DOCKET SECTION

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268–0001

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POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97–1

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS THRESS TO INTERROGATORIES OF
THE MCGRAW HILL COMPANIES, INC.
AND DMA
(MH/USPS–T7—1 – 10, DMA/USPS-T7-1 - 4)

The United States Postal Service hereby provides responses of witness Thress to the following interrogatories of The McGraw Hill Companies, Inc. and DMA: MH/USPS–T7—1 – 10 and DMA/USPS-T7-1 - 4, filed on September 17, 1997.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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October 1, 1997

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-1.

(a) Please confirm that in estimating the own-price elasticity of demand for Periodicals Regular mail, you did not take into account the extent to which Periodicals mailers respond to an increase in Periodicals postal rates by reducing the size and/or weight of mailed periodicals (or by increasing the size and/or weight of mailed periodicals by less than otherwise). If you do not confirm, please explain fully.

(b) Please confirm that had you taken into account the factor referred to in part (a) above, your estimate of the own-price elasticity of demand for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

RESPONSE:

(a) Confirmed. My econometric estimation uses fixed-weight price indices that do not reflect changes in the average size and/or weight of mailed periodicals as a result of changes in Postal rates.

(b) Not entirely confirmed. To the extent that mailers change the size and/or weight of their mailings, but do not change the volume of periodicals mailed, this would have no effect on my price elasticity, which measures a change in the **piece volume** of Periodical mail attributable to a change in Postal rates.

To the extent that mailers are able to reduce the size and/or weight of their mailings, however, this may serve to reduce the aggregate impact of a Postal rate increase. If this factor were taken into account, the estimated own-price elasticity could be higher.

On the other hand, if mailers adjust the size and/or weight of their mailings for reasons other than changes in Postal prices, the effects of such changes would be incorrectly incorporated into the own-price elasticity. In such a case, the use of a price index which attempted to incorporate changes in the size and/or weight of Periodical mail would result in an estimated own-price elasticity that is biased away from zero.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-2.

(a) Please confirm that your estimate of the own-price elasticity of demand for Periodicals Regular mail does not take into account newspaper volumes that are presently delivered by alternate systems. If you confirm, please explain fully why you did not take that factor into account. If you do not confirm, please explain fully and precisely how that factor was taken into account.

(b) Please confirm that in estimating the own-price elasticity of demand for Periodicals Regular mail, you did not include any variable for the cost of alternate newspaper delivery systems. If you confirm, please explain fully why you did not include any such variable. If you do not confirm, please explain fully and precisely how that variable was included.

(c) Please confirm that had you taken into account the factors referred to in parts (a) and (b) above, your estimate of the own-price elasticity of demand for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

(d) Please confirm that in estimating the own-price elasticity of demand for Periodicals Regular mail, you did not take into account alternate delivery of Periodicals mail by electronic means (e.g., through computer networks, CD-ROMs, etc.). If you confirm, please explain fully why you did not take that factor into account. If you do not confirm, please explain fully and precisely how that variable was included.

(e) Please confirm that had you taken into account the factor referred to in part (d) above, your estimate of the own-price elasticity of demand for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

RESPONSE:

(a)-(b) Not entirely confirmed. The own-price elasticity of Periodicals mail reflects the extent to which volume is affected by a change in the price charged by the Postal Service to deliver Periodical mail. As I note in my testimony at page 44 (lines 16-19), there are two principal means by which Periodical mailers may reduce Periodical mail volume in response to changes in Postal rates: "In addition to affecting the price of newspapers and magazines by being incorporated into subscription rates, the price charged by the Postal Service will also affect the demand for Periodical mail directly by affecting publishers' decisions over how to deliver their periodicals." Hence, my own-price elasticity estimate implicitly models the extent to which alternate delivery is a feasible alternative for Periodical mail.

I did not explicitly include either the volume or the cost of alternate delivery systems due

to a lack of available data. In order for a variable to be included in the Periodical mail demand equations as specified in my testimony, I must be able to obtain a quarterly time series dating back to 1971. I am unaware of any such data which measure either the volume or cost of alternate delivery systems.

(c) Only if the price of Periodical mail charged by the Postal Service is positively correlated with the price of alternate delivery. If these prices are independent, however, so that alternate delivery prices are not increased whenever the Postal Service raises its rates, then my own-price elasticity estimate would be unaffected by the introduction of the price of alternate delivery. (see, for example, Jan Kmenta, Elements of Econometrics, 1971, p. 394)

If, on the other hand, alternate delivery rates are increased with changes in Postal rates, then my omission of this variable, while understating the own-price elasticity of Periodical Regular mail, would not adversely affect the use of my demand equation for either volume forecasting or the setting of Ramsey prices, since my understatement of the negative volume impact of a change in Postal rates would be offset at least somewhat by an understatement of the positive volume impact of a change in the price of alternate delivery which would be brought about by the change in Postal rates.

(d) Confirmed. Please see my response to parts (a) and (b) above. Dr. Tolley did, however, take these factors into account in making his volume forecasts, by his inclusion of a negative net trend in the forecasting equations associated with Periodical mail volume. Please see his discussion of electronic alternatives at pages 86, 97, and 104-105 of his testimony in this case (USPS-T-6).

(e) See my response to part (c) above.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-3. Please explain fully your testimony on p. 7 (lines 23-24) and p. 8 (line 1) that "the correspondence between the Periodical mail market and the Periodical mail class may not be exact."

RESPONSE:

In order to model a demand equation for a product, it is necessary for one to define the relevant market. In this case, I have defined the relevant market of interest as the demand for the Periodical mail class. There may, however, be mail which is sent through the Postal Service and which serves the same basic purpose as Periodical mail -- i.e., is periodical in nature and could be classified as a magazine, newspaper, journal, or newsletter -- but which is not sent as part of the Periodical mail class. I was thinking specifically about some smaller newsletters or journals which may be sent via First-Class Mail due to an inability or lack of desire on the part of mailers to use the Periodical mail class. In addition, it is possible that some periodical mail (by which I mean mail that is periodicals as defined above) could be sent as Standard A mail.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-4. With reference to your response to NAA/USPS-T7-11(b):

(a) Please confirm that in estimating the own-price elasticity of demand for Periodicals Regular mail, you did not take into account any cross-price relationship between Standard and Periodicals mail. To the extent that you do not confirm, please explain fully and precisely how that factor was taken into account.

(b) Please confirm that had you taken into account the factor referred to in part (a) above, your estimate of the own-price elasticity for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

RESPONSE:

(a) Confirmed.

(b) Confirmed, although to the extent that the prices of Periodical and Standard mail are positively correlated, then my omission of the cross-price elasticity with respect to Standard mail, while understating the own-price elasticity of Periodical Regular mail, would not adversely affect the use of my demand equation for either volume forecasting or the setting of Ramsey prices, since my understatement of the negative volume impact of a change in Periodical mail rates would be essentially offset by an understatement of the positive volume impact of a change in Standard mail rates.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-5.

(a) Please confirm that while you took into account user costs (i.e., the cost to mailers of satisfying worksharing requirements, see USPS-T-6, p. 16, lines 18-22) in estimating the own-price elasticities of demand for First-Class and Standard A mail, you did not take into account user costs in estimating the own-price elasticity for Periodicals Regular mail. If you do not confirm, please explain fully.

(b) Please confirm that had you taken into account user costs, your estimate of the own-price elasticity of demand for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

(c) Please explain fully why you did not take into account user costs in estimating the own-price elasticity of demand for Periodicals Regular mail.

RESPONSE:

(a) Confirmed.

(b) Confirmed.

(c) User costs for First-Class and Standard A mail are calculated by estimating share equations for the various presort and automation categories of First-Class and Standard A mail, which are documented in section IV of my testimony. I did not estimate share equations for the worksharing categories of Periodical Regular mail. Consequently, I was not able to estimate the costs to mailers of worksharing Periodical Regular mail.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-6.

(a) Please confirm that in estimating the own-price elasticity of demand for Periodicals Regular mail, you did not take into account the extent to which increases in Periodicals postal rates deter the start-up (and/or mailing) of new periodicals. To the extent you do not confirm, please explain fully and precisely how that factor was taken into account.

(b) Please confirm that had you taken into account the factor referred to in part (a) above, your estimate of the own-price elasticity of demand for Periodicals Regular mail may have been higher. If you do not confirm, please explain fully.

(c) Please confirm that estimates of demand elasticities are necessarily subject to substantial uncertainty. To the extent you are unable to confirm, please explain your answer fully.

RESPONSE:

(a) Not confirmed. The own-price elasticity presented in my testimony implicitly accounts for reductions in mail sent by existing Periodical mailers as well as reductions in the number and/or size of new entrants into the Periodical market as a result of changes in postal rates. Hence, the difference between Dr. Tolley's Test Year before-rates forecast of Periodical Regular mail of 7,172.571 million and his after-rates forecast of 7,147.574 million reflects the impact of mailers who would choose to cease mailing altogether as well as mailers who would choose to merely reduce the size of their mailing.

(b) Not applicable. See my response to part (a).

(c) Although I would not agree with the term "substantial" your statement is generally true. Estimates of demand elasticities are necessarily subject to uncertainty.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-7.

(a) In estimating "the impact of a change in postal prices ... on subscription rates," please explain fully whether it would be more relevant to consider the price of postage as a percentage of subscription rates rather than as a percentage of the "total cost of preparing and delivering a periodical."

(b) Please confirm that 15-20 percent is more than a "relatively minor component" of either a subscription rate or (if different) of the total cost of preparing and delivering a periodical. To the extent that you do not confirm, please explain your answer fully.

(c) If you knew (assuming it is true) that the average postal rate per piece for Periodicals Regular mail represented on average 15 percent or more of the corresponding subscription rates or (if different) of the total cost of preparing and delivering the periodicals in question, and you were asked to reconsider in that light your estimate of the own-price elasticity of demand for Periodicals Regular mail, what additional investigation and/or analysis and what adjustments in methodology and/or calculation would be appropriate in order to arrive at a more reliable estimate of the own-price elasticity of demand for Periodicals Regular mail? Please explain your answer fully.

RESPONSE:

(a) It is not necessarily the case that Periodical mailers will incorporate increases in postage rates entirely into their subscription prices. For example, as I noted in my responses to ABP/USPS-T7-2 and NAA/USPS-T11(a), publishers may increase advertising rates in response to increases in Postal rates. This would thereby enable these publishers to recoup some of this additional cost without having to increase subscription rates. Alternately, publishers may also recoup these costs by increasing the cover price of their publications. Finally, publishers may choose to absorb some of the increase in postage themselves, in the form of lower profits, rather than pass this cost on to subscribers.

Because of this plethora of available means by which a publisher may incorporate the price of postage, I believe that it would be more appropriate to consider the price of postage relative to the total cost of preparing and delivering a periodical, as opposed to the subscription price of a periodical.

(b) Please see my responses to ABP/USPS-T7-3 and ABP/USPS-T7-5. I would agree that

15-20 percent may be more than "a relatively minor component" of the total cost of preparing and delivering a periodical. I am not convinced, however, that this is a realistic assessment of the true share that postage is of the total cost of preparing and delivering a periodical.

The relevance of the quote to which you are referring within the context of my testimony is revealed at lines 17-19 of my testimony, where I state that "the impact of a ***change*** in postal prices would be expected to have a relatively modest impact on subscription rates." (emphasis added). The real price of Periodical Regular mail has increased by approximately 44.2 percent over the past ten years. Even if I accepted your estimate of 15 percent, this leads to the conclusion that this 44.2 percent change in 15 percent of the total costs of preparing and delivering a periodical has led to a 6.6 percent change in the total cost of preparing and delivering a periodical that is due to changes in postage rates (44.2% times 15%). I would certainly maintain that a change of 6.6 percent over a ten-year period would be "a relatively modest impact on subscription rates."

(c) Please see my response to ABP/USPS-T7-1. As I explained there, this quote was made as a probable explanation for the observed price elasticity of Periodical Regular mail of -0.143, but that it did not play a role in my arriving at that price elasticity. Even if I were convinced that postage represented 50 percent of the cost of preparing and delivering a periodical, I would not have changed my analysis that resulted in an own-price elasticity of -0.143, although I would certainly have altered my hypothesis for the reason as to why this value was so low.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-8. With respect to your response to ABP/USPS-T7-1, please confirm that total publishing revenue is not necessarily a reliable proxy for the total cost of preparing and delivering a periodical. To the extent that you do not confirm, please explain your answer fully.

RESPONSE:

If the market for periodicals is a competitive one, then total publishing revenue should be exactly equal to the total cost of preparing and delivering periodicals, if, by "cost" one includes normal economic profits. I believe this to be a reasonable approximation in this case. If one were to exclude normal economic profits from one's calculation of cost, then your statement could be confirmed. However, I believe that this would be inappropriate within the context of this discussion. In particular, publishers may have the option of forgoing profits in response to increases in other costs (including postage), so that the full increase of these costs would not necessarily be borne by consumers, thereby mitigating the extent to which increases in postage costs may be expected to lead to a decline in the demand for periodicals.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-9. With reference to your testimony on p. 47, lines 23-24, on p. 48, lines 3-10, and on p. 50, lines 13-21, please confirm that under your analysis, an estimated own-price elasticity of demand for Periodicals Regular mail (-.143) that is 37.3 percent lower than the estimated own-price elasticity of demand for Periodicals Nonprofit mail (-.228) is sufficiently implausible as to cast some doubt on the estimated elasticity for Periodicals Regular mail. To the extent you are unable to confirm, please explain your answer fully.

RESPONSE:

Not confirmed. I have no reason to expect Periodical Regular and Periodical Nonprofit mail to have the same demand elasticities. As I stated on page 47, lines 23-24, "[t]he basic theory of demand for the preferred categories of Periodical mail is expected to be similar to the theory [for Periodical Regular mail]." By this I mean to suggest that one might expect the same factors to affect these demands, although I would not suggest that one would expect them to affect these demands to the same extent. On page 50, at lines 16-17, I offer one hypothesis as to why Periodical Nonprofit mail volume is more price-elastic than Periodical Regular mail volume, namely that "nonprofit periodicals have a somewhat greater degree of substitution with other alternatives, including cable television." In addition, I would suggest that Periodical Nonprofit mail may be more amenable to alternate delivery. For example, a church may choose to stop mailing out newsletters if the price of postage increases significantly and instead distribute them in church on Sunday. The price of postage may also represent a greater percentage of the total cost of preparing a periodical, particularly if, as I explain in my response to MH/USPS-T7-8, profit is considered one "cost" of preparing a for-profit periodical. Any of these hypotheses may explain the observed difference in the own-price elasticities associated with Periodical Regular and Periodical Nonprofit mail.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF MCGRAW-HILL

MH/USPS-T7-10. (a) Please confirm that the own-price elasticity of demand estimated for Periodicals (second-class) Regular mail in Docket R90-1 was -.291, more than twice as high as the own-price elasticity of demand estimated by you for Periodicals Regular mail in this proceeding. If you do not confirm, please explain fully.

(b) To the extent you are able to do so, please explain fully any factors that would cause the own-price elasticity of demand for Periodicals (second-class) Regular mail to decline by more than 50 percent during this period.

RESPONSE:

(a) Confirmed.

(b) The own-price elasticity presented by Dr. Tolley in the most recent omnibus rate case, R94-1, was -0.145. This differs by less than 1.5 percent from my estimate of -0.143. The introduction of cable television usage as an explanatory variable in the second-class regular rate equation was the source of the decline in the estimated own-price elasticity of second-class regular rate mail between R90-1 and R94-1.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF DIRECT MARKETING ASSOCIATION

DMA/USPS-T7-1. On page 68 of your direct testimony you indicate that the sign of the cross price elasticity of Standard A regular mail with respect to the price of Enhanced Carrier Route mail was "implausible if one expects these two subclasses to be substitutes for one another." You also indicate that you found the cross price elasticity of enhanced carrier route with respect to the price of Standard A regular to be of the correct sign, but too high in magnitude. You further state that "[h]ence, no cross-price substitution was modeled between Standard Regular and Enhanced Carrier Route mail in the demand equations presented and discussed here." Does this imply that you fit demand equations for Standard Regular and Enhanced Carrier Route that are not presented in your testimony? If so, please provide the specification for these equations, the parameter estimates, and the results of any statistical tests or regression diagnostics you performed.

RESPONSE:

The equations to which you refer are found in Workpaper 3, "Choice Trail Results for Modeling of Demand Equations", accompanying my testimony. Alternate equations for Standard bulk mail are presented on pages 3-250 through 3-328. The equation for Standard Regular mail which includes a cross-price elasticity with respect to Standard ECR mail is presented at pages 284 - 288 of Workpaper 3 accompanying my testimony. The equation for Standard ECR mail which includes a cross-price elasticity with respect to Standard Regular mail is presented at pages 309 - 313 of Workpaper 3 accompanying my testimony.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF DIRECT MARKETING ASSOCIATION

DMA/USPS-T7-2. On page 69 of your direct testimony you state that "[t]he regressions were not begun starting in 1983Q1 based on a comparison of regression results starting in 1983Q1 and those starting in 1984Q1." Please provide the specification for the regressions starting in 1983Q1 and the results, including parameter estimates and all statistical tests and regression diagnostics.

RESPONSE:

Regressions were run which used the same demand specifications as presented in my testimony, but were estimated over a sample period beginning in 1983Q1. The results of these equations are presented at pages 259 - 273 of Workpaper 3, "Choice Trail Results for Modeling of Demand Equations", accompanying my testimony.

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF DIRECT MARKETING ASSOCIATION

DMA/USPS-T7-3. a) Does the cross-price elasticity of Standard A ECR mail with newspapers and radio mean that they both get additional advertising revenues when ECR rates increase?

b) Would newspaper and radio also get additional advertising revenues as a result of increases in the Standard A Regular rates?

c) Please provide an estimate of how much additional advertising revenues newspapers and radios will receive as a result of the Postal Service's proposed increase (i) for Standard A ECR and (ii) for Standard A Regular mail.

RESPONSE:

a) Yes.

b) Standard A Regular mail has a cross-price elasticity with respect to the price of newspaper advertising, but not with respect to radio advertising in the equations presented in my testimony. Hence, newspapers would be expected to receive additional advertising revenues as a result of increases in Standard Regular rates, while radio would not.

c) It is possible to use the Standard A demand equations presented in my testimony to provide a rough approximation to how much additional advertising expenditures will be made on newspaper and radio advertising. This figure includes expenditures made in preparing these advertisements, so that this figure will be somewhat greater than the increase in additional newspaper and radio advertising revenues.

Using the Slutsky-Schultz condition (see my testimony at pp. 142-144) to estimate the cross-price elasticities of newspaper and radio advertising with respect to direct mail advertising, and estimating the share of direct mail advertising expenditures which are spent to purchase postage as approximately 25 percent, the estimated increase in newspaper and radio advertising expenditures resulting from the Postal Service's proposed rate increase is approximately equal to the following:

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF DIRECT MARKETING ASSOCIATION

- Increase in Newspaper advertising expenditures due to change in Standard ECR rates ~ $160 million

- Increase in Radio advertising expenditures due to change in Standard ECR rates ~ $40 million

- Increase in Newspaper advertising expenditures due to change in Standard Regular rates ~ $160 million

RESPONSE OF POSTAL SERVICE WITNESS THRESS
TO INTERROGATORIES OF DIRECT MARKETING ASSOCIATION

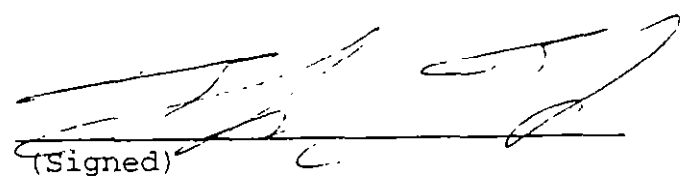
DMA/USPS-T7-4. In the past several cases, Dr. Tolley has used the Z variable in demand estimates for Standard A mail. Please explain why you no longer use this variable.

RESPONSE:

The Z-variables used by Dr. Tolley were included in his demand equations for third-class bulk mail to reflect significant increases in third-class mail volumes in the late 1970s and early 1980s due to "the increased use of targeted direct mail advertising, made possible by improvements in computer-driven technology." (Docket No. R94-1, USPS-T-2, p. I-47, ll. 8-10). I do not include z-variables in my demand specifications for Standard A mail in part because my sample period for these equations, which begins in 1984Q1, excludes the period for which the z-variable was most prominent, namely the late 1970s and early 1980s. In addition, I model the enhanced profitability of direct mail advertising due to technological innovations somewhat more explicitly by including the price of computer equipment directly in my demand equation for Standard Regular mail.

DECLARATION

I, Thomas Thress, declare under penalty of perjury that the foregoing answers are true and correct to the best of my knowledge, information and belief.



(Signed)

9-30-97

(Date)

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

Eric P. Koetting

475 L'Enfant Plaza West, S.W.
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October 1, 1997