

UNITED STATES OF AMERICA  
POSTAL REGULATORY COMMISSION  
WASHINGTON, DC 20268-0001

Before Commissioners:

Michael Kubayanda, Chairman;  
Ann C. Fisher, Vice Chairman;  
Mark Acton;  
Ashley E. Poling; and  
Robert G. Taub

Periodic Reporting  
(Proposal Two)

Docket No. RM2022-8

ORDER ON ANALYTICAL PRINCIPLES USED IN PERIODIC REPORTING  
(PROPOSAL TWO)

(Issued September 23, 2022)

I. INTRODUCTION

On July 7, 2022, the Postal Service filed a petition pursuant to 39 C.F.R. § 3050.11 requesting that the Commission initiate a rulemaking proceeding to consider changes to analytical principles relating to periodic reports.<sup>1</sup> The Petition identifies the proposed analytical changes filed in this docket as Proposal Two. For the reasons discussed below, the Commission approves Proposal Two because it improves the

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<sup>1</sup> Petition of the United States Postal Service for the Initiation of a Proceeding to Consider Proposed Changes in Analytical Principles (Proposal Two), July 7, 2022 (Petition). The Petition was accompanied by a study supporting its proposal. See Michael D. Bradley, *Calculating Variabilities for Postmaster Costs*, July 7, 2022 (Bradley Report). The Postal Service also filed a notice of filing of public and non-public materials relating to Proposal Two. Notice of Filing of USPS-RM2022-8-1 and USPS-RM2022-8-NP1 and Application for Nonpublic Treatment, July 7, 2022.

quality, accuracy, and completeness of the data or analysis of data contained in the Postal Service's annual periodic reports to the Commission, in accordance with 39 C.F.R. § 3050.11(a).

## II. PROCEDURAL HISTORY

On July 12, 2022, the Commission issued a notice initiating this proceeding, soliciting public comment, and appointing a Public Representative.<sup>2</sup> On July 15, 2022, Chairman's Information Request No. 1 was issued.<sup>3</sup> On July 22, 2022, the Postal Service provided its Response to CHIR No. 1.<sup>4</sup> On July 29, 2022, Chairman's Information Request No. 2 was issued.<sup>5</sup> On August 5, 2022, the Postal Service provided its Response to CHIR No. 2.<sup>6</sup> On August 4, 2022, the Public Representative filed a motion for issuance of information request.<sup>7</sup> On August 5, 2022, in response to the PR Motion, Chairman's Information Request No. 3 was issued.<sup>8</sup> On August 10, 2022, the Postal Service provided its Response to CHIR No. 3.<sup>9</sup>

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<sup>2</sup> Notice of Proposed Rulemaking on Analytical Principles Used in Periodic Reporting (Proposal Two), July 12, 2022 (Order No. 6224).

<sup>3</sup> Chairman's Information Request No. 1, July 15, 2022 (CHIR No. 1).

<sup>4</sup> Responses of the United States Postal Service to Questions 1-5 of Chairman's Information Request No. 1, July 22, 2022 (Response to CHIR No. 1).

<sup>5</sup> Chairman's Information Request No. 2, July 29, 2022 (CHIR No. 2).

<sup>6</sup> Responses of the United States Postal Service to Questions 1-4 of Chairman's Information Request No. 2, August 5, 2022 (Response to CHIR No. 2). The Postal Service also attached a zip file of its SAS program and its log and listing of individual post offices, and the full regression results, entitled "OneDrive\_2022-08-05.zip."

<sup>7</sup> Motion of the Public Representative for Issuance of Information Request, August 4, 2022 (PR Motion).

<sup>8</sup> Chairman's Information Request No. 3, August 5, 2022 (CHIR No. 3).

<sup>9</sup> Responses of the United States Postal Service to Questions 1-6 of Chairman's Information Request No. 3, August 10, 2022 (Response to CHIR No. 3).

On August 26, 2022, the Public Representative submitted comments.<sup>10</sup> On August 29, 2022, the Greeting Card Association (GCA) submitted comments,<sup>11</sup> along with a motion for leave to file comments out of time because of a computer failure.<sup>12</sup> On August 29, 2022, the Postal Service submitted reply comments,<sup>13</sup> along with a motion for leave to file reply comments addressing concerns raised by the Public Representative.<sup>14</sup> No other parties submitted comments in this proceeding.

### III. BACKGROUND

In Docket No. RM2020-2 (Proposal Ten), the Postal Service proposed, and the Commission rejected, revisions aimed at updating and improving the attribution of postmaster costs.<sup>15</sup> Postmasters receive compensation based on the Executive Administrative Schedule (EAS) grades of the post offices they manage, and these grades are determined by Work Service Credits (WSCs) earned in various ways, relating to both revenue (which in turn relates to volume) and non-revenue activities. See Order No. 5932 at 3-4. The goal of the postmaster variability analysis is to create a model which can capture how postmaster costs vary with volume through the WSC cost driver. However, the relationship between WSCs and grade changes is not direct. If a post office's WSCs increase or decrease outside of the range of its pay grade, it could fall into either the lower Zone of Tolerance (ZOT) or upper ZOT for the pay grade. Proposal Ten Bradley Report at 1. If it sustains in the upper ZOT or lower ZOT for 2

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<sup>10</sup> Public Representative Comments, August 26, 2022 (PR Comments).

<sup>11</sup> Comments of the Greeting Card Association, August 29, 2022 (GCA Comments).

<sup>12</sup> Motion for Leave to File Comments Out of Time, August 29, 2022 (GCA Motion).

<sup>13</sup> Reply Comments of the United States Postal Service Regarding Proposal Two, August 29, 2022 (Postal Service Reply Comments).

<sup>14</sup> Motion of the United States Postal Service for Leave to File Reply Comments Regarding Proposal Two, August 29, 2022 (Postal Service Motion).

<sup>15</sup> See Petition, Proposal Two at 1 (citing Docket No. RM2020-2, Order on Analytical Principles Used in Periodic Reporting (Proposal Ten), July 8, 2021 (Order No. 5932)). See also Docket No. RM2020-2, Michael D. Bradley, *Investigating the Variability of Postmaster Costs*, November 29, 2019 (Proposal Ten Bradley Report).

years, it will be upgraded or downgraded, respectively. *Id.* If the change in WSC causes a post office to either surpass the upper ZOT or fall below the lower ZOT, it will be immediately upgraded or downgraded, respectively.<sup>16</sup> An increase in volume that triggers an increase in WSCs will only increase costs if it pushes a post office into or past the upper ZOT. Bradley Report at 5. Similarly, a decrease in volume leading to a decrease in WSCs will only lower postmaster costs if it pushes a post office into or under the lower ZOT. *Id.* This results in a discontinuous cost structure, which must be addressed in the cost-WSC variability calculation.<sup>17</sup>

The existing methodology for attributing postmaster costs to products is based on a regression of minimum salaries and weighted average WSCs for ten EAC grades from Docket No. R84-1. Order No. 5932 at 4. Due to a lack of available data, this analysis was conducted at the EAC grade level. *Id.* The variability was calculated to be 18.2 percent and it was and continues to be applied as a single variability for grades between EAS-A and EAS-23. Proposal Ten Bradley Report at 2-4. Costs associated with grades EAS-24 and above were considered 100 percent institutional. *Id.* at 2-3.

In Proposal Ten, the Postal Service argued that changes to the postmaster compensation structure and the availability of postmaster workload operational data called for an updated and more sophisticated postmaster variability analysis. Order No. 5932 at 4-5. For example, offices below EAS-18 were removed as a part of the Post Office Structure Plan, the EAS-18 pay grade was split into EAS-18 and EAS-18B, and the salary schedule was updated.<sup>18</sup> The Postal Service also noted that the

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<sup>16</sup> *Id.* at 2. The Postal Service clarifies that “offices with WSCs outside their respective Zones to Tolerance are not necessarily misclassified.” Response to CHIR No. 2, question 2. The Commission understands that there may be a small lag in the time in which a post office is upgraded or downgraded after leaving the ZOT of its grade. See Response to CHIR No. 2, question 3.c.

<sup>17</sup> All of the Postal Service’s models discussed in this order aim to calculate the cost-to-WSC variability while assuming that the WSC-to-volume variability equals 100 percent (Proportionality Assumption). To calculate the cost-volume variability, these two variabilities must be multiplied. See Response to CHIR No. 1, question 1.a., n.3. Unless otherwise noted, references to variabilities in this order will refer to cost-to-volume variabilities, which are equivalent to cost-to-WSC variabilities as the Proportionality Assumption is maintained.

<sup>18</sup> *Id.* at 4. Any reference to “salary” implies minimum salary, henceforth.

variability calculation was not consistent with other Commission variability calculations, and the correct variability should be 13.3 percent. Proposal Ten Bradley Report at 4. The Commission summarized the Postal Service's methodology, which used an updated salary schedule as of January 2019 and analyzed Form 150 data for over 13,000 post offices, as follows:<sup>19</sup>

These steps are applied to EAS grade pairs (18-18B; 18B-20; 20-21; 21-22; 22- 24; 24-26). First, for each EAS grade pair, the probability of a Postmaster moving from the lower EAS grade, *i.e.*, the grade with lower Postmaster minimum salary, to the higher EAS grade, *i.e.*, the grade with higher Postmaster minimum salary is estimated, using a logistic regression. Second, for each EAS grade pair, the total minimum Postmaster salary in the lower grade is computed through the classification of Postmasters based on the estimated probabilities determined as part of step one. Third, all WSCs in the lower grade of each EAS grade pair are scaled up, uniformly, by a chosen percentage (for example, by 10 percent). The probabilities from step one are recalculated and the newly calculated probabilities are used to classify, once again, Postmasters in the lower grade of each EAS grade pair. This classification leads to a new total minimum Postmaster salary in the lower grade of each EAS grade pair. Fourth, for each EAS grade pair, the percentage change in total minimum Postmaster salary in the lower grade from step two to step three is calculated and divided by the chosen percentage change in WSCs (10 percent). Step four results in an estimated variability for the lower EAS grade in each EAS grade pair. Finally, the variability for each EAS grade is applied to the accrued cost for each EAS grade, resulting in volume-variable costs for each grade.

Order No. 5932 at 5-6 (footnotes omitted).

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<sup>19</sup> The Postal Service designated cutoff values of WSCs outside of the ZOTs for each grade. Proposal Ten Bradley Report at 27. If a post office's WSC level was past this cutoff, it was labeled as a misclassified and was removed from the analysis. *Id.* at 28. This data cleaning procedure removed 18 out of 9,434 post office observations, maintaining 99.8 percent of the original data. *Id.* The Hosmer-Lemeshow statistics that measure a good fit all failed to reject the null hypothesis of a good fit after removing the outliers. *Id.* See Response to CHIR No. 3, question 3 for more discussion of the Hosmer-Lemeshow (H-L) statistic.

The Commission raised issues with Proposal Ten and ultimately rejected it because the Postal Service did not show that its proposed revisions to postmaster cost variability and attribution would result in a significant improvement in the attribution of costs nor were necessitated by the public interest. Order No. 5932 at 46. The Commission raised several concerns with the Postal Service's third step re-classification procedure, in which a uniform scaling factor of 10 percent was applied to post offices. The Commission found that conceptually using a scaling factor necessitated excessively arbitrary assumptions with respect to the changes in WSCs used in the variability calculation. See *id.* at 27, 46. The Commission also noted that a serious concern of Proposal Ten was that it was unidirectional and did not account for the possibility of EAS grade downgrades. *Id.* at 43-44. While not a cause for its rejection, as the assumption also underlies the existing methodology, with respect to the assumption of proportionality between volume and WSCs, the Commission suggested that future proposals to improve the variabilities for calculating attributable postmaster costs should rigorously examine "the validity of the assumption that WSCs vary in proportion to volume or explain why such a more rigorous examination is unnecessary." *Id.* at 14; see Proposal Ten Bradley Report at 2.

The Commission offered two alternative methods that would remedy the deficiencies it identified in Proposal Ten's logistic regression approach to estimating cost-to-WSC variabilities, and it encouraged the Postal Service to resubmit an updated postmaster variability analysis. Order No. 5932 at 47-48. The Large-Sample Version of Proposal Ten Variability method (LSVPTV Method) assumed a large-sample form of Proposal Ten and the Minimization of Error Distance Between Predicted and Actual Cost method (MEDBPAC Method) employed a "geometrical perspective," which was more similar to Postal Service variability calculations for other cost segments.<sup>20</sup> The

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<sup>20</sup> *Id.* at 48. See Docket No. RM2020-2, Library Reference PRC-LR-RM2020-2/5, July 8, 2021, Word file "A5.docx," File A5: Suggested Approaches to Address the Shortcomings of Proposal Ten (File A5) for a more detailed description of the approaches suggested by the Commission. See *also* Bradley Report at 9-14.

Commission compared the variabilities it calculated using these two alternative approaches with those calculated by the Postal Service in Proposal Ten. See Order No. 5932 at 49, Table 6. The Commission noted that the Postal Service should explain its choice of utilizing or not utilizing the alternatives it suggested when it resubmitted an updated postmaster variability analysis. *Id.* at 47.

Specifically, with respect to the MEDBPAC Method overcoming the issue of Proposal Ten's arbitrary scaling factors and reclassification procedure, the Commission explained that:

The second suggested approach [MEDBPAC Method] does not perform any classification of post offices. It is based on the best prediction of the total cost with respect to the criterion of minimization of the prediction error among all possible prediction functions. Because it uses the notion of distance, the approach is referred to as the geometrical approach. As mentioned above, this method also employs the assumption that the logistic model is correctly specified. The geometrical approach uses calculus techniques to compute the cost-weighted variability for any desired group of post offices, *e.g.*, in the lower or higher pay grade or in the combined pair of pay grades.

File A5 at 12-13 (footnote omitted).

Specifically with respect to the MEDBPAC Method and LSVPTV Method overcoming the issue of Proposal Ten's unidirectional model, the Commission explained that:

These two suggested approaches avoid the need to make assumptions about the direction and magnitude of changes in WSCs. They also lead to variabilities that, for each EAS grade pair, do not vary with the direction in which post offices may move from one EAS grade to the other (from lower to higher or from higher to lower).

Order No. 5932 at 48.

With respect to criticism from the Public Representative on Proposal Ten that an alternative baseline-category logit model could improve the efficiency of the proposed dichotomous logistic regression model, the Commission found that “the data provide no evidence of efficiency loss in estimating the model as done in Proposal Ten.” *Id.* at 19.

Following the Commission’s guidance in Order No. 5932, the Postal Service submitted Proposal Two to address and improve the postmaster cost variability analysis. See Petition, Proposal Two at 1-2.

#### IV. PROPOSAL TWO

The Postal Service’s proposal seeks to update Proposal Ten in terms of adopting the MEDBPAC Method suggested by the Commission on more recent operational data from February 2022. Bradley Report at 14. The Postal Service prefers the MEDBPAC method because it is closer in form to established methods of variability calculation, can be calculated directly from the logit models, uses the actual distribution of WSCs across post offices, and it is consistent with theory underlying attributable cost calculation. *Id.* at 11. The Postal Service derives the MEDBPAC Method using traditional variability methods. *Id.* at 11-14; see Response to CHIR No. 3, question 1. The Postal Service finds that the LSVPTV Method requires “potentially controversial” assumptions regarding the continuous probability distribution of WSCs, a “troublesome” assumption of there being an infinite number of post offices, calculation of the variability from the variability function indirectly, and additional steps to calculate incremental costs. See Bradley Report at 10-11.

The Postal Service compares the updated February 2022 operational data to the 2019 data underlying Proposal Ten. It notes that the number of total post offices changes only by 19 between the 3 years, decreasing from 13,611 to 13,592. *Id.* at 14. It suggests that the change in the number of post offices within the various grades is not material. See *id.* at 15-16. It also suggests that its analysis of the dispersion of WSCs within the grades has also not changed materially since 2019. *Id.* at 17-18. It notes that if a grade has more dispersion, with more post offices clustered towards the end of the



grade's band and closer to the ZOTs, the variabilities would likely be higher because a marginal increase in WSCs would have a higher cost impact. See *id.* at 16.

The Postal Service performed the same data cleaning procedure as Proposal Ten to remove potentially undue influential observations. It removed 22 of 13,592 post office observations whose WSC levels were beyond the ZOT limits and past operational cutoffs determined by the Postal Service.<sup>21</sup> The Postal Service clarifies that the reason for the presence of these outlier offices is likely data error. Response to CHIR No. 3, question 2.b.

The Postal Service presents the summary statistics and logit estimation results for each of the grade-pairs in Tables 5 and 6 of the Bradley Report. Bradley Report at 20, 22. It notes that the Cox Snell R-Squared statistics indicate that all the models fit the data well.<sup>22</sup> The H-L statistics also all fail to reject the null hypotheses of a good fit.<sup>23</sup> The coefficients of the logistic regression are statistically significant. Bradley Report at 20.

As reasonableness checks, the Postal Service checks that the coefficients have negative intercepts reasonably implying the probability of upgrading to a higher EAS at low WSC levels is essentially zero. *Id.* In addition, the Postal Service confirms that coefficients decrease for the regressions of the higher grade-pairs as the width of the WSC bands increase and “a given-sized increase in WSC is less likely to lead to a change in EAS grade.” *Id.* at 21. The larger the size of the bands, a larger increase in WSCs is needed to move a post office to a higher grade. Proposal Ten Bradley Report

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<sup>21</sup> See *id.* at 18-19. See also Response to CHIR No. 2, questions 2-4; Response to CHIR No. 3, question 3.

<sup>22</sup> *Id.* at 19. The R-Squared statistics shown in Table 5 of the Bradley Report are “Max-rescaled R-Square” values to adjust the upper bound of the Cox-Snell R-Squared to 1. See N.J.D. Nagelkerke, *A note on a general definition of the coefficient of determination*, *Biometrika* Vol. 78 Sep. 1, 1991, at 691-92, available at [https://www.cesarzamudio.com/uploads/1/7/9/1/17916581/nagelkerke\\_n.j.d.\\_1991\\_-\\_a\\_note\\_on\\_a\\_general\\_definition\\_of\\_the\\_coefficient\\_of\\_determination.pdf](https://www.cesarzamudio.com/uploads/1/7/9/1/17916581/nagelkerke_n.j.d._1991_-_a_note_on_a_general_definition_of_the_coefficient_of_determination.pdf).

<sup>23</sup> Bradley Report at 20. The Postal Service notes that failing to remove the outliers from the analysis results in the H-L statistic for some grades below EAS-24 having a poor fit. See Response to CHIR No. 2, question 2.

at 22. The Commission reproduces Table 7 of the Proposal Ten Bradley Report as Table 1 below, demonstrating the width of the WSC bands increases by grade:

**Table 1: WSC Requirements in the EAS System<sup>24</sup>**

Grade	Lower	Midpoint	Upper	Range
18	0	1,038	2,075	2,075
18B	2,076	3,788	5,500	3,424
20	5,501	9,251	13,000	7,499
21	13,001	19,501	26,000	12,999
22	26,001	47,101	68,200	42,199
24	68,201	117,701	167,200	98,999
26	167,201			

After obtaining logistic regression results, the Postal Service calculates the new minimum salary schedule that correlate with the level of a post office's WSCs and its probability of entering a higher-grade EAS level and incorporates salary schedule data to calculate cost-to-WSC variabilities. See Bradley Report at 24-25. Post offices with the highest variabilities are those in the ZOT for their respective grade, and post offices not in the ZOT have variabilities of essentially zero, which accurately reflects the EAS upgrade and downgrade process. See *id.* at 30, 31, Figures 2-3. The Postal Service provides the new variabilities for the grade-pairs (2022 Variabilities) and compares them to the variabilities calculated by the Commission in Proposal Ten using 2019 data (2019

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<sup>24</sup> Proposal Ten Bradley Report at 22, Table 7.

Variabilities).<sup>25</sup> It notes that the EAS-21 and EAS-22 (EAS-21-22), EAS-22-24, and EAS-24-26 variabilities are similar to the variabilities estimated by the Commission in Proposal Ten, but the EAS-18-18B, EAS-18B-20, and EAS-20-21 variabilities are relatively different. Bradley Report at 27. The Postal Service posits that the difference in variabilities for these three grade-pairs is not driven by differences in the logit model parameters but in the salary schedule changes from 2019 to 2022. *Id.*

The Postal Service supports this claim by analyzing the changes in the 2022 salary schedule as compared to 2019.<sup>26</sup> The Supervisory Differential Adjustment (SDA) raised minimum salaries for select postmasters in EAS-18 and EAS-18B to \$73,517. Bradley Report at 24. The eligibility for SDA is similar to the Fair Labor Standards Act (FLSA) Exempt Status, namely that a postmaster directly supervises two or more full-time equivalent bargaining unit employees. *Id.* Therefore, the Postal Service calculates modified EAS-18 and EAS-18B minimum salaries by considering the percentage of FLSA-exempt postmasters in these grades. The calculation is reproduced by the Commission for transparency in Table 2 below.

**Table 2: EAS-18 and EAS-18B Minimum Salary Calculation with SDA<sup>27</sup>**

Grade	Percent FLSA-Exempt	Exempt Min. Salary (\$)	Non-Exempt Min. Salary (\$)	Weighted Average Minimum Salary (\$)
	(a)	(b)	(c)	(d) = (a)*(b)+(1-a)*(c)
EAS-18	47.19%	73,517	59,160	65,936
EAS-18B	95.79%	73,517	64,500	73,137

<sup>25</sup> See *id.* at 27, Table 9. The Postal Service exactly replicated the 2019 Variabilities using the MEDBPAC Method as the Commission provided in Order No. 5932 after making a slight revision to the minimum salary value for EAS-18B in 2019 as identified by the Public Representative. See Bradley Report at 22-23; PR Comments at 13; Postal Service Reply Comments at 1-2.

<sup>26</sup> See *id.* at 25, Table 8; see also the 2022 EAS Salary Schedule at [unitedpma.org](https://www.unitedpma.org/docs/default-source/default-document-library/news/upma-salary-range-decision.pdf?Status=Master&sfvrsn=a3c9688d_3), available at [https://www.unitedpma.org/docs/default-source/default-document-library/news/upma-salary-range-decision.pdf?Status=Master&sfvrsn=a3c9688d\\_3](https://www.unitedpma.org/docs/default-source/default-document-library/news/upma-salary-range-decision.pdf?Status=Master&sfvrsn=a3c9688d_3) (last visited September 12, 2022) (2022 EAS Salary Schedule). Please note that “the minimum salary for grade EAS-18B in 2019 was \$59,300; however, its source states this to be \$59,330.” PR Comments at 13.

<sup>27</sup> The Postal Service calculates these minimum salaries in Library Reference USPS-LR-RM2022-8/1, July 7, 2022, folder “Directory 4 - Estimate 2022 Models and Variabilities,” SAS output file “Calculate 18 and 18B Salary.lst” and displays them in Table 8 of the Bradley Report at 25.

Because of the SDA, overall salaries for select EAS-18 and EAS-18B postmasters dramatically increased from 2019 to 2022, also prompting a large increase in the EAS-20 minimum salary. Bradley Report at 25. This caused the gaps between minimum salaries of successive grades to change. The size of the minimum salary gap between EAS-18 and EAS-18B increased from \$5,219 to \$7,201.<sup>28</sup> The size of the minimum salary gap between EAS-18B and EAS-20 decreased from \$6,000 to \$3,033.<sup>29</sup> Finally, the size of the minimum salary gap between EAS-20 and EAS-21 decreased from \$5,670 to \$740.<sup>30</sup> The Postal Service states that a “larger gap implies that there is a larger cost effect in 2022 of a change between the two grades.” Bradley Report at 27. Therefore, it purports that the increase in the EAS-18-18B variability and the decreases in the EAS-18B-20 and EAS-20-21 variabilities could be due to the changes in the salary gaps discussed above. *Id.* at 28. The Postal Service further supports this hypothesis by performing a hybrid analysis of combining its 2022 logit parameters with the 2019 salary schedule. *Id.* at 28, 29, Table 10. The Postal Service argues that the resulting variabilities’ similarity to the 2019 Variabilities suggest that most of the changes between the 2019 Variabilities and 2022 Variabilities can be attributed to the changes in salaries between 2019 and 2022. *Id.* at 28.

Responding to the Commission’s directive to investigate the robustness of the Proportionality Assumption, the Postal Service explored the relationship of WSCs and volume. It developed equations to relate WSCs to various factors like revenue units, mail processing related workload, the number and types of delivery points in the network, and seasonal workload. *Id.* at 32-36. However, other factors like “exception” credits can be added or subtracted when a postal service does something out of the ordinary. *Id.* at 36. Overall, the Postal Service finds that the extent to which these different factors vary with volume is ambiguous, and it does not possess measures of

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<sup>28</sup> See *id.*, Table 8, \$59,330-\$54,081 = \$5,249; \$73,137-\$65,936 = \$7,201.

<sup>29</sup> See *id.*, \$65,330-\$59,330 = \$6,000; \$76,170-\$73,137 = \$3,033.

<sup>30</sup> See *id.*, \$71,000-\$65,330 = \$5,670; \$76,910-\$76,170 = \$740.

volumes for relevant postmaster activities. See *id.* at 37; Response to CHIR No. 1, question 1.a. The Postal Service states that its “best estimate is that the variability is likely to be less than fully proportional, but currently has no reliable basis to determine exactly how much less than fully proportional.” Response to CHIR No. 1, question 1.f.

Because the Proportionality Assumption is maintained in Proposal Two, the cost-volume variability is the same as the cost-to-WSC variability. The Postal Service applies the new variabilities for the EAS grades to the total accrued costs for the EAS cost segments to calculate volume variable costs.<sup>31</sup> The Postal Service calculates that the total volume attributable postmaster costs are \$53.1 million, implying a 3.03 percent cost-to-volume variability.<sup>32</sup> The Postal Service argues that this variability is much lower than the current variability of 18.23 percent because its calculation is not consistent with other postal cost variability calculations (which would lower the variability to 13.3 percent); it reflects the current EAS structure after the Post Office Structure Plan without lower, small-band, and higher variability grades; and it accounts for the actual distribution of WSCs across post offices. See Bradley Report at 38-39.

In terms of impact, Proposal Two’s decline in postmaster cost variabilities would cause unit product costs to fall by 1.98 cents for competitive, 0.2 cents for first class mail, and 0.1 cents for marketing mail. *Id.* at 42, Table 12. As a result of Proposal Two, total volume variable costs, including competitive costs, decline by \$255.238 million.<sup>33</sup>

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<sup>31</sup> See Bradley Report at 41, Table 11. For example, the variability calculated for the EAS-20-21 grade pair is applied to the accrued costs of EAS-20 because it can be interpreted as the amount that EAS-20 costs increase with an incremental increase in WSC.

Because EAS-18 has only one accrued cost pool, the Postal Service calculates a cost-weighted average of EAS-18 and EAS-18B variabilities of 0.0363. Bradley Report at 37. This calculation occurs in Library Reference USPS-LR-RM2022-8/1, folder “Directory 6 - Public Impact,” SAS output file “Find Overall EAS18 Variability.lst.”

<sup>32</sup> See Bradley Report at 38, 41, Table 11; see also Library Reference USPS-LR-RM2022-8/1, folder “Directory 6 - Public Impact,” Excel File “CS01-Public-FY21.New Variabilities.xlsx,” tab “1.0.1.”

<sup>33</sup> See Library Reference USPS-LR-RM2022-8/1, folder “Directory 6 - Public Impact,” Excel File “CS01-Public-FY21.New Variabilities.xlsx” tab “Outputs to CRA,” cell H57.

## V. COMMENTS

The Public Representative examines the Postal Service's claim in Proposal Ten that the postmaster cost variability should be made consistent with other variability calculations, such that variability would be lowered to 13.3 percent. PR Comments at 3. She also provides analytical comments relating to the data and methodology of Proposal Two. See *id.* at 9-13.

In terms of data, the Public Representative approves of the Postal Service's decision to update the Form 150 data using February 2022 data and argues this data is a much better reflection of the EAS system than the 30-plus year-old data underlying the existing methodology. *Id.* at 9. She asserts that this data will better approximate the Postal Service's EAS system because it uses post office level data as opposed to weighted averages of grades' WSCs. *Id.* She also remarks that her concerns over the use of single time period of February 2022 are assuaged by the Postal Service's confirmation that the February 2022 data is representative of the typical distributions of EAS grades and WSCs and these distributions do not fluctuate seasonally. *Id.* at 10. She takes no issue with Proposal Two's method of dealing with outliers. *Id.* at 9-10.

In terms of methodology, the Public Representative agrees with the Postal Service that the main reason the Commission rejected Proposal Ten was the variability calculation. *Id.* at 8. She agrees that the MEDBPAC Method was the preferred approach to calculating variability according to the Commission criteria, Postal Service criteria, and public interest. *Id.* at 8-9. She notes that the MEDBPAC Method was suggested by the Commission and satisfactorily addresses the Commission's reasons for rejecting Proposal Ten. *Id.* at 11. She states that the MEDBPAC Method is also preferred when judged based off the Postal Service's criteria of selecting the method, which required the least amount of additional assumptions and comported with existing economic theories of attributable cost. See *id.* With respect to the Postal Service's second criteria, she believes that due to its similarity of calculating variabilities in other cost segments, the MEDBPAC Method would have benefits in terms of "transparency" and "cohesiveness" to the public in understanding and reviewing postal affairs. *Id.* The

Public Representative notes that Order No. 5932 did not specify explicit criteria for deciding between the MEDBPAC Method and LSVPTV Method. *See id.*

Lastly, the Public Representative identified a typographical error in the Postal Service's replication analysis of the 2019 Variabilities. *Id.* at 13. Overall, she believes that the adoption of Proposal Two represents an improvement in the quality and accuracy of postmaster cost variability analysis. *Id.* at 14.

The Greeting Card Association (GCA) comments that Proposal Two should be adopted as an improvement in terms of analysis and data of postmaster costs compared to the existing methodology. GCA Comments at 1. GCA emphasizes that the underlying data of the existing methodology is dated. *Id.* It also recognizes Proposal Two as being more accurate in recognizing the differences in variability that occur across pay grades and within pay grades. *Id.* at 2. Lastly, GCA believes that Proposal Two improves the postmaster cost analysis by treating EAS-24 costs, which are currently treated as fully institutional, as 7.83 percent volume variable. *Id.* at 3.

The Postal Service offered brief reply comments in response to the PR Comments. The Postal Service agreed with the Public Representative's identification of a typographical error and agreed with her conclusion that resolving this error allowed the Postal Service to exactly replicate the 2019 Variabilities. Postal Service Reply Comments at 1. However, the Postal Service confirmed that this error has no bearing on its calculation of the 2022 Variabilities, which are the subject of Proposal Two. *Id.* at 1-2.

## VI. COMMISSION ANALYSIS

### A. Choice of MEDBPAC Method vs. LSVPTV Method in Calculating Variability

In Proposal Ten, the Commission wrote that “[w]hile the availability of more data creates the opportunity to improve the existing methodology that governs postmaster cost attribution, the Commission finds that the proposed methodology has several shortcomings, which need serious consideration by the Postal Service.” Order No.

5932 at 46. The Postal Service has dealt with these shortcomings and capitalized on the opportunity to improve postmaster costing methodology in Proposal Two.

In terms of addressing previous Commission concerns, the MEDBPAC Method resolves all of the Commission's issues with Proposal Ten relating to scaling factors and reclassification because it does not involve the classification of post offices. See File A5 at 12. Additionally, the Proposal Two logistic models are also bi-directional, conceptually capable of estimating cost impacts of EAS upgrades and downgrades due to increases and decreases of WSCs, respectively. *Id.*; see Section III, *supra*. The Commission recognizes that Proposal Two's MEDBPAC Method is close to other established methods of postal cost variability calculation. See PR Comments at 11; Bradley Report at 11. Furthermore, the conceptual development of the variability parallels other cost segments, such as highway transportation. See Response to CHIR No. 3, question 4.

While the Commission understands the Public Representative's suggestion that the Commission could have issued more specific guidance when rejecting Proposal Ten on which of the two methods were to be preferred, the Commission's intent in Order No. 5932 was to give the Postal Service maximum flexibility in creating a costing model that made the most sense for its operations and expertise. See PR Comments at 11. The Postal Service chose to adopt the MEDBPAC Method in Proposal Two, and the Commission finds that this choice represents a significant improvement in the accuracy, completeness, and quality compared to the existing methodology. First, the Commission agrees with the Postal Service and the Public Representative on the benefit of the MEDBPAC Method to the public interest in maintaining similar variability calculation methodologies across cost segments. See Bradley Report at 11; PR Comments at 11. Second, the Commission agrees with the Postal Service that the LSVPTV Method presents the disadvantage of requiring the estimation of the distribution of the WSCs. However, the Commission does not agree with all of the Postal Service's reasoning in choosing the MEDBPAC Method over the LSVPTV Method. The Commission finds it important to note that the assumption of large sample



is implicit in the tests of significance following the estimation of the logistic model, namely through the consideration of the limit distribution of the estimators when the sample size, *i.e.*, the number of post offices, tends to infinity.<sup>34</sup>

#### B. Other Improvements of Proposal Two to the Existing Methodology

In terms of improving the accuracy of the Postal Service's postmaster costing methodology, Proposal Ten uses more recent data and a larger quantity of data. The Commission agrees with both the GCA and Public Representative that using February 2022 Form 150 WSC data is an improvement from using data from a docket that is nearly 40 years old. See GCA Comments at 1; PR Comments at 2. The Commission agrees with the Public Representative that the February 2022 data better represent the WSC distribution in post offices today. Furthermore, the analysis is more granular because it is at the post-office level rather than the grade level. This increased granularity improves the accuracy of the analysis by including more information, namely the information relating to the dispersion of WSCs in each grade and the associated likelihood of changes in WSCs affecting postmaster costs. Consequently, each EAS grade cost pool is assigned its own variability to include this information, as compared to the existing methodology in which a single variability is applied to the aggregated EAS-18 through EAS-22 cost pool. Due to these factors, the size of the analysis dataset increases from 10 EAS-grade observations to 13,592 post office observations.

Although Order No. 5932 did not reference any concerns with the Postal Service's method of identifying and removing potentially undue observations, a CHIR was issued to assure that potentially valid observations are not removed. CHIR No. 2, question 2. While data cleaning can sometimes remove valid observations, the Commission agrees with the Public Representative and accepts the Postal Service's data cleaning method of removing potentially undue influential observations proposed in

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<sup>34</sup> See, *e.g.*, J. Scott Long and Jeremy Freese, *Regression Models for Categorical Dependent Variables Using Stata* 114 (Stata Press, 3rd ed. 2014).

Proposal Two. See Response to CHIR No. 2, question 2. The Postal Service intentionally removes a very small set of potentially undue influential observations based on both statistical measures like the H-L test for model fit and individual analysis of unusual WSC-level post offices. See *id.* This method of identifying potentially undue influential observations is similar to methods approved in Docket Nos. RM2014-6 and RM2021-1. See *id.*

In terms of improving the completeness of the Postal Service's postmaster costing methodology, the Commission agrees that one advantage of Proposal Two over the existing methodology is that it improves the postmaster cost analysis by treating EAS-24 costs as 7.83 percent volume variable. GCA Comments at 3. This change improves the methodology by not treating the full cost pool, which was \$41 million in FY 2021, as institutional costs.<sup>35</sup>

In terms of improving the quality of the Postal Service's postmaster costing methodology, unlike the existing methodology, Proposal Two produces results that closely reflect the operational realities of postmaster costs. For example, the logistic model coefficients decrease with EAS grade as the marginal cost impact of a WSC declines with the increase in grade band widths. Also, increases and decreases in minimum salary gaps between EAS grades over time intuitively affect the variability calculation by, respectively, increasing and decreasing variabilities. Finally, the Postal Service effectively demonstrates that variabilities increase for post offices at their upper and lower ZOTs, which constitute the vast majority of post offices that are likely to undergo a grade change. See Bradley Study at 30. The Commission commends the Postal Service for providing the additional analyses discussed above as part of its submission in Proposal Two. These analyses serve as quality checks of the costing methodology's ability to reflect the realities of the postmaster compensation structure.

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<sup>35</sup> See Library Reference USPS-LR-RM2022-8/1, folder "Directory 6 - Public Impact," Excel File "CS01-Public-FY21.New Variabilities.xlsx," tab "1.0.1," cell F14.

With respect to the GCA Motion seeking that the Commission accept comments that were submitted after business hours on August 26, 2022, and thus filed one business day late as well as the Postal Service Motion seeking that the Commission accept reply comments, the Commission finds that accepting and considering these filings would not prejudice any party. Therefore, the Commission grants both the GCA Motion and the Postal Service Motion.

## VII. CONCLUSION

Pursuant to 39 C.F.R. § 3050.11 and based upon a review of the Postal Service's filings, supporting workpapers, Responses to CHIRs, Public Representative Comments, GCA Comments, and Postal Service Reply Comments, the Commission finds that the proposed analytical methodology significantly improves the accuracy, completeness, and quality of postmaster variability calculations. Therefore, the Commission approves Proposal Two with no conditions.

At the same time, the Commission urges the Postal Service to seek opportunities to collect measures of volumes for postmaster activities that would allow it to empirically test the veracity of the Proportionality Assumption. The Postal Service refers to its postmaster costing as a "two-step" process, and the approval of this docket should serve as the impetus for the Postal Service's serious effort to link changes in WSCs and volumes. Response to CHIR No. 1, question 1.a.

## VIII. ORDERING PARAGRAPHS

*It is ordered:*

1. The Greeting Card Association's Motion for Leave to File Comments Out of Time, filed August 29, 2022, is granted.
2. The Motion of the United States Postal Service for Leave to File Reply Comments Regarding Proposal Two, filed August 29, 2022, is granted.

3. For purposes of periodic reporting to the Commission, the changes in analytical principles proposed by the Postal Service in Proposal Two are approved.

By the Commission.

Erica A. Barker  
Secretary