

Before The  
POSTAL REGULATORY COMMISSION  
WASHINGTON, D.C. 20268-0001

RATE ADJUSTMENT DUE TO EXTRAORDINARY  
OR EXCEPTIONAL CIRCUMSTANCES

Docket No. R2010-4

RESPONSES OF THE UNITED STATES POSTAL SERVICE  
TO INFORMAL QUESTIONS REGARDING FORECASTING MATTERS  
POSED AT TECHNICAL CONFERENCES  
(July 26, 2010)

The United States Postal Service hereby provides its responses to informal question regarding forecasting matters posed at Technical Conferences. The first three were posed at the Technical Conference on July 19, 2010. The fourth was posed at the Technical Conference on July 23, 2010.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorney:

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Eric P. Koetting

475 L'Enfant Plaza West, S.W.  
Washington, D.C. 20260-1137  
(202) 268-2992, FAX: -5402  
July 26, 2010

**Response of United States Postal Service to Request for Additional  
Information  
Related to Volume Forecasting from Technical Conference on July 19, 2010**

1. Volume-Adjustment Multipliers

At the July 19, 2010, Technical Conference, the Postal Service was asked to document the volume-adjustment multipliers found at row 83 of sheet 'Comp. Mult' of the volume forecasting spreadsheets filed in USPS-R2010-4/8.

As explained at the conference, the purpose of the volume-adjustment multipliers is to adjust base-year volumes for factors which may have influenced only portions of the base year. If, for example, a rule which served to reduce mail volume was in effect for only the last two quarters of the base year, a volume-adjustment multiplier would be introduced by lowering the observed volume for the first two quarters of the base year based on the expected impact of such a rule. In this way, the base volume, adjusted by the volume-adjustment multiplier, would fully reflect the expected impact of such a rule going forward through the forecast period.

Almost all of the volume-adjustment multipliers used in the present case are constructed based on shifting some base-period volume between the Negotiated Service Agreement (NSA) portion of a particular mail subclass and the non-NSA mail categories of the same subclass.

The one exception to this is with respect to Market-Dominant Parcel Post volume. In this case, the volume-adjustment multiplier is included to adjust the base-year volume to account for a significant decline in this volume beginning around the time of the Postal Service's May, 2009, rate increase. The demand equation for Market-Dominant Parcel Post includes a dummy variable equal to one since the introduction of May, 2009, rates (D\_R09). This variable has an estimated coefficient of -0.445 (t-statistic of -6.897).

Over the four quarters of the base period used in this case, this variable, D\_R09, was equal to 0 in 2009Q2, had a value of (51/91) in 2009Q3, and was equal to 1 in 2009Q4 and 2010Q1. Market-Dominant Parcel Post volumes in 2009Q2 and 2009Q3 were adjusted based on what they would have been expected to be had D\_R09 had a value of 1 in each of those quarters.

The mathematics of how this is done can be explained briefly as follows.

$$(1) \text{ Actual Volume} = X * e^{(D\_R09 \text{ Value} * D\_R09 \text{ Coefficient})}$$

$$(2) \text{ Adjusted Volume} = X * e^{(1 * D\_R09 \text{ Coefficient})}$$

Re-writing (1) as a function of X and plugging it into (2), then, yields

$$(3) \text{ Adjusted Volume} = \text{Actual Volume} * [e^{(1 * D\_R09 \text{ Coefficient})} / e^{(D\_R09 \text{ Value} * D\_R09 \text{ Coefficient})}]$$

Adjustments were made separately for inter-BMC and intra-BMC market-dominant Parcel Post. The specific adjustments made are shown in the Table below.

	<u>Volume</u>	<u>Value of D R09</u>	<u>Coefficient</u>	<u>Adjusted Volume</u>
<u>2009Q2</u>		0	-0.444522	
Inter-BMC	17.826			11.429
Intra-BMC	5.379			3.448
<u>2009Q3</u>		(51/91)	-0.444522	
Inter-BMC	9.074			7.463
Intra-BMC	8.320			6.843
<u>2009Q4</u>		1	-0.444522	
Inter-BMC	0.000			0.000
Intra-BMC	13.045			13.045
<u>2010Q1</u>		1	-0.444522	
Inter-BMC	0.000			0.000
Intra-BMC	16.712			16.712
<u>Base Year</u>				
Inter-BMC	26.900			18.892
Intra-BMC	43.455			40.048
<u>Volume-Adjustment Multipliers</u>				
Inter-BMC				0.7023
Intra-BMC				0.9216

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2. Hodrick-Prescott Filters

At the July 19, 2010, Technical Conference, the Postal Service was asked to provide the spreadsheet used to apply Hodrick-Prescott filters to the macro-economic data used in the volume forecasting spreadsheets filed in USPS-R2010-4/8.

The attached spreadsheet, 1st.TC.FilteredData.xlsx, calculates Trend components for Retail Sales (STRR), Employment (EMPLOY), and Investment (INVR), using the Hodrick-Prescott filter. Note that because of the complexity of the calculations here, this spreadsheet requires Excel 2007 or a later version.

The Cyclical component of these variables is calculated by subtracting the Trend component from the unadjusted data. The cumulative negative trend variables, EMPL\_TN\_L and INVR\_TN\_L, are constructed as described at pages 9 – 11 of the document “Narrative Explanation of Econometric Demand Equations for Market Dominant Products filed with the Postal Regulatory Commission on January 20, 2010”, which was filed with the Commission on July 1, 2010.

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3. Workshare Equations

At the July 19, 2010, Technical Conference, the Postal Service was asked to provide a version of the 'Shares' sheet of the volume forecasting spreadsheets filed in USPS-R2010-4/8 which would allow one to update the share forecasts given changes to the worksharing discounts.

Unfortunately, in preparing this spreadsheet, it was discovered that the discounts used in constructing the volume forecasts originally filed with USPS-R2010-4/8 were the same in all three forecasts and that, moreover, these discounts were not entirely correct for any of the three forecasts. These errors have been corrected in the revised versions of USPS-R2010-4/8 and USPS-R2010-4/NP3 filed on July 26, 2010. The revised versions also allow one to update the share forecasts given changes to the worksharing discounts.

**Response of United States Postal Service to Request for Additional  
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1. Lag Effects

At the technical conference on July 23, 2010, despite the fact that the same topic had been covered at the Technical Conference on July 19, 2010, a question was posed regarding the period of time over which the lagged price effects in the equation affect the forecasts. As a practical matter, a forecast through Quarter 2 of FY2012 would be sufficient to allow all of the lag effects to play out in the price variables. Technically speaking, with new rates scheduled to take effect on Sunday, January 2, 2011, there is a very small fraction of Quarter 2 of FY11 in which the "old" rates are still effective. Therefore, a minute portion of the lag effect would not show up until Quarter 3 of FY2012 but, again, as a practical matter, that can reasonably be ignored.

## **CERTIFICATE OF SERVICE**

I hereby certify that I have this date served the foregoing document in accordance with Section 12 of the Rules of Practice and Procedure.

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Eric P. Koetting

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Washington, D.C. 20260-1137  
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