BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

Statutory Review of the System for Regulating Rates and Classes for Market Dominant Products (Consolidating Docket Nos. RM2024-4, RM2022-5, RM2022-6, and RM2021-2)	Docket Nos. RM2024-4 RM2022-5 RM2022-6 RM2021-2

NATIONAL POSTAL POLICY COUNCIL: TECHNICAL APPENDIX

July 9, 2024

TECHNICAL APPENDIX

Introduction and Summary

Efficient component pricing (ECP) provides the theoretical basis for productive efficiency in postal pricing. The Postal Regulatory Commission (PRC) has long accepted ECP principles and has implemented regulations requiring discounts to be set in ways that adhere more closely to it. The Postal Accountability and Enhancement Act (PAEA) enshrines in law an upper bound on passthroughs but does not set a lower bound.

As discussed in the NPPC comments, the PRC has done so in regulation. However, there is nothing in PAEA on the vintage of the cost avoidances used for discounts are to be measured, instead the PRC establishes that via regulation. Under the PRC regulations, there is a mismatch between the time period during which the cost avoidances are measured and the time period during which the discounts developed based upon those cost avoidances are in effect. This mismatch also means that passthroughs underlying discounts as filed generally appear larger than they actually are during the period that the rates are in effect. Particularly problematic, discounts set below cost avoidances at the time of filing generally deviate from ECP even more during the period when the rates are in effect.

This Appendix, which is accompanied by Appendix Supporting Data.xlsx containing supporting calculations, fully explains the reason for the mismatch, quantifies the period of lag, and calculates how cost avoidances have increased during the lag period. Finally, it shows that the combination of the time lag and the growth in cost avoidances during this period has resulted in passthroughs well below 85 percent under current rules, increasing the importance of setting a higher minimum passthrough.

Discussion

The Postal Service increased prices for market dominant products on January 21 this year and the PRC has also approved increases for July 14 of this year. The Service has stated publicly that it will continue to increase market dominant prices twice annually.[1] For ease of exposition and calculation but with no loss of generality, we will assume that price increases take effect July 1 and January 1. However, since the implementation dates are during the month, rather than at the start, the actual lags will be slightly longer.

Cost avoidances calculated by the Postal Service for use in complying with PRC regulation on passthroughs and discounts are based on costs incurred during an entire Fiscal Year and displayed each year in the Postal Service Annual Compliance Reports in Library Reference 10, e.g., USPS-FY23-10. For price increases that occur in July ("July increases") and remain in effect for six months, there is an 18-month lag from the

[1] *See* "United States Postal Service Filing of Updated Schedule of Regular and Predictable Rate Adjustments" on September 15, 2021, January 11, 2022, and December 29, 2023.

mid-point of the cost avoidance measurement period to the mid-point of the discounted rates. For January increases, that period is 24 months. Calculating elapsed time using the mid-point of the cost avoidance period to the mid-point of the discounted rates is correct if cost change is even and continuous, thus resulting in an average elapsed time.

Figure 1—Elapsed Time Between Cost Avoidance Calculations and Applied Discounts (Graphic)

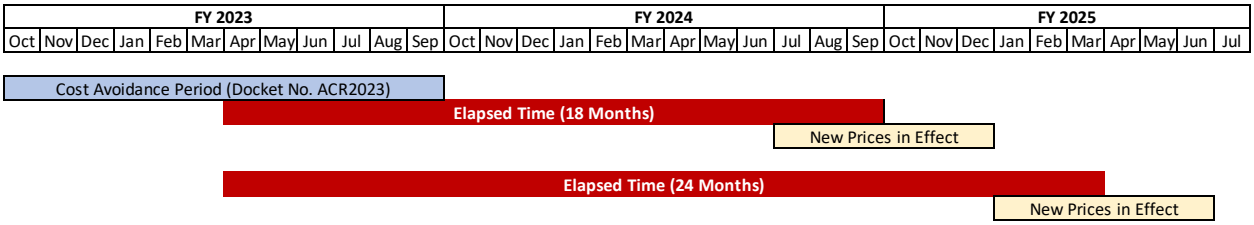


Figure 2—Elapsed Time Between Cost Avoidance Calculations and Applied Discounts (Table)

Docket No.	R2024-2	TBD
Prices in Effect	July 2024 to January 2025	January 2025 to July 2025
Filed	April 2024	October 2024
Cost Avoidance Period	Oct 2022 – Sep 2023 (FY 2023)	Oct 2022 – Sep 2023 (FY 2023)
Mid-Point of Cost Avoidance Period to Mid-Point of New Prices	18 Months	24 Months

As Figure 3 below shows, First-Class Mail and USPS Marketing Mail comprise the vast majority of all Market Dominant mail: over 96 percent. Within these two products, 5-Digit Automation Letters are the largest rate categories. As Figure 3 also shows, with mail that is not workshared excluded (First-Class Mail Single-Piece Letters and Cards), in FY 2023, these two accounted for more than half of all Market Dominant mail.

Figure 3—FY 2023 Mail Volumes

	Volume (billions)		Percent of Total
	Total	5-Digit Auto Letters	
First-Class Mail (FCM)	46.2	22.5	48.8%
USPS Marketing Mail	59.4	30.0	50.5%
Market Dominant	109.5	52.5	48.0%
-- w/o FCM Single-Piece Letters & Cards	97.7	52.5	53.8%

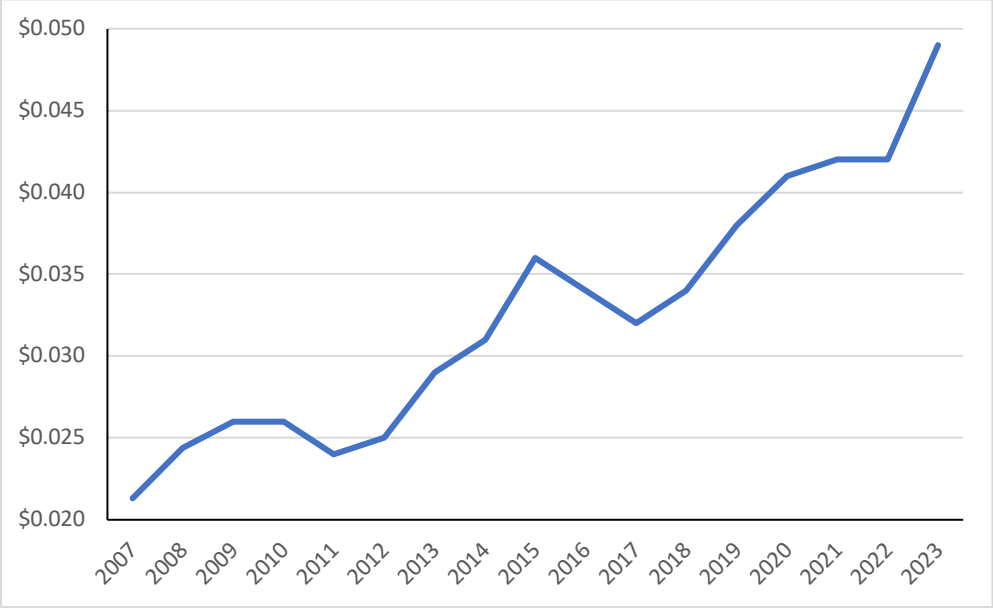
Source: Appendix Supporting Data.xlsx, "Figure 3"

As the largest products by volume, how their discounts comport with ECP is particularly important. Our analysis consequently focuses on these two.

Over the PAEA period, cost avoidances generally grew year to year as shown in the figures below. Over the 17 years since PAEA was enacted, based on simple annual averages, 5-Digit Automation Letter cost avoidances grew 5.6 percent and 5.7 percent annually for First-Class Mail and USPS Marketing Mail, respectively. For the most recent 5 years (FY 2019 – FY 2023), those average annual growth rates were 7.8 percent and 6.6 percent, respectively.

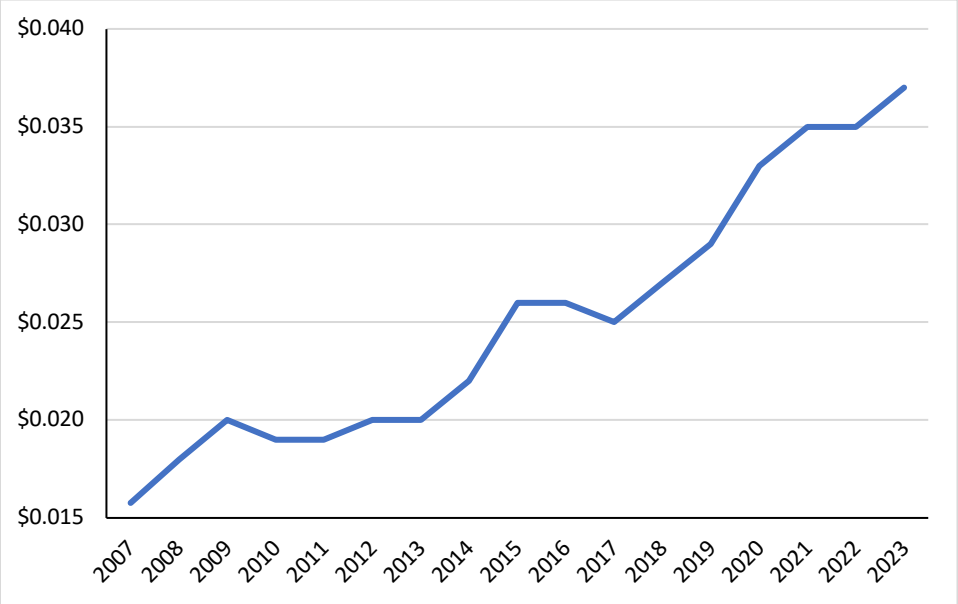
The First-Class Mail 5-Digit Automation Letters cost avoidance more than doubled, increasing from 2.1 cents in FY 2007 to 4.9 cents in FY 2023, an increase of 130 percent (see Figure 4). The percentage increase – 135 percent, from 1.6 to 3.7 cents – was similar for USPS Marketing Mail 5-Digit Automation Letters (see Figure 5).

Figure 4—First-Class Mail 5-Digit Automation Letters Cost Avoidance



Source: Appendix Supporting Data.xlsx, "Figures 4 & 5"

Figure 5—USPS Marketing Mail 5-Digit Letters Cost Avoidance



Source: Appendix Supporting Data.xlsx, "Figures 4 & 5"

Regression analysis confirms the magnitude and significance of these growth rates.[2] To perform the regression we took the natural log of the relevant cost avoidances and then fit the OLS regression line. The growth rate is the slope of the regression line and is highly significant in both cases.[3]

Figure 6—Regression Analysis

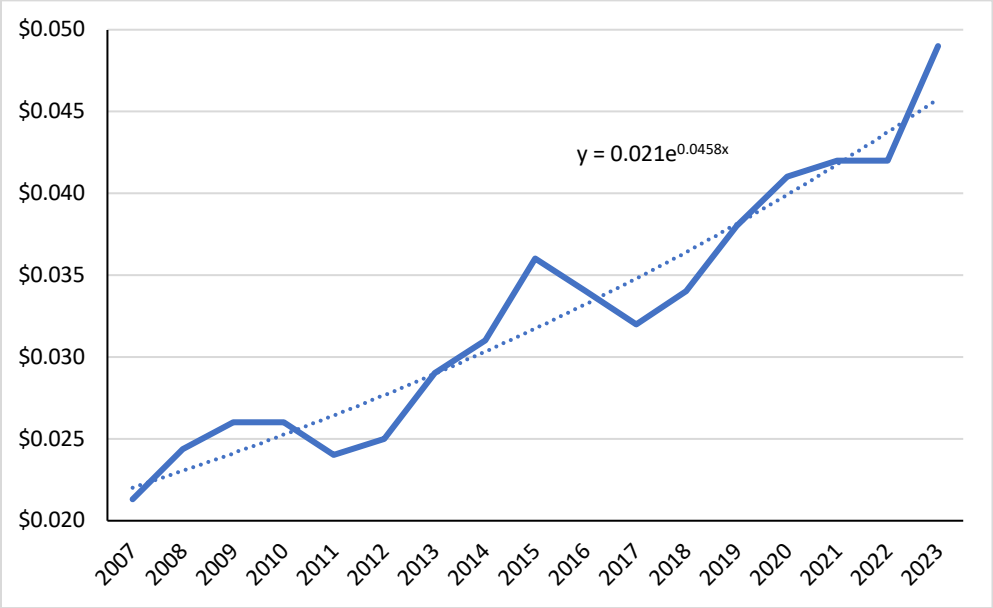
5-Digit Automation Letters	Cost Avoidance Annual Growth Rate		
	Regression Value	Lower 95%	Upper 95%
First-Class Mail	4.6%	3.9%	5.3%
USPS Marketing Mail	5.1%	4.5%	5.7%

Source: Appendix Supporting Data.xlsx, "Figures 6, 7, 8"

Figures 7 and 8 modify Figures 4 and 5, respectively, fitted with a regression line.

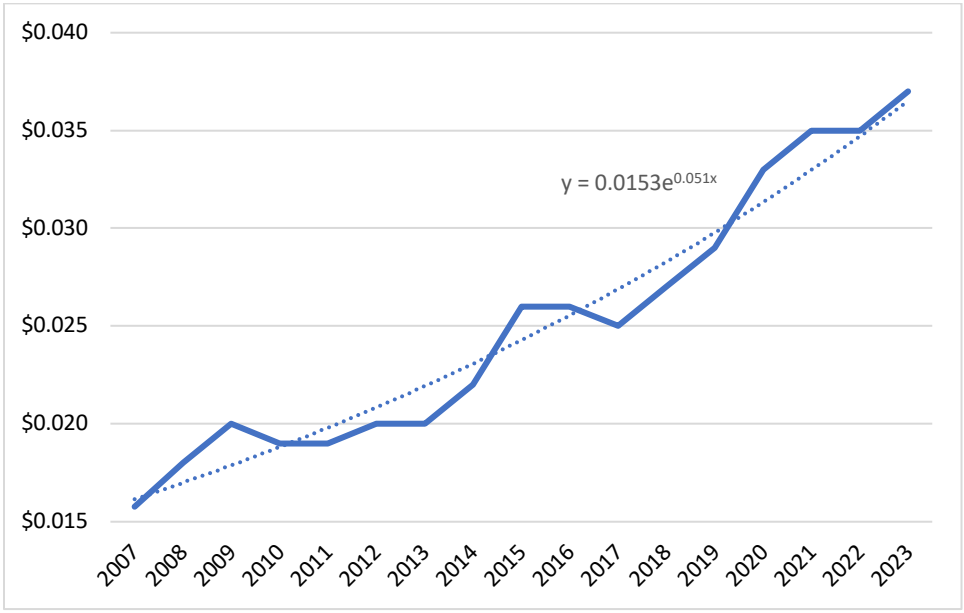
[2] An OLS regression minimizes the sum of the squared deviations of the date points from best fit regression line.
[3] The t-test on the slope is 14.0 and 17.8, respectively, with P-values well below 0.0001.

Figure 7—First-Class Mail 5-Digit Automation Letters Cost Avoidance with Regression Line



Source: Appendix Supporting Data.xlsx, "Figures 6, 7, 8"

Figure 8—USPS Marketing Mail 5-Digit Letters Cost Avoidance with Regression Line



Source: Appendix Supporting Data.xlsx, "Figures 6, 7, 8"

Figure 9 shows the annual growth rate in cost avoidance for First-Class Mail and USPS Marketing Mail 5-Digit Automation Letters with lower and upper bounds and the mid-point lags for each of the aforementioned price increases. By the mid-point of the

discounted rates, First-Class Mail automation 5-digit letters' actual cost avoidance is between 7.5 percent and 9.6 percent higher than the cost avoidance used to calculate the discounted rates. Similarly for USPS Marketing Mail automation 5-digit letters, the actual cost avoidances is between 8.4 percent and 11.1 percent higher than the cost avoidance used to calculate the discounted rates.

Figure 9—Cost Avoidance Growth

Product	Measure	Annual Growth Rate	Mid-Point Lag (ACR Mid-Point to Price Increase Mid-Point)	
			July Rate Increase (18 Months)	January Rate Increase (24 Months)
First-Class Mail Automation 5-Digit Letters	Annual Growth Rate	4.6%	7.1%	9.6%
	Lower 95%	3.9%	6.0%	8.1%
	Upper 95%	5.3%	8.2%	11.1%
Marketing Mail Automation 5-Digit Letters	Annual Growth Rate	5.1%	8.0%	10.7%
	Lower 95%	4.5%	7.0%	9.4%
	Upper 95%	5.7%	8.9%	12.1%

Source: Appendix Supporting Data.xlsx, "Figures 9 & 10"

This means that under the current regulation, prices that appear to be ECP compliant generally aren't because cost avoidances will have grown during the lag period and that the passthrough will generally be lower during the period the discount is in effect than calculated in the initial filing. Figure 10 below shows actual passthroughs during the period of the discount (on average using growth rates calculated from the regression) if they are filed at 85, 90, 95, and 100 percent passthroughs. As Figure 8 shows, if passthroughs are at 90 percent as filed, actual passthroughs will be less than 85 percent, the permissible floor under current regulation.

Figure 10—What Passthroughs Really Are

Product	Filed Passthrough	July Filing	January Filing
First-Class Mail 5-Digit Automation Letters	85% Passthrough is really…	79.0%	76.8%
	90% Passthrough is really…	83.6%	81.4%
	95% Passthrough is really…	88.2%	85.9%
	100% Passthrough is really…	92.9%	90.4%
USPS Marketing Mail 5-Digit Automation Letters	85% Passthrough is really…	78.2%	75.9%
	90% Passthrough is really…	82.8%	80.3%
	95% Passthrough is really…	87.4%	84.8%
	100% Passthrough is really…	92.0%	89.3%

Source: Appendix Supporting Data.xlsx, "Figures 9 & 10"