

ORDER NO. 4742

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

Before Commissioners:

Robert G. Taub, Chairman;
Tony Hammond, Vice Chairman;
Mark Acton; and
Nanci E. Langley

Institutional Cost Contribution
Requirement for Competitive Products

Docket No. RM2017-1

REVISED NOTICE OF PROPOSED RULEMAKING



Washington, DC 20268-0001
August 7, 2018

TABLE OF CONTENTS

	<i>Page</i>
I. INTRODUCTION	1
II. ORGANIZATION OF DISCUSSION	2
III. BACKGROUND	3
A. Relevant Statutory Requirements	3
B. Previous Commission Decisions.....	4
C. Current Commission Review: Docket No. RM2017-1	4
1. Procedural History.....	4
2. Order No. 4402	5
IV. PROPOSED MODIFIED FORMULA AND COMMISSION ANALYSIS.....	8
A. Modified Formula-Based Approach	9
1. Modification to Postal Service Lerner Index	9
2. Modification to Competitive Market Output	19
3. Resulting Formula	33
B. Analysis Pursuant to 39 U.S.C. 3633(b)	47
1. Prevailing Competitive Conditions in the Market	48
2. Unique or Disproportionate Costs	52
3. Other Relevant Circumstances	53
V. SECTION 703(d) OF THE PAEA.....	57
VI. ADMINISTRATIVE ACTIONS.....	58
VII. ORDERING PARAGRAPHS	59

Attachment A—Proposed Rules

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I. INTRODUCTION

On February 8, 2018, the Commission issued a Notice of Proposed Rulemaking (Order No. 4402) proposing that a formula be used to calculate the minimum amount that competitive products as a whole are required to annually contribute to institutional costs (*i.e.*, the appropriate share).¹ Order No. 4402 was the result of the Commission's second review of the appropriate share, conducted pursuant to 39 U.S.C. 3633(b) in order to determine whether the existing appropriate share requirement of 5.5 percent should be retained, modified, or eliminated. See 39 U.S.C. 3633(b); see *also* 39 CFR

¹ Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, February 8, 2018 (Order No. 4402). The Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products was published in the *Federal Register* on February 14, 2018. See 83 FR 6758 (February 14, 2018).

3015.7(c). For the reasons discussed below, the Commission proposes modifications to its formula-based approach and related revisions to the proposed rules.

II. ORGANIZATION OF DISCUSSION

Section III of this Revised Notice of Proposed Rulemaking provides an overview of 39 U.S.C. 3633 and a recap of the Commission's two previous decisions concerning competitive products' appropriate share. In addition, section III provides a synopsis of Order No. 4402, including a brief summary of the formula-based approach previously proposed by the Commission and that approach's compliance with the elements set forth in 39 U.S.C. 3633(b). Section III also provides a list of comments received in response to Order No. 4402.

In section IV, the Commission proposes modifications to Order No. 4402's formula-based approach. In conjunction with the proposed modifications, the Commission discusses comments received in response to Order No. 4402 that directly relate to a modification proposed in this Order as well as several comments applicable to aspects of the formula's calculation.² As it did in Order No. 4402, the Commission also analyzes its modified proposed formula pursuant to the requirements of 39 U.S.C. 3633(b).

² The Commission received a range of comments related to its proposed formula-based approach and its analysis pursuant to the elements of 39 U.S.C. 3633(b). The Commission has reviewed and considered all comments received in response to Order No. 4402. For the purposes of this Revised Notice of Proposed Rulemaking, the Commission addresses those comments that relate to the formula modifications the Commission is proposing in this Order. Comments received in response to Order No. 4402 but not addressed in this Order will be addressed in a subsequent order in this proceeding.

In section V, the Commission affirms its finding in Order No. 4402 pursuant to section 703(d) of the Postal Accountability and Enhancement Act (PAEA).³

Section VI takes administrative steps to allow for comments on the modifications to the proposed formula and related revisions to the proposed rules by interested persons.

III. BACKGROUND

A. Relevant Statutory Requirements

The PAEA requires that competitive products collectively cover what the Commission determines to be an appropriate share of the Postal Service's institutional costs. 39 U.S.C. 3633(a)(3).

The Commission is required to review the appropriate share regulation at least every 5 years to determine if the contribution requirement should be "retained in its current form, modified, or eliminated." See 39 U.S.C. 3633(b). In making such a determination, the Commission is required to consider "all relevant circumstances, including the prevailing competitive conditions in the market, and the degree to which any costs are uniquely or disproportionately associated with any competitive products." 39 U.S.C. 3633(b). Thus, by its terms, section 3633(b) establishes three separate elements that the Commission must consider during each review: (1) the prevailing competitive conditions in the market; (2) the degree to which any costs are uniquely or

³ Uncodified section 703 of the PAEA, Pub. L. 109-435, 120 Stat. 3198 (2006), directs the Commission, when revising regulations under 39 U.S.C. 3633, to consider subsequent events that affect the continuing validity of a Federal Trade Commission (FTC) report that analyzed the Postal Service's economic advantages and disadvantages in the competitive product market when compared to private competitors. See PAEA, 120 Stat. 3244; see also Federal Trade Commission, Accounting for Laws that Apply Differently to the United States Postal Service and its Private Competitors, December 2007 (FTC Report), available at: <https://www.ftc.gov/sites/default/files/documents/reports/accounting-laws-apply-differently-united-states-postal-service-and-its-private-competitors-report/080116postal.pdf>.

disproportionately associated with competitive products; and (3) all other relevant circumstances. See Order No. 4402 at 6.

B. Previous Commission Decisions

In promulgating its initial competitive product rules in Docket No. RM2007-1, the Commission determined that basing competitive products' minimum contribution on a percentage of total institutional costs was easily understood and, in tying it to historic contribution at the time, set the appropriate share at 5.5 percent.⁴

The Commission completed its first review of the appropriate share, pursuant to 39 U.S.C. 3633(b), in Docket No. RM2012-3.⁵ After considering the elements established by section 3633(b), the Commission determined that the appropriate share should be retained at 5.5 percent. See *generally* Order No. 1449.

C. Current Commission Review: Docket No. RM2017-1

1. Procedural History

On November 22, 2016, the Commission issued an Advance Notice of Proposed Rulemaking, which established this docket as its second review of the appropriate share pursuant to 39 U.S.C. 3633(b), appointed a Public Representative, and provided interested persons with an opportunity to comment.⁶ On February 8, 2018, after

⁴ See Docket No. RM2007-1, Order Proposing Regulations to Establish a System of Ratemaking, August 15, 2007, at 70 (Order No. 26); Docket No. RM2007-1, Order Establishing Ratemaking Regulations for Market Dominant and Competitive Products, October 29, 2007, at 91, 138 (Order No. 43); see *also* Order No. 4402 at 6-7.

⁵ See Docket No. RM2012-3, Order Reviewing Competitive Products' Appropriate Share Contribution to Institutional Costs, August 23, 2012 (Order No. 1449); see *also* Order No. 4402 at 7-11.

⁶ Advance Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, November 22, 2016 (Order No. 3624). The Advance Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products was published in the *Federal Register* on November 29, 2016. See 81 FR 229 (November 29, 2016).

considering initial and reply comments received, the Commission issued Order No. 4402, which responded to comments, presented a new formula-based approach to setting the appropriate share, and provided another opportunity for interested persons to submit comments. See *generally* Order No. 4402.

2. Order No. 4402

In Order No. 4402, the new formula-based approach proposed to set the appropriate share through a dynamic formula, which would annually update the appropriate share percentage based on market conditions. *Id.* at 11-33.

a. Formula-Based Approach

The proposed formula-based approach used two components to annually capture changes in the Postal Service's market power and in the overall size of the competitive market: the Postal Service Lerner Index and the Competitive Market Output. *Id.* at 15.

The purpose of the Postal Service Lerner Index was to measure the Postal Service's market power within the competitive market. *Id.* at 16. In Order No. 4402, the Commission noted that market power is a competitor's ability to profitably set prices well above costs with little chance that entry or expansion by other competitors would erode such profits. *Id.* The Commission determined that evaluating the Postal Service's market power allowed it to assess whether competition was being preserved and whether the Postal Service possessed any competitive advantage. *Id.*

The purpose of the second component of the proposed formula, the Competitive Market Output, was to measure the overall size of the competitive market. *Id.* at 22. The Commission proposed evaluating the overall size of the market because doing so enabled the Postal Service's market power to be placed into context relative to the market as a whole. *Id.*

With the two components discussed above, the Commission proposed calculating the appropriate share using the following formula:⁷

$$AS_{t+1} = AS_t * (1 + \% \Delta LI_{t-1} + \% \Delta CMO_{t-1})$$

If t = 0 = FY 2007, AS = 5.5%

The Commission proposed measuring the year-over-year percentage change in the Postal Service Lerner Index and Competitive Market Output, weighting both components equally. *Id.* at 29-31. As proposed in Order No. 4402, the formula's calculation was recursive with the Commission proposing to begin the calculation in FY 2007, using an initial appropriate share value of 5.5 percent. *Id.* at 31-32. The Commission proposed adjusting the appropriate share annually by using the formula to calculate the appropriate share for the upcoming fiscal year. *Id.* at 30. The appropriate share for each upcoming fiscal year would be reported in the Commission's Annual Compliance Determination (ACD). *Id.*

b. Compliance with Statutory Requirements

As part of Order No. 4402, the Commission examined how its proposed formula-based approach complied with section 3633(b) and accounted for the requirements of that section: (1) the prevailing competitive conditions in the market; (2) whether any costs are uniquely or disproportionately associated with any competitive products; and (3) other relevant circumstances. 39 U.S.C. 3633(b); Order No. 4402 at 34-53. For

⁷ *Id.* at 29.

prevailing competitive conditions and other relevant circumstances, the Commission addressed the ways the proposed formula captured the prevailing competitive conditions and other relevant circumstances described in previous Commission decisions concerning the appropriate share. *Id.* at 34-40, 45-51. In addition, the Commission found that all costs uniquely or disproportionately associated with competitive products were already attributed to those products under the Commission's costing methodology.⁸

c. Comments in Response to Order No. 4402

The Postal Service, the Public Representative, Amazon.com Services, Inc. (Amazon), the Greeting Card Association (GCA), the Parcel Shippers Association, Pitney Bowes Inc., United Parcel Service, Inc. (UPS), Robert J. Shapiro, and the American Consumer Institute Center for Citizen Research filed comments in response

⁸ Order No. 4402 at 43-45. The Commission's analysis of "the degree to which any costs are uniquely or disproportionately associated with any competitive products" relied on current costing methodologies approved in Docket No. RM2016-2. *Id.* at 40-45; see Docket No. RM2016-2, Order Concerning United Parcel Service, Inc.'s Proposed Changes to Postal Service Costing Methodologies (UPS Proposals One, Two, and Three), September 9, 2016 (Order No. 3506). UPS challenged the Commission's costing methodologies approved in Order No. 3506 in the United States Court of Appeals for the District of Columbia Circuit. See Petition for Review, *United Parcel Serv., Inc. v. Postal Reg. Comm'n*, No. 16-1354 (D.C. Cir. filed Oct. 7, 2016). The Court issued its opinion on May 22, 2018. See *United Parcel Serv., Inc. v. Postal Reg. Comm'n*, 890 F.3d 1053 (D.C. Cir. 2018) (*UPS*). In its opinion, the Court denied UPS's Petition for Review and found that the Commission exercised reasonable judgment in "settling on a cost-attribution methodology that implements its statutory mandate and falls well within the scope of its considerable discretion." *Id.* at 1069. UPS petitioned for rehearing *en banc*, which was denied by the United States Court of Appeals for the District of Columbia Circuit. See Petition for Rehearing *En Banc*, *United Parcel Serv., Inc. v. Postal Reg. Comm'n*, No. 16-1354 (D.C. Cir. filed July 6, 2018), *denied per curiam*, No. 16-1354 (D.C. Cir. filed July 27, 2018).

to Order No. 4402.⁹ In addition, representatives for the Public Representative and UPS filed declarations supporting comments on Order No. 4402.¹⁰

IV. PROPOSED MODIFIED FORMULA AND COMMISSION ANALYSIS

As noted above, in this Revised Notice of Proposed Rulemaking, the Commission is proposing modifications to both the Postal Service Lerner Index and the Competitive Market Output previously presented in Order No. 4402. As discussed in more detail below, these proposed modifications are made in response to comments received in response to Order No. 4402. The Commission proposes modifications to the Postal Service Lerner Index in order to address concerns related to the aggregation of data used in its calculation, provide a better measure of Postal Service market power, and more clearly distinguish the Commission's component from a traditional Lerner index. The Commission proposes modifications to the Competitive Market Output in order to more explicitly incorporate Postal Service market share.

⁹ Comments of the United States Postal Service in Response to Order No. 4402, April 16, 2018 (Postal Service Comments); Public Representative Comments in Response to Notice of Proposed Rulemaking, April 16, 2018 (PR Comments); Comments of Amazon.com Services, Inc. on Order No. 4402, April 16, 2018 (Amazon Comments); Comments of the Greeting Card Association, April 16, 2018 (GCA Comments); Comments of the Parcel Shippers Association, April 16, 2018; Comments of Pitney Bowes Inc., April 16, 2018; Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, April 16, 2018 (UPS Comments); Declaration of Robert J. Shapiro, April 16, 2018; Comments of American Consumer Institute Center for Citizen Research Regarding Docket No. RM2017-1 Submitted to the Postal Regulatory Commission, April 16, 2018.

¹⁰ Declaration of Soiliou Daw Namoro for the Public Representative, April 16, 2018 (Namoro Decl.); Declaration of J. Gregory Sidak on Behalf of United Parcel Service, April 16, 2018 (Sidak Decl.). Soiliou Daw Namoro filed in support of the Public Representative, and J. Gregory Sidak filed in support of UPS.

A. Modified Formula-Based Approach

In this section, the Commission reviews pertinent portions of Order No. 4402, examines relevant comments, describes its proposed modifications to both components, and discusses the resulting formula.

1. Modification to Postal Service Lerner Index

a. Order No. 4402

The Postal Service Lerner Index component was designed to gauge the Postal Service's market power in the competitive market. Order No. 4402 at 15-16. The Commission determined that evaluating the Postal Service's market power enables it to assess whether competition is being preserved and whether the Postal Service possesses a competitive advantage in the competitive market. *Id.* at 16. A Lerner index quantitatively assesses market power for a given firm by measuring the difference between the price charged by the firm for a particular product and the marginal cost incurred by the firm in producing that product. *Id.* at 17. In general, the further a firm is able to price its product above marginal cost, the more market power the firm possesses. *Id.*

In Order No. 4402, the Commission used a traditional Lerner index as a starting point and proposed to develop a measure of market power specific to the Postal Service using Postal Service data. The Commission noted that the Postal Service is a multi-product firm, with each product having its own unique marginal cost and associated set of prices. *Id.* Therefore, in order to develop a measure that would be applicable to competitive products as a whole, the Commission proposed using average competitive product marginal cost and average competitive product price to calculate what it referred to as the Postal Service Lerner Index. *Id.*

The Commission determined that marginal cost data for the Postal Service's competitive products could be obtained from the Postal Service's Cost and Revenue Analysis (CRA) report, which is submitted to the Commission annually as part of the Postal Service's Annual Compliance Report (ACR).¹¹ The Commission uses the CRA report as an input to the Postal Service Product Finances analysis (PFA), which is produced each year as part of the Commission's ACD.¹² Order No. 4402 at 18. The CRA report calculates marginal costs using volume-variable costs, which are the costs of specific Postal Service operations that vary with respect to relevant cost drivers. *Id.* The volume-variable costs are then distributed to individual Postal Service products. *Id.* Dividing the total volume-variable costs of a product by the product's total volume results in unit volume-variable costs, which are equivalent to marginal costs. *Id.* The Commission, therefore, proposed to divide the sum of all competitive product volume-variable costs in the PFA by the sum of all competitive product volume in order to calculate the aggregate competitive product unit volume-variable cost. *Id.* This number is equivalent to the average marginal cost for all competitive products.

The Commission determined that the price variable could be obtained using average revenue-per-piece, which incorporates all of the prices for all of the Postal Service's competitive products. *Id.* The PFA presents revenue data by product. *Id.* at 18-19. The Commission proposed dividing the sum of all competitive product revenue by the sum of all competitive product volume in order to calculate competitive product average revenue-per-piece. *Id.* at 19. This number is equivalent to the average price for all competitive products.

¹¹ Order No. 4402 at 18; see 39 U.S.C. 3652.

¹² See 39 U.S.C. 3653.

Using the two variables described above, the Commission developed its proposed Postal Service Lerner Index, which consisted of the following formula:¹³

$$\text{Postal Service Lerner Index} = \frac{\text{Revenue-per-Piece} - \text{Unit Volume-Variable Cost}}{\text{Revenue-per-Piece}}$$

b. Comments

Multiple commenters address the proposed Postal Service Lerner Index. Some of these commenters allege that the Postal Service Lerner Index suffers from a number of defects resulting from the aggregation of data. Specifically, UPS and Sidak assert that it is improper to calculate the Postal Service Lerner Index using an average of the marginal costs for each of the Postal Service's competitive products. UPS Comments at 32; Sidak Decl. at 24-26. They contend that because the Postal Service is a multi-product firm with different cost characteristics for each of its products, averaging costs across different products is misleading. *Id.* Sidak maintains that even if the aggregate Postal Service Lerner Index is positive, the Lerner index for an individual product could still be negative, which could enable the Postal Service to engage in below-cost pricing for individual products. Sidak Decl. at 24. Sidak states that, for a multi-product firm, economists typically develop separate Lerner indices for each product. *Id.*

UPS asserts that averaging product costs together could result in distortions and instability in the Postal Service Lerner Index following any future reclassifications of market dominant products as competitive or any future changes within the competitive product mail mix. UPS Comments at 32-33. UPS maintains that such changes would result in the composition of products within the Postal Service Lerner Index shifting for reasons unrelated to changes in market conditions. *Id.* For example, if a market dominant product had its own Lerner index with a value lower than the Postal Service

¹³ *Id.*

Lerner Index (which is the aggregate of all competitive products), and that market dominant product were to be reclassified as a competitive product, then its addition to the Postal Service Lerner Index would reduce the Postal Service Lerner Index's overall value.

With regard to the Commission's proposed use of average revenue, UPS and Sidak argue that it is improper to calculate the Postal Service Lerner Index using average revenue as a measure of price. UPS Comments at 33; Sidak Decl. at 28-31. Sidak asserts that average revenue is an inaccurate measure of price for a firm that engages in price discrimination, as he states the Postal Service does through its offering of negotiated service agreements (NSAs).¹⁴ Under these circumstances, he notes that as the quantity of a good that is sold increases, the price of a marginal unit of that good will decrease more quickly than average revenue will decrease.¹⁵ Sidak concludes that average revenue can overstate price, and a Lerner index built on such data can overstate the difference between price and marginal costs, thereby serving as an inaccurate measure of market power.¹⁶

¹⁴ Sidak Decl. at 30. Price discrimination is a form of nonlinear pricing where the same good is sold at different prices. See Jeffrey Church & Roger Ware, *Industrial Organization: A Strategic Approach* 157 (2000) (Church & Ware), available at: https://works.bepress.com/jeffrey_church/23/. The Postal Service regularly enters into NSAs, which are contractual agreements between the Postal Service and specific mailers providing for customized prices and classifications in exchange for volume commitments by the mailer.

¹⁵ *Id.* The Commission provides a simple example to explain Sidak's concern. If the Postal Service were to sell 100 parcel deliveries at \$5 each to retail consumers, and then sell 200 parcel deliveries at \$3 each to a particular mailer pursuant to an NSA, then the price of a marginal unit of parcel delivery would be \$3 (because marginal price is defined as the price of the last unit sold), but the average revenue for all 300 units sold would be \$3.67.

¹⁶ *Id.* Sidak does not argue that revenue in general is inappropriate as a measure of price—only that average revenue is an inappropriate measure of price because the Postal Service offers NSAs. *Id.* at 28-31. Sidak does not suggest an alternative measure of price to be used in this case.

c. Commission Analysis and Proposed Modification

After considering the comments received, the Commission proposes to replace the Postal Service Lerner Index with an alternate measurement the Commission labels as the Competitive Contribution Margin. The Competitive Contribution Margin has two primary differences when compared to the Postal Service Lerner Index: (1) it uses total competitive product values rather than average competitive product values; and (2) it uses competitive product attributable costs instead of competitive product volume-variable costs. The formula for calculating the Competitive Contribution Margin is as follows:

$$\text{Competitive Contribution Margin} = \frac{\text{Total Revenue} - \text{Total Attributable Cost}}{\text{Total Revenue}}$$

This modification presents several benefits. First, it addresses an apparent misunderstanding with the mathematical functioning of the Postal Service Lerner Index as initially proposed by the Commission. With regard to UPS's and Sidak's assertions that the Postal Service Lerner Index inappropriately uses average revenue in place of price, Namoro's declaration demonstrates that the use of averages has no actual effect on the calculation. See Namoro Decl. at 6-7.

The Postal Service Lerner Index, as initially proposed by the Commission, used revenue-per-piece (*i.e.*, average revenue) and unit volume-variable cost (*i.e.*, average cost). Revenue-per-piece is calculated by dividing total competitive product revenue by total competitive product volume, and unit volume-variable cost is calculated by dividing total competitive product volume-variable cost by total competitive product volume.

Because every term is divided by volume, the volume terms cancel each other out, which is mathematically demonstrated as follows:

$$\begin{aligned}
 \text{Postal Service Lerner Index} &= \frac{\text{Revenue-Per-Piece} - \text{Unit Volume-Variable Cost}}{\text{Revenue-Per-Piece}} \\
 &= \frac{\frac{\text{Revenue}}{\text{Volume}} - \frac{\text{Volume-Variable Cost}}{\text{Volume}}}{\frac{\text{Revenue}}{\text{Volume}}} \\
 &= \frac{\text{Revenue} - \text{Volume-Variable Cost}}{\text{Revenue}}
 \end{aligned}$$

The final construction of the Postal Service Lerner Index shown above is mathematically equivalent to the Postal Service Lerner Index as originally proposed in Order No. 4402, but does not use averaging. *See id.*; *see also* Order No. 4402 at 19. As demonstrated above, averaging is immaterial to the calculation of this component. For that reason, the Commission proposes to omit averaging and to use total revenue for all competitive products in its modified component. Because this modification does not affect what the component measures, the modified component will continue to measure the market power of the Postal Service's competitive products as a whole. At the same time, the Commission recognizes that using total amounts departs somewhat from a traditional calculation of a Lerner index, which is typically calculated using unit cost and unit price.¹⁷ Therefore, the Commission proposes to refer to the modified component as the Competitive Contribution Margin to distinguish it from a traditional Lerner index.

¹⁷ A traditional Lerner index is defined by the ratio of price minus marginal cost to price. *See Church & Ware* at 31-36.

The second major benefit of this modification is that by using total attributable costs, it more accurately reflects competitive product costs than the Postal Service Lerner Index. The Postal Service Lerner Index only included volume-variable costs, whereas the Competitive Contribution Margin uses attributable costs, which include volume-variable costs, product-specific costs, and inframarginal costs calculated as part of each competitive product's incremental costs.¹⁸ In addition, by incorporating the inframarginal costs of competitive products collectively, the Competitive Contribution Margin also reflects costs which are not caused by any one competitive product, but by competitive products as a whole. Reflecting all costs caused by competitive products mitigates the risk of overstating the Postal Service's market power in the competitive market because the modification allows the component to more accurately measure the relationship between cost and price.

The third benefit of this proposed modification is that it better reflects modern economic literature on the subject of measuring market power. As Sidak notes, "[e]conomists routinely use the ratio of 'operating profits net of depreciation, provisions and an estimated financial cost of capital [to] sales' as a proxy for a firm's Lerner [i]ndex."¹⁹ Sidak estimates UPS's and FedEx's Lerner index values for FY 2017 using each firm's operating profit-to-revenue ratio. Sidak Decl. at 47. The Competitive Contribution Margin follows the same calculation outlined in the economic literature cited to by Sidak, determining the ratio of operating profit to revenue.²⁰ This measure is frequently referred to in economic literature as the price-cost margin.

¹⁸ See Order No. 3506 at 60 (directing Postal Service to begin basing attributable costs for competitive products on incremental costs, which include a portion of inframarginal costs).

¹⁹ Sidak Decl. at 47, Figure 4 (citing Philippe Aghion *et al.*, *Competition and Innovation: An Inverted-U Relationship*, 120 Q.J. Econ. 701, 704 (2005); Frederick H. deB. Harris, *Structure and Price-Cost Performance Under Endogenous Profit Risk*, 35 J. Indus. Econ. 35, 43 (1986)).

²⁰ The difference between total competitive product revenue and total competitive product attributable costs constitutes the profit derived from competitive products. Dividing this difference by total competitive product revenue results in the profit-to-revenue ratio that Sidak uses.

With regard to UPS's and Sidak's concerns that an index which aggregates total costs across multiple competitive products could be used to mask below-cost pricing for individual competitive products, the Commission finds that such a situation is, as a practical matter, highly unlikely to occur. First, because the PAEA allows the Postal Service to retain earnings, the Postal Service is incentivized to maximize profits on competitive products. To price below-cost for individual competitive products would be economically disadvantageous for the Postal Service. As the Commission noted in Order No. 4402, a firm pricing below marginal cost should suspend production in the short run, and if cost or market characteristics do not change, exit the industry in the long run. Order No. 4402 at 36 n.63. Second, an individual competitive product that was priced below cost would violate 39 U.S.C. 3633(a)(2), which requires each competitive product to recover its attributable costs. See 39 U.S.C. 3633(a)(2). Such violations are addressed annually in the ACD, with the Commission having authority to order appropriate remedies.²¹

With respect to UPS's concern that the effects of future product reclassifications or competitive product mail mix changes could result in distortions, the Commission finds that although such a change would alter the inputs to the calculation, the Competitive Contribution Margin would accurately reflect the Postal Service's market power in the expanded (or contracted) market that resulted from the change. For example, if a market dominant product were to be re-classified as competitive, the addition of that product to the competitive mail mix would change both competitive

²¹ See, e.g., Docket No. ACR2007, Annual Compliance Determination, March 27, 2008, at 112-13; Docket No. ACR2008, Annual Compliance Determination, March 30, 2009, at 86-89; Docket No. ACR2009, Annual Compliance Determination, March 29, 2010, at 117; Docket No. ACR2010, Annual Compliance Determination, March 29, 2011, at 139-40; Docket No. ACR2011, Annual Compliance Determination, March 28, 2012, at 156-63; Docket No. ACR2012, Annual Compliance Determination, March 28, 2013, at 162-72; Docket No. ACR2013, Annual Compliance Determination, March 27, 2014, at 79-91; Docket No. ACR2014, Annual Compliance Determination, March 27, 2015, at 72-82; Docket No. ACR2015, Annual Compliance Determination, March 28, 2016, at 79-92; Docket No. ACR2016, Annual Compliance Determination, March 28, 2017, at 80-88; Docket No. ACR2017, Annual Compliance Determination, March 29, 2018, at 82-92 (FY 2017 ACD).

products' total attributable costs and total revenue. However, because the Competitive Contribution Margin is calculated by subtracting total attributable costs from total revenue, and dividing that number by total revenue, the result would continue to indicate how much market power the Postal Service possessed after the transfer.

Table IV-1 provides a comparison of annual changes in the Competitive Contribution Margin and the Postal Service Lerner Index.

Table IV-1
Comparison of Competitive Contribution Margin
and Postal Service Lerner Index

Fiscal Year	Competitive Contribution Margin	Percentage Change in Competitive Contribution Margin	Postal Service Lerner Index	Percentage Change in Postal Service Lerner Index
FY 2007	0.226	N/A	0.228	N/A
FY 2008	0.213	-5.9%	0.217	-5.1%
FY 2009	0.241	13.4%	0.251	15.9%
FY 2010	0.279	15.7%	0.298	18.6%
FY 2011	0.257	-7.9%	0.276	-7.3%
FY 2012	0.266	3.7%	0.275	-0.3%
FY 2013	0.281	5.5%	0.290	5.4%
FY 2014	0.282	0.4%	0.292	0.8%
FY 2015	0.275	-2.6%	0.284	-2.7%
FY 2016	0.325	18.1%	0.332	16.6%
FY 2017	0.329	1.3%	0.356	7.5%

As shown in Table IV-1, the growth and decline in the two measures is generally consistent. Two divergences warrant discussion: FY 2012, when the Postal Service Lerner Index declined while Competitive Contribution Margin grew; and FY 2017, when

the difference between the Postal Service Lerner Index and Competitive Contribution Margin was more than 6 percentage points.

As noted above, the Competitive Contribution Margin uses attributable costs while the Postal Service Lerner Index uses only volume-variable costs.²² In a given fiscal year, if the percentage growth in attributable costs was greater than the percentage growth in volume-variable costs, the Competitive Contribution Margin would grow less than the Postal Service Lerner Index. If the percentage growth in attributable costs was less than the percentage growth in volume-variable costs, the Competitive Contribution Margin would grow more than the Postal Service Lerner Index. Between FY 2011 and FY 2012, volume-variable costs increased by 27 percent, while attributable costs increased by 25 percent.²³ Thus, the Competitive Contribution Margin grew in FY 2012, while the Postal Service Lerner Index decreased.

In FY 2017, the Commission included a portion of inframarginal costs in the calculation of attributable costs for the first time, which increased the overall level of cost attribution.²⁴ This resulted in attributable costs growing 11 percent from FY 2016 to FY 2017, while volume-variable costs (which were not affected by this methodological change) grew only 8 percent during the same period. This produced an inverse situation to that which occurred in FY 2012—because the growth in attributable costs was greater than volume-variable costs, the Competitive Contribution Margin grew less than the Postal Service Lerner Index.

²² For FY 2007 through FY 2016, attributable costs were calculated as the sum of volume-variable costs and product-specific fixed costs.

²³ The smaller increase in attributable costs was caused by a decrease in product-specific fixed costs of 42 percent. This decrease in product-specific fixed costs was primarily driven by a decrease in competitive product advertising costs.

²⁴ See Order No. 3506 at 60.

These differences reflect how the Competitive Contribution Margin more accurately measures the Postal Service's market power for competitive products. Because the Competitive Contribution Margin measures all costs caused by competitive products, including those that cannot be attributed to any one competitive product specifically, the Competitive Contribution Margin provides a more complete view of the Postal Service's market power. For that reason, the Commission proposes to replace the Postal Service Lerner Index with the Competitive Contribution Margin in its revised formula.

2. Modification to Competitive Market Output

a. Order No. 4402

The second component of the formula initially proposed by the Commission was the Competitive Market Output, which was designed to measure the overall size of the competitive market. Order No. 4402 at 22. The Commission proposed that evaluating the overall size of the market provided context for assessing the prevailing competitive conditions in the market and the Postal Service's market power. *Id.* The Commission stated that the appropriate share requirement should balance encouraging the Postal Service to increase competitive products' contribution to institutional costs when the market is growing with the need to adjust competitive products' pricing in the event of a market decline. *Id.*

The Commission determined that the relevant market consisted of two groups: the Postal Service's competitive products and "similar products" offered by the Postal Service's competitors. *Id.* The Commission proposed using revenue, rather than volume, to measure the size of the overall market. *Id.* at 23. This was because revenue data for all competitors were available and directly comparable, whereas volume data were not uniformly available and would require frequent adjustments. *Id.*

The Commission proposed obtaining the necessary revenue data for the Postal Service's competitive products from the PFA, which the Commission produces every year as part of its ACD. *Id.* The Commission proposed obtaining the necessary revenue data for the Postal Service's competitors from two surveys conducted by the United States Census Bureau: the Quarterly Services Survey (QSS) and the Services Annual Survey (SAS). *Id.* The methodology for collecting and aggregating these data was described in Order No. 4402. *Id.* at 22-29.

Using the foregoing information, the Commission developed its proposed Competitive Market Output measure, which consisted of the following formula:²⁵

$$\textit{Competitive Market Output} = \textit{Revenue}_{USPS} + \textit{Revenue}_{C\&M}^{26}$$

b. Comments

Multiple commenters address the proposed Competitive Market Output component. These comments can be broadly grouped into six different areas.

First, the Public Representative and his declarant, Namoro, both express concern that the Competitive Market Output component, as proposed, disproportionately incorporates competitor revenue. Namoro Decl. at 10-11; PR Comments at 5-6. Namoro explains that this is due to the fact that not all competitor revenue within Competitive Market Output is weighted by market share. Namoro Decl. at 10-11. As a result, the Public Representative and Namoro assert that coordinated price increases by the Postal Service's competitors could cause the required appropriate share to increase, regardless of other market conditions. *Id.* at 11; PR Comments at 5-6.

²⁵ See Order No. 4402 at 23.

²⁶ "C&M" stands for "Couriers and Messengers," the name of the relevant dataset for the Postal Service's competitors within the Census Bureau data. See *id.* at 24.

Second, several commenters note that the Competitive Market Output as proposed does not incorporate the Postal Service's market share. Sidak observes that the Competitive Market Output will not reflect changes in market share; it will simply show the size of the overall market. Sidak Decl. at 49-51. Namoro likewise posits that the Competitive Market Output as proposed implicitly and incorrectly assumes that "the Postal Service's specific gains or losses from total market expansion or market contraction are irrelevant to the computation of the appropriate share[]..." Namoro Decl. at 3. UPS argues that the appropriate share should take into account how much the Postal Service's competitive products are growing within the context of the overall market. UPS Comments at 35. The Postal Service asserts that under the formula as proposed, the appropriate share would not decrease if the Postal Service were to lose market share but the measured Competitive Market Output did not also decrease. Postal Service Comments at 20. The Postal Service states that a circumstance where it loses market share without the Competitive Market Output similarly decreasing is not merely theoretical. *Id.* If the Postal Service's competitors were to begin competing more aggressively or shippers and non-traditional competitors were to expand their delivery operations, then the Competitive Market Output (which measures the total size of the package delivery market) might remain the same even as the Postal Service's individual share of the market decreased. *Id.* at 20-21.

Third, UPS asserts that there is no economic basis for linking the size of the overall competitive market (measured by revenue) with the question of what the appropriate share should be. UPS Comments at 34. UPS states this is because "[n]either the Commission nor the Postal Service ha[s] the ability to control what prices are charged by other participants in the market," and considering market size alone "does not account for the possibility of customers making in-house deliveries, which would not impact overall market volume but would decrease [the Competitive Market Output] nonetheless." *Id.* at 34-35. The Postal Service also notes this issue. It states that both the Competitive Market Output and the appropriate share could increase

without necessarily reflecting additional market opportunities, for the Postal Service or any other package delivery company, if there were to be a market change towards greater self-delivery of packages by shippers themselves. Postal Service Comments at 21.

Fourth, UPS and Sidak both criticize the Competitive Market Output for measuring output in terms of revenue, as opposed to volume. UPS Comments at 35; Sidak Decl. at 36-38. Sidak asserts that “a firm’s costs are more directly a function of its unit volume than of its revenue.” Sidak Decl. at 36. Furthermore, Sidak maintains that “[m]easuring output on the basis of revenue can fail to capture market growth if competitive pressure decreases prices more rapidly than unit volume increases, or if growth in volume is driven by below-cost pricing.” *Id.* Sidak notes that measuring industry output by unit volume would be consistent with the approach taken by other regulatory agencies. *Id.* at 36-38.

Fifth, the Postal Service criticizes the Competitive Market Output for failing to take into account inflation, considering that the Competitive Market Output constitutes an absolute measure of market size by revenue, denominated in current dollars. Postal Service Comments at 21. By presenting growth rates in the Competitive Market Output based on revenues expressed in nominal dollars, rather than constant dollars adjusted for inflation, the Postal Service maintains that the Competitive Market Output includes purely inflationary increases in revenue, demand, and market power. *Id.* The Postal Service also asserts that if the Competitive Market Output were to grow more slowly than inflation, the Competitive Market Output growth may not accurately reflect growth in the Postal Service’s ability to increase competitive products’ contribution to institutional costs because, in such a situation, institutional costs (which are also subject to inflation) would be increasing faster in real terms than the Postal Service’s competitive revenue. *Id.* at 21-22.

Sixth, the Postal Service asserts that the Competitive Market Output fails to take into account differentiation between the Postal Service's and its competitors' respective product offerings, which can impact the ability of competitive products to contribute to institutional costs.²⁷

c. Commission Analysis and Proposed Modification

After considering the comments received, the Commission proposes to replace the Competitive Market Output with an alternate measurement the Commission labels the Competitive Growth Differential. Unlike the Competitive Market Output, which sought to determine overall market size, the Competitive Growth Differential assesses the growth or decline of the Postal Service's market position from year-to-year. It explicitly incorporates the Postal Service's market share and accounts for inflation and whether market growth is structural or caused by coordinated pricing by competitors. It is calculated using the following equation:

$$\begin{aligned} & \textit{Competitive Growth Differential} \\ & = \textit{Market Share}_{USPS} * (\% \Delta \textit{Revenue}_{USPS} - \% \Delta \textit{Revenue}_{C\&M}) \end{aligned}$$

The Competitive Growth Differential is calculated by subtracting the year-over-year percentage change in competitors' revenue from the year-over-year percentage change in the Postal Service's competitive product revenue to determine the Postal Service's growth relative to that of its competitors, and multiplying the result by the Postal Service's market share. The Postal Service's market share is determined by dividing the Postal Service's total competitive product revenue by the sum of the Postal

²⁷ Postal Service Comments at 16. Although the Postal Service does not explain this particular argument in detail, it appears to suggest that to the extent the Postal Service's and its competitors' products are not perfect substitutes for each other, those products will not be in direct competition, and arguably should not be considered part of the same market. Therefore, to the extent that the Competitive Market Output includes such products in the same market, it could be said to overstate the size of the market.

Service's total competitive product revenue and total competitor revenue, as depicted in the following formula:

$$\text{Market Share}_{USPS} = \frac{\text{Revenue}_{USPS}}{\text{Revenue}_{USPS} + \text{Revenue}_{C\&M}}$$

As with the Competitive Market Output, the Competitive Growth Differential is measured using revenue, rather than volume. As explained in Order No. 4402, the Commission selects revenue data because volume data would need to be adjusted for intra-industry transactions, while revenue data can be used directly, without adjustment.²⁸ Additionally, revenue data are also available for all firms in the relevant market through publicly available sources, whereas volume data for the Postal Service's competitors are not publicly available. *Id.*

As with the Competitive Market Output, revenue data for the Postal Service are obtained from the PFA, and revenue data for the Postal Service's competitors are obtained from Census Bureau data—specifically the QSS and SAS survey data. Unlike the Competitive Market Output, revenue data under the Competitive Growth Differential are adjusted for inflation, using the Consumer Price Index for All Urban Consumers (CPI-U) as the deflator.²⁹ CPI-U data are obtained from the Bureau of Labor Statistics (BLS).³⁰ The Commission indexes the CPI-U data to FY 2007; that is, FY 2007

²⁸ See Order No. 4402 at 23. An example of an intra-industry transaction is a Postal Service competitor transporting a package from a sender in California to a recipient's destination delivery unit (*i.e.*, the Postal Service facility where mail carriers depart for local mail delivery) in New York. The Postal Service would then deliver the package to the recipient (*i.e.*, last-mile delivery).

²⁹ The CPI-U is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. See Bureau of Labor Statistics, Consumer Price Index, Frequently Asked Questions, available at: <https://www.bls.gov/cpi/questions-and-answers.htm>.

³⁰ Bureau of Labor Statistics, Consumer Price Index – All Urban Consumers (Series ID CUUR0000SA0),” available at: <https://data.bls.gov/timeseries/CUUR0000SA0>.

constitutes the base year for any inflation adjustment. This aligns the CPI-U data with the beginning year for the Commission's proposed formula.³¹

The Competitive Growth Differential better reflects the Postal Service's position in the overall competitive market and addresses the concerns raised by commenters discussed above. First, the change to the Competitive Growth Differential eliminates the disproportionate inclusion of competitor revenue from the component's underlying equation. To illustrate this, the Commission starts with the formula for calculating the year-over-year percentage change in Competitive Market Output (which was an input into the formula as initially proposed in Order No. 4402):³²

%ΔCompetitive Market Output

$$= \frac{(Revenue_{USPS,t} + Revenue_{C\&M,t}) - (Revenue_{USPS,t-1} + Revenue_{C\&M,t-1})}{Revenue_{USPS,t-1} + Revenue_{C\&M,t-1}}$$

³¹ See Order No. 4402 at 32. For additional discussion of the beginning year of the Commission's formula, see section IV.A.3.c, *infra*.

³² This equation and all equations in this section are calculated for *t* for simplicity of demonstration, while the input (*i.e.*, when using the formula to determine the appropriate share) is calculated for *t-1*.

Although not explicitly depicted in the formula, both the change in Postal Service revenue and the change in competitor revenue are weighted by their respective market shares. This is because an aggregate rate of growth is not equivalent to the sum of individual rates of growth.³³ The formula is therefore mathematically equivalent to the following:

$$\begin{aligned} \% \Delta \text{Competitive Market Output} \\ = (\text{Market Share}_{USPS} * \% \Delta \text{Revenue}_{USPS}) + ((1 - \text{Market Share}_{USPS}) \\ * \% \Delta \text{Revenue}_{C\&M})^{34} \end{aligned}$$

Weighting by market share is necessary in order to incorporate the relative contribution of each source of revenue growth to the overall growth. As Library Reference PRC-LR-RM2017-1/2 illustrates, the year-over-year percentage change in the Competitive Market Output is equivalent to the year-over-year percentage change in the Postal Service's revenue, weighted by the Postal Service's market share, plus the year-over-year percentage change in competitors' revenue, weighted by competitors' market share.³⁵ In order to demonstrate how this equation over-incorporates competitor

³³ A simple example can be used to demonstrate why this is the case. Consider an entity with two products, one generating revenue of \$100,000 in FY 2017 and \$105,000 in FY 2018 (a 5-percent year-over-year increase) and the other generating revenue of \$50,000 in FY 2017 and \$55,000 in FY 2018 (a 10-percent year-over-year increase). If the entity were trying to calculate the aggregate rate of revenue growth, it would be incorrect to add the individual rates of growth (*i.e.*, 5 percent for the first product and 10 percent for the second product = 15 percent total). Instead, the entity would calculate each product's share of total revenue (*i.e.*, \$100,000/\$150,000 = 66 percent for the first product and \$50,000/\$150,000 = 34 percent for the second product), and then multiply each product's share of total revenue by the percentage revenue change (*i.e.*, 66 percent * 5 percent = 3.3 percent for the first product, and 34 percent * 10 percent = 3.4 percent for the second product). The final step would be to add the two numbers to calculate the aggregate rate of revenue growth for the entity (*i.e.*, 3.3 percent + 3.4 percent = 6.7 percent).

³⁴ For a rigorous demonstration of this transformation, see Namoro Decl. at 11-13, reproduced in Library Reference PRC-LR-RM2017-1/2.

³⁵ Competitors' market share is determined by calculating $1 - \text{Market Share}_{USPS}$. This constitutes the residual left over after the Postal Service's market share has been determined.

revenue, it is helpful to state its terms differently. The terms of the equation can be mathematically rewritten as follows:

$$\begin{aligned} \% \Delta \text{Competitive Market Output} \\ &= ((\text{Market Share}_{USPS}) * (\% \Delta \text{Revenue}_{USPS} - \% \Delta \text{Revenue}_{C\&M})) \\ &+ (\% \Delta \text{Revenue}_{C\&M})^{36} \end{aligned}$$

This construction of the Competitive Market Output growth rate equation is mathematically equivalent to the previous construction and demonstrates that growth in Competitive Market Output constitutes the sum of two terms: the market share weighted difference in revenue growth between the Postal Service and its competitors; and the unweighted growth in competitor revenue. It is this second term ($+ (\% \Delta \text{Revenue}_{C\&M})$) that results in the disproportionate incorporation of competitor revenue because the growth in competitor revenue is not weighted by market share. The Competitive Growth Differential removes the second term, thereby resolving the problem of disproportionate incorporation of competitor revenue.³⁷ Eliminating the disproportionate incorporation of competitor revenue by adopting the Competitive Growth Differential addresses the concerns raised by the Public Representative and Namoro that competitors' pricing decisions alone could influence the appropriate share.

This modification also changes the nature of the component from a measure of overall market size to a measure of the Postal Service's market position because the modification captures the change in the size of the Postal Service's competitive business relative to that of the Postal Service's competitors.

³⁶ This formula is the result of a three-step transformation from the formula directly above it. The three-step transformation is demonstrated in detail in Library Reference PRC-LR-RM2017-1/2.

³⁷ The Commission notes that this adjustment was identified as a possible solution by Namoro in his declaration. See Namoro Decl. at 17 n.12.

Additionally, the Competitive Growth Differential directly incorporates the Postal Service's market share into the appropriate share calculation, which addresses comments that the Competitive Market Output failed to consider the Postal Service's market share.³⁸ The Competitive Growth Differential directly incorporates the Postal Service's market share as a weight. This ensures that any change in the appropriate share due to changes in the Competitive Growth Differential are not solely driven by growth in the overall market but are also reflective of whether those changes give the Postal Service greater (or reduced) market share. This is important because if both the Postal Service's and its competitors' respective revenues increase but the Postal Service's market share remains the same, the Postal Service's relative position in the market may not have changed. With the Competitive Growth Differential, the Commission's proposed formula will now reflect this. Similarly, the change from the Competitive Market Output to the Competitive Growth Differential will prevent the scenario identified by the Postal Service in which, despite the Postal Service having lost market share, the appropriate share requirement may not decrease due to the size of the overall market remaining unchanged.

With regard to UPS's assertion that there is no economic basis for linking the size of the overall competitive market to the appropriate share, the Commission reiterates its explanation in Order No. 4402 that evaluating the overall size of the market provides context for assessing prevailing competitive conditions. See *id.* at 22. The size of the market serves as an indicator of how healthy the market is, both when the market is considered in isolation and when the market is considered relative to the broader economy. Evaluating the overall size of the market is also necessary to

³⁸ The Commission found in Order No. 4402 that market share was indirectly incorporated into the Competitive Market Output because any large shift in revenue share between the Postal Service and its competitors would be reflected in the Competitive Market Output. Order No. 4402 at 38-39. Market share is also indirectly incorporated into the Competitive Market Output because determining growth rates for the Competitive Market Output implicitly requires a determination of the Postal Service's market share, as demonstrated in Library Reference PRC-LR-RM2017-1/2.

determine the relative shares of the competitors in it. For these reasons, it remains appropriate to consider the overall size of the competitive market, as well as the Postal Service's position in the market, as relevant to the appropriate share.

As discussed above, the Competitive Growth Differential tracks changes in the market more accurately than the Competitive Market Output. It accomplishes this by using real revenue growth instead of nominal revenue growth. The Commission agrees with the Postal Service's suggestion that taking into account inflation will improve this component of the formula. Without such an adjustment, the formula could interpret inflationary changes in the market as market growth. Relatedly, with regard to UPS's and Sidak's criticisms of this component for measuring output in terms of revenue, it is true that there are circumstances in which using revenue as a measure of output could be misleading, such as when a firm is attempting to strategically price its products at a low level in order to gain market share. However, because the Competitive Growth Differential accounts for inflation, those circumstances do not apply here. Even if the Postal Service or its competitors were to engage in strategic pricing in order to gain market share, causing revenue to diverge from volume, as long as revenue is measured in real terms, the Competitive Growth Differential would accurately reflect the Postal Service's relative position in the market.³⁹

The Postal Service's concern that this component fails to directly consider product differentiation is mitigated by the overarching similarities between the Postal Service's and its competitors' products. Furthermore, product differentiation would be

³⁹ With regard to Sidak's assertion that measuring industry output by volume would be more consistent with practice in other agencies, the Commission notes that the use of revenue to determine output is consistent with the methodology employed by agencies such as the United States Department of Commerce, which uses revenue as an initial measure of output when calculating Gross Domestic Product (GDP). GDP is the total expenditure on the economy's output of goods and services. See N. Gregory Mankiw, *Macroeconomics* 18, 27 (7th ed. 2010). For information on the use of revenue in calculating GDP, see Bureau of Economic Analysis, *Concepts and Methods of the U.S. National Income and Product Accounts*, November 2017, at 4-9, 5-30, available at: <https://www.bea.gov/national/pdf/all-chapters.pdf>.

reflected in the Competitive Growth Differential because changes in product differentiation will affect the relative growth in revenue for the Postal Service compared to its competitors. This is because if the Postal Service's and its competitors' products became less and less interchangeable to the point that they were occupying different markets with different characteristics, those products' growth rates would be likely to diverge, resulting in greater changes in the Competitive Growth Differential. In addition, such differentiation would be reflected by larger increases in the Competitive Contribution Margin because that index measures the market power of the Postal Service; and to the extent that the Postal Service has fewer competitors, it will have greater market power. Further, if differentiation between the Postal Service's and its competitors' products were to occur such that the products were no longer considered to constitute the same market, the 5-year review of the appropriate share mandated by 39 U.S.C. 3633(b) would allow the Commission to examine whether the data obtained from Census Bureau continues to be an appropriate measure of competitors' revenue.⁴⁰

The Competitive Market Output and Competitive Growth Differential results for each fiscal year since the PAEA was enacted are reported in Table IV-2 below.

⁴⁰ Should a change be necessary in advance of the 5-year review, the Commission is also permitted to revise its regulations when circumstances warrant. See 39 U.S.C. 3633(a); Order No. 1449 at 13.

Table IV-2
Comparison of Annual Changes in Competitive Market Output Growth
and Competitive Growth Differential⁴¹

Fiscal Year	Competitive Market Output Growth	Competitive Growth Differential
FY 2007	N/A	N/A
FY 2008	-1.5%	0.7%
FY 2009	-13.9%	1.2%
FY 2010	-0.8%	0.9%
FY 2011	5.3%	-0.2%
FY 2012	6.4%	2.7%
FY 2013	5.0%	2.5%
FY 2014	4.7%	1.2%
FY 2015	6.5%	0.2%
FY 2016	5.1%	1.4%
FY 2017	6.3%	1.1%

The Competitive Growth Differential values differ substantially from the Competitive Market Output values because they measure different things: the Competitive Market Output measures absolute growth in the market, whereas the Competitive Growth Differential measures the Postal Service's growth relative to that of its competitors.

For example, in FY 2008, FY 2009, and FY 2010, the Competitive Market Output decreased and the Competitive Growth Differential increased. This occurred because the Postal Service maintained (and in some years, increased) its competitive product output despite a global financial crisis, both through NSAs and the reclassification of certain market dominant products as competitive. As such, the Postal Service was able

⁴¹ Because the Competitive Growth Differential evaluates relative growth rather than absolute growth, it is inappropriate to include the absolute Competitive Market Output values in this table. No corresponding absolute Competitive Growth Differential values exist.

to improve its market position relative to its competitors, even as the overall market declined. In FY 2011, the Competitive Growth Differential was negative because the Postal Service's competitive revenue displayed no material growth, while competitor revenue, and hence the overall market, grew. This demonstrates that the Competitive Growth Differential reflects the source of the growth in the market in ways that the Competitive Market Output did not. Subsequent fiscal years reflect similar differences, with the Competitive Growth Differential better reflecting the Postal Service's market position in the overall competitive market than the Competitive Market Output would.

In the next section, the Commission discusses the formula proposed in Order No. 4402, as well as specific comments received related to the operation of the formula. The Commission then describes how the two modified components, the Competitive Contribution Margin and the Competitive Growth Differential, are incorporated into the Commission's proposed formula to calculate the appropriate share.

3. Resulting Formula

a. Order No. 4402

In Order No. 4402, the Commission proposed calculating the appropriate share using the following formula:⁴²

$$AS_{t+1} = AS_t * (1 + \% \Delta LI_{t-1} + \% \Delta CMO_{t-1})$$

$$\text{If } t = 0 = \text{FY 2007, } AS = 5.5\%$$

Where,

AS = Appropriate Share⁴³

LI = Postal Service Lerner Index

CMO = Competitive Market Output

t = Fiscal Year

As noted above, under the previously proposed formula, the Commission would have calculated the year-over-year percentage changes for both the Postal Service Lerner Index and Competitive Market Output components. *Id.* at 31; see section III.C.2.a, *supra*. In order to calculate an upcoming fiscal year's appropriate share percentage (AS_{t+1}), the formula multiplied the sum of the percentage changes in the Postal Service Lerner Index and the Competitive Market Output from the previous fiscal year⁴⁴ ($1 + \% \Delta LI_{t-1} + \% \Delta CMO_{t-1}$) by the current fiscal year's appropriate share (AS_t). Order No. 4402 at 30. In addition, both components were given equal weight in the

⁴² Order No. 4402 at 29.

⁴³ This figure would be expressed as a percentage and rounded to one decimal place for simplicity and consistency with the Commission's past practice of expressing an appropriate share using one decimal place. *Id.* at 29 n.52.

⁴⁴ As noted in Order No. 4402, the "1 +" is a necessary mathematical concept for any percentage change formula in order to incorporate the pre-existing value being changed. *Id.* at 30 n.54; see Jagdish Arya & Robin Lardner, *Mathematical Analysis for Business and Economics* 202-03 (2d ed. 1985).

calculation in order to balance changes in the competitive market with changes in the Postal Service's market power. *Id.* at 29-30.

In order to calculate the appropriate share for the current fiscal year, the Commission needed to determine the beginning appropriate share percentage (*AS*) and the beginning fiscal year (*t*). The Commission proposed to begin the calculation in FY 2007, when the PAEA was enacted, and set the initial appropriate share value at 5.5 percent, which was the appropriate share initially set by the Commission. *Id.* at 32. Both beginning values were chosen to allow for incorporation of the changes in the competitive market in the years since the PAEA's enactment. *Id.* Using FY 2007 and the 5.5-percent appropriate share as the beginning point of the formula's calculation, the Commission used the cumulative formula results from FY 2008 through FY 2018 in order to reach FY 2019's proposed appropriate share (10.8 percent). *Id.* at 33.

In Order No. 4402, the Commission proposed adjusting the appropriate share annually by using the formula to calculate the appropriate share for the upcoming fiscal year. *Id.* at 30. Due to the timing of when all necessary data were available, the Commission proposed that the appropriate share would be reported as part of the Commission's ACD issued each year in March and would take effect at the beginning of the following fiscal year on October 1. *Id.*

b. Comments Concerning Beginning Appropriate Share, Beginning Fiscal Year, and the Weighting of Components

In response to Order No. 4402, the Commission received comments from several parties concerning the beginning appropriate share, beginning fiscal year, and the weighting of the two components of the formula. As these comments relate directly to the modified formula as well as the previously proposed formula, the Commission discusses the comments received on those three topics in this section.

i. Beginning Appropriate Share

UPS contends that using 5.5 percent as the beginning appropriate share percentage is “irrational” because the initial 5.5 percent appropriate share was an “intentionally low” figure and was based on different analysis. UPS Comments at 36. UPS states that the initial 5.5 percent was set based on factors, such as small Postal Service market share and the risk of setting appropriate share too high, and was intended to provide flexibility to the Postal Service. *Id.* UPS maintains “[t]hese concerns have no bearing today.” *Id.*

In the Order No. 4402, the Commission proposed that the appropriate share be modified to better reflect the modern competitive market that had exhibited changes since the Commission’s last appropriate share review and the PAEA’s enactment. Order No. 4402 at 12. UPS interprets this as Commission recognition that the 5.5-percent appropriate share level is “too low given current market conditions” and thus questions its use as the beginning value for the Commission’s calculation of the appropriate share. UPS Comments at 37. UPS contends that if the Commission is increasing the appropriate share from 5.5 percent to better reflect current market conditions, the beginning value of the appropriate share calculation should not be 5.5 percent and instead should reflect current market conditions. *Id.* For these reasons, UPS recommends the Commission use the average revenue share of Postal Service

competitive products over the last 3 fiscal years (26.6 percent) as the beginning value of the appropriate share (*AS*). *Id.* at 39-40.

ii. Beginning Fiscal Year

UPS and the Postal Service address the beginning fiscal year used in the proposed formula in their comments. In recommending the Commission use 26.6 percent as the beginning value of the appropriate share, UPS notes that percentage should be considered “in the Commission’s formula for 2018 and onwards,” which implies that UPS is recommending the Commission change the beginning fiscal year (*t*) to FY 2018. *Id.* at 40.

The Postal Service recommends that the Commission eliminate or reduce the appropriate share. Postal Service Comments at 3-8. However, if the Commission retains the formula, the Postal Service alternatively recommends that the Commission change the formula’s beginning fiscal year (*t*) to FY 2017. *Id.* at 23-24. The Postal Service contends there is “no basis for applying the new formula beginning in FY 2007 and continuing forward on a cumulative basis.” *Id.* at 23.

In Order No. 4402, the Commission stated that the formula’s calculation, beginning in FY 2007, would be recursive in order to capture the cumulative effects of changes in prevailing competitive conditions in the market on the appropriate share. Order No. 4402 at 31-32. The Postal Service states that the current prevailing competitive conditions are already captured by the proposed formula’s two components and do not need to be captured by beginning the formula’s calculation in FY 2007. Postal Service Comments at 23-24. In addition, the Postal Service notes that the formula produces a hypothetical appropriate share for each fiscal year between FY 2007 and FY 2017, and that the use of those figures is “inappropriate” and “arbitrary”

because the actual appropriate share for those same fiscal years are known.⁴⁵ For these reasons, the Postal Service maintains that the beginning fiscal year (t) “should be FY 2017, the most recent year in which the appropriate share requirement was a fixed 5.5 percent,” or in the alternative, FY 2012, the most recent time the Commission reviewed the appropriate share. Postal Service Comments at 23.

iii. Weighting of the Components

Related to the Commission’s equal weighting of both components, Sidak asserts that the Commission’s decision is an arbitrary one. Sidak Decl. at 39. He maintains the Commission provides no reasonable explanation for the equal weighting of the components. *Id.* Sidak contends that the Commission failed to evaluate whether the two components are endogenous, whether a correlation exists between the two components and attributable costs, or how the formula would evolve under alternative weights. *Id.* He suggests the Commission should have “conduct[ed] some research and analysis to find the correct ratio” of the two components. *Id.*

c. Commission Analysis and Modified Formula

After consideration of the comments received, the Commission elects to maintain Order No. 4402’s approach to the beginning appropriate share, the beginning fiscal year, and the weighting of components. In this section, the Commission initially discusses the modified formula’s configuration and then provides its analysis of the commenters’ recommendations.

⁴⁵ *Id.* at 24. The “hypothetical” appropriate shares the Postal Service references can be found in Order No. 4402 at 33, Table IV-6, column “Appropriate Share for the Following Year (AS_{t+1}).”

Based on the proposed modifications to both components discussed in sections III.A.1 and III.A.2, *supra*, the Commission proposes to calculate the appropriate share using the following modified formula:

$$AS_{t+1} = AS_t * (1 + \% \Delta CCM_{t-1} + CGD_{t-1})$$

If t = 0 = FY 2007, AS = 5.5%

Where,

AS = Appropriate Share⁴⁶

CCM = Competitive Contribution Margin

CGD = Competitive Growth Differential

t = Fiscal Year

Procedurally, the Commission proposes that the appropriate share be adjusted annually through the same process as proposed in Order No. 4402. Under that process, the appropriate share would be adjusted annually by using the formula to calculate the minimum appropriate share for the upcoming fiscal year.⁴⁷ The Commission also retains that the new appropriate share level for the upcoming fiscal

⁴⁶ This figure continues to be expressed as a percentage and rounded to one decimal place for simplicity and consistency with the Commission's past practice of expressing an appropriate share using one decimal place.

⁴⁷ In response to Order No. 4402, GCA requested the Commission confirm that, despite the use of its formula-based approach, the appropriate share continues to act as a minimum contribution level or floor, to be exceeded, if possible. GCA Comments at 1-2. As noted in Order No. 4402, "the Commission has and continues to view the appropriate share as a minimum requirement." Order No. 4402 at 81; see *id.* at 6 (citing Order No. 26 at 72). The Commission continues to view the appropriate share as a minimum requirement. The minimum requirement nature of the appropriate share is embodied in the proposed rule itself, which states "...the appropriate share of institutional costs to be recovered from competitive products collectively, at a minimum, will be calculated using the following formula..." See Order No. 4402, Attachment A at 1.

year would be reported as part of the Commission's ACD.⁴⁸

In order to calculate an upcoming fiscal year's appropriate share percentage (AS_{t+1}), the modified formula multiplies the sum of the Competitive Growth Differential and the percentage change in the Competitive Contribution Margin, $(1 + \% \Delta CCM_{t-1} + CGD_{t-1})$,⁴⁹ by the current fiscal year's appropriate share (AS_t). The modified formula continues to be recursive in nature in order to incorporate year-over-year changes in the competitive market. See Order No. 4402 at 31.

Thus, as an example of how the modified formula functions, if the following conditions hold:

- Current year appropriate share is 5.5 percent (AS_{t+1})
- Competitive Contribution Margin grew by 6 percent in the prior year ($\% \Delta CCM_{t-1}$)
- Competitive Growth Differential⁵⁰ was 0.4 percent when:
 - Postal Service revenue grew 5 percent in the prior year ($\% \Delta Revenue_{USPS}$)
 - Competitor revenue grew 3 percent in the prior year ($\% \Delta Revenue_{C\&M}$)
 - Postal Service market share was 20 percent ($Share_{USPS}$)

⁴⁸ See Order No. 4402 at 30. It is important to note that, as recently as its FY 2017 ACD, the Commission has stated the appropriate share requirement of 39 U.S.C. 3633(a)(3) applies to the Postal Service annually. See FY 2017 ACD at 92-93. Thus, to comply with 39 U.S.C. 3633(a)(3), the Postal Service's competitive products must collectively cover the Commission-determined appropriate share of institutional costs as set forth in 39 CFR 3015.7(c) in each fiscal year. See *id.* Although the Postal Service may exceed this minimum contribution level, any contribution that exceeds the minimum level cannot be used as a form of "prepayment" for future fiscal years. See *id.*

⁴⁹ See n.44, *supra*.

⁵⁰ As discussed above, the Competitive Growth Differential is calculated as follows: $Market Share_{USPS} * (\% \Delta Revenue_{USPS} - \% \Delta Revenue_{C\&M})$. See section IV.2.c, *supra*.

Then the appropriate share for the next year is calculated as follows:

$$\text{Appropriate Share} = 0.055 * \left(1 + 0.06 + (0.2 * (0.05 - 0.03)) \right) = 0.059 \text{ or } 5.9\%$$

Under this scenario, the next year's appropriate share would be 5.9 percent. As noted above, this result will be the starting point for calculating the appropriate share for the following year.

Using 5.9 percent as the starting point for calculating the appropriate share for the following year (AS_{t+1}), if the following conditions hold:

- Competitive Contribution Margin declined by 1 percent in the prior year ($\% \Delta CCM_{t-1}$)
- Competitive Growth Differential was 2.2 percent, when:
 - Postal Service revenue grew 6 percent in the prior year ($\% \Delta Revenue_{USPS}$)
 - Competitor revenue declined 4 percent in the prior year ($\% \Delta Revenue_{C\&M}$)
 - Postal Service market share was 22 percent ($Share_{USPS}$)

Then the appropriate share for the next year is calculated as follows:

$$\text{Appropriate Share} = 0.059 * \left(1 - 0.01 + (0.22 * (0.06 - (-0.04))) \right) = 0.06 \text{ or } 6.0\%$$

Under this scenario, the next year's appropriate share would be 6.0 percent and would become the starting point for calculating the appropriate share for the next year.

As it relates to comments received concerning the beginning appropriate share and beginning fiscal year, the Commission finds that it is appropriate to use 5.5 percent as the beginning appropriate share and FY 2007 as the beginning fiscal year when calculating the modified formula. Those beginning values allow the resulting appropriate share to capture the impact of market fluctuations on the appropriate share over time and moving forward.

The Commission's selection of 5.5 percent as the beginning appropriate share does not imply that the Commission believes the initial 5.5 percent set in Docket No. RM2007-1 was "too low" or "inadequate" as UPS suggests. See UPS Comments at 37. To the contrary, the initial 5.5 percent appropriate share was reasonably based on historical contribution. Order No. 4402 at 7. However, since the PAEA's enactment, the Postal Service, competitors, and market conditions have changed, and the goal of the formula-based approach is to better capture these changes both historically and moving forward. As a result, UPS's proposed use of Postal Service competitive products' revenue share would be inappropriate because it does not appropriately reflect market conditions in FY 2007 and subsequent years. In addition, the use of revenue share to begin the calculation of the formula is improper for the reasons discussed by the Commission in Order No. 4402 when it rejected using Postal Service competitive products' revenue share to set the appropriate share. See Order No. 4402 at 82. Postal Service competitive products' share of revenue is not reflective of market conditions, the elements of 39 U.S.C. 3633(b), and Commission precedent. *Id.* As discussed in Order No. 4402, competitive products' share of revenue is driven in large part by market dominant revenue, which has been declining due to a decline in demand for market dominant products. *Id.* As a result of declining market dominant demand and revenue, the competitive revenue share has increased and is likely to continue to increase. However, this increase in revenue share has little to do with the criteria of 39 U.S.C. 3633(b) that drive the determination of the appropriate share. As a result, use of revenue share would be inappropriate because such use would allow the appropriate share to be substantially impacted by factors unrelated to the prevailing market conditions and other relevant circumstances required pursuant to 39 U.S.C. 3633(b).

Additionally, it would be inappropriate to begin the formula's calculation in FYs 2012, 2017, or 2018, as the Postal Service and UPS respectively suggest. Calculating the appropriate share beginning in any fiscal year other than FY 2007 would result in the Commission disregarding the cumulative impact that changes in market have had

on the initial 5.5 percent appropriate share in the years since the PAEA's enactment. The proposed formula's calculation incorporates the changes from those fiscal years, a necessary action to better capture the impact that changes in market conditions have had on the appropriate share.

As noted above, the Postal Service makes two specific critiques regarding the use of FY 2007 as the beginning fiscal year. The Postal Service contends that the two components themselves reflect current prevailing competitive conditions, leaving no reason to begin the formula's calculation in FY 2007 in order to capture historical market changes. Although it is true both components capture changes in prevailing competitive conditions in the market,⁵¹ the beginning fiscal year serves a different purpose. The components, as applied through the formula, capture market changes, including prevailing competitive conditions, over a single fiscal year. However, they do not capture the prevailing competitive conditions in the market as they have evolved since the PAEA's enactment. As the Commission explained in Order No. 4402, it is appropriate to set FY 2007 as the beginning year for the formula because the prevailing competitive conditions in the market, as well as other relevant circumstances, have changed since FY 2007. Order No. 4402 at 32. By using FY 2007 as the beginning year, the proposed formula allows the appropriate share to reflect the cumulative effect of developments in competitive market conditions since the PAEA's enactment.

Additionally, the Postal Service maintains that it is inappropriate and arbitrary to assign "hypothetical" values that represent the appropriate share dating back to FY 2007 when the actual appropriate share for those fiscal years are known. Postal Service Comments at 24. The Commission acknowledges that the actual appropriate

⁵¹ The components, as applied through the formula, also capture other relevant circumstances. See section IV.B, *infra*.

share⁵² is known for prior fiscal years and clarifies that its approach does not purport to change the actual values for any prior fiscal year. However, as explained above, the Commission finds that the formula should ensure the appropriate share reflects the market conditions as they have evolved since the PAEA's enactment. As a result, it is neither inappropriate nor arbitrary for the Commission to use these values to determine the impact that market changes have had on the appropriate share. The formula's calculation is purposefully and appropriately cumulative in order to determine this impact.

As it relates to comments received concerning the weighting of the two components of the formula, the Commission finds that it is appropriate from both a legal and economic perspective to weight the components equally. First, from a legal perspective, the Commission's decision to weight both components equally is appropriate because it is based on the required consideration of the statutory criteria set forth in 39 U.S.C. 3633(b). The Commission notes that the modified components measure two discrete concepts. As described in sections IV.A.1 and IV.A.2, *supra*, the Competitive Contribution Margin measures the Postal Service's absolute market power; that is, its own ability to raise prices above costs, whereas the Competitive Growth Differential measures the Postal Service's market position relative to its competitors. These concepts measure different aspects of the competitive market, as the Competitive Contribution Margin considers the Postal Service's market power with respect to consumers and the Competitive Growth Differential measures the Postal Service's market position with respect to competitors. Both modified components play critical and equal roles in supporting the formula's ability to capture the criteria set forth in 39 U.S.C. 3633(b). For example—as it relates to capturing prevailing competitive conditions in the market—the Competitive Contribution Margin provides insight into

⁵² In using the term “actual appropriate share” the Commission is referring to the fact that, since its regulations in Docket No. RM2007-1 became final, as required by the PAEA, the appropriate share has remained at 5.5 percent. See *supra* at 4 n.4.

potential Postal Service competitive advantage; the Competitive Growth Differential reflects any changes in Postal Service market share; and both are equally necessary in order to capture various changes to the market and competitors. See section IV.B.1, *infra*. Additionally, both modified components play a role in capturing each of the other relevant circumstances the Commission considers. See section IV.B.3, *infra*. Given that neither component is more significant than the other in capturing the criteria set forth in 39 U.S.C. 3633(b), the Commission finds it is appropriate to weight the components equally.

Second, from an economic perspective, the Commission's decision to weight both components equally is appropriate. Although Sidak maintains that "from an economic perspective" the Commission failed to offer a reasonable explanation for the formula's configuration and suggests that weights be assigned at the component level, Sidak's criticism is problematic for two reasons. See Sidak Decl. at 39. First, the assignment of weights at the component level, without unique economic justification, is inconsistent with economic practice. Typically, weighting is applied in survey analyses to correct imperfections in surveys or in regression analyses to normalize errors.⁵³ In those instances, a unique weight is applied to each variable, for each observation, using a function or a formula.⁵⁴ Sidak seems to suggest weights be assigned as follows:

$$\begin{aligned} \text{Weighted Competitive Contribution Margin} &= \text{Weight} * \% \Delta \text{CCM} \\ \text{Weighted Competitive Growth Differential} &= \text{Weight} * (\text{Market Share}_{USPS,t-1} * \\ &\quad (\% \Delta \text{Revenue}_{USPS} - \% \Delta \text{Revenue}_{C\&M})) \end{aligned}$$

⁵³ See Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach* 280-94 (5th ed. 2013) (Wooldridge); see also Sharon L. Lohr, *Sampling: Design and Analysis* 225-29 (1999).

⁵⁴ Wooldridge at 280-94.

However, statistically, a more accurate assignment of weights would be as follows:

Weighted Competitive Contribution Margin

$$= \left(\frac{(Weight_1 * Revenue) - (Weight_2 * Attributable Cost)}{Weight_1 * Revenue} \right)$$

Weighted Competitive Growth Differential

$$= (Weight_1 * Market Share_{USPS,t-1}) \\ * \left(\left(\left(\frac{Weight_{2,t} * Revenue_{USPS,t}}{Weight_{2,t-1} * Revenue_{USPS,t-1}} \right) - 1 \right) \right. \\ \left. - \left(\left(\frac{Weight_{3,t} * Revenue_{C\&M,t}}{Weight_{3,t-1} * Revenue_{C\&M,t-1}} \right) - 1 \right) \right)$$

The Commission finds that assigning unique weights to each variable in the context of the proposed formula would be inappropriate without an economic rationale for each weight (e.g., to correct imperfections (survey analysis) or to normalize errors (regression analysis)).⁵⁵ Sidak does not propose an economic rationale for assigning any particular set of weights, and the Commission has not separately identified any. Without an economic rationale or justification, the application of unique weights to each variable would be artificial and thus inappropriate. *Id.*

Second, it would be problematic to assign weights at the component level because both the Competitive Contribution Margin and the Competitive Growth Differential rely in part on a shared input, the Postal Service's competitive product revenue. See Order No. 4402 at 18-19, 23; see *also* sections IV.A.1.c and IV.A.2.c, *supra*. For this reason, the components are not independent and are considered economically related.⁵⁶ Due to the relatedness of variables (*i.e.*, *Revenue*) from the Competitive Contribution Margin and ($\% \Delta Revenue_{USPS}$) from the Competitive Growth

⁵⁵ *Id.* at 280-94.

⁵⁶ Related terms are commonly used in econometric models. See Wooldridge at 198-200.

Differential), if unique weights are assigned to the two components, the effect on those components and the formula's calculation would be disproportionate. To weight the components in a formula of this type would be inconsistent with statistical practice and would diminish the accuracy of the formula by changing how the components interact with each other.⁵⁷

Table IV-3 below illustrates the calculation using the Commission's revised proposed formula starting with an appropriate share of 5.5 percent in FY 2007.

Table IV-3
Calculation of Appropriate Share,
FY 2007 – FY 2019⁵⁸

Fiscal Year	Appropriate Share for the Current Year (AS_t)	Percentage Change in Competitive Contribution Margin for the Prior Year ($\% \Delta CCM_{t-1}$)	Competitive Growth Differential for the Prior Year (CGD_{t-1})	Appropriate Share for the Following Year (AS_{t+1})
FY 2007	5.5%	N/A	N/A	5.5%
FY 2008	5.5%	0.0%	0.0%	5.5%
FY 2009	5.5%	-5.9%	0.7%	5.2%
FY 2010	5.2%	13.4%	1.2%	6.0%
FY 2011	6.0%	15.7%	0.9%	7.0%
FY 2012	7.0%	-7.9%	-0.2%	6.4%
FY 2013	6.4%	3.7%	2.7%	6.8%
FY 2014	6.8%	5.5%	2.5%	7.3%
FY 2015	7.3%	0.4%	1.2%	7.4%
FY 2016	7.4%	-2.6%	0.2%	7.2%
FY 2017	7.2%	18.1%	1.4%	8.6%
FY 2018	8.6%	1.3%	1.1%	8.8%

⁵⁷ See *id.* at 280-94.

⁵⁸ Source: Library Reference PRC-LR-RM2017-1/2.

The proposed revised formula and each resulting appropriate share percentage reflect trends in the market. For example, Table IV-3 shows that the appropriate share would have decreased from FY 2009 to FY 2010 under the proposed modified formula (comparing the second column with the last column of the FY 2009 row). This decrease would have occurred in response to a decline in the Postal Service's market power in FY 2008 (as measured by the Competitive Contribution Margin shown in the third column of the FY 2009 row) largely due to the global financial crisis. Although there was an increase in the Competitive Growth Differential in FY 2008 (as shown in the fourth column of the FY 2009 row), it would not have offset the decline in the Competitive Contribution Margin. The appropriate share would have also decreased from FY 2012 to FY 2013 (comparing the second column with the last column of the FY 2012 row), again in response to a decline in the Postal Service's market power (as measured by the Competitive Contribution Margin shown in the third column of the FY 2012 row). In this case, the decline was due to changes in the mail mix that caused competitive products' revenue to increase less than attributable costs. Beginning with FY 2014's appropriate share, the appropriate share would have steadily increased as the Postal Service expanded its market power and market position. As a result, the appropriate share for FY 2019 (as indicated in the bottom-right cell in Table IV-3) would be 8.8 percent under the Commission's modified formula.

B. Analysis Pursuant to 39 U.S.C. 3633(b)

As it did in Order No. 4402, in this section, the Commission explains how its modified formula captures the prevailing competitive conditions in the market and other relevant circumstances as required by 39 U.S.C. 3633(b). Additionally, the Commission addresses the remaining element of section 3633(b)—whether any costs are uniquely or disproportionately associated with Postal Service competitive products.

1. Prevailing Competitive Conditions in the Market

- a. Order No. 4402

In Order No. 4402, to assess the prevailing competitive conditions in the market, the Commission considered whether there was any evidence of Postal Service competitive advantage; whether there had been any changes in Postal Service market share; and whether there had been any changes in the package delivery market or to competitors since the Commission's last appropriate share review.⁵⁹

The Commission identified and discussed changes in market conditions that had occurred since its last appropriate share review and determined that its formula-based approach captured these considerations. Order No. 4402 at 34-40. For example, the Commission found that the Postal Service Lerner Index would reflect any Postal Service competitive advantage because the more market power the Postal Service possesses, the larger the Postal Service Lerner Index would be. *Id.* at 35. The Commission also determined that the formula would capture any evidence of predatory pricing because, should the Postal Service ever engage in predatory pricing, the Postal Service Lerner Index value would be negative. *Id.* at 36-37. In addition, the Commission found that the formula captured Postal Service and competitor market share by revenue mainly through the Competitive Market Output. *Id.* at 38-39. Finally, the Commission found that changes in the market including overall growth, entry and exit of firms, and

⁵⁹ Order No. 4402 at 34-40. The Commission also mentioned a purely qualitative factor previously considered as a market condition—whether there was any evidence of antitrust actions filed against the Postal Service. *Id.* at 34 n.60. The Commission found that that factor could not be explicitly captured through the proposed quantitative formula. *Id.* However, the Commission did determine antitrust actions were implicitly captured by the previously proposed formula because changes in the Postal Service's market power could offer insight into whether the Postal Service was engaging in the kinds of anticompetitive behavior that would underlie an antitrust action. *See id.* Because the Competitive Contribution Margin continues to measure the Postal Service's market power, the Commission finds that the modified formula implicitly captures antitrust actions for the same reasons described in Order No. 4402.

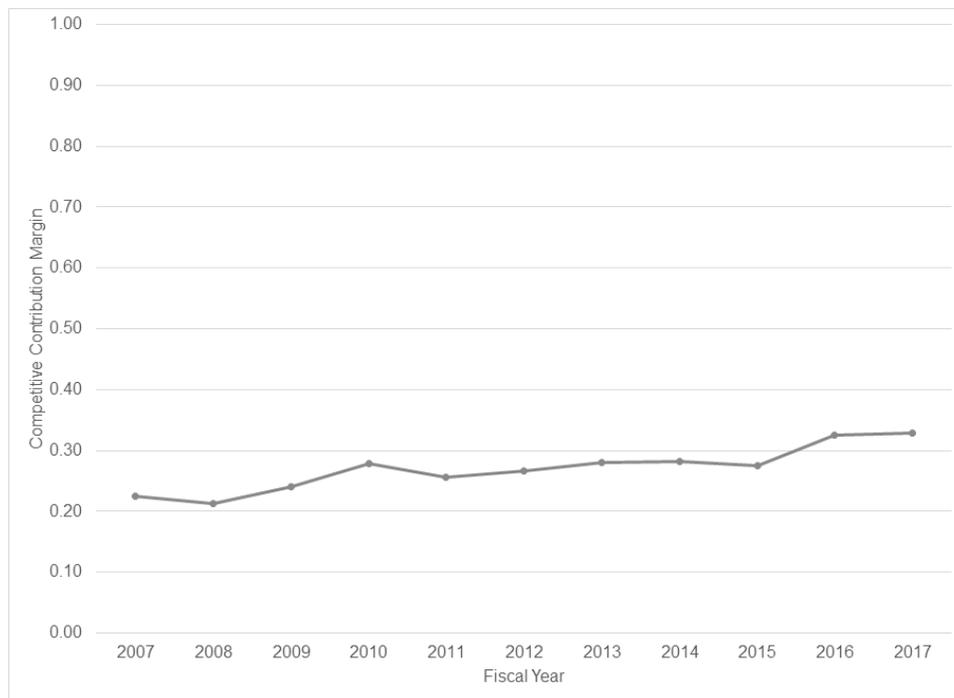
innovation would be observed in both the Postal Service Lerner Index and Competitive Market Output. *Id.* at 39-40.

b. Modified Formula's Compliance with Section 3633(b)

Despite modifications to the previously proposed components, the modified formula captures the prevailing competitive conditions in the market. First, similar to the Postal Service Lerner Index, the Competitive Contribution Margin provides insight into whether the Postal Service possesses a competitive advantage.⁶⁰ The higher the Competitive Contribution Margin, the more market power the Postal Service possesses. Any large increases in the Competitive Contribution Margin may indicate a competitive advantage under certain circumstances. Just as with the Postal Service Lerner Index, the Competitive Contribution Margin also indicates whether the Postal Service is engaging in predatory pricing because the resulting Competitive Contribution Margin would be negative. If the Postal Service were engaging in predatory pricing, its attributable costs would be greater than its revenue, and, as calculated in the Competitive Contribution Margin, the difference between them would be less than zero, resulting in a negative value. Figure IV-1 below displays the Competitive Contribution Margin from FY 2007 to FY 2017.

⁶⁰ As discussed in Order No. 4402, the Commission also uses its analysis required by section 703(d) to assess whether Postal Service competitive products have a competitive advantage. See Order No. 4402 at 35, 54-68. The Commission clarifies that a section 703(d) analysis is the primary way the Commission assesses whether Postal Service competitive products have a competitive advantage due to differences in the application of federal and state laws to the Postal Service compared to competitors. The Commission notes that it also uses other factors (*e.g.*, large increases in market power or evidence of Postal Service predatory pricing) to assess whether the Postal Service has a competitive advantage.

Figure IV-1
Postal Service Competitive Contribution Margin,
FY 2007 – FY 2017⁶¹



As shown in Figure IV-1, the Competitive Contribution Margin has never been negative. As a result, the Commission continues to find no evidence of Postal Service predatory pricing. The Commission maintains that the use of the Competitive Contribution Margin in its modified formula will provide an ongoing indication of whether the Postal Service is engaging in predatory pricing.

Second, the change in the Postal Service's market share by revenue would be reflected in the Competitive Growth Differential even more so than the Competitive Market Output component of the previously proposed formula. Unlike the Competitive

⁶¹ Source: Library Reference PRC-LR-RM2017-1/2.

Market Output, which reflected market share in its composition, the Competitive Growth Differential directly incorporates Postal Service market share into the calculation of the appropriate share, as discussed in section IV.A.2.c, *supra*. If the Postal Service's market share were to grow from an increase in revenue, the Competitive Growth Differential would increase, thereby increasing the appropriate share if all other factors were to remain constant. If the Postal Service's market share were to decline from a decrease in revenue, the Competitive Growth Differential would decrease, thereby decreasing the appropriate share if all other factors were to remain constant. Additionally, similar to the Postal Service Lerner Index, any growth or decline in the Postal Service's market share caused by shifts in demand or pricing strategies would be reflected in the Competitive Contribution Margin because such shifts would affect the Postal Service's ability to price above costs and therefore its market power. See Order No. 4402 at 39.

Finally, changes in the market and to competitors, such as overall market growth, firm entry or exit from the market and innovation, are reflected by both of the modified components. For example,⁶² if a firm enters the market and generates new business, competitor revenue relative to the Postal Service's revenue would increase, thereby decreasing the Competitive Growth Differential. Alternatively, if a firm enters the market and takes business from the Postal Service—whether through pricing or innovation—the Postal Service would have to price closer to marginal cost to remain competitive, thereby reducing the Competitive Contribution Margin. However, if a firm exits the market and the business it used to generate is lost, it could cause a decrease in competitor revenue and an increase the Postal Service's market share, thereby increasing the Competitive Growth Differential. These various examples illustrate the

⁶² Each example assumes all other factors remain constant.

modified formula's ability to capture overall changes, including expansion or retraction in the competitive market.

2. Unique or Disproportionate Costs

As previously noted, the second element of section 3633(b) is that the Commission must consider "the degree to which any costs are uniquely or disproportionately associated with any competitive products." See 39 U.S.C. 3633(b); see section III.A, *supra*. The analysis of this second element differs from the other elements in section 3633(b) because the Commission's consideration of the second element is unrelated to the Commission's formula-based approach.

For that reason, in Order No. 4402, the Commission's discussion of whether any costs are uniquely or disproportionately associated with any competitive product relied on its current costing methodologies. See Order No. 4402 at 43-45. The Commission's current costing methodology attributes all reliably identifiable, causally related costs that can be traced to individual products to those products and was recently upheld by the D.C. Circuit.⁶³ The requirement that cost attribution must be based on reliably identified causal relationships comes from the PAEA. Order No. 4402 at 43 (citing 39 U.S.C. 3622(c)(2)). The Commission noted that "[b]y definition, costs identified as institutional are those that cannot be causally linked to any specific product" and found that there were no costs uniquely associated or disproportionately associated with any competitive products that were not already attributed to competitive products under the Commission's methodology. *Id.* at 43-44.

The Commission's discussion on whether any costs were uniquely associated or disproportionately associated with any competitive products elicited multiple

⁶³ *Id.*; see generally *UPS*, 890 F.3d 1053.

comments.⁶⁴ However, as this Revised Notice of Proposed Rulemaking is concentrated on modifications to its proposed formula-based approach, the Commission will address the comments related to “the degree to which any costs are uniquely or disproportionately associated with any competitive products” in a subsequent order.

3. Other Relevant Circumstances

a. Order No. 4402

In its assessment of other relevant circumstances in Order No. 4402, the Commission considered the effects of: (1) products which have been transferred from the market dominant product list to the competitive product list since the Commission’s last review of the appropriate share; (2) changes to the mail mix (*i.e.*, the relative proportions of individual mail products’ volumes within the overall postal system) since the last review of the appropriate share; (3) uncertainties in the marketplace; and (4) the risks associated with setting the appropriate share either too high or too low. Order No. 4402 at 45-53. The Commission identified and discussed changes in these relevant circumstances and determined that all were reflected in its proposed formula-based approach. *Id.*

First, the Commission identified product transfers since its last review of the appropriate share and determined that they were reflected in the previously proposed formula because the transferred products’ revenue was automatically included in the Postal Service’s portion of the Competitive Market Output, and the transferred products’ revenue-per-piece and unit volume-variable cost were incorporated into the composition of the Postal Service Lerner Index. *Id.* at 46.

⁶⁴ See, e.g., Amazon Comments at 8-11; Postal Service Comments at 4-5, 13, 16, 26-28; Sidak Decl. at 53-55.

Second, the Commission noted that the Postal Service has experienced mail mix changes since the Commission's last review of the appropriate share, as market dominant volumes have continued to decline and competitive volumes have continued to increase. *Id.* at 46-49. The Commission determined that the formula's Competitive Market Output component incorporated changes in the Postal Service's mail mix by including revenue that the Postal Service received from any increase in competitive product volume. *Id.* at 48-49. Likewise, the Postal Service Lerner Index would reflect the growth or decline of competitive products with varying degrees of profitability. *Id.*

Third, with regard to market uncertainties, the Commission explained that "shifts in market demand or macroeconomic conditions would be reflected in the appropriate share determination through changes in the Postal Service Lerner Index and Competitive Market Output." *Id.* at 49. The Commission also noted that the last 5 years have been a time of significant innovation and development in the delivery industry, and that it is important for the Commission's proposed formula-based approach to be able to incorporate such changes. *Id.* For potential competitor innovation or changes in e-commerce, the Commission explained that both would be reflected in the Competitive Market Output because competitor revenue would change as their innovations succeeded or failed. *Id.* The Commission also noted it was possible for competitor innovation to affect the Postal Service Lerner Index should it cause the Postal Service to alter its pricing of competitive products. *Id.* at 49-50.

Finally, the Commission has consistently recognized that there are risks inherent in setting the appropriate share either too high or too low. *Id.* at 50-51; *see also* Order No. 1449 at 12. If the appropriate share were set too high, the Postal Service would be forced to raise its prices to non-competitive levels. Order No. 4402 at 50. If the appropriate share were set too low, the Postal Service might be incentivized to discount its prices in order to gain market share. *Id.* at 50. The Commission found that its proposed formula should limit increases in the appropriate share to no higher than

appropriate to account for the Postal Service's growth in market power and the growth of the market as a whole. *Id.* With regard to the risk of the appropriate share being set too low, the Commission noted that price discounting on the scale necessary to gain market share would come at the expense of the Postal Service's overall profitability. *Id.* at 50-51. The Commission therefore concluded that the Postal Service possesses little incentive to engage in such behavior. *Id.* at 51.

b. Modified Formula's Compliance with Section 3633(b)

Despite changes to the previously proposed components, with the Competitive Contribution Margin and the Competitive Growth Differential, the modified formula captures other relevant circumstances. First, the modified formula continues to capture changes caused by Postal Service product transfers to the competitive product list. When a product is transferred from the market dominant to the competitive product list, the modified formula continues to incorporate it directly through the Competitive Growth Differential because the modified component continues to include the transferred product's revenue as part of the Postal Service's revenue. The effect of product transfers would also be reflected in changes in Postal Service market share because market share is calculated using, in part, Postal Service revenue, which would include the revenue of any transferred product. In addition, the transferred product's attributable costs and revenue are incorporated into the Competitive Contribution Margin. Any change in the Competitive Contribution Margin resulting from a transfer reflects the Postal Service's market power in the expanded competitive market, as discussed above. See section IV.A.1.c, *supra*.

Second, as it relates to changes in the mail mix, the Commission noted in Order No. 4402 that mail mix changes occur as demand for postal products shifts. Order No. 4402 at 46. Most recently, Postal Service market dominant product demand has decreased, while demand for its competitive products has increased. *Id.* at 46-48. The modified formula captures these mail mix changes as the Competitive Growth

Differential reflects the revenue the Postal Service receives from any increase in competitive product volume. The Competitive Contribution Margin, similar to the Postal Service Lerner Index, would reflect the growth or decline of very profitable or less profitable competitive products. See *id.* at 48-49.

Third, regarding market uncertainties, the modified formula captures changes in market demand or other macroeconomic conditions through changes in either of the modified components. For example, if demand in the market declines, because of a recession or other conditions, there may be downward pressure on prices in the market. This occurrence may cause the Postal Service to reduce its prices in order to preserve volume, reducing the Competitive Contribution Margin. Other competitors may reduce prices as well, resulting in changes to the market overall; an occurrence that would be reflected in the Competitive Growth Differential.

The Commission also finds that its modified formula should capture efforts to innovate or changes in e-commerce, accomplishing the same objective as the previously proposed formula. The Competitive Growth Differential captures these changes as they affect the Postal Service's position in the market. For example, if competitors in the aggregate were to successfully innovate and generate more revenue relative to the Postal Service, the Competitive Growth Differential would decrease if all other factors were to remain constant. If the Postal Service were to successfully innovate and generate more revenue relative to its competitors, the Competitive Growth Differential would increase if all other factors were to remain constant.

Finally, in terms of the risk involved with setting the appropriate share too high, the Commission finds that this risk is addressed by the modified formula, just as it was by the previously proposed formula. The modified formula continues to limit increases in the appropriate share to no higher than appropriate to account for the Postal Service's growth in market power and for growth in the Postal Service's market position. In terms of the risks involved in setting the appropriate share too low and allowing the

Postal Service to gain market share by discounting prices, the Commission continues to find that this risk is minimal. As noted in Order No. 4402, the Postal Service has little incentive to discount prices in order to gain market share because discounting prices to gain market share would decrease the Postal Service's profitability at a time when it continues to face financial challenges.⁶⁵

V. SECTION 703(d) OF THE PAEA

As discussed in Order No. 4402,⁶⁶ in order to determine whether Postal Service competitive products enjoyed advantages over private carriers, Congress directed the FTC to prepare a report identifying federal and state laws that apply differently to the Postal Service's competitive products than similar products offered by private competitors and to account for the net economic effect resulting from such differences.⁶⁷ Additionally, section 703(d) directs the Commission, when revising regulations under 39 U.S.C. 3633, to consider subsequent events that may affect the continuing validity of the FTC's net economic effect finding.⁶⁸

Order No. 4402 presented the first proposed revision to a regulation issued under 39 U.S.C. 3633 since the PAEA's enactment. The Commission provided its analysis pursuant to section 703(d) in Order No. 4402. Order No. 4402 at 54-68. In that analysis, the Commission discussed the FTC Report and its findings, defined the scope of its review pursuant to section 703(d), and performed the required analysis based on the statute. *Id.* The comments received in response to Order No. 4402 have not

⁶⁵ See Order No. 4402 at 50-51. The modified formula continues to be calculated with a time lag that further discourages price discounting by the Postal Service because the negative consequences would appear before the benefits. See *id.* at 51.

⁶⁶ See *id.* at 54-58.

⁶⁷ See PAEA, 120 Stat. 3244; see also S. Rep. No. 108-318 at 29 (2004); PAEA section 703(a) and (b). Section 703 was not codified and is reproduced in the notes of 39 U.S.C.A. 3633. See also FTC Report.

⁶⁸ PAEA section 703(d).

identified any subsequent events pursuant to the Commission's interpretation of section 703(d) that were not addressed in Order No. 4402 or that have subsequently occurred.⁶⁹ The Commission also has not identified any subsequent events that would affect its section 703(d) analysis in Order No. 4402. As such, the Commission affirms its finding in Order No. 4402 that the FTC's conclusion that the Postal Service operates at a net economic disadvantage continues to be valid.

VI. ADMINISTRATIVE ACTIONS

Additional information concerning this rulemaking may be accessed via the Commission's website at <http://www.prc.gov>. Interested persons may submit comments on the modified formula-based approach and related revisions to proposed rules⁷⁰ no later than 30 days after the date of publication of this Revised Notice of Proposed Rulemaking in the *Federal Register*. Pursuant to 39 U.S.C. 505, Kenneth R. Moeller continues to be designated as an officer of the Commission (Public Representative) to represent the interests of the general public in this proceeding.

The Regulatory Flexibility Act requires federal agencies, in promulgating rules, to consider the impact of those rules on small entities. See 5 U.S.C. 601, *et seq.* (1980). If the proposed or final rules will not, if promulgated, have a significant economic impact on a substantial number of small entities, the head of the agency may certify that the initial and final regulatory flexibility analysis requirements of 5 U.S.C. 603 and 604 do not apply. See 5 U.S.C. 605(b). In the context of this rulemaking, the Commission's

⁶⁹ The Commission's discussion on the FTC Report and section 703 elicited multiple comments. See, e.g., UPS Comments at 22-26; Sidak Decl. at 6, 9-15, 52-53. However, as this Revised Notice of Proposed Rulemaking is concentrated on modifications to the proposed formula-based approach, the Commission will address the comments received on the FTC Report and section 703(d) in a subsequent order.

⁷⁰ The Commission makes one revision to proposed § 3015.7(c)(1). The Commission replaces the formula proposed in Order No. 4402 (*i.e.*, $AS_{t+1} = AS_t * (1 + \% \Delta LI_{t-1} + \% \Delta CMO_{t-1})$) with the formula proposed in this Revised Notice of Proposed Rulemaking (*i.e.*, $AS_{t+1} = AS_t * (1 + \% \Delta CCM_{t-1} + CGD_{t-1})$). The proposed rules are set forth below the signature of this Order.

primary responsibility is in the regulatory oversight of the United States Postal Service. The rules that are the subject of this rulemaking have a regulatory impact on the Postal Service, but do not impose any regulatory obligation upon any other entity. Based on these findings, the Chairman of the Commission certifies that the rules that are the subject of this rulemaking will not have a significant economic impact on a substantial number of small entities. Therefore, pursuant to 5 U.S.C. 605(b), this rulemaking is exempt from the initial and final regulatory flexibility analysis requirements of 5 U.S.C. 603 and 604.

VII. ORDERING PARAGRAPHS

It is ordered:

1. Interested persons may submit comments no later than 30 days from the date of the publication of this notice in the *Federal Register*.
2. Pursuant to 39 U.S.C. 505, Kenneth R. Moeller continues to be appointed to serve as the Public Representative in this proceeding.
3. The Secretary shall arrange for publication of this Order in the *Federal Register*.

By the Commission.

Stacy L. Ruble
Secretary

List of Subjects for 39 CFR Part 3015

Administrative practice and procedure.

For the reasons stated in the preamble, the Commission amends chapter III of title 39 of the Code of Federal Regulations as follows:

PART 3015—REGULATION OF RATES FOR COMPETITIVE PRODUCTS

1. The authority citation for part 3015 continues to read as follows:

Authority: 39 U.S.C. 503; 3633.

2. Amend § 3015.7 by revising paragraph (c) to read as follows:

§ 3015.7 Standard for Compliance.

* * * * *

(c)(1) Annually, on a fiscal year basis, the appropriate share of institutional costs to be recovered from competitive products collectively, at a minimum, will be calculated using the following formula:

$$AS_{t+1} = AS_t * (1 + \% \Delta CCM_{t-1} + CGD_{t-1})$$

Where,

AS = Appropriate Share, expressed as a percentage and rounded to one decimal place

CCM = Competitive Contribution Margin

CGD = Competitive Growth Differential

t = Fiscal Year

If t = 0 = FY 2007, AS = 5.5 percent

(2) The Commission shall, as part of each Annual Compliance Determination, calculate and report competitive products' appropriate share for the upcoming fiscal year using the formula set forth in paragraph (c)(1) of this section.