difference in revenues generated
16 by a difference of 7.3 cents meters per day is obtained
17 by multiplying 7.3 cents meters per day times the number
18 of meter days of operation.

19 Q Now, did you obtain a total number of meter
20 days of operation for Brink's during the ten-month period?

21 A Yes.

22 Q And would you state how you obtained that
23 total, please?

24 A The total number of meter days was simply
25 the sum over each of the ten months of meter days, which

1 8 PRjw Fairley - direct
2 in turn were obtained from the cash folio sheets.

3 Q And so it's the actual meters collected divided
4 by the number of days between collections, measuring
5 collections by Brink's during its ten-month period;
6 is that correct?

7 A Total revenues divided by total meter days.

8 Q And what is the total number of meter days
9 during the Brink's period?

10 A It's approximately 18,500,000. I have the
11 exact figure here. The exact figure for the number
12 of meter days for Brink's, \$18,698,946.

13 Q What amount then represents the difference
14 between Brink's actual collections and the expected
15 performance measured by the meter day difference between
16 CDC and Brink's?

17 A We multiply 7.3 cents times the actual meter
18 days that Brink's collected. We get \$214,600.

19 Q I'm sorry.

20 A Take the difference between the two --

21 Q Are you now addressing yourself, Dr. Fairley,
22 to that (indicating)?

23 A No.

24 I was addressing myself to the difference
25 between the averages over the entire ten-month period.

1 9 PRjw

Fairley - direct

2 Q And if you take that average, which you testified
3 was 7.3 cents -- is that correct?

4 A Yes.

5 Q -- and you multiply it times the total number
6 of meter days, what total difference do you come out
7 with between Brink's actual performance and the performance
8 to be expected on the per meter day basis?

9 MR. MEISTER: Objection to the expectation.

10 THE COURT: I'll allow it.

11 A Let me do the calculation. That, in total,
12 is a difference of \$1,365,000.

13 THE COURT: What's that? One million what?

14 THE WITNESS: \$1,365,000, your Honor. That's
15 over the entire ten months.

16 Q Over the ten-month period then, using the
17 per meter day derived figure of 7.3 cents, the difference
18 between Brink's actual collections and the CDC to
19 Brink's per meter average is \$1,365,000?

20 A Yes.

21 The number I gave you previously was referring
22 to a calculation between the actual Brink's June and
23 the actual CDC June. Brink's March and CDC June.

24 Q Okay, we will come back to that in just a
25 second.

1 10PRjw Fairley - direct

2 A Right.

3 Q Now, you testified to totals of differences
4 between Brink's production in ten months and CDC's production
5 in ten months. You testified, if I recall, to three
6 differences -- total actuals to total actuals of some
7 890,000 and --

8 A Excuse me, 980,000.

9 Q Excuse me.

10 Brink's to CDC of some 1,200,000 and now
11 Brink's to expected Brink's under the per meter day
12 concept of some \$1,365,000.

13 Now, couldn't those -- whichever of those
14 figures turns out to be the most useful -- couldn't
15 any of those figures be explained by simply assuming
16 that more money was put in the meters between January
17 of 1979 and March of 1981? Wouldn't that be a perfectly
18 reasonable explanation not involving theft?

19 A No.

20 The analysis that I have done at some length,
21 statistically, indicates that that alone is unlikely
22 to be the explanation.

23 Q Now, looking at this chart, does this chart
24 represent a continuous increase in money going into
25 the meters or does it represent something else?

1858

11PRjw

Fairley - direct

2 MR. MEISTER: I object, your Honor.

3 THE COURT: Well, the witness is expressing
4 his opinion. I'll take it.

5 A Maybe you could rephrase your question.

6 Q I'm sorry, Dr. Fairley.

7 A I'm sorry, I didn't follow it.

8 Q Why, in your opinion, Dr. Fairley, is the
9 increase in revenues obtained during the CDC period
10 over that obtained in the Brink's period not explicable
11 by a general increase in money being put in the parking
12 meter?

13 A Well, that has to deal with the question
14 of whether there is a trend over this 22-month time
15 period -- the ten months of Brink's, the two months
16 in the transition period, and the ten months for CDC.

17 Because were there just a general trending
18 increase in meter usage over this period, then the change
19 between the two contractors might be explained just
20 by the kinds of changes you were talking about.

21 Now, this is an extremely important point
22 and one to which I have devoted considerable thought
23 and analysis and estimation of statistical models.

24 You can see, looking at the revenues per
25 meter day in each of the two ten-month time periods,

1 12PRjw

Fairley - direct

2 you can see visually, graphically, that there is little,
3 if any, indication of trend within each of those periods --
4 that is, the revenues per meter days would bump up and
5 down around the average line. The same is true in
6 the CDC period, the revenues per meter day bump up and
7 down.

8 There is, therefore, no indication, Citywide,
9 that there is some kind of generalized trend going on
10 due to trends and other factors or whatever.

11 Well, now, this is true Citywide, what about
12 the boroughs?

13 I thought it was important to look at the
14 boroughs to see whether the Citywide aggregate phenomenon
15 of zero trend in each of the two periods held in the
16 boroughs. I prepared some charts per each borough
17 in the City which give the actual revenues per meter
18 day delivered over these two periods.

19

20

endt3b

21

(Continued on next page)

22

23

24

25

1 RMjw

Fairley - direct

2 THE COURT: Are you going to go into each
3 one now?

4 MR. GLEN: Very briefly, your Honor.

5 Q Dr. Fairley, I show you a six-page document,
6 of which you already have copies, marked Defendant
7 Exhibit FG for identification. The first page is marked
8 Chart 12 and is Chart 12 an exact duplicate of FI in
9 evidence?

10 A Yes, it is.

11 Q Would you state what Charts 13, 14, 15, 16
12 and 17 constitute?

13 A These charts give for Manhattan, Bronx, Brooklyn,
14 Queens and Richmond, the revenues per meter day delivered
15 by Brink's and CDC over this time period.

16 Q Do these charts indicate the per meter day
17 amount borough by borough for the same time period that
18 the large chart, FI, indicates per meter day amounts
19 for the City as a whole?

20 A Yes, they do.

21 MR. GLEN: I move Defendant Exhibit FG in
22 evidence, your Honor. I believe a copy has been supplied
23 to your clerk.

24 A There is one feature of the charts that I
25 want to point out to the Court.

1 2 RMjw Fairley - direct

2 Q Is it relevant to the question of whether
3 they should be --

4 MR. GLEN: I will withdraw the offer and
5 ask another prefatory question, your Honor.

6 Q I draw your attention on Exhibit FI in
7 evidence to two small lines on the far left above the
8 letter J and below the figure 0.8.

9 What does that indicate?

10 A The vertical axis representing revenues has
11 been cut off. We don't have the entire axis going from
12 zero up to a dollar, and I have done that because, otherwise
13 the changes from month to month would be unreadable
14 on this chart if entire axes were represented.

15 Q On 13 through 17, constituting pages 2 through
16 6 of City's Exhibit FG for identification, is there
17 simply a break in the left-hand vertical line?

18 A Yes, that's correct, and that is a standard
19 procedure for being better able to use the graphical
20 procedures.

21 MR. GLEN: I offer City Exhibit FG in evidence
22 your Honor.

23 MR. MEISTER: No objection.

24 (Defendant Exhibit FG received
25 in evidence)

3 RMjw

Fairley - direct

1862

2 MR. GLEN: Your Honor, we have additional
3 copies to pass among the jury, or we can have additional
4 copies made at the break.

5 (Pause)

6 MR. GLEN: I believe we are waiting for
7 other counsel, your Honor.

8 THE COURT: While other counsel look at
9 it, we will take our mid-morning recess.

10 (Recess)

11 MR. GLEN: Dr. Fairley --

12 MR. GLEN: I think at this point, your
13 Honor, I move the admission of --

14 THE COURT: I thought you did that before
15 the recess.

16 MR. GLEN: Yes, I had not heard if there
17 was an objection from the third-party defendants, if
18 I recall.

19 THE COURT: Okay.

20 MR. GLEN: Is that exhibit now in evidence?

21 THE COURT: Yes.

22 BY MR. GLEN:

23 Q Dr. Fairley, did you state that you made
24 certain borough-by-borough comparisons?

25 A Yes.

1 4 RMjw Fairley - direct

2 Q What were those comparisons and how do they
3 bear on the question of whether or no there was a trend
4 during this period?

5 A I looked to each borough, for a trend, in
6 the Brink's periods and in the CDC periods. Chart 13 --

7 MR. GLEN: Your Honor, we have an extra
8 copy of that. May it be circulated amongst the jurors?

9 THE COURT: Yes -- I don't see any point
10 in giving it to one juror --

11 MR. GLEN: I have two, your Honor.

12 THE COURT: I don't see any point in it.
13 Let him describe it.

14 MR. GLEN: Thank you.

15 Q Go on, Mr. Fairley.

16 A Chart 13 shows for Manhattan revenues delivered
17 per meter day collected, and it is clear graphically
18 from the chart that within the Brink's period there
19 is no systematic tendency for rise or fall of the points
20 relative to the straight-line average.

21 Similarly, within the CDC period, there is
22 no systematic tendency for the points to rise or fall.
23 That is Manhattan.

24 We go to the Bronx and see a similar phenomenon,
25 that there is a difference of the two means, that is,

1 5 RMjw

Fairley - direct

1864

2 the CDC revenue per meter day is higher than the Brink's,
3 but in both periods we have a flatness to the points.

4 We go to Brooklyn and the points are different.
5 Again, there is a separation. CDC has the larger revenues
6 per meter day than Brink's and there is no systematic
7 tendency for the points to rise or fall within each
8 period.

9 In other words, over this entire 22 month
10 period there is a flat period and then a discontinuity
11 in the average of the points at the transition point
12 between the two companies, and then there is another
13 flat period. So that were it not for this discontinuity,
14 we would imagine that we would have a flat line going
15 straight across in each case.

16 Now, continuing, Queens, once again there
17 is a jump or a discontinuity at the transition between
18 the two revenues per meter day, and the CDC one is larger
19 and there is no systematic tendency for the points to
20 rise or fall within each period.

21 Finally, Richmond, the same phenomenon is
22 observed. There is no trend within each period. There
23 is a jump at the transition between the two companies.

24 That is one answer to the question, that
25 is one way of studying the existence of trend, graphically,

1 6 RMjw Fairley - direct

2 usually dignified systems by referring to it in the
3 field of statistics as exploratory data analysis.

4 I also approached this from a theoretical
5 statistical point of view and I ran statistical tests
6 for the existence of trend. This involved fitting average
7 lines of prediction for Brink's and for CDC and permitting
8 the data to indicate whether and how much slope existed
9 in each of these periods.

10 For example, had we had, contrary to fact,
11 the points going up, bouncing around but going up in
12 a pattern, then the statistical analysis, technically
13 referred to as regression analysis, would have fitted
14 by the method of least squares.

15 The method of least squares minimizes the
16 sum of the square deviations of the points from a line
17 in either direction. So it is a best-fitting line in
18 a certain sense. It is the line which best describes
19 these points.

20 Now, the line which best describes these
21 points that you see before you Citywide and for each
22 of the boroughs is approximately a straight line in
23 every case, that is a horizontal line.

24 As I was saying, had the points been moving
25 upwards in a trending pattern, the line would have been

1 7 RMjw

Fairley - direct

1866

2 a tilted or sloped line and the method of least squares
3 would have fitted that line.

4 Q Dr. Fairley, is it your testimony, then,
5 that the mere visual drawing of a horizontal line both
6 through the Brink's red line on the chart, the chart
7 which is Exhibit FI, and through the CDC blue line,
8 that the visual drawing of a horizontal line is confirmed
9 by your statistical analysis of the actual points in
10 each of those lines?

11 MR. MEISTER: Objection. I think the question
12 is unclear as to whether he is asking the one chart
13 on the left, the Brink's period, and the CDC chart on
14 the right, or whether it is a combined analysis.

15 MR. GLEN: Your Honor, I think that was --

16 THE COURT: Mr. Meister states the question
17 is unclear to him. See if you can clarify it.

18 Q Addressing the red line on Exhibit FI in
19 evidence, which represents, as you testified, the Brink's
20 revenue per meter day, from your statistical analysis
21 by regression methods and least square analysis, were
22 you able to come to an opinion as to whether there was
23 an increasing trend or a decreasing trend or no trend
24 during the Brink's period?

25 A Yes. The statistical analysis confirms what

1 8 RMjw

Fairley - direct

1867

2 a graphical statistical analysis indicates, that there
3 is no trend. Technically there is no statistically
4 significant difference between the line that is fitted
5 to the Brink's data and the line that is fitted to the
6 CDC data. This is true Citywide and it is true in each
7 of the boroughs.

8 THE COURT: Are you saying there was no
9 statistical trend in either period or in both periods?

10 THE WITNESS: In either or both.

11 THE COURT: In both periods are you saying
12 there is no statistical trend?

13 THE WITNESS: That's correct.

14 Q Withint the ten-month CDC period, just as
15 you testified within the ten-month Brink's period, your
16 analysis is that there is no statistically significant
17 trend, is that correct?

18 A Yes. Let me add, even were there a statistical
19 significant trend, because we happen to have a lot of
20 data points, one would still conclude from the graphical
21 analysis and from the size of the difference that there
22 was no interesting difference in the trends, because
23 it is quite obvious.

24 Q Did you analyze as part of your analysis
25 of trend the effect, if any, of seasonal variation

1 9 RMjw

Fairley - direct

1868

2 either within the two periods or between the two periods?

3 A Yes, I did.

4 Q Would you explain to the Court and jury what
5 you did to take seasonal variation -- what you did to
6 examine whether or not seasonal variations were of importance
7 in this analysis?

8 A Yes. I start out with the same charts we
9 have been looking at. From a common sense point of
10 view, one can see that there is --

11 Q You are now working from a chart which is
12 a replica of FI in evidence?

13 A Yes, I am. This is the Citywide revenues
14 delivered per meter day collected.

15 One can see characteristic -- some similarities
16 in the two periods. There is a decline to July from
17 June, there is a dip, a sharp dip, in January, in both
18 cases. The points around the months of November tend
19 to be higher than the points around July and August
20 and, similarly, the points in March tend to be higher
21 than the points in July and August but lower than the
22 points around November.

23 So that just casually examining this graph,
24 one sees evidence of the kind of seasonal repetition
25 which is familiar to people who examine time series

1 10RMjw

Fairley - direct

1869

2 like this.

3 If you go through each of the boroughs you
4 can also see similar phenomenon and the phenomenon are
5 similar with these.

6 Just as an illustration, you run through
7 these and you see the dip in January occurs in every
8 borough.

9 The point of talking about the seasonal variation
10 is not to say that the year repeats itself exactly and
11 each ten-month period in one year is exactly the same
12 as each ten-month period in the other. That is not
13 true.

14 All that we are saying is that we find in
15 time series that there commonly are seasonal effects
16 which have to do with the typical ways in which people
17 use their automobiles and use parking, their patterns
18 of shopping, their patterns of taking vacations, and
19 so on. All of these behaviors naturally influence meter
20 use throughout the city.

21 So starting with that observation, one can
22 then go on to estimate statistically using standard
23 methods an estimate of these seasonal effects.

24 Q Were you able from the data presented to
25 you and using various statistical methods to evaluate

1 llRMjw

Fairley - direct

2 the seasonal variations, if any, operating during these
3 periods?

4 A Yes.

5 Q Were you able to create a graph that accounts
6 for the seasonal variations throughout these periods?

7 A Yes, I was. Let me just state that the method
8 is one of applying a method of least squares --

9 MR. MEISTER: I object to the document being
10 displayed to the jury until it is admitted in evidence.

11 MR. GLEN: I believe Dr. Fairley is still
12 working from Chart 12 which is a replica of FI.

13 MR. MEISTER: I apologize.

14 A Again employing the method of least squares,
15 the seasonal estimates are determined as those estimated
16 values which best explain the variation of the ten-
17 month periods within every one of the five boroughs.
18 So that, in my language, a statistical model was fitted
19 to these data which accounted for the seasonal changes
20 within each borough.

21 Q After you fitted the statistical model to
22 the data that is contained on Chart FI in evidence,
23 were you able to obtain a series of dots representing
24 in each month of the 20 months in question your conclusion
25 as to the proper adjustment to be made for seasonal

1 12RMjw

Fairley - direct

1871

2 variations?

3 A Yes, I was.

4 Q I show you now a chart which has the number
5 12A on the top and ask if this chart is a plot of the
6 points of seasonally adjusted per meter revenue?

7 A Yes, it is.

8 Q Did you make a graph that is an exact replica
9 of this chart?

10 A Yes.

11
12 (Continued on next page)

ndt4a

13
14
15
16
17
18
19
20
21
22
23
24
25

4ba

x

mlt 1

Fairley-direct

2 MR. GLEN: Page 1 of FL for identification,

3 please.

4 Your Honor, I would move the admission of
5 Defendant's Exhibit FL for identification and I inform the
6 Court that we have a blow-up of FL. I am offering Page 1
7 Chart 12A, as FL.

8 MR. AKSELRAD: May we see it?

9 MR. GLEN: Yes

10 MR. AKSELRAD: No objection.

11 (Defendant's Exhibit FL was received

12 in evidence)

13 Q Did you take the data contained on Defendant's
14 Exhibit FL and add those dots on a plastic overlay, which
15 can be displayed over the chart which is FI in evidence?

16 A Yes.

17 MR. GLEN: Your Honor, as FL is in evidence,
18 may I now flip the chart?

19 Q The black circles on the plastic overlay --
20 strike that.

21 What do the black circles on the plastic
22 overlay represent, Dr. Fairley?

23 A These represent the revenues per meter day
24 after seasonal adjustment. What that means is, if I could
25 explain that, we estimate the typical seasonal pattern

rmlt

Fairley-direct

1872

1
2 within each borough and then we find, for example, that
3 January is typically low and so that is a negative
4 seasonal effect for January. To seasonally adjust
5 January, we add that effect in absolute value to January
6 to bring it up, because January is low, because January
7 is typically low.

8 So to seasonally adjust January, we take out
9 of the observed data point for January the typical January
10 effect, and that means that we move this point up, and
11 you can see on the chart for January, for Brink's, the point
12 is above the actual January because that is the correction
13 for the January effect, that is, were it not for effects
14 that are typical of January, that is the revenue that
15 would have been observed.

16 Coming over to CDC, the point that is
17 indicated is the seasonally adjusted point (indicating)
18 and that has been moved up. So this is a January
19 correction.

20 The same thing applies to other months. For
21 example, if we look at the period March 1980, the last
22 month of Brink's, to June of '80, the first month of CDC,
23 we see that because June is typically a little bit above
24 average, we move June down, and simply because March is a
25 little bit above average, we move it down. We take out the

1 rmlt

Fairley-direct

1873

2 March effect.

3 Q If you draw a line connecting these various dots,
4 that would be a line showing over each ten-month period
5 the seasonally adjusted effect during per meter day
6 collections; is that correct?

7 A That's correct.

8 Q Would you take your grease pencil and draw
9 that line?

10 A Yes. I will connect the first two points
11 here like this, the second two -- is that visible?

12 Going over to CDC, I have connected these
13 points.

14 Q Thank you, Dr. Fairley. Please return to the
15 witness stand.

16 Taking into account seasonal variations, were
17 you able to draw any conclusions as to whether within
18 the Brink's period there was any trend in meter revenues?

19 A Yes. Displaying graphically the seasonally
20 adjusted values has the meter that we are now controlling
21 for seasonal variation. Whereas before we had, as you
22 noticed, a somewhat jumpier line, that is, the changes
23 from month to month are larger in the Brink's period, in
24 the red line, the actual revenues per meter day per month,
25 than in the black line, which tends to be smoothed, as

1 rmlt Fairley-direct

2 we say, is not as jumpy.

3 That is useful if you are not interested in
4 the monthly changes and you want to get rid of the monthly
5 changes and see where is the level of these points, where
6 are they if you exclude monthly effects.

7 We did exactly the same thing for CDC and
8 excluding the monthly effects, we get a somewhat smoother
9 picture, although it is not quite as dramatic as there.

10 I simply did that for each of the five
11 boroughs.

12 Q Did each of the five boroughs follow the same
13 pattern?

14 A Yes. I can show you here, as well as you can
15 see, Manhattan is smoother than the other data points.
16 The seasonally adjusted points for Bronx are smoother. The
17 points for Brooklyn are smoother.

18 Let me add, importantly, in each case the
19 property that we noted, that a horizontal line described
20 the points, continues to hold. So that after we
21 seasonally adjust, the best fitting lines are approximately
22 horizontal in each borough and for each contractor.

23 Q By seasonally adjusting, Dr. Fairley, what if
24 any conclusion do you come to as to whether there was a
25 trend either up or down within the Brink's period, within

rmlt

Fairley-direct

--1875

2 the CDC period or over the entire 22-month period?

3 A The seasonally adjusted series for the ten-
4 month comparisons serve only to illustrate the phenomenon
5 we observed graphically and tested by the least squares
6 procedure of no trend within each month.

7 So that it facilitates comparison of any
8 differences between the two companies because in comparing
9 ten months to ten months and since they are the same ten
10 months, we are already controlling for seasonal influences
11 in that comparison.

12 Q Against the background of your testimony that
13 there were no trends within Brink's and within CDC, did
14 you find any difference in the levels of revenue delivered
15 between Brink's and CDC?

16 A I'm sorry, could you repeat the question?

17 Q Did you find any difference in the revenues
18 delivered by CDC and the revenues delivered by Brink's?

19 A Yes, I did, and I can give you those by each
20 borough. The revenue per meter day differences between
21 Brink's and CDC for the five boroughs and citywide were
22 as follows -- this is over the entire two time periods --

23 MR. MEISTER: Is this seasonally adjusted,
24 Doctor?

25 THE WITNESS: Yes. It doesn't make any

1 rmt

Fairley-direct

1876

2 difference, because we are dealing with the entire ten-
3 month time periods.

4 A Rounded off to the nearest cent, it is Manhatta
5 7 cents, Bronx, 5 cents, Brooklyn, 7 cents, Queens, 8 cents
6 Richmond, 6 cents, a citywide average of 7 cents, and that
7 is rounded from 7.3 cents difference.

8 Q Dr. Fairley, is there a discontinuity between
9 the end of the Brink's period and the beginning of the CDC
10 period, as you set it out in your graph?

11 A Yes, there is.

12 Q Does that discontinuity, which is only
13 represented graphically there, have any meaning?

14 A Well, in terms of the statistical model
15 fitted by least squares, the model estimated, as I have
16 said, the seasonal factors by borough and therefore
17 accounted for the seasonal variations that were seen and
18 accounts for the systematic difference between boroughs
19 and the model also had a third factor for the company
20 difference, taken to be an average company difference in
21 all boroughs in all months, and whether the least
22 square estimates obtained for the company difference,
23 that is 7.4 percent -- excuse me, 7.4 cents per meter
24 day.

25 So what the statistical model says is how --

1 rmlt

Fairley-direct

1877

2 the model says how well can you predict the actual revenues
3 per meter day if you allow yourself predictive factors for
4 each month within each borough, and if you allow yourself
5 an average difference between the two companies, and that
6 difference, which corresponds to the jumps, or disconti-
7 nities, seen here in the middle between the two companies,
8 is on average, overall borough months, 7.4 cents per meter
9 day.

10 Q Taking into account all the factors that go
11 into the definition of meter day and taking into account
12 seasonal variations, were you able to determine what, if
13 any, difference between the last month of Brink's
14 collections, that is, March of 1980, and the first month
15 of CDC's collections, that is, June of 1980, was attributable
16 to a factor other than change in the state of plant,
17 change in the number of meters --

18 MR. MEISTER: Could I --

19 MR. GLEN: Let me withdraw that question.

20 A I wanted to indicate at some point the
21 comparison of the model predictions with the actual --

22 Q I will rephrase another question, Doctor.

23 A I had not quite finished with my discussion of
24 the model.

25 Q Would you go on with the answer to the last

1 rmlt Fairley-direct
2 question, please?

3 A Yes. On chart 2 --

4 THE COURT: What exhibit is that?

5 MR. GLEN: It is going to be FM, your Honor.
6 I have a copy for the Court.

7 Q I show you City Defendant's Exhibit FM for
8 identification and ask you -- strike that.

9 Did you make any comparisons of statistical
10 predictions as against actual predictions in regard to
11 meter day revenue?

12 A Yes, I did.

13 MR. MEISTER: Objection. Did you mean to say
14 actual predictions?

15 MR. GLEN: Actual data. I will correct my
16 question.

17 Q Without using the chart for the moment, what
18 if any comparison did you make?

19 A I compared point by point the predicted value
20 from the statistical model with the actual value of revenue
21 per meter day.

22 Q Did you place those points of comparison on a
23 chart?

24 A Yes.

25 Q I show you Defendant City's Exhibit FM and ask

1 rmlt Fairley-direct 1879

2 you if this is the chart upon which you placed those
3 observations.

4 A Yes, it is.

5 MR.GLEN: I offer it in evidence.

6 VOIR DIRE EXAMINATION

7 BY MR. MEISTER:

8 Q What statistical predictions are you referring
9 to when you say this chart reflects them?

10 A The predictions: from the statistical model
11 that I referred to.

12 Q What is that?

13 A That is a two-way analysis of variance model.

14 MR. GLEN: Your Honor, I believe that the
15 question is to the -- that any questions as to the content
16 of statistical models are properly directed to cross
17 examination.

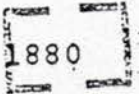
18 THE COURT: Is the statistical model, statis-
19 tical predictions, in evidence as an exhibit?

20 MR. GLEN: No, your Honor. The statistical
21 model, it is my information, is a theoretical construct
22 which results in certain charts and graphs and testimony.

23 THE COURT: I think you should ask him
24 whether he is referring to when he speaks about statistical
25 model.

1 rmlt

Fairley-direct



2 Q Dr. Fairley, would you state in lay language,
3 as best you can, the characteristics and definitions of
4 the statistical model that you used to obtain the
5 points you placed on chart 2?

6 A Yes. The model obtains estimates within each
7 borough of the monthly seasonal effect for each of ten
8 months. So we have a value which represents, for example
9 January, which estimates the average deviation of January
10 from its average for each contractor. So for each
11 contractor January was a substantially below average month
12 and so the average of those two deviations is a
13 substantially negative deviation and that would be an
14 estimate of a January effect.

15 That would be in a given borough. We do that
16 not only for January, but for every month. Those give
17 the seasonal effects within each of the boroughs.

18 There will be ten effects that are estimated.
19 The actual method of finding that January effect is to use
20 this method of least squares, which is defined in that
21 single point for January which is closest to the January
22 figure for both Brink's and CDC simultaneously using the
23 criterion of least squares, minimizing the least square
24 of the difference, from the actual point to the estimated
25 point.

1 rmlt

Fairley-direct

1881

2 So there are fifty different estimates that are
3 obtained in this model for seasonal effects, ten within each
4 of the five boroughs.

5 Then there is another value which is the
6 average difference between the companies, or equivalently,
7 between these two time periods. We can predict what the
8 model is going to produce qualitatively, because we have
9 seen in the CDC period it is larger by some five to eight
10 cents per meter day in each one of the five boroughs.

11 So we know before even estimating the model
12 that the company difference is going to be something
13 between 5 and 8, and it happens to turn out to be
14 7.4.

15 So that the model is a way of estimating
16 simultaneously fifty monthly seasonal effects within each
17 borough and a company difference.

18 So that it is a way of representing the data
19 that gives a simplified description of the data in terms
20 of monthly effects and in terms of a company difference.

21 Now, one can apply a model like this, can
22 estimate a model like this for any set of points. That
23 is not the point. How valid is this model? How closely to
24 the points of the model represent the actual points? If
25 they have no relation to the actual points, if they are

1 rmlt

Fairley-direct

1882

2 completely uncorrelated, the model is worthless for any
3 purpose.

4 In this case I have a chart, chart No. 2,
5 in which the predicted points are plotted against the
6 actual points to indicate how closely the model predictions
7 follow the actual predictions.

8 (Continued on the next page)

9 End 4b a.m.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

prlt 1

Fairley-direct

1883

1
2 MR. GLEN: On the basis of that explanation,
3 your Honor, I now move Defendnat's FM in evidence.

4 MR. MEISTER: Voir dire.

5 VOIR DIRE EXAMINATION

6 BY MR. MEISTER:

7 Q Dr. Fairley, this model, sir, was based solely
8 upon the ten months which you studied in Brink's period,
9 June 1979 to March 1980, and the ten months in the CDC
10 period of June 1980 to March 1981, is that correct?

11 A That's correct.

12 Q Did you make any effort to examine points in
13 other years to determine whether seasonal factors are
14 shown on a greater time frame?

15 MR. GLEN: Objection.

16 Improper voir dire.

17 THE COURT: I'll allow it.

18 A I did not because, as I explained earlier, I
19 had chosen the two ten-month time periods as being the
20 closest groups of months for both contractors and also the
21 data which I could study and have most confidence in and
22 the other characteristics of the meter plant in those two
23 periods.

24 Q Sir, is there a professional technique in your
25 evaluation of statistical analysis as to how much data you

188

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

prlt Fairley-direct

need to determine seasonality?

A No, there is no single answer to that.

The amount of data here was amply sufficient to determine the seasonal, in my estimation.

Q Have you ever for any other assignment as a statistician determined seasonality by use of comparing just one year with another year, without considering the results before or after another year's?

MR. GLEN: Objection as to--

THE COURT: The objection is sustained.

You may reserve those questions for cross examination of the witness. The only question is the admissibility of the document.

BY MR. MEISTER:

Q Sir, this document then compares your prediction from your model based on these actual months, to these actual points?

A Yes, it does.

MR. MEISTER: I object to the admission of the document, your Honor.

THE COURT: Overruled.

(Defendant's Exhibit FM was received in evidence)

xxxxx

prlt

Fairley-direct

1885

BY MR. GLEN:

Q Dr. Fairley, were you able to determine with a reasonable degree of certainty whether the obtaining of the data seasonally corrected as inserted on the chart which is now in evidence as Defendant City's Exhibit FM correlated within any degree of percentages with the actual results obtained from the data?

A Yes, I was.

Q And taking the seasonally adjusted predictions and correlating to actuality, what level of correlation did you obtain?

A It was a very high level of correlation, 99 percent level of correlation. It can be graphically understood by seeing how closely the points lie along this line, 45-degree line, which represents points that are actually identical between the predicted value and the actual.

Any deviation of a point from that line represents some degree of error in the model. You can see that every one of the points show some degree of error, but the error tends -- in every case it is a relatively small percentage. You can see by graphical examination that the relationship is very strong between the predicted values and the actual values.

1 prlt

Fairley-direct

1886

2 Q Now, Dr. Fairley, addressing yourself to the
3 gap between March 1980 and June of 1980, on the chart
4 which is, I believe, FI in evidence, and its overlay
5 that you drew on it, taking into account seasonal factors,
6 are you able to predict with a reasonable degree of
7 certainty the inter-company differences between March
8 1980 collections -- let me rephrase that.

9 Are you able to state with a reasonable degree
10 of certainty the amount of the inter-company differences,
11 taking into account seasonal variations, between March of
12 1980, the last month of Brink's, and June of 1980, the
13 first month of CDC?

14 A Yes.

15 Let me state that in the model I mentioned
16 that an average company difference between these two
17 periods was estimated. That was one of the elements of
18 the model. That value was 7.4 cents revenues per meter
19 day. That value is estimated in terms of the discretion
20 I gave before, a high degree of statistical significance,
21 the so-called T value being in excess of 9.

22 The probability that that difference would have
23 occurred by chance under the least squares model that's
24 assumed here is less than one in 10,000. So that we have
25 a very strong confirmation in terms of the estimated

prlt

Fairley-direct

1887

parameter, the inner company difference value, a very strong confirmation between the differences of the two companies that we can see very obviously in every one of the boroughs in the chart.

Q And placing upon your earlier analysis of a 7.4 cent difference per meter day, the seasonal variations that you have graphically demonstrated by your drawing the black line, are you able to ascertain what amount of differences between March collections and June collections is attributable to the inter-company differences?

MR. MEISTER: I object.

The phrase "inter-company differences" is improper.

MR. GLEN: I would prefer to use the word "theft" then, your Honor.

MR. SCHNEIDER: I would object to that.

MR. MEISTER: Objection.

MR. GLEN: The objection was that Mr. Meister did not want the phrase intercompany difference.

MR. MEISTER: It's not that I didn't want it, your Honor, it's not that it is not defined. I don't know what it means.

THE COURT: The difference between the collections of the two companies.

1 prlt

Fairley-direct

2 Do you understand the question?

3 THE WITNESS: Yes.

4 MR. MEISTER: Could we have it read back, Mr.
5 Reporter?

6 THE COURT: Do you understand the question?

7 MR. MEISTER: I'm afraid I don't, your Honor.

8 As I understand the difference between the
9 collections, it's the difference between the collections.
10 I feel this question is attempting to achieve some other
11 factor. I'm not sure at this point what it is.

12 MR. GLEN: I don't recall the exact phrasing.
13 I, too, would ask that the question be read back.

14 THE COURT: Start all over.

15 MR. GLEN: All right.

16 BY MR. GLEN:

17 Q Dr. Fairley, building upon your per meter day
18 analysis which you testified to led to a difference between
19 CDC and Brink's collections on the average of either 7.3
20 cents or 7.4 cents, depending upon whether you are using
21 the model or the actual data, and adding to it your
22 corrections for seasonal variation which I believe you
23 graphically represented here on the overlay, taking into
24 account those factors, are you able to state with a
25 reasonable degree of certainty the magnitude of the inter-

1889

1 prlt

Fairley-direct

2 company difference, the difference in collections attribut-
3 able to the termination of one company and the beginning
4 of another company between March of 1980 and June of 1980?

5 MR. MEISTER: And I object, your Honor. It's
6 cumulative. The difference is the difference.

7 THE COURT: If it is as simple as you stated
8 it, I'll allow the witness to answer it.

9 A The seasonally adjusted factors now have some
10 usefulness more than just facilitating --

11 MR. MEISTER: I'm going to object, your Honor.

12 Excuse me, Doctor.

13 I'm going to ask the witness to restrict his
14 answer to the answer to the question. He was asked what
15 the dollar difference is.

16 THE COURT: Read the question to the witness
17 again, please.

18 (Record read)

19 A Yes.

20 Citywide, the difference is 11.6 cents
21 per meter day. That's the difference between the two
22 seasonally adjusted points, in March of 1980 and in June
23 of 1980.

24 Q And are you able to convert that difference
25 into a total dollar amount based upon Brink's meter days

1890

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

prlt Fairley-direct

in March of 1980?

A Yes.

That would be approximately \$215,000.

Q Ascribable to the termination of one company and the beginning of another company; is that correct?

MR. MEISTER: Objection.

THE COURT: It's a question. I'll allow it.

A Yes, ascribable to the difference in revenues per meter day collected by Brink's, adjusted for March, the peculiar March effect, and the difference for CDC in June, adjusted for the peculiar June effect.

So that the difference is not between the actual points, which include the peculiar monthly effects, but it is between two points where those monthly effects have been taken out, so that what's left is ascribable to the companies or the periods.

(Continued on the next page)

nd 5a a.m.

PRjw

Fairley - direct

2 Q Now, Dr. Fairley, assume with me that there
3 is independent evidence that during the month of March
4 1980 Brink's collectors stole parking meter revenues.

5 What characteristics would factors other
6 than the assumed theft have to have to explain this
7 \$215,000 seasonally adjusted difference?

8 A Well, any factors that would explain that
9 would have to be a factor that could operate suddenly
10 in that period. That is, some factors operate in a
11 kind of gradual trending effect over time. They have
12 their influence on, say, the state-of-the-meter plant
13 or the people's usage of meters which occurs over time.

14 It takes time to work itself out. So that
15 whatever factor explained the jump has to be a quickly
16 acting factor.

17 The second characteristic that any factor
18 would have to have to explain this jump would be it
19 would have to be able to explain a jump of -- it's about
20 12 percent. It has to be a factor which has enough
21 punch, as it were, to have that size effect in a short
22 interval of time, whatever it is.

23 The third feature of any factor that would
24 explain that jump would be that it has to either operate
25 only at that transition or if it operates at som other

1 2 PRjw Fairley - direct
2 places, we should observe its effect in some comparable
3 jump.

4 The fourth condition that any factor would
5 have to make would be that it should be a factor which
6 operates in all the boroughs, because we have observed
7 this phenomenon in each and every borough.

8 Q Now, Dr. Fairley, given the ten-month figures
9 that you have derived and your earlier testimony that
10 within the Brink's period there is no trend and within
11 the CDC period there is no trend, what characteristics
12 would any factor other than theft have to have to explain
13 the change between Brink's collections and CDC collections
14 over the ten-month periods?

15 A Well, they could not be seasonal factors
16 because we have taken those out. They could not be
17 a factor which slowly trended over time because there
18 is no evidence of trend here.

19 Q Dr. Fairley, did you examine, in regard now
20 together to the March-to-June comparison or the ten-
21 month-to-ten-month comparison, the factor of rate changes
22 or meter retimings as a possible factor other than theft
23 or in addition to theft to explain these differences?

24 A Yes, I did.

25 Q What data did you obtain regarding rate changes

1893

1 3 PRjw Fairley - direct

2 and retimings from the City of New York?

3 A I obtained data from six large computer tapes,
4 referred to as the "area description tapes" which give
5 for each and every meter in the City, each month, the
6 status of that meter in terms of what its "cycle code"
7 is, that is, how much it charges, what maximum time,
8 over how many hours, how many days that meter is active
9 for -- Monday through Friday, Monday through Saturday
10 or Sunday -- and indicates whether the meter is in operation.

11 Q Did you analyze these changes over time in
12 ten different categories?

13 A Yes.

14 Q And did you analyze them over three different
15 time periods?

16 A Yes.

17 Q And did you tabulate the results of this
18 analysis on a document?

19 A Yes, I did.

20 Q I show you Defendant Exhibit FB in evidence,
21 subject to connection, and ask if this table is the
22 tabulation to which you just testified.

23 A Yes, it is.

24 MR. GLEN: I now offer FB in evidence, your

25 Handr.

1894

1 4 PRjw Fairley - direct

2 MR. MEISTER: Voir dire?

3 THE COURT: Yes.

4 VOIR DIRE EXAMINATION

XXX

5 BY MR. MEISTER:

6 Q Dr. Fairley, were you informed that the computer
7 tapes upon which you say Exhibit FB is based did not
8 include, until June of 1980, the off-street meters?

9 A Yes, I was.

10 Q And therefore, what factors did you put into
11 this chart to compensate for the off-street changes?

12 A I also examined the off-street parking orders
13 for the off-street lots.

14 Q So this chart then, sir, contains data from
15 the off-street parking orders?

16 A This chart does not, no. This contains for
17 the on-street, about 60,000 out of the 70,000 meters
18 in the city.

19 Q But it does not contain any information as
20 to changes in the off-street meters, does it?

21 A No, it does not.

22 MR. MEISTER: Your Honor, I then object
23 to the caption. I object to it being offered as demonstrative
24 of what the entire meter plant changes were.

25 MR. GLEN: Your Honor, I propose, as soon

1 5 PRjw Fairley - direct
 2 this ruling is issued, to go into the off-street parking.
 3 changes.

4 THE COURT: It may be received.

5 MR. MEISTER: Your Honor, may it be marked
 6 then, where it says "Number of meters," can the witness
 7 insert the words "on-street meters"?

8 MR. GLEN: Without objection, your Honor.

9 May I insert the words, Mr. Meister?

10 MR. MEISTER: Yes.

11 THE COURT: Received.

12 (Defendant Exhibit FB was received
 13 in evidence)

14 MR. AKSELRAD: Your Honor, the exhibit seems
 15 to be unclear to me in that the period marked, the central
 16 column marked March '80 until May '80 seems to have
 17 an overlap of the first and third columns. May the
 18 witness explain whether that center column is indeed
 19 different?

20 THE WITNESS: Yes.

21 MR. AKSELRAD: In other words, if you had
 22 a meter change in March of 1980, which column would
 23 that apply to?

24 THE WITNESS: Right.

25 The first column includes the month of March,

1 6 PRjw Fairley - direct

2 and the middle column includes the months of April and
3 May only.

4 MR. AKSELRAD: I see.

5 THE WITNESS: So it's the end of March that
6 would be clear to have designated 3/31/80.

7 MR. AKSELRAD: And the last column would
8 be 5/1/80?

9 THE WITNESS: The last column would be the
10 end of May. In other words, the first of June. The
11 last column contains June '80 through March '81. The
12 middle column, April and May of '80. The first column,
13 June 1979 to March 1980.

14 MR. AKSELRAD: Did you prepare this document?

15 THE WITNESS: It was prepared under my direction
16 by staff members.

17 MR. AKSELRAD: I believe that the last witness
18 testified, Mr. Donoghue testified, that his understanding
19 as to the meaning of these columns is not the same as
20 this witness has just testified to and that the number
21 of conclusions that he drew at that time were based
22 on his understanding, which we now learn were erroneous.

23 I, therefore, move that the exhibit be stricken
24 or any testimony placed in evidence as to this document
25 from the prior witness also be stricken.

1 7 PRjw

Fairley - direct

2 MR. GLEN: Your Honor, my recollection,
3 although I could check it with the transcript, is that
4 Mr. Donoghue testified that the middle column represented
5 changes during the inter-company period, April and May,
6 which is precisely what Dr. Fairley just testified to.

7 MR. AKSELRAD: But when the other witness
8 was questioned as to what months he thought the middle
9 column represented, he could not agree with the representa-
10 tion made by this witness, and in fact stated that he
11 did not prepare the exhibit and, as such, was unaware.

12 THE COURT: Suppose you find the exact point
13 in the record upon which you rely for your statement.

14 MR. AKSELRAD: Well, I can't do that just
15 now, your Honor.

16 THE COURT: Pardon me?

17 MR. AKSELRAD: I can't do it at this time.

18 THE COURT: Then we will go ahead in the
19 meantime.

20 How long do you anticipate being with this
21 witness?

22 We have a problem on account of my motion
23 calendar again.

24 MR. GLEN: I would think, your Honor, 15
25 minutes will do.

1893

1 8 PRjw Fairley - direct

2 THE COURT: What we will do is take our
3 mid-morning recess now and resume at a quarter to two
4 and continue with this witness then. You say you anticipate
5 being another 15 minutes with the witness?

6 MR. GLEN: Yes, your Honor.

7 THE COURT: Mr. Meister, do you have any
8 idea how long your cross examination will take, approxi-
9 mately?

10 MR. MEISTER: To be perfectly candid, your
11 Honor, I'd just be guessing at this point. If I would
12 be forced to make a guess, I would guess about an hour.

13 THE COURT: Well, this can be off the record.

14 (Discussion off the record)

15 THE COURT: Back on the record.

16 MR. MEISTER: Your Honor, just before this
17 document is received, if it is going to be, could we
18 have the witness for the sake of clarity make the changes
19 that Mr. Akselrad's questioning suggested?

20 THE COURT: Does that present any problem?

21 MR. MEISTER: So that the middle period
22 would then read --

23 THE COURT: All right, the witness will
24 do it.

25 MR. MEISTER: -- 4/80 and the last period

1899

9 PRjw

Fairley - direct

would read 6/80.

THE COURT: We will take our luncheon recess.

The witness will take care of that.

(Luncheon recess)

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

4
(

1900

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

RMjw 1

A F T E R N O O N S E S S I O N

1:45 P.M.

W I L L I A M V . F A I R L E Y , resumed.

THE COURT: We will have to wait, Mr. Glen.
There is an alternate juror missing.

MR. GLEN: Yes, sir.

(Pause)

MR. AKSELRAD: Your Honor, I found the record
reference you asked for before the luncheon recess.
Would you like to see it at this point?

THE COURT: Let me see it.

(Discussion off the record at the
bench)

THE COURT: All right, proceed, please.

CONTINUED DIRECT EXAMINATION

BY MR. GLEN:

Q Good afternoon, Dr. Fairley.

Did you in your analysis take into account
meter rate changes and meter retimings?

A Yes, I did.

Q What if anything did you conclude regarding
rate changes and retimings on the on-street plant as
regards rate changes and retimings as a possible factor,

RMjw

Fairley - direct

2 other than theft, to explain either the March or June
3 difference or the ten-month difference?

4 A On the on-street plant, as I mentioned before,
5 I looked -- did a compilation of data from the area
6 description tapes, which gives the status of every meter
7 in the City at the end of each month, and the compilation,
8 which I believe is an exhibit, is Table 1.

9 Q That is Defendant City Exhibit FB in evidence?

10 A Yes, which is entitled "Number of On-Street
11 Meters with Retiming Changes by Type of Change," and
12 the period are three periods, the three periods that
13 we have been discussing the Brink's period, the two-
14 month transition period, and the CDC period, ten months,
15 the two months of April and May, and the ten months
16 of CDC.

17 This table gives each of five types of retiming
18 or parking regulation changes and for each it is indicated
19 which direction the change occurred in. So it records
20 changes of coins accepted from dime to quarter, or from
21 quarter to dime, the maximum time limit increase or
22 decrease, hourly rate increase or decrease, increase
23 or decrease in the active days, and an increase or decrease
24 in the active hours of the meter.

25 I summed these up and I think perhaps the

1 3 RMjw Fairley - direct

2 most useful way to give my conclusion would be in terms
3 of the summary statistics.

4 I identified for each of the types of change
5 which one I thought, in discussion with Mr. Donoghue,
6 would tend to lead to an increasing effect on revenue,
7 for instance, a coin from a dime to a quarter would
8 have the tendency to decrease the maximum time limit,
9 increasing the hourly rate, increasing the active days
10 or increasing the active hours.

11 Adding those up, let's look at the middle
12 period, the transition period, two months, April and
13 May, and there were a total of 253 changes to meters
14 that would tend to increase the revenue collected by
15 increasing the rate or one of the other four that I
16 mentioned.

17 There were a total of 772 that would tend
18 to decrease the rate.

19 Q Which time period is this, Dr. Fairley?

20 A The April-May transition time period. These
21 were the totals of changes in those two months.

22 Q Let me make sure I am clear on this, Dr.
23 Fairley. You say that adding the total of changes for
24 the two month period, the second column on the page,
25 you come up with a total number of changes of how much?

1903

1 4 RMjw

Fairley - direct

2 A I beg your pardon. I was reading from the
3 wrong column.

4 I came up with a total of -- the increases
5 are 86 and the decreases are 145.

6 Q You are now talking about the two-month period
7 of April and May?

8 A Yes.

9 Q The period between the two ten-month test
10 periods?

11 A That's correct.

12 Q Did you have a discussion with Larry Donoghue
13 in which you received information as to whether a
14 particular change --

15 MR. SCHNEIDER: I object to that, now,
16 information received from some other party.

17 THE COURT: Ask him the source of information,
18 what he based it on. Can't we eliminate these problems?
19 They are really unnecessary.

20 MR. GLEN: Certainly, your Honor.

21 Q What is your source of information as to
22 whether a particular type of change would have an increasing
23 or decreasing effect on revenue?

24 A Mr. Donoghue.

25 Q Did you make a calculation of the effect

1 5 RMjw Fairley - direct
2 of changes within the two month inter-company period,
3 as a statisticians?

4 A Well, somewhat more than half -- the ratio
5 of the number of changes leading to decreases to the
6 number of changes leading to increases was somewhat
7 under two-to-one.

8 What I would conclude from this is that in
9 this period there would be a tendency to revenue decrease
10 unless the changes leading to decreased revenues decreased
11 the revenue per meter by less than two in comparison
12 with the effect on revenues per meter with the increases.

13 Q Did you compare the total number of changes
14 in the inter-company period with the total number of
15 meters on the street?

16 A Yes.

17 Q Did you as a matter of your expert judgment
18 as a statistician come to any conclusion regarding the
19 effect of the number of changes compared to the total
20 number of meters on the street during this two month
21 period?

22 A Yes, I did. It is a very tiny number. There
23 were 231 meter changes in total in this period and there
24 are approximately 70,000 meters in the entire plant,
25 or 60,000 in the off-street plant, and since we are

1905

6 RMjw

Fairley - direct

2 talking about an effect on the entire plant, if we divide
3 the 231 by 70,000, we get, of course, a very tiny number,
4 3/1000ths of the meters.

5 Q In your expert opinion as a statistician,
6 with a reasonable degree of certainty, can you make
7 any statement regarding the effect upon collections
8 in the parking meter plant of a 3/1000th variation?

9 A If the effect on revenues for each of these
10 changes was identical for every meter change, if the
11 meters were average as far as their revenue generating
12 capacity goes, one would suppose there would be under
13 a third of one percent decrease in predicted revenues
14 for CDC.

15 Q Dr. Fairley, taking all of the rate changes
16 and retimings during the two month inter-company period
17 together, do they meet your criteria for a factor other
18 than theft that would explain the March to June
19 differential?

20 A No, they do not. We could go through the
21 criteria, and the main one that is lacking here is sizeable-
22 ness, that is --

23 THE COURT: Is what?

24 THE WITNESS: Sizeableness, substantialness
25 of the change.

1906

1 7 RMjw Fairley - direct

2 A We were talking about a March to June difference
3 between the seasonally adjusted points of 11.6 cents,
4 which is somewhere in the neighborhood of 12 percent
5 difference. We are talking here about an effect which
6 is about a third of one percent.

7 Q Dr. Fairley, did you or your company make
8 any examination as to changes in the off-street meter
9 portion of the parking system during the 22 months covered
10 by our examination?

11 A Yes, we did.

12 Q Did you embody -- did you or your company
13 embody the results of that investigation, of that analysis
14 in a memorandum?

15 A Yes.

16 Q Do you have a copy of that memorandum?

17 A Yes.

18 Q Before you turn to it, do you recall if there
19 were any meters in the off-street parking facility which
20 were removed between March 1st of 1980 and June 1st
21 of 1980?

22 A Yes, they were.

23 Q How many meters --

24 A Excuse me. My information is, but not in
25 this memo, that the number of meters didn't change

1907

8 RMjw

Fairley - direct

2 appreciably. There were other changes and possibly
3 in hours of operation.

4 Q Are you looking at your memo, 38A, Dr.
5 Fairley, off-street parking meters?

6 A I was looking at 38 and 38A is right next
7 to it. 38 is the summary memo. 38A gives the detailed
8 changes.

9 Q Please turn to memo 38A, the second page
10 of text of that memo, fifth paragraph and I ask if that
11 refreshes your recollection as to any removal of meters
12 from the off-street plant between March and June of
13 1980.

14 A I wonder if we are talking about the same
15 memo. It might be useful for you to take a look at
16 it here.

17 (Pause)

18 A That is memo 38.

19 (Indicating)

20
21
22
23
24 (Continued on next page)

rmlt lbpml

rmlt 1

Fairley-direct

2 Q My mistake. Excuse me.

3 By examining the memorandum produced in your
4 office regarding off-street meters, are you able to tell
5 the Court and jury whether there were meters removed from
6 the off-street plant between March 1, 1980 and June 30,
7 1980?

8 A Yes. I have it now --

9 MR. MEISTER: Objection to his reading a
10 document not in evidence.

11 Q Dr. Fairley, does examining the document
12 refresh your recollection as to the number of meters which
13 were -- if any, which were removed between March 1st and
14 June 1st of 1980?

15 A Yes, approximately 250.

16 Q Do you recall, without looking at the memo,
17 whether any meters in the off-street plant during the 22
18 months in issue here, had their hours of operation reduced?

19 A Yes, I do.

20 Q Do you recall the number?

21 A About 5,700, I believe.

22 Q Did you or your office make an analysis of
23 the rate changes and retimings in the off-street meter
24 plant during the 22 months in question?

25 A Yes.

1909

rmlt

Fairley-direct

2 Q Did you make a calculation as to the number of
3 those rate changes that would, according to Mr. Donoghue's
4 discussion with you, increase revenue and compare them with
5 the number that would decrease revenue?

6 A Yes. There were 105 that would increase and
7 74 that would decrease.

8 Q So that over the 22-month period there was a
9 total of 31 changes which according to Mr. Donoghue's
10 opinion, as expressed to you, would tend to increase
11 revenue, is that correct?

12 MR. MEISTER: Objection.

13 A Yes.

14 MR. MEISTER: We had Mr. Donoghue here and
15 we don't need this witness to say what he thinks Mr.
16 Donoghue's opinion was.

17 THE COURT: I'll allow it.

18 Q There were 31 increases?

19 A A net of 31 over decreases.

20 Q And 5,700 meter retimings?

21 A Yes.

22 Q And some 250 meter removals?

23 Given that set of change in the off-street plant,
24 does change in the rates and retimings and installations and
25 removals of the meters in the off-street plant meet your

[910]

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

rmlt Fairley-direct

criteria for a factor other than theft that would explain the discrepancies between Brink's collections and CDC's collections?

MR. MEISTER: Objection.

THE COURT: Overruled.

A No, it would not. On a frequency basis there are more changes tending to decrease revenues in the subsequent period than increase it, and one of the criteria is that there would be a factor that causes an increase.

Here is a factor which on a frequency basis would cause a decrease and it goes in the other direction.

Q Mr. Fairley, of all of the factors that you examined, would any of them meet your criteria for a factor other than theft that would explain either the March to June discrepancy between Brink's and CDC or the ten-month discrepancy between Brink's and CDC?

A None of the factors that I looked at would meet the criteria.

Q Have you been able to form an opinion from your research and analysis as to the magnitude of the differential between Brink's collections and CDC's collections over the 22 months in issue that is attributable to the difference between -- strike that -- that is attributable to theft?

1911

1 rmlt

Fairley-direct

2 MR. MEISTER: Objection. The witness has not
3 excluded other hypotheses.

4 THE COURT: I understand that he did. The
5 witness just testified otherwise.

6 MR. MEISTER: He testified as to very discreet
7 questions put to him.

8 THE COURT: I'll allow it. You may cross
9 examine him on it.

10 A The amount of the intercompany difference
11 determined from the statistical model is 1,382,000,
12 approximately \$1.4 million.

13 THE COURT: What was that figure again?

14 THE WITNESS: \$1,382,000.

15 THE COURT: You gave a figure previously of
16 \$1,365,000. What figure is that?

17 THE WITNESS: That is a figure -- either figure
18 to be used. That was a figure obtained directly by
19 multiplying the average 11.6 cents intercompany difference
20 as predicted by the model, rounding off to 11.6 cents,
21 and multiplying that by the number of meter days of
22 operation for Brink's during its ten-month period.

23 The difference is essentially one of rounding.
24 The computer printout of the results gives \$1,382,000.

25 Q In answer to the Judge's question, did you

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
rmlt

Fairley-direct

1912

use the figure 11.6 cents which represents the March to June difference or the figure of 7.3 cents, the overall figure?

A I'm sorry. I have to clarify that. The arithmetic was 7.4 cents.

Q As a matter of reasonable certainty within the field of statistics, can you draw any parameters above and below your statement that the intercompany difference is approximately \$1.4 million?

MR. MEISTER: Objection, your Honor.

THE COURT: I will allow it.

A Yes. The statistical model analysis embodying the seasonal factors and the intercompany factors, by removing seasonal variation permits you to estimate an average intercompany difference with some precision.

Q You have just testified, Dr. Fairley, that approximately \$1,400,000 represents, in your view, the intercompany difference.

As a matter of statistical analysis are you able to state the likelihood of that figure being exactly accurate or, on the other hand, as a matter of statistical analysis the likelihood of the figure being within a range on either side of that?

A The estimate range determined from the

rmlt

Fairley-direct

1913

2 standard statistical analysis is approximately 10 percent.

3 Q If one were to estimate on a statistical
4 basis a 10 percent increase or decrease, what in your
5 opinion is the likelihood of ascertaining the actual real
6 difference attributable to the change from Brink's to CDC?

7 A This range of 10 percent that I am referring to
8 is a standard error and typically either one standard error
9 on either side of the estimated value or two standard
10 errors on either side of the estimate values is quoted as
11 an indication of the uncertainty in the estimate produced
by the model.

13 So this would be 10 percent of 1.4 million,
14 just in round numbers, 1.4 million, so 1.4 million plus or
15 minus 140,000.

16 Q 1.4 million plus or minus 140,000 gives you
17 the answer to the intercompany difference within what degree
18 of certainty, sir, as a matter of statistics?

19 A It would be a 66 percent confidence interval.

20 Q Does that mean, Dr. Fairley, that a finding
21 of an intercompany difference within \$140,000 below or
22 above your figure of 1,400,000 has a two in three chance
of being accurate as a matter of statistics?

24 A That is close. From a technical point of view,
25 if I could rephrase that, what it means in terms of

1 rmlt

Fairley-direct

[914]

2 statistical analysis authority is that in repetitions of
3 this history where we do have variation about these
4 averages which create some uncertainty about any average
5 value that we estimate -- in repetitions of these kinds of
6 variations we would expect two out of three times for
7 the average intercompany difference to be computed as
8 1.4 million or something within 140,000 of that, either
9 up or down.

10 MR. GLEN: Thank you, Dr. Fairley.

11 No further questions.

12 THE COURT: Before you start cross, I want to
13 see what the status is of my motion calendar.

14 The jury might wait here.

15 (Pause)

16 (Continued on the next page)

17 End 1Bpm
18
19
20
21
22
23
24
25

prlt 1

Fairley-cross

2 CROSS EXAMINATION

3 BY MR. MEISTER:

4 Q Dr. Fairley, during the luncheon break I
5 asked you if you would be good enough to give me a copy
6 of the actual numerical values used to plot the various
7 charts.

8 And with Mr. Glen's permission, you were good
9 enough to give me four pages of charts, which we have now
10 marked Plaintiff's Exhibit 63.

11 I'm going to ask you to look at that and ask
12 whether these are the actual values, numerical values, which
13 those dots represent on the various charts.

14 A Yes, these are the points.

15 Q Now, are these copies of that, sir?

16 A Yes.

17 MR. MEISTER: I guess first I'd better offer
18 this into evidence.

19 MR. GLEN: Your Honor, since I had not seen
20 these before, may I inquire of the witness whether in fact
21 all of the material on these -- may I have a brief voir
22 dire?

23 THE COURT: Yes.

1916

1 prlt Fairley-cross

2 VOIR DIRE EXAMINATION

3 BY MR. GLEN:

4 Q Is all of the material that is on these four
5 sheets been transformed to one of the sheets that you have
6 already testified to on direct examination?

7 A Not all of the material; but on each page some
8 of the material has been.

9 MR. GLEN: Well, your Honor, I would object
10 to any material which has not formed the predicate for
11 one of the charts or graphs already in evidence.

12 MR. MEISTER: Perhaps I can solve that with a
13 question.

14 BY MR. MEISTER:

15 Q Dr. Fairley, is the other material on each of
16 these tables, the material which forms the predicate,
17 that is, the material which you used to come up with the
18 final figures which appear on the charts themselves?

19 A Yes, it is.

20 MR. GLEN: I will withdraw the objection then,
21 your Honor.

22 THE COURT: Received.

23 (Plaintiff's Exhibit 63 was received
24 in evidence)

25 Q Now, sir, just for the record, could you turn

xxxx

1 prlt Fairley-cross

1917

2 on your copy to the chart -- I should say the table
3 numbered Table No. 7: Revenues Collected Per Meter
4 Day; and tell us for the record what those column indicate.

5 A The column No. 1 is actual Brink's revenues
6 delivered per meter day.

7 Column No. 2 is the model prediction of
8 Brink's in the Brink's period of June 1979 to March 1980.

9 Q And is that prediction, sir, based upon your
10 seasonal adjustment that you testified to?

11 A Yes, it is.

12 And the column 3 is the actual revenues per
13 meter day by month in the CDC period.

14 Q And, sir, on my copy there is a fourth hand-
15 written column on the right.

16 A Yes.

17 Those are differences between column 3 and
18 column 1, differences between CDC and Brink's actual.

19 Q This does not have it, does it, sir, the
20 model prediction or seasonal adjustment of these CDC
21 numbers?

22 A No, it does not.

23 Q Is there another document which has those?

24 A I have information on that, yes, for the
25 purpose for which I prepared this table. I didn't need

1 prlt Fairley-cross



2 that information on here..

3 Q Would that be, sir, on the table which is
4 a part of this exhibit, labeled "Table 12A2: Seasonally
5 Adjustmed Revenues Delivered Per Meter Day Collected By
6 CDC Citywide"?

7 A I'm sorry, would that be what?

8 Q A handwritten document labeled "Table 12A2:
9 Seasonally Adjusted Revenues Delivered Per Meter Day
10 Collected By CDC Citywide"?

11 A Right.

12 Q And could you go over those and tell us what
13 those are?

14 A The first column is CDC actual revenues per
15 meter day.

16 The second column is the model predictions of
17 CDC revenues per meter day.

18 Q And then again is the seasonal adjustment that
19 you referred to?

20 A Yes.

21 The third column is the seasonal adjusted
22 revenues per meter day for CDC.

23 Q Now, sir, is there another table labeled
24 12A1: Seasonally Adjusted Revenues Delivered Per Meter
25

1919

1 prlt Fairley-cross

2 Day Collected By Brink's Citywide?

3 A Yes.

4 Q And could you tell us what those
5 columns on that table are?

6 A Column 1 contains the actual Brink's revenues
7 per meter day.

8 Column 2 contains the model predicted --

9 Q When you say that, you are referring again to
10 the seasonal adjustment?

11 A Yes.

12 And Column 3 is the seasonally adjusted Brink's
revenues per meter day.

14 Q So the columns 1 and 2 on this table represent
15 the same information that is contained on tables 1 and 2
16 on the Table 7 which is part of this exhibit; is that
17 correct?

18 A No.

19 Let me explain. There are two different
20 model predictions depending on whether you include the inter-
21 company difference or not. So that on Table 7 what's
22 labeled "Brink's Expected," that includes an additional
23 7.4 cents per meter day, and a column which does not appear
in column 2 on Table 12A1, which is labeled "Brink's
25 Predicted," they are both based on the model.

prlt

Fairley-cross

1920

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

The Table 7 data contain the estimated inter-company difference and the Table 12A1 does not contain that in the figures.

Q So then, sir, the column labeled "Brink's Expected" on the part of the document labeled Table 7 contains two adjustments.

The first is your so-called seasonal adjustment and second, your increasing the numbers by the 7.3 or 4 cents that you testified was the intercompany difference.

A That's correct.

Q Incidentally, what is it, 7.3 or 7.4?

A 7.4 is the model estimate of the intercompany difference, and 7.3 was an actual difference which I computed using actual raw meter days and raw revenues, divided the raw revenues by the raw meter days.

Q So that the model predicted a factor which is one/tenth of a cent higher than actuality?

A Yes.

Q And again just for completeness, sir, the last document on Plaintiff's Exhibit 63 in evidence is labeled "Table 5: Difference in Average Revenues Delivered Per Month (Closest months of Brink's and CDC)."

Could you look at that and tell us what those numbers are?

1921

1 prlt

Fairley-cross

2 A Yes,

3 These are the numbers that were a graph on
4 the first chart we looked at, which is the differences in
5 average revenues delivered per month between the closest
6 months of Brink's and CDC, starting with one month and
7 then going on to two months and up to ten months.

8 Q And these, sir, represent the actual numbers
9 as opposed to -- I should say in distinction to the
10 numbers which you adjusted in your so-called seasonal
11 adjustment; is that correct?

12 A Yes, these are actual numbers.

13 Q And in this comparison, if you will, you are
14 comparing, in the first case, March of 1980 to June 1980,
15 in the second case February and March of 1980 to June and
16 July of 1980; is that correct?

17 A Yes.

18 Q And that does not reflect these seasonal
19 adjustments, does it?

20 A That's correct.

21 Q Now, what's the purpose of the seasonal
22 adjustments, sir?

23 A The purpose in looking at the closest months is
24 to correct for any unusual -- excuse me, to correct for
25 monthly effects.

1 prlt Fairley-cross

1922

2 Q And so the comparison made with the one
3 closest month, the two closest months, which led to the
4 first chart which was introduced into evidence, did not
5 contain that adjustment; is that correct?

6 A That's correct. Those were intended to show
7 what the actual figures were, and they don't reflect
8 the seasonal adjustment.

9 Q And, therefore, the comparisons are not adjusted
10 to show seasonal variations; is that correct?

11 A That's correct. They are unadjusted.

12 Q And there we are talking, sir, about Exhibit F
13 in evidence?

14 A Yes.

15 Q This chart labeled "Differences in Average
16 Revenues"?

17 A Yes.

18 Q Now, was the reason that you made the seasonal
19 adjustment, where you made it, an attempt to be fair when
20 you were comparing different months which may be different
21 for seasonal factors?

22 A Yes.

23 Q And here, in each and every case, until you
24 get to the tenth month, you're comparing different months
25 which may be different for seasonal factors, is that correct?

prlt

Fairley-cross

1923

2 A That's correct.

3 Q For example, March 1980 might be different from
4 June 1980 for reasons of factors which vary from the seasons;
5 is that correct?

6 A Yes.

7 Q And your effort to make that fair comparison
8 was the seasonal adjustment?

9 A That's right.

10 Q Here, the first nine points do not have any
11 seasonal adjustment, do they?

12 A That's correct.

13 Q So this isn't a fair comparison in the sense
14 of your seasonal adjustment, is it?

15 A We can do exactly the same chart, seasonally
16 adjusted, and the first point will be approximately 225,000,
17 and so forth.

18 Q Well, first, sir, let's just deal with this
19 chart.

20 I think if you answer my question about this
21 chart in the form that it was submitted, we can go ahead.

22 A This chart -- in the sequence of discretion
23 here, I like to begin with actual figures and talk about
24 the actual differences, because I think they are most
25 concrete, I think they are most concrete, and I think

1 prlt Fairley-cross
2 people can understand actual numbers.

1924

3 I then went on to say, in order to be fair --
4 that's your word -- that in fact in order to be fair, it
5 is appropriate to seasonally adjust. I discussed the
6 differences you get and the changes in the actual
7 differences you get when you do seasonally adjust.

8 You are absolutely correct. When you do seasonally
9 ally adjust, then you narrow slightly from 263,000 to
10 225,000 approximately, the best estimate that I could
11 determine of the differences between the two companies
12 at that point.

13 Q If you seasonally adjusted, each of the
14 first nine of these ten points would be different; is that
15 correct?

16 A They would be different. The character of the
17 curve will be just about the same.

18 (Continued on the next page)

19 nd 2apm

20
21
22
23
24
25

1 PRjw

Fairley - cross

2 Q And that's the adjustment that you would
3 make to make these numbers a fairer comparison; is that
4 correct?

5 A Oh, I think it's a fair comparison for the
6 purpose for which I used it.

7 Q Then why did you make the seasonal adjustments,
8 sir?

9 A To amek a different comparison.

10 Q What's the point of the different comparison?

11 A I just explained. I think it's very useful
12 and important both scientifically from the point of
13 view of understanding the phenomenon and from the point
14 of view of communicating that understanding to other
15 people, to look at actual numbers.

16 Then I would go from there to show that these
17 models are usefl and it's appropriate to make deductions
18 depending on the comparisons that you are adjusting.

19 Q Well, sir, let's just deal with this first
20 point for the moment, the difference between March 1980
21 and June 1980. That's a point which you said was how
22 many dollars difference in actual numbers now?

23 A 263,000.

24 Q And that's over a point of an intervening
25 three months; is that correct?

1 2 PRjw Fairley - cross

2 A Intervening two months.

3 Q Two months in between?

4 A Right.

5 Q Sir, I ask you now to look at Exhibit FI
6 in evidence and looking only at the CDC period, and
7 I'll ask you to compare another period during entirely
8 the CDC period with the same intervening number of months
9 October to January.

10 Do you know what the difference is there
11 in magnitude of dollars collected?

12 A I can only hazard a guess. It's probably
13 about 300,000, 350,000.

14 Q Could you take a look at the other documents
15 which you have, sir, and see if you can give that to
16 us more precisely?

17 A This is October to -- this is October to
18 December?

19 Q October 1980 to January 1981, the two interveni
20 months just the way you have in March 1980 to June 1980.

21 A You see, I have a difference of 16 cents
22 here, or \$1.01 in October and 85 cents in January. So,
23 on average, that gives us 296,000.

24 Q That's more than the difference between March
25 1980 in Brink's period and June 1980 in CDC period,

1 3 PRjw Fairley - cross

2 isn't it?

3 A Yes, it is.

4 Q And Brink's had nothing to do with that difference,
5 did it?

6 A That was in the CDC period.

7 THE COURT: I didn't hear the witness' answer.

8 THE WITNESS: Brink's had nothing to do
9 with that difference, no.

10 Q Let's take another comparison, sir. Let's
11 take January 1981 to March of 1981, a comparison where
12 there is only one month in between.

13 Can we agree, first, that's entire CDC, that
14 it has nothing to do with Brink's?

15 A Well, except in the sense that there is a
16 seasonal factor which you are not taking out, which
17 is precisely the point of making a fair comparison,
18 is to deseasonalize.

19 Q And that's the same seasonal factor that
20 isn't taken into consideration when you just compare
21 March of 1980 to June of 1980; is that correct?

22 A That's correct. That's why I corrected it.

23 Q Now, let's go back to this figure, sir, January
24 1981 to March 1981. Perhaps it would be easier if we
25 use Exhibit FJ, which is total revenues Citywide from

1 4 PRjw Fairley - cross

2 from all sources, CDC and the City collections.

3 What's the size of the difference there?

4 A Would you like me to estimate it by the graph
5 or look it up?

6 Q I would prefer it more precisely, sir.

7 A You're talking about December of 1980 to
8 February of 1981; is that the change you're looking
9 at?

10 Q I think January of 1981 to March of 1981,
11 sir.

12 A January of 1981 to March of 1981?

13 Q Yes, sir.

14 A \$216,038.

15 Q That's a difference, again, which is totally
16 unaffected by Brink's, isn't it?

17 A Except for the point that I made. That
18 it is --

19 Q No, no.

20 A It is in the CDC period.

21 Q And, therefore, Brink's wasn't collecting
22 in either period; right?

23 A Right.

24 Q And whatever the factors are which led to
25 that \$216,000 difference, it had nothing to do with

1 5 PRjw

Fairley - cross

2 Brink's, did it?

3 A Correct.

4 Q And that's the same for each and every one
5 of these differences during the CDC period; is that
6 correct?

7 A Absolutely.

8 Q Now, looking at that chart, Exhibit FJ in
9 evidence, can you compare, sir, the amount of variation
10 in the CDC collection period with the variations in
11 the Brink's period; and do they, sir, appear to you
12 as they appear to me that there's a much greater swing
13 back and forth over your dotted line, over the average,
14 in the CDC period than in the Brink's period?

15 MR. GLEN: Objection as to how it appears
16 to counsel.

17 THE COURT: Yes, amend your question.

18 MR. MEISTER: Fine.

19 BY MR. MEISTER:

20 Q In the CDC period, is the amount of revenue
21 difference between the various points, the various months,
22 greater than the revenue differences between the various
23 months in the Brink's period?

24 A The average of the absolute differences is
25 greater.

1 6 PRjw Fairley - cross

2 Q Do you know why?

3 A One of the reasons has to be that there were
4 more variations in the meter days collected, because
5 when we do collect for meter days and put this on a
6 per meter day basis, which I believe is the appropriate
7 way to look at it, this is smoothed out so that the
8 difference in variation between these two is less.

9 Q So then in your opinion, Doctor, the appropriate
10 way to examine the comparison is in a difference per
11 meter day rather than in total revenue difference?

12 A Yes, it is. That's the most appropriate
13 way to examine this.

14 Q Well, let me ask you if you really mean that.
15 Do you really mean that's the most appropriate
16 or would a seasonally adjusted difference be the most
17 appropriate?

18 A Well, that follows. I'm just restricting
19 myself to going from the totals to the per meter day
20 basis.

21 The best that we can do, I think, is then
22 to go on to the seasonally adjusted basis.

23 Q So then, sir, if we look at these two exhibits,
24 Exhibit FJ in evidence and Exhibit FH in evidence, if
25 I understand your testimony, sir, neither of those are

1 7 PRjw

Fairley - cross

2 the best ways to make a comparison, in your opinion?

3 A Each of them has a use.

4 Q But they are not the best way to make
5 the comparison, in your opinion?

6 A No.

7 Q Well, let's not spend any more time with
8 them, then.

9 We will now turn, sir, to Exhibit FI in evidence,
10 which is the revenues delivered per meter day collected
11 Citywide. And this, you testified, is a better way,
12 in your opinion, to make the comparison.

13 A Yes.

14 Q And an even better way, in your opinion,
15 sir, is to do it on this seasonally adjusted basis as
16 you have done on this overlay?

17 A That's correct.

18 Q Now, sir, on that overlay, seasonally adjusted,
19 you see a lot of variation there in the CDC period,
20 don't you?

21 A What do you mean by "a lot"?

22 Q You see variation there, do you not?

23 A There is variation there, yes.

24 Q Could you compare, sir, the month of October,
25 seasonally adjusted, with the month of January, seasonally

1 8 PRjw Fairley - cross

2 adjusted, in the CDC period, that is, October 1980 to
3 January 1981?

4 First, sir, will you tell me that that is
5 an interval with two intervening months? Is that correct?

6 A October to January?

7 Q Two intervening months?

8 A Yes.

9 Q Just the way March 1980 to June 1980?

10 A Correct.

11 Q And what's the difference, sir, between October
12 1980 and January 1981 on a seasonally adjusted basis?

13 A 96.8 cents for October and seasonally adjusted
14 for January, 9.14. So we get a 5.4 cents different.

15 Q And what's the economic difference in dollars
16 in those months?

17 A Multiply 5.4 cents times the average meter
18 days in a month, 1,850,000. It gives 99,900.

19 Q Now, sir, why is that?

20 A Why is what?

21 Q Why is it that you have excluded all these
22 factors that you say you have excluded and you have
23 made the seasonal adjustment which you say is necessary
24 to flatten this out so the months are comparable and
25 why is it that during this period when CDC and the City

1933

1 9 PRjw

Fairley - cross

2 were making collections and Brink's was not, there's
3 a difference of \$100,000 between those two months?

4 A Why is there still such a difference?

5 Q Yes, sir.

6 A Because the world is very complicated. And
7 despite our best efforts here, we have used the best
8 statistical methods that are available to disentangle
9 the different effects that are going on here. We have
10 estimated the seasonal factor in each borough and we
11 have estimated an average inter-company difference.
12 And even after you take out those effects, you have
13 variation because seasonal and borough and company differences
14 are not the only factors in the world.

15 Q And so each of these variations between the
16 seasonally adjusted point in CDC's period of June 1980
17 to March 1981 and your average for CDC is attributable
18 to factors other than those which you have been able
19 to examine and quantify?

20 A It's attributable to factors other than any
21 specific factors that go into this analysis.

22 Q And do you know what those factors are, sir?

23 A A great variety of factors having to do with
24 people's decisions to park or not to park, vandalism
25 or a great variety of other factors. This is why we

1 10PRjw Fairley - cross

2 take a statistical approach here. Ideally, if we could
3 understand the parking meter system thoroughly, we would
4 have a prediction, a model which predicted on the basis
5 of all of the factors, income differences in revenues
6 that are delivered by companies, and we would be able
7 to quantify with certainty an amount due to theft, an
8 amount due to vandalism, an amount due to demand changes,
9 an amount due to meter maintenance changes, and so forth.

10 We don't have such a full understanding.
11 Such a full understanding would be -- is undoubtedly
12 impossible to achieve even if we did. It would require
13 inquiry into the meter using habits of every person
14 in the New York metropolitan area.

15 So that we do the best approach here to
16 an analysis of what caused a change from one period
17 to another. The best that we can hope to do really
18 is a statistical analysis.

19 The purpose is: What is the most reasonable
20 estimate of the difference and what you can most reasonably
21 attribute the difference to? That's the best that
22 you can do.

23 You have to live with these variations.

24 In terms of this statistical model, the standard
25 error that I gave -- the difference of 1.4 million is

1935

1 llPRjw

Fairley - cross

2 plus or minus the standard error of 140,000, that standard
3 error, that uncertainty factor of 140,000 is precisely
4 what the statistician does to quantify these variations
5 that are not otherwise explained.
6
7

b 8 (Continued on next page)
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
A
25

1936

3a

1 RMjw Fairley - cross

2 Q Well, sir, the 140,000 is a different variation
3 isn't it, than the difference in the standard deviation
4 or error for October 1980 and January 1981, or, as you
5 call it, the seasonally adjusted figures, right?

6 A Yes. That is the error attached to the --

7 Q That is a ten month total?

8 A Ten month total difference, yes.

9 Q When you say 140,000, you don't mean, sir,
10 to use that figure in comparison to the \$99,000 difference
11 between your predictions and actualities for October
12 1980 and January 1981, do you?

13 A Well, I wouldn't, but I also wouldn't want
14 an inappropriate comparison. If we look at -- yes,
15 what the 140,000 is measuring is the confidence that
16 you have in the inter-company difference overall.

17 Q Let's leave that for when we deal with that.
18 Let's confine ourselves now to this October 1980 to
19 January 1981 difference which are factors you can't
20 explain, of about \$99,000, is that right?

21 A Yes.

22 Q I asked you, before you started giving this
23 answer, what are those factors?

24 A I gave you my understanding of that, the
25 variety of factors affecting the nature of the meter

1 2 RMjw

Fairley - cross

2 plant itself and the nature of the use of the meter
3 plant, changes in rates in the meters, changes in active
4 hours --

5 Q All of those are factors which in your direct
6 testimony you said, if I may paraphrase, don't amount
7 to a heck of a lot of difference. I think you said
8 it was 3/10ths of one percent variation, is that right?

9 A Those factors, yes.

10 Q And the difference we are dealing with here
11 is considerably greater than 3/10ths of one percent,
12 isn't it?

13 A Yes.

14 Q We heard the other day Mr. Donoghue say based
15 upon his review and the information given to him by
16 the City there was no significant difference, in his
17 opinion, in the state of repair or vandalism to parking
18 meters during this ten-month period. So that wouldn't
19 be a factor, in your opinion, would it?

20 A That is also my understanding.

21 Q So what is the factor that accounts for that
22 difference?

23 A One thing that can occur is that you have
24 about 20 different factors and just by chance some of
25 them pile up at different times. So that you might

1 3 RMjw Fairley - cross
2 have a pileup of factors here. In other words, if
3 we focus, as you have done, on just one particular change,
4 there is always the largest change in a series of numbers
5 like this --

6 Q Just the way there is between March 1980
7 and June 1980, is that correct?

8 A No, it is not exactly the same.

9 Q But it is one change of some magnitude?

10 A That change occurs in each and every borough
11 and that change, when we deseasonalize these data, they
12 show no trend line and show a jump -- excuse me, no
13 trend over the Brink's period, no jump on the CDC period,
14 and that is not true of any other change in these charts.

15 Q I would appreciate it if you would answer
16 my question, sir.

17 What is or are the factors that accounts
18 for that variation between October 1980 and January
19 1981?

20 A As I was saying, what could easily account
21 for it would be a bunching of the effects of factors
22 each one of which has a relatively small impact but
23 which by chance when you pick out one change like that,
24 that could be the point where they happen to bunch up
25 and that is the kind of chance phenomenon that is taken

1939

1 4 RMjw

Fairley - cross

2 care of by the standard error I discussed.

3 Q Could you tell us what the factors are, sir?

4 A I thought I had given you a list of several
5 of them before. Are there some other types of factors
6 that you were looking for?7 Q I don't know what list you are referring
8 to, sir. I would like to have you say now what the
9 factors are in your expert opinion which account for
10 the difference between the October 1980 seasonally adjusted
11 figure for CDC and the January 1981 seasonally adjusted
12 figure for CDC.13 A I don't purport to have an answer for that
14 question. I don't have the factors that did account
15 for that change.16 Q Similarly, sir, you don't have the factors
17 that account for the difference between the seasonally
18 adjusted figures between September 1980 and October
19 1980, do you?

20 A No, for none of those variations.

21 Q Nor for October to November 1980?

22 A None of them.

23 Q Nor for January to February 1981?

24 A None of them.

25 Q Nor for February to March 1981?

1940

1 5 RMjw

Fairley - cross

2 A No.

3 Q And the one thing that we do know is that
4 that variation had absolutely nothing to do with Brink's?
5 We can agree on that, can't we?

6 A Yes.

7 Q So, in summary, Doctor, is it your testimony
8 that the variation in the CDC period between the flat
9 average and the actual seasonally adjusted points is
10 due to a variety of factors that you cannot specifically
11 label or quantify?

12 A That's correct.

13 Q And that would be true, wouldn't it, if I
14 asked you the same questions as to the differences in
15 the seasonally adjusted collections during the Brink's
16 period?

17 A That's correct.

18 Q Sir, in your opinion would it be probable
19 that whatever those factors are they would be factors
20 which could be summarized as the difference in the amount
21 of money which the motoring public put into the parking
22 meters?

23 MR. GLEN: Objection. Are we talking about
24 the Brink's period or the CDC period?

25 MR. MEISTER: Let's take the CDC period

1941

1 6 RMjw Fairley - cross

2 first.

3 MR. GLEN: No objection as to the CDC period.

4 A Yes, as influenced by the state of the meter
5 plant and other factors.

6 Q I thought you were assuming the state of
7 the meter plant is constant.

8 A But you are talking about little variations.

9 Q Well, \$99,000 is not a little variation.

10 A You can have a bunching of little factors
11 that can produce --

12 Q Whatever the factors are that you can't label,
13 in your judgment during the CDC period, they could all
14 be summarized as factors which influenced the amount
15 of money the motoring public put into the parking meters?

16 A I think what you are saying is the tautology.
17 These are the differences in amounts of money put in
18 per meter day collected -- differences in amounts delivered
19 per meter day collected.

20 Q When you say tautology, sir, does that mean
21 you agree with it?

22 A Do you think it is a tautology?

23 Q Afterwards, in the recess, you can ask me
24 questions, but now I have to ask you questions and you
25 have to answer.

1992

1 7 RMjw

Fairley - cross

2 A I think to say a tautology and I would always
3 agree with the tautology.

4 Q Leaving out what my father would call the
5 twenty dollar words, you agree then that the differences
6 in these seasonally adjusted points in the CDC period
7 are likely in your expert opinion due to differences
8 in the amount of money that people put into the parking
9 meters?

10 A The word "deliver" is also there. That part
11 of it I would not agree with. There is money put in
12 and there is money taken out and money delivered to
13 the City and recorded in the cash folio sheets.

14 Q We have already established larger variations
15 in the CDC period on seasonally adjusted per meter day
16 basis than in the Brink's period.

17 A Yes.

18 Q Are you suggesting that there is a slip between
19 the cup and the lip in the CDC period, that is, that
20 the money being put into the meter in this period which
21 is being held up as a model for comparison somehow doesn't
22 get its way to the City, although you and Mr. Donoghue
23 agree that the state of repair for meter plant is essential
24 the same throughout this period?

25 MR. GLEN: Objection.

1943

1 8 RMjw

Fairley - cross

2 THE COURT: Sustained as to form.

3 Q Let's go back, then, sir. I ask you if you
4 can answer this one simply and then perhaps we can move
5 on to another question.

6 Do you agree, in your expert opinion, that
7 variations in the seasonally adjusted amount of money
8 received by the City during the ten months from CDC,
9 that variations in those numbers are due to factors
10 which can be summarized as factors affecting the amount
11 of money which people put into the parking meters?

12 A Not entirely. I described this as revenues
13 delivered per meter day collected.

14 Q What are the other factors?

15 A Coins could be lost or coins could be stolen
16 in this period.

17
18 (Continued on next page)

3b a.m. 1

rmlt

Fairley-cross

1944

2 Q But you don't know that for a fact?

3 A No, I have no knowledge of that, but I
4 am responding to your question and trying to answer
5 it precisely.

6 Q Based upon all the information available
7 to you -- strike that.

8 In doing your work in preparation for your
9 testimony in this case, Doctor, did you just rely on
10 information given to you by the City or did you ask
11 for information as well?

12 A I asked for information as well.

13 Q Did the City give you information in response
14 to every request for information?

15 A Yes, every request that we made we received
16 information, yes.

17 Q You hav all the information that you requested
18 from the City?

19 A Yes.

20 Q Based upon the entire sum of the information
21 which you have, sir, in your expert opinion, are the
22 variations between seasonally adjusted money received
23 by the City for each of the months during January, 1980
24 to March 1981 attributable to factors which influenced
25 the amount of money which people put into the parking

1 rmlt Fairley-cross

1945

2 meters?

3 MR. GLEN: Objection. I assume January
4 1980 should be June of 1980.

5 MR. MEISTER: I'm sorry, June 1980 to March
6 of 1981.

7 A I thought I had answered your question
8 before, but perhaps I am missing something.

9 Q Well, perhaps you could say yes or no.

10 A I am trying to give the correct answer
11 and I thought I had responded before.

12 Was there something in my response that
13 was not responsive to your question?

14 Q I would say the response.

15 A Well, I would have to say no, then, because
16 I qualified my answer and you repeated it without the
17 qualification.

18 Q What in your information made available
19 to you accounts for that change in variation other than
20 the amount of money put into the meters?

21 A No other information made available to
22 me.

23 Q That was my question, sir. Based upon
24 the totality, all the information made available, both
25 what the City originally gave you and what the City

1 rmlt Fairley-cross 1948
2 gave you after you asked for additional information,
3 in your expert opinion, are those variations from the
4 seasonally adjusted receipts during the CDC period,
5 June 1980 to March 1981, attributable to the factors
6 which account for variations in the amount of money people
7 put into the parking meters?

8 A Yes.

9 Q Thank you.

10 Now, sir, we have agreed that those variations
11 are greater in magnitude, that is, a greater amount
12 of money, than there is in the Brink's period, June
13 of 1979 to March 31, 1980; is that correct?

14 A You're looking at the citywide chart?

15 Q Yes.

16 A That is going to vary by borough.

17 Q Sir, for some reason the City has not introduced
18 your thorough charts into evidence and we will only
19 deal with what the City put into evidence.

20 A I believe it has, Charts 13 to 17 and 13A
21 through 17A. They are not the large-size charts.

22 Q That's right. They are these but they
23 are not in evidence.

24 MR. GLEN: Objection. The record will
25 show they are in evidence.

1 rmlt

Fairley-cross

1947

2 THE COURT: My understanding is that they
3 are. Are you talking about this exhibit that starts
4 at 12?

5 MR. MEISTER: The first page of that was
6 offered and only the first page, it is my understanding.

7 MR. GLEN: I don't remember exactly, but
8 I am perfectly willing to offer them now.

9 MR. MEISTER: I will do that for you.

10 THE COURT: He is so generous this afternoon.

11 Q Here is the balance of charts 13A, 14A,
12 15A, 16A and 17A which we have marked as Brink's Exhibit
13 64 for identification.

14 Are those those charts?

15 A These are the seasonally adjusted revenues
16 by borough.

17 MR. MEISTER: Brink's will offer them in
18 evidence, your Honor.

19 MR. GLEN: No objection.

20 MR. AKSELRAD: No objection.

21 (Plaintiff's Exhibit 64 was received
22 in evidence)

23 Q Now that we have taken care of that, let's
24 go back, sir, to the citywide total and the variations
25 in the Brink's period on the seasonally adjusted receipts.

rmlt

Fairley-cross

1948

My question, I believe, is whether the amount of those variations is less than the amount of variations in the CDC period for the same corresponding values.

A I would say in the CDC period you can see that going down to January there is a change there. If you took that out, then I would characterize the variations as being similar, including that point, and then by some measure of variation you might say that the CDC was somewhat more variable.

Q And even if you ignored January, for some reason -- by the way, do you know of any reason why January should be ignored?

A No. I am just saying the characterization of the variability -- your statement applies with January in and would not apply with January out. In other words, it is not a characteristic difference between the two series. It is one which a single month can alter the characterization.

Q Well, we have to deal with all the months, don't we, including January?

A If you want to deal with them, yes.

Q Dealing with all the months, the amount of variation in the CDC period is greater than the amount

1 rmlt

Fairley-cross

1949

2 of variation in the Brink's period; is that correct?

3 A Yes.

4 Q But there still is variation in the Brink's
5 period?

6 A Yes.

7 Q And, sir, if the variation in the CDC period
8 is, in your opinion, most likely explained by variations
9 in the amount of money which people put into the meters
10 for various factors that you can't identify, isn't that
11 the most reasonable assumption to make for the reasons
12 for the variations in the Brink's period?

13 A May I ask a clarifying question?

14 When you say the factors affecting money
15 people put into the meters, are you excluding the number
16 of meters that are present and the state of those meters?

17 Q That is in a per meter day, which you testified
18 takes care of the question of the number of meters present;
19 is that correct?

20 A Yes.

21 Q Therefore, we don't have to worry about
22 that, right?

23 A I am just trying to understand your phrase-
24 ology.

25 Q And Mr. Donoghue testified, and I think

1950

1 rmlt

Fairley-cross

2 you agree, that your information is the state of the
3 meter plant in terms of repair -- that it is essentially
4 the same throughout this period, according to the information
5 the City gave you?

6 A Yes.

7 Q So then, sir, would you answer my question?

8 A The factors affecting these variations
9 I would say could be of two kinds:

10 One is factors of use, which I believe
11 you are referring to in terms of monies that people
12 put into the meters, and then they could be meter plant --
13 any meter plant variations that remain even though on
14 average it is approximately constant, and you could
15 have bunching those or those with the use factors or
16 bunching of the use factors alone.

17 Any of those kinds of variations could
18 in principle explain these variations.

19 THE COURT: Are you about to go to another
20 subject?

21 MR. MEISTER: Sort of a variation on the
22 same subject but, yes, your Honor.

23 THE COURT: Well, we have been going quite
24 a while and I think in view of the time that counsel
25 requested on the motions that there is no point in keeping

1951

1 rmlt

Fairley-cross

2 the jury waiting here about an hour or so.

3 We will go over until tomorrow morning
4 at 9:30.

5 Good night, all.

6 (Adjourned to Wednesday, June 2, 1982
7 at 9:30 a.m.)

8 - - -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

WITNESS INDEX

<u>Name</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
William V. Fairley	1809	1915		

EXHIBIT INDEX

<u>Defendant</u>	<u>Identification</u>	<u>In Evidence</u>
FC		1816
FI		1849
FJ		1850
FG		1861
FL		1872
FB		1895
 <u>Plaintiff</u>		
63		1916
64		1947

1953

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BRINK'S, INC.

v.

80 Civ. 6975

THE CITY OF NEW YORK

June 2, 1982
9:40 a.m.

- - -

(In open court - jury present)

W I L L I A M F A I R L E Y, resumed.

THE COURT: Good morning, all.

Let's proceed.

CROSS EXAMINATION (Continued)

BY MR. MEISTER:

Q Good morning, Doctor.

A Good morning.

Q Sir, yesterday you told us that you did certain calculations to produce what you called a seasonal adjustment for data.

Can you tell us, as precisely as you can, exactly how you did that seasonal adjustment?

A Yes.

The seasonal adjustment is based on the method of least squares. In technical terms, the model fitted is a two-way analysis.

XXX

1 prlt

Fairley-cross

1954

2 Let me try to explain the meaning of the
3 seasonal adjustment.

4 We notice seasonal patterns. As I pointed
5 out yestrday, January, June to July, other months, show
6 a characteristic pattern for both of the ten-month periods
7 and in the different boroughs. So we start out with
8 an expectation that there would be some natural seasonal
9 variation depending on changing habits of people between
10 summer, fall, winter, spring, changing weather patterns,
11 and so forth.

12 You start out with that expectation whenever
13 we look at changes over time.

14 A graphical examination of the revenues
15 per meter day by month indicates, just by eye, by looking
16 at them, what some of those typical seasonal patterns
17 are. That's the common sense or intuitive background
18 to what's being done.

19 Now, the actual estimate of the seasonal
20 factors can be understood as follows:

21 Let's take Manhattan. In Manhattan we
22 have two years of data and we have ten months in each
23 of two years, the same ten months, March to June in
24 both cases.

25 Now, the two years were picked -- these

1955

1 prlt Fairley-cross

2 two ten-month periods were picked because they were
3 close together and therefore gave us the best estimate
4 of an intercompany difference.

5 Now, two years of data with two ten-month
6 periods, we have for each month two observations, that
7 is, for June we have a revenue per meter day for Brink's
8 and we have a revenue per meter day for CDC; for July
9 and so on through March.

10 Now, essentially what the model estimates
11 is -- take the average of the two Junes and that's the
12 best that we can do to estimate the June seasonal effect.
13 So you take the average of each of the months. And
14 then we find, how does this average deviate from the
15 overall average, because it's the deviation of the Junes
16 from the overall average that gives you the seasonal
17 effect.

18 You will recall that January was a low
19 month in both cases, as the chart illustrates. So when
20 we look at the deviation of January we see it's negative,
21 it's below the average.

22 In the CDC period, we see the same phenomenon,
23 January is below the CDC average.

24 You take the average of those two deviations,
25

1 prlt

Fairley-cross

1956

2 and that's the best estimate we have from this data
3 for a January effect.

4 Q Now, sir, in doing that calculation, you
5 did it -- let's just take January for a moment -- on
6 the basis of the two citywide totals; is that correct?
7 The CDC total for January and the Brink's total for
8 January on a citywide basis, I mean.

9 A No.

10 It was done for each borough. The citywide
11 charts are aggregates over the five boroughs.

12 Q Now, sir, in doing that, you're measuring,
13 I take it, the differences -- let's take January --
14 between the CDC revenue per meter day which you calculated
15 for January and the average of the CDC revenue per meter
16 days, on the one hand, and the Brink's revenue per meter
17 day difference from the Brink's average revenue per
18 meter day; is that correct?

19 A Yes.

20 Q So that necessarily assumes, as you testified
21 in your opinion, that there is no trend between these
22 points; is that correct?

23 A Yes.

24 The existence of trend as a hypothesis was
25 tested for and rejected.

1957

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

prlt Fairley-cross

Q And if there were a trend, then the calculation would be different, wouldn't it?

A It would be the same sort of calculation, the same concept, but the actual numbers would be different, somewhat different, yes.

Q Now, sir, you said you tested for a trend in the Brink's points, and you say you found none.

Is that correct?

A Yes.

Q And you say you tested for a trend on the CDC data for those ten months and you found none.

Is that correct?

A Yes.

Q Am I correct, sir, that you did not test to see if there was a trend for all the points taken together; that is, the Brink's collections and the CDC collections viewed as a whole?

A I considered that but rejected it. That would not make --

Q Well, the question is:

Did you test for it?

A That would not make sense here.

THE COURT: I didn't hear you.

That would not make what?

prlt

Fairley-cross

1958

1
2 THE WITNESS: That would not make sense
3 here.

4 What we are interested in is a hypothesis
5 of a jump at the transition point, April and May.

6 Q So if you assume that hypothesis, then
7 it's not necessary in your opinion to test for whether
8 or not there's a trend?

9 A One reason it is not necessary -- why it
10 is not only not necessary, it would not make sense to
11 test for a trend, is that we are testing a difference
12 between the Brink's period and the CDC period.

13 The other reason, which is very plain from
14 just graphical inspection, is that if you fitted a trend-
15 line, that would be a line going from somewhat below
16 the Brink's period of Point A on the vertical axis up
17 here to above the CDC period. You could see that that
18 trendline would not correspond to reality because the --
19 because that would not be a good model.

20 Q Well, sir --

21 A It would not be a good model because the
22 deviations -- you can see that it is not a good model
23 in Brink's because Brink's doesn't have a trend, and
24 yet that model would say it had a trend.

25 Q Now, sir --

1 prlt

Fairley-cross

1959

2 A It's not a good model in CDC because there
3 is no trend in CDC and that model would say that it
4 had a trend. So that's why it doesn't make any sense
5 to pursue that.

6 Q Sir, my question was:

7 Is it correct that you did not attempt
8 to determine whether there was a trend over the entire
9 period?

10 A I determined that there was not a trend
11 over the entire period.

12 Q Now, sir, in examining --

13 A In answer to your question, I did attempt
14 that. The answer is there is not.

15 Q How did you attempt it?

16 A By fitting a model. In fact, the models
17 which test for trendline within each borough separately
18 are also joint tests. So that I fitted in a model in
19 which it was possible for the slope in either period
20 to vary arbitrarily, so that the slope in the Brink's
21 period I fitted for each borough, and it could take
22 whatever value the points best seemed to indicate, and
23 similarly for the CDC period, simultaneously.

24 In all cases, the slopes were insubstantial
25 and not statistically significant.

1 prlt

Fairley-cross

1960

2 Q Sir, I find your answer a little confusing.
3 Let me try to clarify it.

4 Did you take, sir, all of the data on a
5 citywide basis and view it as one whole, that is, from
6 June 1979 all the way to March 1981, and attempt through
7 mathematical and statistical means to see if there was
8 one trend for those points?

9 A The best single answer for your question
10 is yes.

11 Q And did you do that, sir, under the concept
12 that you referred to in your direct testimony as regression
13 analysis?

14 A Yes.

15 Q Now, in regression analysis, are there
16 mathematical tests to determine how good a fit the trend-
17 line is to the data?

18 A Yes, there are.

19 Q And is one of those factors called the
20 correlation of the trend to the data?

21 A Yes.

22 Q And that's measured by a number, isn't
23 it?

24 A Yes.

25 Q When you tried to fit a trendline to explain

1961

1 prlt

Fairley-cross

2 the entire period, from June 1979 to March 1981, did
3 you come up with a number for the correlation of that
4 trendline?

5 A No, because I didn't fit it that way.

6 Q So you didn't attempt it to do that way?

7 A No, I didn't. There are different ways
8 to do it.

9 Let me distinguish for you. Your original
10 question was broad and it encompassed a number of technical
11 ways in which -- what you're talking about could be
12 done.

13 You're talking about fitting a single trend-
14 line.

15 As I pointed out --

16 Q Right.

17 A -- I don't think that exercise would be
18 scientifically appropriate.

19 Q That's my question here, Doctor.

20 Did you attempt to do that?

21 A What I did --

22 Q No. Just, did you attempt to do that?

23 A I did something that I thought was better.

24 Q Let's put that aside.

25 A I fitted two different lines --

prlt

Fairley-cross

1962

2 Q Sir, please. I'd appreciate it that you
3 would restrict yourself to answering my questions. Your
4 counsel can ask you whatever questions he wants to later.

5 My question is:

6 Did you go through a mathematical statistical
7 exercise of attempting to fit one trendline through
8 all those data points on a citywide basis from June
9 1979 to March 1981?

10 A No, I did not fit a single trendline.

11 Q Thank you.

12 Sir, may I ask you when you were first
13 retained to act for the City in this case?

14 A August of 1981.

15 Q And when you were retained, by whom were
16 you retained?

17 A New York City Law Department.

18 (Continued on the next page)

1963

b am

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

PRjw

Fairley - cross

Q And what was it that you were asked to do?

MR. GLEN: Objection.

THE COURT: Overruled.

A I was asked to investigate the revenue collection and delivery over some relevant time period.

Q Who told you --

A For the two contractors.

Q Who determined what the time period was?

A I chose the time period after consulting with people in the City, in the New York City Parking Meter Department and in the Department of Finance, the people who I dealt with for gathering and putting on computer data, the data on the Parking Meter Division's collections of revenues.

Q And, sir, in determining that, were you given any data for collections prior to June 1979?

A I was not given any and I didn't ask for any. I determined that I wanted those two ten-month periods rather shortly after beginning to look at the problem.

Q And similarly, you didn't ask for and weren't given any data after March 1981; is that correct?

A That's correct.

Q When you were retained, sir, did people tell

1964

1 2 PRJw Fairley - cross

2 you in their view there was a difference between the
3 collections attributable to theft in these periods?

4 A They told me that there had been an arrest
5 of, I believe, seven people on April 9, 1980, that there
6 was -- that theft had been established at least on that
7 date.

8 They told me that there were videotapes that
9 investigators had taken on other occasions and various
10 other evidence which I was not shown at that time which
11 indicates that some theft occurred.

12 Q Now, sir, were you shown that evidence at
13 any other time?

14 A I saw a couple of memos. I think I saw the
15 affidavit of Investigator Kilgallon and a memo summarizing
16 one of the videotapes.

17 Q You say you were retained in August of 1981.
18 When did you prepare those charts?

19 A These charts were only prepared about, oh,
20 a week or ten days ago.

21 Q And when did you come to your conclusion?

22 A I came to my basic conclusion about the non-
23 existence of trends and the statistical evidence for
24 a jump at that point and an approximate answer as to
25 the revenue difference of \$1.4 million in November.

1965

1 3 PRjw Fairley - cross

2 Q That would be November 1981?

3 A Yes.

4 Q What was the reason that the charts weren't
5 prepared in November of 1981?

6 A At that time, I think the trial was thought
7 to be most probably scheduled in December, even January.
8 I didn't want to prepare charts until just prior to making
9 a presentation.

10 Also, you know, I did do continuing work
11 on this right up to a couple of weeks ago. I have
12 been constantly refining my thinking on it. So I didn't
13 want to go to the expense of making up charts until
14 that time.

15 Q When you say refining your thinking, sir,
16 what does that mean?

17 A Well, you know, is it 1.4 million or 1.3
18 million or 1.5 million, that kind of thinking.

19 Q Does that mean, sir, that the data with which
20 you were provided changed over this period of time?

21 A Hardly at all. As you know, we had some
22 back and forth about 10 or 15 data points out of all
23 of the days in this period which we changed some of
24 the numbers. Out of revenue . of 16 or 17 million
25 in a ten-month period, these changes were, I believe,

1966

1 4 PRjw Fairley - cross

2 on the order of 50 or 60 thousand dollars in revenue.
3 These didn't importantly change any of the conclusions,
4 but the numbers did change. We ran all of the regressions
5 and model estimates and making the final few changes
6 in the data base.

7 Q Sir, I'm showing you Exhibit FC in evidence,
8 which you testified, I believe, is the data base that
9 you used.

10 Is that correct?

11 A Yes.

12 MR. MEISTER: And just so the jury is clear
13 about what we mean by data base, may I display this
14 to the jury, your Honor?

15 THE COURT: Yes.

16 Q This, then, is a computer printout showing
17 the data and area of collection, the number of meters
18 collected, the days between -- the calendar days between
19 the collections and the revenue received by the City
20 from each collection according to the daily folio sheets.

21 Is that correct?

22 A Yes.

23 Q And that's what you mean when you say the
24 "data base"; is that correct?

25 A That's correct.

1967

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

5 PRjw Fairley - cross

Q Can you tell, sir, when this data base became available in the condition that it now is after all of the corrections that were made?

A You mean the date of this particular printout?

Q The date that the data base, the data on the computer which formed this printout, first became available in the form that it is now after the corrections that were made?

A After the final corrections that were made two or three weeks ago?

Q After the last corrections were made, yes.

A Well, this printout is dated May 12, 1982.

Q Does that mean that it was May 12th that the final corrections were made?

A No. I can give you that date.

Q I don't think we need it precisely.

MR. GLEN: Objection, your Honor.

A A week or two before.

MR. GLEN: If the question goes to the date, I think the witness should be allowed to give the date if he wishes.

MR. MEISTER: Fine.

BY MR. MEISTER:

Q Please give the precise date then.

1958

1 6 PRjw

Fairley - cross

2 A May 6th.

3 Q May 6, 1982?

4 A That's right.

5 Q Sir, do you recall the date of the previous
6 printout which you said we had back and forth as to
7 errors that were there?

8 A I don't recall offhand. It was sometime prior
9 to that.

10 Q About a week or so before?

11 A I think so.

12 Q Sir, you recall that in that previous printout
13 there were collections that were omitted completely;
14 is that correct?

15 MR. GLEN: Objection, your Honor.

16 The accuracy of the two data bases, the one
17 that the City worked off of and the one that Brink's
18 worked off of, was the subject of a stipulation entered
19 into between Mr. Meister and myself. I fail to see
20 the relevance of this questioning in the light of the
21 stipulation.

22 THE COURT: What's the question?

23 (Record read)

24 THE COURT: I'll allow the question.

25 A Yes.

1009

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

7 PRjw Fairley - cross

Q You recall, sir, there were collections where the amount of money collected was reported in errors of thousands of dollars; is that correct?

MR. GLEN: Objection, your Honor.

It is precisely --

THE COURT: In the light of the stipulation, I think counsel is right. There is no point in going into it. The witness has based his testimony upon stipulated facts -- at least in part.

MR. MEISTER: I ask the witness be given Exhibits FA and FD in evidence.

Q Dr. Fairley, I'm handing you Exhibits FA and FD. Sir, I ask you first, so the jury is clear on this, Exhibit FA lists for each of the ten months, in each of the periods, the total revenue received by the City from parking meter collections no matter who did the collecting; is that correct?

A Yes, that's correct.

Q And Exhibit FD lists the total money received by the City from the collections done only by Brink's in the period of June 1979 to March 1980, on the one hand, and only by CDC in the period of June 1980 to March 1981, on the other hand; is that correct?

A Yes.

1970

1 8 PRjw

Fairley - cross

2 Q Sir, comparing the figures for the revenue
3 received only from the Brink's collections and only
4 from the CDC collections, you testified, sir, there's
5 a difference?

6 A Yes.

7 Q On a total basis of what?

8 A The total difference between CDC and Brink's
9 revenues delivered in regular collections, \$1,212,084.

10 Q Of the difference, sir, in those two periods
11 between the City's total receipts from revenues from
12 parking meters no matter who did the collections is
13 what, sir?

14 A \$980,358.

15 Q Now, that, sir, is lower, that difference
16 is lower than the other difference, isn't it?

17 A Yes, it is.

18 Q Would you, sir, compute that difference to
19 us?

20 A Certainly. \$231,726.

21 Q Now, sir, in your expert opinion, why is it
22 that there is a \$231,726 difference between these two
23 figures that you have computed?

24 A I don't know exactly. I don't know all the
25 reasons.

1 9 PRjw

Fairley - cross

2 One reason that seems likely is a difference
3 in the amount of collection activity engaged in by the
4 City in these two periods.

5 So that, for example, the City, in gathering
6 more revenue, absent other information, I would assume
7 collected more meter days during the Brink's period
8 than during the CDC period. So that you have already
9 in the regular collections Brink's collected \$162,000
10 more meter days than CDC. I would presume, absent
11 other information, that the City also collected more
12 meter days in that period. That would be one explanation.

13 Q Well, regardless of the reason, sir, can
14 we not agree that the only difference between those
15 two tables of data which you have prepared is the fact
16 of the City collections? Is that correct?

17 A Yes.

18 Q And so no matter why the City was making
19 the collections or how the City was making the collections,
20 it's a fact, isn't it, that during the Brink's period
21 the City collected itself \$231,726 more than the City
22 itself collected during the CDC period?

23 A That is a fact, yes.

24 Q And in your expert opinion, the fact that
25 the money was collected by the City rather than Brink's

1972

1 10PRjw Fairley - cross

2 doesn't give rise to any inference that Brink's was
3 stealing, does it?

4 A Let me think about that. Inference that
5 the City collecting more doesn't give rise to the inference
6 that Brink's was stealing? No.

7 Q The City received the money no matter where
8 it came from; isn't that right?

9 A Yes.

10 Q No matter who brought it to the City; correct?

11 A Well, what I attempted to do, counsel, was
12 to compare the performance of the two contractors, absent
13 the City-type collections.

14 Q And your comparison there, sir, ignores,
15 does it not, that during that same period the City itself
16 collected \$231,726 more during the Brink's period than it
17 itself collected during the CDC period?

18 A Well, no, I didn't ignore that. I presented
19 the data because I wanted to present a complete picture.
20 But I didn't ignore it. I deliberately chose the data
21 on the regular collections of the two contractors to
22 compare them, because the fact that the City has collected
23 more just reflected the fact that the City was more
24 active and presumably collected more meter days.

25 What the City does is irrelevant to comparing

1973

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

11PRjw Fairley - cross

the two contractors' performance.

Q Sir, I would ask you, while you are testifying, not to speculate as to reasons why something happened, unless you have a basis for saying that's why it happened.

Would you do that for me, sir?

MR. GLEN: I move to strike the comment.

The question called for the expert's opinion.

THE COURT: The jury is instructed to disregard counsel's comment.

(Continued on next page)

endtb

1974

1 RMjw Fairley - cross

2 Q Did you count and tabulate the number of
3 meter days collected by the City during these periods?

4 A No. To the best of my knowledge, that was
5 not available, was not recorded by the Parking Meter
6 Division.

7 Q Going back to your data base for one moment,
8 sir, Exhibit FC in evidence, could you take, sir, just
9 a typical line and go through the mechanics of the division
10 that you did to come up with the meter-day figure? Why
11 don't you start on line 6.

A That is Area 1011, the 29th of June, 1979.

13 Q How many meters were recorded collected then?

14 A 300.

15 Q How many calendar days are listed as being
16 between that collection and the immediately preceding
17 collection?

18 A Three.

19 Q I think, sir, you are reading from the previous
20 line.

21 A 27.

22 Q What was the revenue received?

A \$7,891.80.

24 Q What was the calculation you did based on
25 those numbers?

31
2
ec

1975

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

2 RMjw Fairley - cross

A The calculation to get what?

Q To get this per meter day figure.

A Per meter day figure, that would be to divide we didn't do it, as you understand, on a daily basis like this, but we can calculate it on this basis as an example.

Divide the revenue delivered there by the product of the number of meter and the number of days between the collection.

Q So use the calendar days between the collection?

A Plus one.

Q Thank you.

Looking at that, sir, do you see that in that area there were 27 days between that collection on the 29th of June and the previous collection, correct?

A Correct.

Q Would you look down for the balance of that period, all the way through March 1981, and tell me, sir, do you see any other time when there were that many days between collections?

A I don't see any here, no.

Q What would be the effect, sir, of having a large number of days between collections on the amount of money brought back from a particular area?

3 RMjw

Fairley - cross

1976

2 A The effect of a large number of days of
3 collection?

4 Q Yes.

5 A Well, that is going to reduce -- the larger
6 the number of days, the smaller the revenue per meter
7 day. What are you varying and what you are holding
8 constant?

9 Q Trying to hold constant the number of meters
10 collected. Would you agree that if you collect from
11 a particular meter on a ten-day interval, each collection
will have less money than if you collect on a 20-day
13 interval, all other factors considered equally?

14 A All other factors equal, 20 days versus 10,
15 it would be twice as much revenue.

16 Q You say you didn't have your computer make this
17 calculation on an individual-collection basis, is that
18 correct?

19 A What do you mean by an individual collection
20 basis?

21 Q I thought you said you didn't have do it
22 for each line, that is, each collection each day for
23 each area.

24 A Either I misspoke or I didn't understand
25 your discussion at that time. We did do it on a collection

1 4 RMjw

Fairley - cross

1977

2 basis. The computer did it on a collection basis.

3 The distinction I was making, just to clarify,
4 is that what is represented here, what we have been
5 talking about up to now, is on a monthly basis in a
6 borough or aggregated over all the boroughs.

7 Q Sir, in doing these calculations on an area
8 and daily basis for each collection, did you make any
9 attempt to analyze who it was in the crew that was making
10 that collection?

11 A No, we did not analyze this by crew.

12 Q Were you informed that of the various Brink's
13 personnel who worked on this only five were convicted
14 of theft and that was only for theft on April 9, 1980?

15 A I was informed that some number -- I believe
16 seven -- were arrested, and some number, which I think
17 was six, were convicted.

18 Q But you didn't attempt, sir, to go through
19 the collections of those individuals and compare the
20 revenue returned by their collections to see if that
21 differed from other individuals, is that correct?

22 A That's correct.

23 Q Were you informed, sir, that the City engaged
24 in a process which it calls salting of coins put into
25 meters?

1978

1 5 RMjw

Fairley - cross

2 A Yes.

3 Q And the salting related to particular collections
4 by particular people? Were you informed of that?

5 A Not specifically.

6 Q You didn't make any attempt to look at the
7 collections made by the people covered by the salting
8 to see what their collection pattern showed under your
9 analysis?

10 A No, I didn't, and I chose the particular
11 approach deliberately that I did. I understood that
12 apart from those arrested quite a few others were under,
13 I suppose you would say, active suspicion, and the extent
14 of participation by others beyond that was completely
15 unknown.

16 Q Completely unknown?

17 A Yes.

18 Q You didn't, sir, attempt to look at the data
19 for the persons who the City told you were under suspicion
20 and compare that to the other people, did you?

21 A No, I didn't take that approach.

22 Q In fact, you were not given, were you, any
23 information as to the identity of any person or persons
24 making any particular collection?

25 A That was available.

1979

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

6 RMjw Fairley - cross

Q But you were not given it?

A No.

Q You didn't ask for it?

A No. I decided not to.

Q I want to go back for a moment to the collection made by the City of New York personnel itself, and you will recall that you computed that during the Brink's period the City collections were \$231,726 more than they were in the CDC period.

A Yes.

Q Do you recall that?

A Yes.

Q Were you informed that the City engaged in a practice of visiting high-revenue meters and making collections from them in between the regular collections?

A Not specifically, no.

Q There is one other calculation I wanted you to do, if you would.

You said you came up with an inter-company difference, you say, on the basis of all your various computations, of 7.3 cents per meter day; is that correct?

A Yes.

Q And that, sir, was based on your determination by your methods that the average collection per meter

1 7 RMjw

Fairley - cross

1980

2 day by Brink's personnel during that ten-month period
3 was 87.4 cents.

4 A I believe so. Let me just check that.

5 That is the ten-month to ten-month comparison,
6 Brink's, 87.4 cents for its ten-month period.

7 Q Can you compute for us what percent increase
8 that 7.3 cents, which you call the inter-company difference,
9 is above the average Brink's collection?

10 A Yes, I did compute that and have it in my
11 notes as 8.4 percent.

12 Q 8.4 percent.

13 In reaching your conclusion that you are
14 aware of no factors other than the inter-company difference
15 attributable to the difference in the collectors to
16 account for that, did you consider, sir, all the factors
17 that you think are relevant?

18 A I can tell you the factors that I explicitly
19 considered.

20 Q First, sir, can you tell me, did you consider
21 all the factors that you think are relevant, based on
22 all the information available to you and everything
you were told?

24 A Based on all the information I used, I considered
25 all those factors. I deliberately did not investigate

1 8 RMjw

Fairley - cross

[1981]

2 or form an opinion on some of the factors that were
3 properly addressed by someone with knowledge and experience
4 about parking and about parking meter operations and
5 demand for parking meter use and --

6 Q My question is, sir, did you consider all
7 the factors that you thought were relevant based on
8 the sum total of information available to you, including
9 what anyone else ever told you, Mr. Donoghue, Mr. Glen,
10 anyone?

11 A To be precise in answering you, let me put
12 it two or three different ways.

13 No. 1, the statistical analysis in an important
14 sense considers all possible factors in the universe
15 in that it reflects as appropriately adjusted by season,
16 borough, company differences -- it reflects the whole
17 reality. So the existence of a jump, the absence of
18 trend, the character of the seasonality, all of these
19 things are reflecting every factor. So in that sense
20 my analysis is completely comprehensive and considers
21 all the factors. That is the first thing I would say.

22 The second thing is that in the process of
23 making the statistical analysis and in order to make
24 the comparisons that were appropriate on a meter day
25 basis, seasonally adjusted, I took into account certain

1 9 RMjw

Fairley - cross

1982

2 specific factors in order to perform that analysis.

3 I took into account the number of meters, number of
4 days between meters, for example, and in effect using
5 the meter day approach I took into effect meter maintenance,
6 the City collections, installation and removal of meters,
7 and so forth. Those were factors, then, that I explicitly
8 studied and took into account.

9 Certain other factors, the possible effects
10 of certain other factors individually, would have to
11 be addressed -- the judgment on the effects of those
12 would have to be addressed by an expert with experience
13 and knowledge in parking meters, although just to return
14 to my first point, I was not interested in investigating
15 all of the reasons why we have -- after we seasonally
16 adjust, why we still have some variation. That is understood
17 in a statistical analysis. You do the best you can
18 with the seasonal adjustment and the borough analysis
19 and inter-company.

20 You necessarily have remaining changes which
21 you don't understand in particular. You may have particular
22 conjectures about each of those variations, but they
23 remain only that, a conjecture.

24 What the model or the statistical analysis
25 does it to find the -- given the data available, to

1 10RMjw

Fairley - cross

1983

2 find what is the best estimate of the change in that
3 transition period and given the finding of no trend,
4 what is the best measure of the effect of a change like
5 that over the two ten-month periods.

6 The purpose then is not to investigate why
7 there were changes within each of those periods and
8 it is not necessary to do that in order to form an opinion
9 about the effect between the two periods.

10
11
12 (Continued on next page)

ndt2a

13
14
15
16
17
18
19
20
21
22
23
24
25

1 rmlt Fairley-cross

2 Q And the changes within the periods are
3 the changes which yesterday you testified you didn't
4 understand what they came from, but they seemed most
5 probably to be changes in the amount of money that people
6 put in meters for whatever reason?

7 A Or bunching of factors from any source.

8 Q When you say or, you mean yes?

9 A Excuse me?

10 Q When you say or the bunching, you mean
11 yes, or the bunching?

12 A Yes, or the bunching.

13 Q Thank you.

14 Sir, out of curiosity, have you computed
15 the percentage magnitude of the variations in the CDC
16 period on your seasonally adjusted basis from the average,
17 as you computed it?

18 A No, I have not done that because, as I
19 explained, I am not interested in estimating intra-
20 period changes. I am not interested specifically in
21 those.

22 Q So you have not computed that?

23 A No.

24 Q Out of curiosity, could you just ---

25 MR. GLEN: Objection. The motivation is

1 rmlt 2 Fairley-cross

2 not at issue in the case.

3 MR. MEISTER: I will withdraw the comment.

4 Q To enlighten us, would you compute, please,
5 sir, the difference in January 1981 of your computation
6 of seasonally adjusted revenue delivered per meter day
7 citwide, compared to the average for CDC in that ten
8 months, as you computed it?

9 A The deviation of January from the average?

10 Q On an percentage basis.

11 MR. GLEN: A point of clarification:

12 Is the question assuming the seasonal variatio:
13 or the raw data?

14 MR. MEISTER: I said seasonally adjusted.

15 MR. GLEN: Thank you.

16 A The averages is 95.6 cents, and I will
17 enter that, and January was 91.4 cents. Let me get
18 it on a different basis.

19 95.6, that is a difference of 42, and let
20 me get that directly as a percentage. That was a 43.9
21 percent decrease from the average.

22 Q I don't think you mean that, Doctor.

23 A Excuse me. Let me do this again.

24 Okay, 95.6, 91.4, and that os .042. Thank
25 you. That is 4.4 percent, a 4.4 percent decline.

1 rmlt 3 Fairley-cross

2 Q Out of curiosity, that decline is measured
3 as a percentage of the average, isn't it?

4 A Yes.

5 Q Suppose you took the same decline and measured
6 it as a percentage of the January seasonally adjusted
7 per meter day level; what would the percentage be?

8 A Okay, I can do that. That is .042 divided
9 in time by the January figure, .914. That is 4.6 percent.

10 Q On the basis of that January seasonally
11 adjusted figure, can you tell us the percent increase
12 from January '81 to March 1981 of the seasonally adjusted
13 per meter day figures collected by CDC in accordance
14 with your computation?

15 A Percentage increase from January to March?

16 Q Correct.

17 A We have .48 cents difference as a ratio
18 to January, .914, and that is a 5.3 percent increase
19 of March over January.

20 Q Would you say that the factors which accounted
21 for that increase had to be sudden, quick-acting, and
22 have a sufficient magnitude to account for that jump?

23 A By definition, if you mean over that period --

24 Q Over that period of one intervening month.

25 A Yes.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

rmlt 4 Fairley-cross

Q Simply, sir, whatever factors caused the drop in CDC revenues per meter day seasonally adjusted or not seasonally adjusted, either way, from October 1980 to January 1981, with two intervening months, in your opinion that had to be sudden, quick-acting and have a very large magnitude sufficient to account for that drop?

A By definition.

Q And you don't know what those factors are?

A No.

Q In reaching your conclusions, sir, did you consider whether or not there was any impact on the amount of money put into meters arising from the strike of the Port Authority Transit-Hudson Train Service in June, July, August of 1980?

A I'm sorry, could you repeat the question?

Q In deference to my sore throat, perhaps the reporter could read it.

(Question read)

A I had some data on that and that is what I considered and primarily I left the answer to that question to another expert, Mr. Donoghue.

If you would like, I can go through with you what information I have.

rmlt 5

Fairley-cross

2 Q I am not so much concerning with the information
3 sir, but as to whether you considered that as a factor
4 accounting for any of this variation.

5 A It is my opinion the kind of factor --
6 yes, in answer to your question, I did consider it --

7 Q What was the consideration that you gave
8 it mathematically?

9 A Not in terms of an explicit entry into
10 the analysis, but in terms of -- that is one of the
11 types of effects that can influence these changes where
within CDC or within Brink's.

13 Q So that if, for example, you assume that
14 during the period of the Port Authority Trans-Hudson
15 strike more people who normally took the train in came
16 in by car and meter usage increased, that might explain
17 why these CDC collection points for June, July and August
18 are where they are rather than somewhat lower?

19 A You described a particular sequence of
20 events and in your description of that, that could be
21 a source of a difference, yes.

22 Q And you know of no way to come up with
23 a numerical value for that difference?

24 A Not in any easy way, no.

25 Q If those June, July and August collections

1 rmlt 6 Fairley-cross

2 by CDC were in fact higher because of the phenomenon
3 that I described, that would have the effect, wouldn't
4 it, of making the trend or the average in the CDC period
5 higher, wouldn't it?

6 A That phenomenon, taken alone, would, yes.

7 Q Sir, did you consider in your computation
8 and analysis whether there was any affect on the Brink's
9 collections of the gasoline shortage in June, July and
10 August of 1979 when odd-even gasoline rationing was
11 imposed?

12 A Again, I had some data on that and it was
13 my understanding from discussions with Mr. Donoghue
14 that that would primarily affect arterial traffic because
15 the effect would be inter-borough, that is, the Queens
16 Midtown Tunnel between Queens and Manhattan, and to
17 some extent you have a trade from one borough to another.

18 I considered it to that extent, and I considered
19 him to be better qualified to give a judgment as to
20 the effect of that kind of factor. That is the kind
21 of detail causal factor that will be reflected in varia-
22 tions but it is really impossible to follow up all of
23 these and that is the reason why you use a statistical
24 analysis.

25 Q Assume with me that during the period of

rmlt 7 Fairley-cross

2 June, July and August of 1979, when Brink's was collecting,
3 and when there was odd-even gasoline rationing, that
4 people drove their cars less and parked at parking meters
5 less.

6 That would have the effect of making these
7 points or your figures for the collections for those
8 three months by Brink's lower than they would normally
9 be, is that correct?

10 A Taken alone under your assumptions, that
11 would be correct.

12 Q And if there was some way to adjust for
13 that phenomenon, the June, July and August 1979 figures
14 would be greater, wouldn't they?

15 A If that were established, yes. There is
16 a danger in ad hoc corrections to a statistical analysis --

17 Q There may be, but that would make those
18 points higher, to some degree?

19 A That alone, I wouldn't --

20 Q And there is no way of telling and you
21 don't know how to compute what amount of increase that
22 would be under that set of circumstances?

23 A No, and I won't attempt to make that adjustment,
24 because it would be selective.

25 Q And you didn't?

910
-
20

1 rmlt 8 Fairley-cross

2 A And I didn't.

3 Q If those points were higher for that reason,
4 in June, July and August, Brink's had a greater per
5 meter day collections because there was no gas shortage
6 and no gas rationing, and that would have the effect
7 on your computations of making the Brink's average which
8 you computed somewhat higher; is that correct?

9 A That in itself, if that adjustment were
10 made, would.

11 Q There is no way of telling how much higher,
12 is there?

13 A One can form a judgment about that.

14 Q There is no way of mathematically computing
15 it to the nearest tenth of a cent, as you made all these
16 other computations; is there?

17 A I don't quite understand you. If you do
18 make the adjustment, you can also compute the effect
19 on the average.

20 Q And if you don't make the adjustment, you
21 can't, is that correct?

22 A By definition.

23 Q And you didn't?

24 A I did not.

25 Q So you don't know what adjustment should

1 rmlt 9

Fairley-cross

2 be made or how much that average would move up in accordance?

3 A I don't think any adjustment should be
4 made for that.

5 Q But if, sir, the jury were to disagree
6 with you and reach the computation that people drove
7 less when they couldn't get gas and therefore put fewer
8 coins in parking meters, you would agree under that
9 assumption that these figures should be higher and this
10 average that you computed for the Brink's period would
11 be greater but you don't know how much?

12 MR. GLEN: Objection as to the conjecture
13 as to what is going to the jury.

14 THE COURT: I will allow the question,
15 eliminating about the jury fact-finding.

16 A The reason that it is dangerous to make --

17 Q First, and my question, sir.

18 A Your question is --

19 Q You don't know how much the increase would
20 be?

21 A I don't know, no.

22 (Continued on the next page)

23

24

25

3aa.m.

1 r. lt Fairley-cross

2 Q Sir, I'm going to ask you about another
3 factor, sir.

4 During the testimony of Mr. Donoghue, at
5 transcript Page 1603, Mr. Donoghue gave the following
6 testimony, starting at line 4:

7 "Q Were you given any information
8 regarding differences in the rates of summonses between
9 the ten-month Brink's study period and the ten-month
10 CDC period?"

11 MR. GLEN: Objection.

12 There is no question put to the witness,
13 your Honor.

14 MR. MEISTER: There will be.

15 THE COURT: Why don't you let him finish?
16 He was about to put a question.

17 Q "A Yes, I was.

18 "Q Was there any difference in the
19 rates?

20 "A Yes. During the Brink's period
21 the level of enforcement was in the neighborhood of
22 about 165,000 citations per month for overtime parking
23 at the meters. During the CDC period, the enforcement
24 level was a little bit higher, it was at about 20,000
25 more, namely, 185,000 enforcement citations were written

1 prlt

Fairley-cross

1994

2 up per month during those -- those are averages now of the
3 two periods."

4 Did you consider in reaching your conclusion
5 the effect of the increased number of summonses issued
6 for overtime parking in the CDC period of ten months --
7 June 1980 to March 1981 -- compared to the Brink's period
8 of June 1979 to March 1980?

9 MR. GLEN: Objection.

10 It's an outrageous, out of context reading.

11 Mr. Donoghue went on to state that, in
12 his opinion, that would make no difference. Now, he
13 didn't give that as part of the hypothetical.

14 THE COURT: Mr. Glen, don't you know if
15 you think it is an outrageous distortion of testimony,
16 when you question the witness on redirect you can pick
17 up the balance of it? What are you getting excited
18 about?

19 MR. GLEN: A hypothetical put to an expert
20 witness, your Honor, according to my understanding --

21 THE COURT: I will allow you on redirect
22 to read the balance of the witness' testimony.

23 MR. GLEN: Thank you, your Honor.

24 THE COURT: And that's the orderly way
25 to do it.

1995

1 prlt

Fairley-cross

2 A Your question, if I could restate it, was:

3 Did I consider this information about traffic
4 summonses or traffic summonses in general?

5 Q About summonses for overtime parking at
6 parking meters.

7 A For overtime parking at parking meters?

8 Q Yes, sir.

9 A I considered it in the sense of -- I considered
10 it in the sense that I explained it earlier, that the
11 statistical analysis considers all factors in the sense
12 that they are all embodied. I deliberately did not
13 investigate a whole series of particular hypotheses
14 such as that in terms of quantitative magnitudes because
15 that list would be just about endless and each particular
16 estimation of the causal effects that are going on would
17 be very speculative.

18 So that, in my view, methodologically,
19 the best way to deal with that is that all of those
20 factors that are not explicitly included are part of
21 the unexplained variation. So it is considered, but
22 I did not specifically undertake an investigation of
23 those citations that you're referring to.

24 Q And so you made no specific attempt to
25 come up with a measurement of what effect that increase

1996

1 prlt

Fairley-cross

2 in traffic summonses would have on revenue delivered
3 to the City?

4 A That's correct.

5 Q Now, sir, would you agree with me that
6 the level of summonses for overtime parking during the
7 CDC period of 185,000 citations for overtime parking
8 a month is slightly more than 12 percent greater than
9 the level during the Brink's period of 165,000 citations
10 per month?

11 A 12 percent seems about right.

12 Q Would you like to check it in the computer?

13 A No.

14 THE COURT: He accepted your statement
15 on it. He doesn't have to resort to his computer.

16 Q Now, sir, if that 12 percent increase in
17 summonses for overtime parking was because, on balance,
18 people were parking at parking meters 12 percent more,
19 that would mean that the level of revenue received in
20 the CDC period would be 12 percent higher than in the
21 Brink's period, assuming the same percentage of people
22 who put money in as opposed to letting the meters run
23 out; is that correct?

24 A You're saying if the 12 percent greater
25 citations reflected a 12 percent greater use in parking

1997

1 prlt Fairley-cross
2 meters in the City, would that imply that there was
3 a 12 percent greater use in parking meters in the City?

4 Q Yes, sir.

5 A The answer is clearly yes.

6 Q And if there were 12 percent greater use
7 of parking meters with 12 percent people putting in
8 12 percent more money, then you would expect CDC's revenues
9 to be 12 percent higher than Brink's revenues, wouldn't
10 you?

11 A That's essentially saying if 12 percent
12 more coins are put in, 12 percent more revenues will
13 be received. Yes, sir.

14 Q And, sir, the actual differences, as you
15 computed it on your revenue per meter day, CDC was only
16 8.4 percent higher; is that correct?

17 A Yes, although you imply a comparison there
18 that is misleading.

19 Q Well, let's deal with it separately, sir.

20 You agree that, according to your calculations
21 of revenue per meter day, the CDC collections were 8.4
22 percent higher, on average, than your computation of
23 the Brink's revenues per meter day; is that correct?

24 A Yes.

25 Q And if you assume that the 12 percent increase

[]
1998

1 prlt Fairley-cross

2 in summonses is reflective of the 12 percent greater
3 usage of meters generally, you would expect the revenues
4 to be 12 percent higher, wouldn't you?

5 A By definition.

6 Q Now, sir, you gave some testimony on your
7 direct examination about what you understood to be the
8 City's efforts to remove parking meters on balance.

9 Is that correct?

10 A Yes, sir.

11 Q Were you informed that throughout the period
12 of June 1979 to March 1981, the City was engaged in
13 a systematic program of removing meters from areas which
14 were characterized by low revenue and high vandalism
15 and installing meters in areas which were characterized
16 by high revenue, or high demand for parking, and low
17 vandalism?

18 A I understood that some fraction of their
19 removals were motivated in this way; others by street
20 closing and other factors.

21 Q And, sir, if meters were taken out of low
22 revenue areas and put into areas where there was a greater
23 unfulfilled demand for metered parking, that would have
24 the effect, wouldn't it, of increasing revenue?

25 A In itself, yes.

prlt

Fairley-cross

1999

1
2 Q And you didn't make any attempt to separately
3 compute what that effect would be, did you?

4 A I did not compute that effect, no.

5 Q Now, sir, in connection with your testimony
6 about the removal of meters, do you know when during
7 the period of June 1979 to March 1981 the meters that
8 you testified were removed were in fact removed?

9 A I have a breakdown of installations and
10 removals by month derived from the S&D Maintenance Company's
11 invoices.

12 Q Well, before we get to that, sir, would
13 you agree with me that meters that were removed in the
14 early part of this June, July, August, September 1979
15 period would have the effect of being nonproductive
16 meters for all or most of the Brink's period as well
17 as the CDC period?

18 A Yes.

19 Q So adding up just the total number of meters
20 removed from June 1979 to March of 1981, is a figure
21 that doesn't give you the effect necessarily, does it?

22 A No.

23 It gives you a direction, but you have
24 to do a calculation to get an effect.

25 Q And to do that calculation, you'd have

2000

1 prlt Fairley-cross

2 to know what the regulations were at a particular meter, -
3 whether it was a dime or a quarter meter, and how many
4 hours and how many days it functioned, wouldn't you?

5 A Well, if you had that information, you
6 could then make an assumption or conjecture about revenue-
7 generating capacity.

8 Q But, sir, you didn't examine that information,
9 you weren't furnished it, were you?

10 A No.

11 Q Sir, I want to quote again from the testimony
12 of Mr. Donoghue last Friday, at transcript Page 1602,
13 counsel, lines 9 through 21, on Mr. Glen's direct
14 examination:

15 "Q Assume with me that in the New
16 York City traffic control system there is a concept
17 called 'snow emergency days,' which, among other regulations,
18 forbids parking on certain avenues that contain parking
19 meters.

20 "Assuming with me that such a regulatory
21 system exists and comparing ten months to ten months,
22 ought one to examine the number of snow emergency days
23 in making one's comparison?

24 "A Yes, because the comparison here
25 does go through the winter months. We have November,

91
ec

1 prlt

Fairley-cross

2001

2 December, January, February. Definitely such an analysis
3 should be made.

4 "Q Were you given any material on
5 that issue?

6 "A No, sir."

7 That's the end of the quotation.

8 Sir, were you, Dr. Fairley, given material
9 on those data?

10 A Yes, I was.

11 Q Can you enlighten us as to what consideration,
12 if any, you gave to them?

13 A The information that I had was that there
14 was one snow emergency day in each of the two ten-month
15 periods so that they were the same number. There was
16 no directional effect on expected revenues from snow
17 emergencies.

18 Q Sir, were you given any information or
19 documentation as to a procedure by the City of suspended
20 metered parking due to adverse weather circumstances?

21 A No, I was not.

22 Q Sir, I want to read to you from Page 1601
23 to 1602, from the testimony of Mr. Donoghue, starting
24 on line 17 or 18, again Mr. Glen's direct examination:

25 "Q Assume with me, Mr. Donoghue, that

1 prlt

Fairley-cross

2 in the City of New York parking meter system, that is,
3 a procedure to suspend metered parking due to adverse
4 weather conditions.

5 "Assuming that such a system exists for
6 a ten-month comparison, ought one to examine the number
7 of days in each period during which metered parking
8 was suspended in order to make a valid comparison of
9 the periods?

10 "A Yes, that would be appropriate.

11 "Q Were you supplied any documentation
12 regarding meter suspension days?

13 "A I saw some things, but I think
14 I'd better say I did not. I casually saw some things,
15 but I don't have any present knowledge, and I'd rather
16 have some other witness who is more familiar with the
17 weather or the suspensions, whatever your problem was.
18 I would prefer not to answer that."

19 Sir, did you consider the number of days
20 that metered parking was suspended due to adverse weather
21 circumstances in making your evaluations of the comparability
22 of the two periods that you have been testifying about?

23 A I considered it only in the sense described
24 earlier, that is, that it is part of all of the factors
25 that enter into the variations.

3b

1 PRJW Fairley - cross

2 Q But, sir, you have no idea whether the number
3 of days were greater in the Brink's period, greater
4 in the CDC period, or equal, do you?

5 A No, I didn't investigate that.

6 Q Now, sir, assume with me that alternate-side
7 of-the-street parking regulations in the City of New
8 York were suspended during the period of June 1979 to
9 March 1980, the Brink's period, for 61 days and that
10 they were suspended for only 46 days during the CDC
11 period; and further, sir, assume that there has been
12 testimony that the suspension of those regulations for
13 holidays is relatively constant on a year-by-year basis,
14 because you have the same holidays recurring in each
15 year, so that the difference would be due to adverse
16 weather.

17 If that were the case, sir, and if that reflect^s
18 that there were fewer days when people parked in parking
19 meters during the Brink's period than the CDC period,
20 that would count for part or all or a greater portion
21 of the difference between the two periods, wouldn't
22 it?

23 A I would be surprised -- how do you arrive
24 at that?

25 Q Well, sir, I think --

200

1 2 PRjw Fairley - cross

2 A Maybe I didn't understand your question.

3 Q All right, let's try it again.

4 If in the Brink's period alternate-side-of
5 the-street parking was suspended 61 days --

6 A 61 and 45?

7 Q And 46 days in the CDC period.

8 A Right.

9 Q So that you had the parking regulations suspended
10 for a greater number of days in the Brink's period than
11 in the CDC period.

12 A So that meters were not used more during
13 that time?

14 Q That's the assumption.

15 A And this was suspended for reasons of snow;
16 is that it?

17 Q That would be the assumption, sir, adverse
18 weather.

19 A That would be in February or January, that
20 time period. This is Citywide?

21 Q Yes, sir.

22 A Well, that would be -- of the various factors
23 not considered, some of which operate to depress revenues
24 in Brink's and some of which operate to increase them over
25 CDC, that would be one clearly that would operate to

91

~~2~~

20

2005

1 3 PRjw Fairley - cross
2 depress revenues in Brink's.

3 Q Or another way of saying it would be to increase
4 revenues in the CDC period?

5 A I meant depress or increase relative to
6 Brink's -- I mean, relative to the CDC period, yes.

7 Q And if in fact the revenues in the CDC period
8 were increased because of that difference in suspension
9 or difference in the times that the regulations were
10 in effect and people were parking at meters, that also
11 would have had the effect of increasing the average
12 that you computed for CDC by some amount of money; is
13 that correct?

14 A It would have that effect in the winter months.
15 You know, it's localized by months. So you'd look to
16 the winter months for a difference due to that effect.

17 Q And that in turn, the difference in the winter
18 months, was part of the factors that made up the average;
19 is that correct?

20 A Yes.

21 I'd just like to point out that the winter
22 months are both below and above the average for both
23 Brink's and CDC. So whatever effect that had, it must
24 have been netted out by other countervailing effects
25 going in the other directions.

1 4 PRjw Fairley - cross

2 Q You haven't made a computation of that, have
3 you, Doctor?

4 A It's not necessary to do that. You can see
5 directly that the actual points are around the average
6 in both cases.

7 Q Sir, did you make a computation of that?

8 A No, I didn't. And this is an illustration
9 of why it is not wise to do that.

10 Q Do you know, sir, during the winter months
11 what the daily revenue received by the City was during
12 the CDC period or the Brink's period?

13 A The daily revenue?

14 Q Yes, sir.

15 A Well, the monthly revenue is about 1,700,000,
16 on average, over the two periods. So just divided that
17 by 30.

18 Q It wouldn't be 30, would it, sir?

19 A Well, if it is on a meter-day basis, it would
20 be 30.

21 Q But if the meters aren't operating on Sunday,
22 it wouldn't be 30, would it?

23 A You're talking about -- on the meter-day
24 basis, it would be.

25 THE COURT: Pardon me.

1 5 PRjw

Fairley - cross

2 How much longer will you be on this subject?

3 MR. MEISTER: Perhaps ten more minutes,
4 your Honor.

5 THE COURT: On the subject or on the cross
6 examination?

7 MR. MEISTER: I think probably the entire
8 cross, your Honor.

9 THE COURT: Well, then let's stay and finish
10 up.

11 MR. MEISTER: Yes, sir.

12 BY MR. MEISTER:

13 Q Do you think, sir, that motorists in New
14 York come and put money into parking meters on days
15 when regulations aren't in effect?

16 MR. GLEN: Objection.

17 THE COURT: You will be curtailed if you
18 keep this up.

19 A I don't have enough knowledge of the way
20 the system works in New York to answer that. For example,
21 I could imagine that people coming from New Jersey might
22 be unaware of that and put coins in anyway. But that's
23 the kind of knowledge that I think you have to have
24 to accurately respond to your question.

25 Q Well, sir, assume with me that there has

2008

1 6 PRjw Fairley - cross

2 been testimony that the vast preponderance of meters
3 in the City of New York function on a Monday through
4 Saturday basis.

5 If that is the case, sir, would you agree
6 that to compute the average daily revenue received in
7 these months, you would divided by less than 30?

8 A Oh, we went over this yesterday.

9 Q Let's go over it today.

10 A Okay.

11 The days between collections is defined --

12 Q Excuse me, I'm not getting into days between
13 collections. I'm just trying to find out what is the
14 approximate level of money received by the City in the
15 winter on a daily basis, dollar figure.

16 A On a daily basis on days during which they
17 were active, is that your question?

18 Q Yes, sir.

19 A Then we'd divide by -- instead of 30 days,
20 we'd take off roughly four Sundays, on average. So
21 we would divide by 26.

22 Q And you would come up with what?

23 A Well, I can do a calculation on that. Let's
24 see, we have an average monthly revenue of 1,700,000.
25 If we divide that by 26, we get \$65,384.

2009

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

7 PRjw Fairley - cross

Q And that would be the average revenue per day that the City received in this period?

A Yes.

Q And if people didn't park at parking meters at all for one day, that would be the approximate amount of money that the City would lose for that reason; is that correct?

A If they didn't park at all, that would be the average amount, yes, sir.

Q And you made no attempt to quantify that, did you?

A I did in the sense that it's already included in the quantification here, which indicates that there must have been factors going the other way because there isn't any dramatic reduction such as would seem to be implied by your calculation.

Q You mean there isn't any that you see?

A It's not there.

Q Sir, do you agree with me that the winter months for CDC have a greater revenue per meter day than the Brink's months? Is that correct?

A Yes.

Q And you have attributed that to something you call the inter-corporate difference; is that correct?

2010

1 8 PRjw

Fairley - cross

2 A That's what I call it, yes.

3 Q And you don't know that a portion or all
4 of that isn't attributable to one of these other factors
5 that you didn't attempt to quantify, do you?6 A As I said before, all of those other factors
7 are going to influence the variations.8 Q And all of those other factors are going
9 to amount to a lot of money or a little money collected,
10 right?

11 A I am not sure what you're saying now.

12 Q Well, my question, sir, is, you can't and
13 haven't attempted to quantify to come up with numbers
14 for the differences in the collections attributable
15 to these various factors that we have just been discuss-
16 ing, have you?

17 A No.

18 Q Separate, isolated numbers.

19 A No.

20 Q And so you can't testify as to what portion
21 of the inter-corporate difference, or whether all or
22 a greater amount of the inter-corporate difference is
23 accountatable by reason of those factors in distinction
24 to the difference in the identity of the collectors,
25 can you?

THIS PAGE LEFT BLANK INTENTIONALLY

2011

9 PRjw

Fairley - cross

2 A Oh, yes, I can on a number of them. I listed.
3 yesterday four criteria that any factor would have to
4 have that would explain the jump that was observed --
5 the substantial size and occurring over a two-month
6 transition period.

7 Q Sir, you didn't quantify the Path strike,
8 did you?

9 A No.

10 Q And you didn't quantify the gas shortage,
11 did you?

12 A No.

13 For each of those you would have to test
14 against those criteria.

15 Q And you didn't quantify the 12 percent increase
16 in summonses which might mean a 12 percent increase
17 in use of meters, did you?

18 A No.

19 But in answer to your question --

20 MR. GLEN: Objection.

21 THE COURT: Let him finish, please.

22 A In answer to your question, it is possible
23 to indicate which factors are more likely to be an explana-
24 tion for the jump.

25 Q But you didn't do it, did you?

91
2
CO

1 10PRjw Fairley - cross

2 A That has occurred.

3 Q But you didn't quantify it, did you?

4 MR. GLEN: Objection.

5 The witness has not completed his answer.

6 A Well, in a sense, I've given you a little
7 exercise in quantification here just on this question
8 of suspension of parking.

9 You will notice that --

10 Q Sir, we are talking about summonses now.

11 MR. GLEN: Objection.

12 Q Did you attempt to quantify the 12 percent
13 increase in summonses and correlate it to see if that
14 represents a 12 percent increase in meter usage, people
15 putting money in the meters, yes or no?

16 MR. GLEN: Objection.

17 Your Honor, could counsel be instructed not
18 to interrupt the witness in the course of his answer?

19 THE COURT: Answer the question, please.

20 A I'm sorry, your Honor, the last one that
21 he asked or the one that I was answering?

22 THE COURT: If you have it in mind; if not,
23 we'll read it to you.

24 MR. MEISTER: Will the reporter read the
25 question back, please.

2013

1 11PRjw

Fairley - cross

2 (Record read)

3 A Yes, in one sense; no, in another.

4 Yes, in the sense that as a trending factor,
5 unless there was evidence that there was a big jump
6 in summonses which had a big effect at April and May,
7 then that in itself would not explain what we are looking
8 at, that would not explain the jump.

9
10
11 (Continued on next page)

91

~~2~~

CO

e4a

1 RMjw Fairley - cross

2 Q You testified before that you did not --
3 did not -- attempt to test all of this data from June
4 1979 to March 1981 to determine if there was one big
5 trend?

6 A I differ with you there. I did test for
7 one big trend. I didn't test for it in a specific technique
8 way that you had asked me. I tested for it in an equivalent
9 and, in my opinion, and better way.

10 Q But you didn't test it on the basis of this
11 scientific technique known as regression analysis?

12 A I did.

13 Q For the entire period?

14 A Yes, the entire period. That is what I was
15 explaining.

16 Q Let's go back then. I guess it will be more
17 than ten minutes.

18 THE COURT: I think you are getting argumentative
19 with the witness and we will take our recess.

20 Just answer his question.

21 A As I explained, then, I fitted a regression
22 which permitted the slope of any possible trendline
23 in either period to vary simultaneously. The result
24 of that was that the trendlines fitted simultaneously
25 and had an insubstantial slope, that is, they were closer

2015

1 2 RMjw

Fairley - cross

2 to the horizontal, and were not statistically significant.

3 Q That, sir --

4 THE COURT: We will take our recess now.

5 MR. MEISTER: I have two more questions.

6 THE COURT: Then we will stay.

7 Q That was an attempt to fit one line which
8 could bend and vary, is that correct? Did you attempt
9 to fit one straight line all the way through this period
10 to see mathematically, using your statistical techniques,
11 if there was one line which correlated to a trend?

12 A Using statistical -- I don't do things that
13 don't make sense, and that obviously didn't make sense
14 and I didn't do it.

15 MR. MEISTER: Thank you. No further questions.

16 THE COURT: We will take our mid-morning
17 recess at this point.

18 (Recess)

19 THE COURT: Please proceed.

20 MR. PERROTTA: Your Honor, I have a few
21 questions.

22 CROSS EXAMINATION

23 BY MR. PERROTTA:

24 Q Dr. Fairley, you have been conceded to be
25 an expert and you can draw certain inferences and

1 3 RMjw Fairley - cross

2 conclusions from certain data.

3 A Yes.

4 Q Suppose you take this situation, Dr. Fairley:
5 We have a Brink's employee whom we shall call Employee
6 A. Now, A has been arrested and convicted of possession
7 of stolen coins from the parking meter revenues.

8 Suppose you made a study of the collection
9 days in which A was a member of a crew and you found
10 shortages between the amount of revenue collected and
11 the amount of revenue turned in.

12 Now, suppose we have another employee, Employee
13 B. Employee B has never been arrested, he has worked
14 with over 200 other employees of Brink's on various
15 days during the period of Brink's contract.

16 From your study you find when he worked with
17 these other employees there were no shortages, okay?

18 Now we have Employee A, the convicted employee,
19 and Employee B working as a member of the same crew
20 on a certain day in which you found a collection shortage,
21 okay?

22 Could you draw an inference or a conclusion
23 as an expert whether or not B converted any parking
24 meter revenues?

25 A To draw conclusions one would want to control

redirect

2017

1 4 RMjw

Fairley - cross

2 for the various factors --

3 Q Based on the facts I gave you.

4 A Based on those facts and assuming you had
5 controlled as best you could for the factors that you
6 could, such as seasonality, you could not tell whether
7 he was collaborating with A or not and such an inference
8 would rest on other information.

9 Q Could you come to a valid inference whether
10 he converted any parking meter funds, from the facts
11 that I gave you?

12 A No.

13 MR. PERROTTA: Thank you.

14 THE COURT: Any other questions?

15 MR. CLYDE: No questions.

16 REDIRECT EXAMINATION

17 BY MR. GLEN:

18 Q You were asked a lot of questions about factors
19 you allegedly didn't take into account, Doctor. Let's
20 assume that during the CDC period 20,000 summonses per
21 month were issued more than during Brink's and the reason
22 was because 20,000 more people that had previously been
23 accustomed to putting money in the meters didn't put
24 money in the meters, did that have an increasing or
25 a decreasing effect?

FAI
Ca
Neo

1 5 RMjw Fairley - redirect

2 A 20,000 more summonses issued --

3 Q And no change in parking use, but 20,000
4 more people that used to put quarters in don't put them
5 in, an increasing or decreasing effect on parking meter
6 revenue?

7 A Increasing --

8 Q No change in number of people parking. The
9 change is that 20,000 people that used to put quarters
10 in don't and that is why 20,000 summonses are written.

11 Would that increase parking meter revenue
12 or decrease it?

13 A It would decrease it.

14 Q That hypothetical, as far as you know, is
15 just as true or false as the hypothetical that more
16 people are parking at meters and therefore the summonses
17 would indicate an increase, is that correct?

18 A As far as I know, yes.

19 Q The gas shortage. Let's assume that because
20 of the gas shortage people that used to drive out to
21 Jones Beach instead drive to Coney Island and park their
22 cars at the meters and therefore the gas shortage causes
23 an increase in meter use rather than a decrease.

24 If there is an increase in meter use, would
25 you expect an increase in revenue?

6 RMjw

Fairley - redirect

2019

2 A Yes.

3 Q For all you know, the effect of the gas shortage
4 was precisely what I just hypothesized, more people
5 stayed in the City and used parking meters than what
6 Mr. Meister hypothesized that fewer people used parking
7 meters, for all you know; is that correct?

8 A Yes, that's correct.

9 Q Do you happen to know when . alternate side
10 of the street parking is suspended in New York whether
11 that relieves a parker of the obligation to put money
12 in a meter? Do you know the answer to that?

13 A No. I guess I would assume that it did.

14 Q Would you assume with me that when alternate
15 side of the street parking is suspended it means it
16 is suspended precisely at those places that have no
17 meters and has no effect on the meter obligation at
18 all? Would you assume that with me for a moment?

19 A Okay.

20 Q First of all, if that happens to be the truth
21 about what alternate side of the street parking means,
22 that you still have to put money in meters, but it just
23 opens up side street parking, would that change your
24 mathematical calculation that Mr. Meister had you do
25 regarding the winter months where you eliminated, as

2020

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

7 RMjw Fairley - redirect

I understood it, all parking meter revenue on days in which there was alternate side suspension?

A Yes, that would change it.

Q When alternate side of the street parking is suspended meter use increases because people who usually move their car during the alternate side hours -- strike that. You are from Boston and you don't know that.

Assume with me that when alternate side of the street parking is in effect it has the -- it prohibits parking for a three-hour period on two or three days of the week, a non-metered legal parking spot, and further assume with me -- strike that.

MR. GLEN: May I have one minute, please?

(Pause)

Q Assume with me that when parking meter regulations are suspended it permits people to leave their car at the curbside without paying for metered parking, which they could not do if the alternate side of the street regulations are in effect.

From merely knowing that, can you predict whether there would be an increase or decrease or anything else from the suspension of alternate side of the street parking?

8 RMjw

Fairley - redirect

2 A I am sorry, let me understand what your assumption
3 is.

4 Q The assumption is this: When alternate
5 side of the street parking regulations are not in effect,
6 the meter regulations are still in effect but by suspending
7 alternate side of the street parking, persons who would
8 normally have to move their car from a side street,
9 a non-metered area, don't have to move their car. That
10 is the effect of alternate side of the street parking.

11 A Okay.

12 Q Do you have an opinion as to whether that
13 increases, decreases or does nothing at all to meter
14 use and meter revenue?

15 A I suppose if they had to move their cars
16 some of them might have to park at meters and that would
17 tend to increase it.

18 Q So that if alternate side of the street
19 parking were suspended it might have a marginal or tiny
20 increasing effect on revenues, assuming my hypothetical?

21 A Yes.

22 Q Mr. Meister asked you a series of questions
23 about trends. Would you tell the Court and jury how
24 you determined that there was no trend during the Brink's
25 period?

1 9 RMjw Fairley - redirect 2022

2 A By two different methods. One is graphical
3 inspection. It is obvious that if there is any trend,
4 it is a tiny one.

5 The second is, actually fitting a trendline
6 by the method of least squares, and that line turns
7 out to be close to a horizontal line.

8 Q On cross examination Mr. Meister asked you
9 about something which, if my notes are correct, was
10 a concept called correlation of trendline to data.

11 Did I get the phrase correctly?

12 A Yes.

13 Q Is that another way, other than the least
14 squares way, to see whether there is a trend in something?

15 A No. The method of correlation is part of
16 the least squares method. That is, for example, I displayed
17 a graph of the statistical predictions from the model
18 against the actual revenues per meter day and those
19 points were very close together, they fell along a 45
20 degree line and the correlation of the predictions exceeded
21 .99, 99 percent. So that we first fitted the model
22 by least squares, which means we found predicted values
23 that were as close to the others as we could in a certain
24 defined sense of least squares, and then having done
25 that, we compute the correlation of the predicted values

2023

10RMjw

Fairley - redirect

2 with the actual and that is what was the 99 percent.

3 Q You did that also for the CDC period and
4 came up with no trend there, right?

5 A Yes.

6
7
8 (Continued on next page)

1 RMjw

Fairley - redirect

2024

2 Q What statistical methodology did you use
3 to ascertain that there was no trend throughout the
4 entire period? How did you eliminate that consideration?

5 A By fitting two trendlines simultaneously.
6 The technique is called piecewise regression and when
7 you fit them simultaneously, you find a little slope.

8 Q Tell me if I am correct in my understanding:
9 By using the method of least squares and then testing
10 the correlation you got a 99 percent correlation on
11 a no-slope during the Brink's period hypothesis.

12 A And the CDC period.

13 Q Similarly, you got a 99 percent likelihood
14 of the accuracy of a no-trend hypothesis within CDC,
15 and you then simultaneously, in a mathematical sense,
16 compared the two trendlines and ascertained that there
17 could not be consistent with the data one overall upward
18 trend throughout the entire period, is that correct?

19 A Having done that and having taken into account
20 all the factors that you took into account in two ways,
21 some factors by working them into your mathematical
22 models and other factors by eliminating them from
23 consideration because you have no way of telling whether
24 they have any upward or downward effect in any particular
25 month but you can tell that they would not have a

2 RMjw

Fairley - redirect

2025

2 statistically significant impact, were you able to come
3 to any conclusion regarding the inter-company effect on
4 the difference between Brink's revenue and CDC revenue?

5 A Yes.

6 Q What conclusion did you come to?

7 A The inter-company effect is 1,382,000.

8 Q Within a standard statistical variation
9 of what?

10 A About 10 percent. In round numbers it is
11 1.4 million plus or minus the standard error of 140,000.

12 Q And this conclusion takes into account, does
13 it not, all of the possible factors that might in one
14 month or another kick the line up or down over the two
15 ten-month comparison figures? It takes that into account?

16 A Yes.

17 MR. GLEN: No further questions.

18 MR. MEISTER: No recross, your Honor. We
19 do have a motion.

20 THE COURT: You may step down.

21 (Witness excused)

22 THE COURT: Do you want to be heard on your
23 motion now?

24 MR. MEISTER: We could combine it with another
25 motion that I understand would be appropriate afterwards --