DOCKET SECTION

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

POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97–1

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS THRESS TO INTERROGATORIES OF
THE NEWSPAPER ASSOCIATION OF AMERICA
REDIRECTED FROM WITNESS TOLLEY
AND ABA REDIRECTED FROM WITNESS HATFIELD
(NAA/USPS–T6–4–7, 9–11, ABA/USPS-T25-1)

The United States Postal Service hereby provides responses of witness Thress to the following interrogatories of the Newspaper Association of America and the ABA: NAA/USPS–T6–4–7, 9–11, redireced from witness Tolley, and ABA/USPS-T25-1, redirected from witness Hatfield, 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 NAA
RE-DIRECTED FROM WITNESS TOLLEY

NAA/USPS-T6-4. Please refer to the cross-price and cross-volume effects between single-piece First Class letters and Standard A mail shown in Table 2 (page 38 of your direct testimony):

a. If single-piece First Class letters are a positive function of Standard A volume, and Standard A mail volume is a negative function of Standard A prices, does the cross-volume coefficient include a "second-order" cross-price effect? Please explain your response.

b. For the purposes of developing Ramsey prices, should any price effects inherent in the cross-volume term be included in the cross-price elasticities. Please explain your response.

c. Please confirm that the own-price elasticities for Standard A Regular and Standard A ECR mail are, on average, approximately -0.5, the cross-volume elasticity for Standard A ECR mail is 0.04, and the estimated cross-price elasticity between First Class single piece letters and Standard A Regular is 0.019. If you cannot confirm any of these elasticities, please provide the correct elasticity.

d. Given the elasticities listed in part (c) above, please confirm that the changes in the price of Standard A mail will have little or no long-term effect on forecast single-piece first-class letter mail, since the cross-price and cross-volume effects offset one another? Please explain your response.

RESPONSE:

a. Yes. An increase in Standard A prices will lead to a decrease in the volume of Standard A mail volume. A decrease in the volume of Standard A mail volume will lead to a decrease in the volume of single-piece First-Class letters. Hence, an increase in Standard A prices will indirectly lead to a decrease in the volume of single-piece First-Class letters.

This cross-price effect implicit in the cross-volume coefficients is not, however, a traditional cross-price effect as this term is usually used. In particular, there is no symmetric dependence of Standard mail on the price of single-piece First-Class letters.

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A traditional cross-price elasticity can be thought of as reflecting the choice of an individual consumer choosing from among various alternatives. With regard to the cross-volume effects modeled in the single-piece First-Class letters equation, the change in First-Class letters volume resulting from an increase in the price of Standard mail is not because mailers have chosen to shift their mail from First-Class letters into the Standard class. Rather, it is a reduction in mail that would have otherwise been sent in response to Standard mail. Hence, this relationship between First-Class and Standard mail volumes would not necessarily have the same implications as a direct cross-price effect.

In addition, the cross-volume effect embodies changes in First-Class letter volumes due to more than simply changes in the price of Standard A mail. Factors other than price which influence the volume of Standard A mail volume will also affect the volume of single-piece First-Class letters through this cross-volume effect. The cross-volume effects of these non-price factors are clearly not cross-price effects.

b. Please see the response of witness Bernstein to ADVO/USPS-T31-1.

c. Generally confirmed. The own-price elasticity of Standard Regular mail is -0.382; the own-price elasticity of Standard ECR mail is -0.598; the average of these two figures is approximately -0.49. The cross-volume elasticity of single-piece First-Class letters of 0.04 is with respect to the sum of Standard A Regular and ECR mail volume.

d. Generally confirmed. The direct effect of a change in the price of Standard Regular mail on single-piece First-Class letters volume is measured by the cross-price elasticity

of 0 019. The indirect effect of a change in the price of Standard Regular mail on single-piece First-Class letters volume through the impact of a change in the price of Standard Regular mail on Standard Regular mail volume is equal to -0.015 (cross-volume elasticity of 0.04 times own-price elasticity of Standard Regular mail of -0.382). Hence, the aggregate impact of a change in the price of Standard Regular mail on single-piece First-Class letters volume is approximately equal to 0.004 (0.019 - 0.015).

The indirect impact of a change in the price of Standard ECR mail on single-piece First-Class letters volume is equal to -0.02 (.04•(-0.598)).

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NAA/USPS-T6-5. Please refer to your discussion of user costs at page 41 of your direct testimony. Please explain in detail how the 11.17 percent effect was calculated, and indicate the change in user cost that was associated with the 11.17 percent decline.

RESPONSE:

Please see my testimony at page 30, lines 10 - 19. The 11.17 percent figure is calculated as the net effect of changes in the time trend and trend squared variables over the past five years on single-piece First-Class letters volume.

The time trend had an average value of 58.4 five years ago (1990Q4 - 1991Q3). The value of the time trend in the final four quarters of the regression period (1995Q4 - 1996Q3) was 77, 78, 79, and 80, respectively. Quarterly multipliers are calculated for single-piece letters for each of the four quarters by taking the ratio of the current value of the time trend to the base value of the time trend (58.4), raised to the coefficient of the time trend from the single-piece First-Class letters equation (2.371). The same thing is then done with the trend squared variable (coefficient of -0.331). The resulting time trend multipliers are then multiplied by the trend squared multipliers for each quarter, yielding the following aggregate trend multipliers:

1995Q4	0.8962
1996Q1	0.8903
1996Q2	0.8845
1996Q3	0.8786

The weighted average of these multipliers minus one is then equal to -11.17 percent.

I discuss the use of these time trends in my equations on page 21, line 1 through page 22, line 5 of my direct testimony. These time trends serve to model the impact of

declining user costs on single-piece First-Class letters volume. They do not, however, explicitly model user costs, so that it is not possible to use this information to make a statement about the change in user costs over this time period.

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NAA/USPS-T6-6. Please refer to your discussion of user costs at page 45 of your direct testimony. Please explain in detail how the 23.91 percent effect was calculated, and indicate the change in user cost that was associated with the 23.91 percent decline.

RESPONSE:

Please see my testimony at page 33, lines 1 - 6. The 23.91 percent figure is calculated as the effect of the change in the time trend variable over the past five years on workshared First-Class letters volume.

The time trend had an average value of 58.4 five years ago (1990Q4 - 1991Q3). The value of the time trend in the final four quarters of the regression period (1995Q4 - 1996Q3) was 77, 78, 79, and 80, respectively. Quarterly multipliers are calculated for workshared letters for each of the four quarters by taking the ratio of the current value of the time trend to the base value of the time trend (58.4), raised to the elasticity of the time trend from the workshared First-Class letters equation (0.727). This yields the following multipliers:

1995Q4	1.2228
1996Q1	1.2343
1996Q2	1.2458
1996Q3	1.2572

The weighted average of these multipliers minus one is then equal to 23.91 percent.

I discuss the use of the time trend in my equations on page 21, line 1 through page 22, line 5 of my direct testimony. The time trend serves to model the impact of declining user costs on workshared First-Class letters volume. It does not, however, explicitly model user costs, so that it is not possible to use this information to make a statement about the change in user costs over this time period.

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NAA/USPS-T6-7. Please refer to your direct testimony at page 68 lines 9 to 13.

a. Does this observed behavior indicate that a cross-price elasticity exists between private cards and Standard A mail? Please explain any negative response.

b. In light of this observation, please explain why no Standard mail price term appears in the forecasting equation for private cards.

RESPONSE:

a. No. The volume shift referred to in Dr. Tolley's testimony was the result of a unique pricing phenomenon, which priced a portion of First-Class cards below the price of third-class bulk regular mail. This caused some mailers to shift to the now less-expensive First-Class cards subclass. The relevant factor which caused this mail to shift subclasses was not a change in the absolute price of either third-class bulk regular mail or First-Class cards, but was simply a change in which of these two subclasses was more expensive. Hence, it would not be correct to refer to this effect as a cross-price elasticity effect, as that term is generally used in my testimony.

b. Changes in the price of third-class mail which did not change the relationship between the prices of First-Class cards and third-class bulk regular mail (i.e., did not change which of the two subclasses was more expensive) have not been observed to lead to substitution between these two subclasses. Consequently, no cross-price elasticity is modeled between First-Class cards and Standard bulk mail.

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NAA/USPS-T6-9. With regard to the inclusion of the prices of substitutes in the econometric analysis:

a. Please explain generally why the prices for substitutes to Standard A Regular and ECR mail were included in the econometric analysis, while prices for substitutes to First-Class Mail were not included.

b. If specific prices for substitutes were excluded from the Standard A equations, would the estimated own-price elasticities for Standard A mail be lower (in absolute value)?

c. If specific prices for substitutes for First-Class Mail were included in the econometric analysis, would the own-price elasticities for First-Class Mail be higher (in absolute value)?

RESPONSE:

a. I am not entirely sure what substitutes for First-Class Mail are being referred to by your question. In general, prices of substitutes were not included in the demand equation for First-Class Mail because most First-Class Mail has relatively few alternatives, due to the Private Express Statutes. For example, according to the Household Diary Study, more than 43 percent of First-Class Mail received by households was either bills or statements. I can think of no reasonable alternative to the Postal Service for delivering this mail. In addition, many potential substitutes for First-Class Mail are not widely used (e.g., electronic bill-payments) and are priced such that it does not appear that there would be significant price-substitution between these alternatives and First-Class Mail. For example, the marginal price of sending one E-Mail message, once one has already purchased a computer and modem and subscribed to an online service is zero. It is not clear, therefore, what "price" of E-Mail one would include in a demand equation for First-Class Mail.

The only non-Postal substitute for First-Class Mail for which there may be some

small cross-price elasticity that I can think of is long-distance telephone service. Long-distance telephone service would primarily substitute for household-to-household mail. Yet, not including greeting cards and packages, which provide a distinct product from long-distance telephone service, household-to-household mail represented only 3.1 percent of total First-Class Mail in 1995 (1995 Household Diary Study, Table 4-10). This suggests that any cross-price elasticity between First-Class Mail and long-distance telephone service would likely be extremely small.

I was not able to find a reliable price series for long-distance telephone service that did not also incorporate the price of local telephone service. I would not expect there to be substitution between First-Class Mail and local telephone service, however. Since the breakup of AT&T, however, the prices of local and long-distance service have behaved quite differently, as local telephone service is still a monopoly product, while the long-distance market has become progressively more competitive. Hence, I do not believe that an aggregate price index which combines both of these markets would be appropriate for measuring the price of either of these markets separately. In light of the relatively small fraction of First-Class Mail for which long-distance telephone service may be a close substitute, however, I did not view the lack of a cross-price elasticity with respect to long-distance telephone service to be a significant shortcoming of my First-Class demand equations.

Prices of substitute goods were included in the Standard A demand equations, on the other hand, because Standard A mail has more available substitutes. In addition, advertisers would be expected to consider price to be a significant factor in choosing between alternate advertising media, as is evidenced by the strong, significant cross-media price elasticities of Standard A mail presented in my testimony.

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b. No.

c. Only if these prices were positively correlated with the price of First-Class Mail.

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NAA/USPS-T6-10. Please refer to your direct testimony at page 58. You observe that advertising represents an increasing share of First Class letter mail.

a. Please describe the substitute forms of advertising available to First Class letter mailers?

b. Did you consider the inclusion of the prices for substitute advertising in the equation for First Class letter mail? If no, please explain why not. If yes, please explain what substitute advertising prices were considered, provide the results of any alternate regression equations, and explain why these prices are not found in the final First Class letter mail equation.

RESPONSE:

a. First-Class advertising mail may also be sent as Standard A mail or First-Class cards. In addition, advertisers may choose between direct-mail advertising and alternate advertising media, as described in my testimony at page 66, lines 1 - 12.

b. Substitution with First-Class cards and Standard A mail are explicitly modeled in my demand equations. I did not attempt to include the prices of substitute advertising media (i.e., the CPM series used in the Standard A equations) in the demand equation for First-Class letters, because the overwhelming majority of First-Class letter mail is not advertising and it is not possible to isolate First-Class advertising mail from First-Class non-advertising mail for the purposes of modeling separate demand equations.

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NAA/USPS-T6-11. With regard to the disparate consumption elasticities of Standard A Regular mail and Standard A Nonprofit mail:

a. Please confirm that the personal consumption expenditure elasticity for Standard A Regular mail is 1.6. If you cannot confirm this elasticity, please provide the correct figure.

b. Please confirm that the personal consumption expenditure elasticity for Standard Nonprofit mail is 0.6. If you cannot confirm this elasticity, please provide the correct figure.

c. Given the elasticities in part (a) and (b) above, is it reasonable to conclude that commercial (for-profit) advertising mailers have been able to gain more volume through targeting (see Mr. Thress' testimony at page 74 lines 19 to 22) than have non-profit mailers. Please explain your response, and identify all other factors which contribute to the disparate consumption elasticities.

RESPONSE:

a. Confirmed

b. Confirmed

c. Yes. I observe on page 79 at line 24 through page 80 at line 6 of my testimony that it appears as if Standard bulk nonprofit mail volume has not grown as a result of technological improvements to the extent that Standard Regular mail has grown. One possible explanation for this is that the share of nonprofit advertising that is direct mail advertising was considerable even before the recent boom in for-profit direct mail advertising, due to preferential rate treatment of nonprofit advertisers by the Postal Service, so that technological improvements have led to relatively little additional growth in direct mail nonprofit advertising "simply because there has been relatively little non-

direct mail nonprofit advertising which could have been induced to shift into Standard bulk nonprofit mail volume due to technological considerations." (p. 80, ll. 3-6) As evidence of this, Standard bulk nonprofit mail volume is affected less than half as much as Standard Regular mail volume by changes in the prices of alternate advertising media.

It may also be the case, however, that nonprofit advertising is simply not as strongly influenced by the general economy. For example, as the economy expands, the number of people in need of charity may decline as there will be fewer people who are unemployed or otherwise distressed financially. Hence, there may be somewhat less of a need for nonprofit advertising in prosperous times. On the other hand, during economic downturns, there will be a greater need for charity organizations, due to growing numbers of unemployed and financially distressed individuals. This counter-cyclical need for charity may also help to lower the overall correlation of nonprofit advertising and general economic conditions.

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ABA/USPS-T25-1.

1. a. If your rationale is to move mail into higher degrees of presortation in setting your First Class automation and presort discounts, what evidence do you have or did you collect that there is any more mail that can move between these rate categories?

   b. Have you or the USPS performed any studies showing that mail would move from the basic to the 3 digit rate as a result of these relative price changes?

RESPONSE:

a. I performed an extensive econometric analysis of the share of First-Class Mail that has been presorted and automated since 1988. The theory used in making this analysis is developed in my testimony at page 160, line 1 through page 184, line 4. The results of my analysis for First-Class letters are presented at page 184, line 11 through page 192, line 10 of my testimony. This analysis concluded that there still exists some potential for growth in the volume of automated First-Class letters in general, and in the share of those letters that are presorted to the 3- or 5-digit level in particular. In addition, there is significant evidence that movement from single-piece into workshared First-Class Mail is still possible (see, e.g., pp. 21, line 1 through 22, line 5, p. 30, ll. 10-19, and p. 33, ll. 1-6 of my testimony).

On the basis of this analysis, the volume of First-Class automated First-Class letters are projected to increase significantly from 1997 through 1999, even in the absence of Postal Service rate proposals, as evidenced in Exhibit USPS-6A, Table 2. In addition, the share of this mail that is presorted to the 3- and 5-digit level is projected to increase as well. The relevant portion of this exhibit is summarized below.

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	GFY 1997	GFY 1998	GFY 1999
First-Class Letters, Flats, and IPPs			
Automation			
Basic Letters	4,052.971	4,284.950	4,517.139
3-Digit Letters	19,222.873	20,642.546	22,155.433
5-Digit Letters	8,748.237	9,375.321	10,020.098

Automation basic letters volume is projected to increase over this time period by 11.5 percent. By comparison, the volume of automation 3-digit letters is projected to increase by 15.3 percent over this same time period, while the volume of automation 5-digit letters is projected to increase by 14.5 percent.

Overall, the number of automated First-Class letters is expected to increase by 14.6 percent over the next two years, while the share of these automation First-Class letters that are presorted to the 3-digit and 5-digit level is expected to increase over this same time period. As noted above, these forecasts are based on an econometric analysis of the growth of these worksharing categories since 1988. These results suggest that there exist continuing opportunities for the Postal Service to encourage further automation as well as further presortation of automated First-Class Mail.

b. I present projections of the share of First-Class Mail sent via the various worksharing categories in Tables IV-2 (before-rates) and IV-3 (after-rates) of my testimony at pp. 227 and 229, respectively. The relevant results are summarized below for 1998Q1, the first quarter for which new rates are expected to be in effect:

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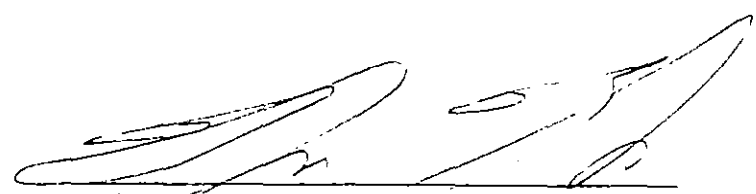
	Before-Rates	After-Rates
Nonautomation Presort	13.968%	13.001%
Automation Letters		
Basic	10.269%	10.448%
3-Digit	49.176%	50.147%
5-Digit	22.163%	22.614%
Carrier-Route	3.747%	3.101%
Automation Flats		
Basic	0.110%	0.113%
3/5-Digit	0.566%	0.578%

The share of First-Class letters that are expected to be sent as automated 3-digit letters is projected to increase by 0.97 percent, due to the proposed decreases in the discounts associated with both nonautomated presort and automated basic First-Class letters. If the nonautomated presort discount is left unchanged, the projected share of workshared First-Class letters sent as automated 3-digit letters is predicted to increase from 49.176 percent to 49.349 percent, in spite of a proposed reduction in the 3-digit automation discount from 6.6¢ to 6.5¢ (relative to the single-piece First-Class letters rate), due to the proposed change in the relative prices of automated basic and 3-digit First-Class letters.

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

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October 1, 1997