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

MAILING ONLINE SERVICE	Docket No. MC98-1

REBUTTAL TESTIMONY
OF
WILLIAM M. TAKIS
ON BEHALF OF
UNITED STATES POSTAL SERVICE

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REBUTTAL TESTIMONY

OF

WILLIAM M. TAKIS

AUTOBIOGRAPHICAL SKETCH

My name is William M. Takis. I am a Partner in PricewaterhouseCoopers' (PwC) Washington Consulting Practice, located at 1616 North Fort Myer Drive, Arlington, VA 22209.

I am responsible for directing many of PwC's projects in the areas of cost analysis and rate design for regulated utilities. My work has focused on cost of service studies, cost of capital studies, rate design analyses, and other related financial and economic studies for utilities in the electric, natural gas, telecommunications, and water supply industries. I have performed these studies for numerous utilities in the United States and abroad.

I am also a leader of PwC's Postal Industry Market Team, comprised of over 200 full-time professionals providing consulting services to the U.S. Postal Service and numerous foreign postal administrations. Over the past thirteen years, I have directed numerous cost analysis projects for the U.S. Postal Service, focusing on the following areas:

- incremental costs
- mail processing
- surface transportation
- air transportation
- window service
- recovery of prior years losses
- new product introductions.

I have also written several papers and articles concerning my work in regulated industries which have been published in various journals and presented at industry conferences.

I have a B.A. in Economics from Williams College and an M.A. in Economics from the University of Maryland. In addition, I have completed most of the requirements for a Ph.D. in Economics at Maryland, including core coursework and comprehensive theory exams. I have also passed the Ph.D. field exam in Industrial Organization.

I have appeared before the Postal Rate Commission on three separate occasions. In Docket No. MC95-1 (USPS-T-12), I presented testimony concerning a variety of costing issues, concentrating on Standard Class letter-shaped mail processing costs. In that same docket, I presented rebuttal testimony (USPS-RT-4) concerning costing issues for Standard Class Enhanced Carrier Route mail. In Docket No. R97-1 (USPS-T-41), I presented estimates of the Postal Service's incremental costs.

I. PURPOSE AND SCOPE OF TESTIMONY

The purpose of my testimony is to comment on several positions that have been taken by participants in this Docket. First, I respond to various arguments made by the Office of the Consumer Advocate (OCA) in its response to Notice of Inquiry (NOI) No. 1, Issue 5 (*OCA Response*), concerning the allocation of advertising costs, including the following:

- the OCA's assertion that advertising costs for POL are volume variable (*OCA Response*, pages 2 through 4);
- the OCA's belief that even if advertising costs are not volume variable, they should still be distributed to products sold through the POL channel, including MOL (*OCA Response*, pages 4 through 10);
- the OCA's use of the testimony of past witnesses appearing before the Commission in previous Dockets to support its position in this case (*OCA Response*, pages 6 through 7);
- the OCA's use of past Commission treatment of the costs associated with Special Delivery Messengers to support its position in this case (*OCA Response*, pages 8 through 10).

I believe that the conclusions drawn by the OCA about the volume variability of advertising costs are incorrect, and that the approach proposed by the OCA for allocating these costs to individual products may be harmful to the Postal Service, competitors, and the mailing public. Moreover, the OCA's arguments are inconsistent with both sound economic costing principles and with Commission precedent.

Second, I also comment on the testimony of Witness Prescott (MASA/PB-T-1), concentrating on two specific issues:

- his conclusion that advertising costs should be allocated to products using a "distribution key" based on the relative number of MOL and POL transactions (Tr. 9/2135-37);
- his statements about vertical integration and the supposed negative effects of the Postal Service's contracting with companies in the printing market (Tr. 9/2117-22).

As with my criticisms of the OCA's similar recommendation, I believe Witness Prescott's proposal concerning the distribution of advertising costs will result in an arbitrary allocation that violates sound economic costing principles. Such an allocation of costs may be harmful to the Postal Service, its competitors, and mailers. Furthermore, I believe his concerns about the potential harmful effects of vertical integration are unjustified and should not affect the Commission's decision to recommend the Mailing Online service.

In the following section of my testimony (Section II), I provide an overview of the importance of *cost causality* in developing product costs, concentrating on Postal Service and Commission precedent. In Section III, I show how the OCA's and Witness Prescott's proposals concerning the allocation of advertising costs violate cost causality criteria and will result in an arbitrary allocation of costs to products sold through the POL channel with potentially harmful consequences. I then provide my recommendations for the proper treatment of advertising costs in Section IV. Section V addresses Witness Prescott's concerns about the supposed harmful effects of vertical integration. Section VI concludes and summarizes my testimony.

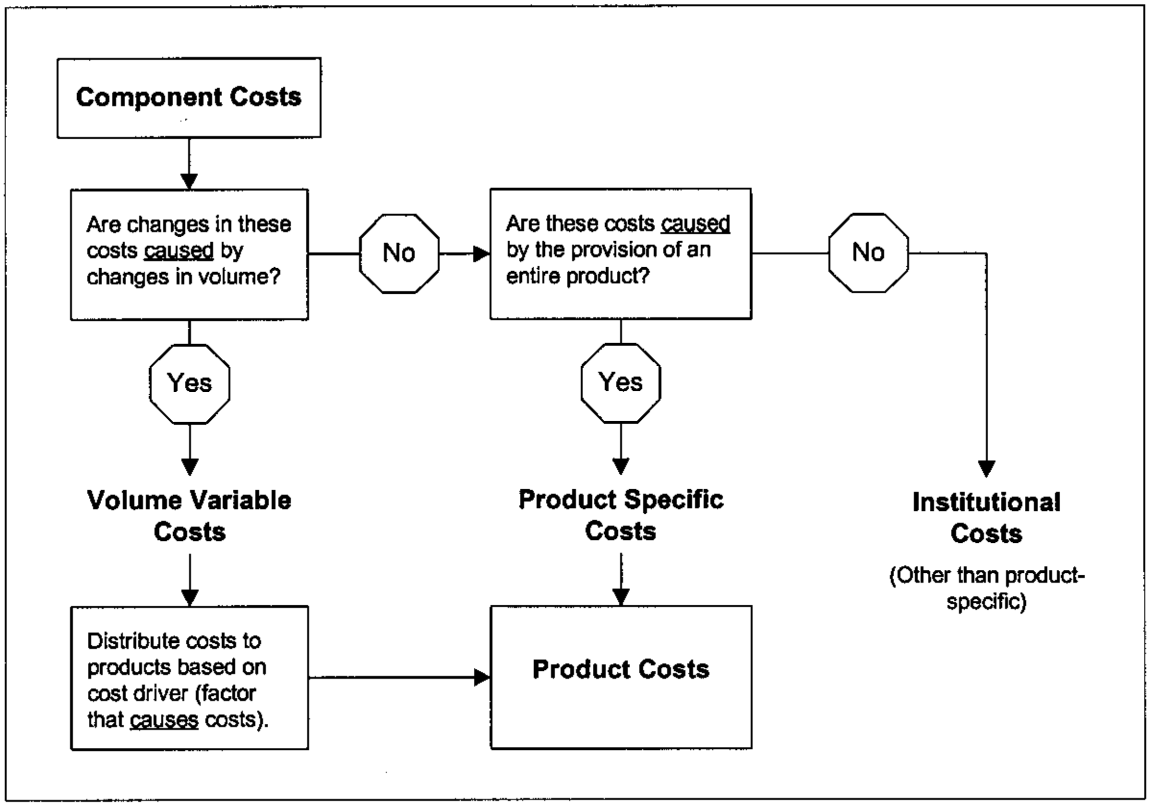
II. THE IMPORTANCE OF COST CAUSALITY IN POSTAL COSTING

In its Notice of Inquiry No. 1, Issue No. 5, the Commission asks interested parties to comment on the proper treatment of joint marketing costs. As I noted briefly in Section I, I believe that the proposals made by both the OCA and Witness Prescott for treating these costs are inconsistent with the Commission's precedent, not to mention sound economic costing principles. My belief is based on the fact that both the OCA and Witness Prescott ignore or misunderstand the critical concept of *cost causality* in their proposals and its important place in Commission precedent. Before I begin my discussion of the specific proposals made by the OCA and Witness Prescott in this area, it would first be helpful to review the important place the principle of cost causality has in postal costing, thus laying a framework for my subsequent discussion.

A. Allocating Costs to Products on a Causal Basis

The concept of cost causality has served as the foundation of both the Postal Service's and the Commission's costing systems since the Postal Reorganization Act was passed. While the Postal Service and the Commission do not always agree about what constitutes attributable costs, treatment of specific segments/components (*e.g.*, variabilities for mail processing costs in Docket No. R97-1), as well as what to do with those costs (*i.e.*, whether volume variable alone or a broader definition of attributable costs should serve as the basis for markups, as was debated in Docket No. R97-1), both the Postal Service and the Commission have consistently held that costs should be allocated to individual products and groups of products on a causal basis.

Exhibit USPS-RT2-A: Conceptual Overview of Postal Product Cost Development



The diagram presented in Exhibit USPS-RT2-A provides a simplified overview of the development of postal costs for a generic cost component their allocation to individual products given my understanding of the Postal Service's and Commission's approaches.[1] As illustrated in the exhibit, causality is the key consideration for the development of product costs. For example, if changes in costs for a particular component are caused by changes in volume at the margin, then that portion of the component cost is termed *volume variable*. Volume variable costs within a particular component are distributed to individual products or subclasses based on *cost drivers* for that component; these cost drivers are also related to those elements that actually cause costs to accrue. If a cost is not caused by marginal changes in volume, but is

[1] There are many additional nuances in the Postal Service's costing system, particularly when allocating product-specific costs to groups of products. I discuss several of these nuances in Section IV with regard to the POL case.

caused by the provision of an entire product or subclass, then the cost is *product-specific* to that product or subclass.[2] If costs are not caused by a specific product or subclass, then they are part of *institutional* costs that are not product-specific. Therefore, at every step of the cost development process, *cost causality* is the critical determinant for allocation to products.

The important role of cost causality in both the Postal Service's and the Commission's development of product costs can be illustrated by examining a particular cost segment in greater detail. For example, Cost Segment 14 (Purchased Transportation) contains volume variable, product-specific, and institutional costs in the various categories of transportation, as discussed below.

B. Example 1: Volume Variable/Marginal Costs and Causality

Volume variable costs for commercial air transportation are determined by examining how changes in volume *cause* changes in contract costs.[3] For example, increases in volume for different classes of mail traveling via commercial air transportation cause the Postal Service to purchase additional transportation (*i.e.*, incur additional costs) to transport additional pound-miles. These volume variable costs are then distributed to individual subclasses of mail using a distribution key based on a specific cost driver that *causes* transportation costs to accrue (*i.e.*, pound-miles).[4] These causal relationships

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[2] The term *product-specific* was introduced by the Postal Service in Docket No. R97-1. It corresponds roughly (but not exactly) to the Commissions' use of the term *specific-fixed*. Please see Tr. 9/4733-36 in Docket No. R97-1 for a complete discussion of these terms. In either case, the concept for the present discussion remains the same – these costs are *caused* by the provision of the entire subclass.

[3] Please see Witness Bradley's testimony in Docket No. R97-1 (USPS-T-13) for a complete discussion of the development of volume variable costs for purchased transportation, including the important role of cost causality.

[4] Please see Witness Nieto's testimony in Docket No. R97-1 (USPS-T-2) for a complete discussion of the distribution of volume variable costs for purchased transportation, including the important role of cost causality.

are at the heart of the purchased transportation planning and operational processes and are mirrored in the Postal Service's and the Commission's development of volume variable cost estimates.

C. Example 2: Product-Specific/Specific-Fixed Costs and Causality

Purchased transportation costs also include *product-specific costs*, such as the premium costs associated with the Eagle Network. The Eagle Network is a dedicated nighttime hub-and-spoke air network that is operated to permit next-day delivery of Express Mail. The premium costs for the network (*i.e.*, the costs over and above standard commercial air transportation costs) are not considered volume variable by the Postal Service or the Commission, but are specific to Express Mail because they are *caused* solely by the provision of this entire product (*i.e.*, these costs would not be incurred if Express Mail were no longer offered).[5] As I discussed in my testimony in Docket No. R97-1, the Eagle Network serves Express, Priority, and First-Class Mail, but it is necessary only for Express Mail.[6] According to the Postal Service's operating practices, if Express Mail were eliminated, then the Eagle Network would not be needed, and Priority and First-Class Mail would be diverted onto commercial flights without impinging on service standards. These premium costs are therefore *caused* by the existence of Express Mail. Mirroring this causal relationship, the product-specific costs associated with the premium costs of the Eagle network are included in the incremental costs of Express Mail. As with volume variable commercial air transportation costs discussed above, the causal relationships that drive operations are

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[5] Please see my testimony in Docket No. R97-1 (USPS-T-41) for a complete discussion of the development of product-specific costs for the Eagle Network, with special emphasis on causality concepts.

[6] At the time of development of product costs for Docket No. R97-1, Priority and First-Class Mail were considered "filler" on the Eagle Network, and could have met their service standards if they traveled on standard commercial flights.

used throughout the development of product costs for the product-specific (incremental) costs of the Eagle Network.

D. Differences Between Causality and Correlation

In discussing the importance of causality-based costing, it is important to note that *correlation* does not necessarily imply *causality*. Simply because a change in cost is *correlated* with a change in volume does not necessarily mean that it is *caused* by a change in volume. Furthermore, using correlation as a substitute for causality in the cost development process can result in inaccurate product costs.

The current treatment of Eagle Network costs by the Postal Service and the Commission is an example of causality-based costing that goes beyond correlation. Although the network is designed to carry Express Mail, a large portion of the volume on the Eagle Network is First-Class Mail and Priority Mail. As I described above, however, Express Mail bears all of the premium costs of the network – First-Class Mail and Priority Mail do not bear any of the responsibility for these premium costs because they are simply filling empty space that exists on the network.

A simple *correlation* analysis would find First-Class, Priority, and Express Mail volume along with the network premium costs and might mistakenly allocate the network premium to all products on the network. By contrast, a *causality* analysis (as was performed by the Postal Service and adopted by the Commission in Docket No. R97-1) shows that these premium network costs are incurred entirely for Express Mail, and, therefore, should be treated as product-specific (*i.e.*, included in incremental costs) to Express Mail and to no other product.

This example shows the potential "correlation trap" that can arise if an analyst equates *correlation* with *causation* when developing volume variable or product-specific costs.[7] I believe that the OCA falls into this trap (as does Witness Prescott, to a certain extent) when analyzing advertising costs, as I will discuss in greater detail in the next section of my testimony.

E. "Benefits" vs. "Causality"

Just as it is important not to confuse *correlation* with *causality*, it is also important not to confuse *benefits* with *causality*. The notion that a particular cost *benefits* a product is not necessarily equivalent to the notion that a product *causes* the cost to accrue. For example, First-Class Mail may benefit from being transported on the Eagle Network, but it does not cause the premium costs associated with the network. Therefore, the incremental cost of First-Class Mail should not include these premium costs, as I discuss above. As another example, each individual product benefits from the activities of the Postmaster General, but the costs of his salary are not caused by any specific product. Therefore, the Postal Service and the Commission do not allocate the PMG's costs to specific products. Any costing methodology that relies on *benefits* to allocate costs to products instead of *causality* should be viewed with suspicion.[8]

F. Fully Distributed Costing (FDC)

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[7] I do not want to leave the impression that statistical/econometric analyses cannot be used to help identify causal links. For example, the econometric analyses that the Postal Service uses to investigate cost variabilities are firmly rooted in causality principles, as they are accompanied by operational analyses of causality. I am trying to distinguish between "spurious" correlation studies and causality-based studies here.

[8] Witness Prescott and the OCA use the notion of *benefits* as a distribution mechanism inappropriately in allocating POL advertising costs to MOL, as I discuss in Section III below.

The problems associated with allocation mechanisms not based on causation can be readily seen when one examines the effects of fully distributed cost (FDC) approaches, which often rely on correlation analyses rather than causation analyses to distribute costs. Under a generic FDC system, all of an organization's costs are distributed to individual products, even though they may not be caused by those products. Direct costs are first allocated to products where causal relationships can be found. Fixed and common costs are then distributed to individual products using a variety of allocation methods that might sound reasonable on the surface, but are not reasonable when the underlying causality is examined. An individual product's share of fixed and common costs could be determined by the product's share of total volume, its share of total revenue, or some other measure. FDC approaches can often result in significant under- or over-statements of product costs, which can lead to disastrous pricing results. As I argue in greater detail in Section III below, the approach proposed by the OCA borders on fully distributed costing. Therefore, an example of the potentially harmful effects of FDC is illustrative.

The following example demonstrates how an FDC system might work within the context of C/S 7, City Delivery Carriers, Street Activity. For the purposes of this example, I assume that an FDC system would allocate direct costs to individual products in the same way that the Postal Service determines a product's volume variable cost. However, to mimic an FDC system, the fixed and common (institutional) costs from this segment must then be distributed to individual products using a potentially arbitrary allocation factor. I demonstrate how an FDC costing approach might look for C/S 7 with the following three different allocation methods for the common costs in C/S 7:

- Method A: Distribute fixed and common costs in proportion to product volume
- Method B: Distribute fixed and common costs in proportion to product revenue
- Method C: Distribute fixed and common costs in proportion to product volume variable costs

Exhibit USPS-RT2-B: Illustration of FDC Approach for Cost Segment 7 (City Carriers)

	C/S 7 Costs[1]	Percent of Total VVC[2]	Revenue[3]	Percent of Total Revenue[4]	Pieces[5]	Percent of Total Pieces[6]
First-Class Mail	$ 983,200	42.7%	$ 33,397,582	57.7%	99,659,943	52.2%
Express Mail	$ 21,530	0.9%	$ 824,698	1.4%	63,633	0.0%
Other Products & Services	$ 1,295,223	56.3%	$ 23,663,392	40.9%	91,164,484	47.8%
Other (Fixed & Common)	$ 5,854,978		N/A		N/A	
Total	$ 8,154,931		$ 57,885,672		190,888,060	

Method A: Distribute Fixed and Common Costs Based on the Proportion of Pieces

	VVC/Piece[7]	Piece Allocation of Other Costs[8]	Piece Alloc./ Piece[9]	FDC Total Cost[10]
First-Class Mail	$ 0.0099	3,056,801	$ 0.0307	$ 0.0406
Express Mail	$ 0.3383	1,952	$ 0.0307	$ 0.3690

Method B: Distribute Fixed and Common Costs Based on the Proportion of Revenue

	VVC/Piece[11]	Revenue Allocation of Other Costs[12]	Rev. Alloc./ Piece[13]	FDC Total Cost[14]
First-Class Mail	$ 0.0099	3,378,074	$ 0.0339	$ 0.0438
Express Mail	$ 0.3383	83,416	$ 1.3109	$ 1.6492

Method C: Distribute Fixed and Common Costs Based on the Proportion of VVC

	VVC/Piece[15]	VVC Allocation of Other Costs[16]	VVC Alloc./ Piece[17]	FDC Total Cost[18]
First-Class Mail	$ 0.0099	2,502,927	$ 0.0251	$ 0.0350
Express Mail	$ 0.3383	54,809	$ 0.8613	$ 1.1996

[1,3,5] Data Obtained from USPS 1997 Cost Segments and Components Report. Costs for First-Class Mail, Express Mail, and "Other Products and Services" represent volume variable costs.
[2] VVC divided by sum of First-Class Mail, Express Mail, and Other Products & Services VVC.
[4] Revenue divided by sum of First-Class Mail, Express Mail, and Other Products & Services Revenue.
[6] Pieces divided by sum of First-Class Mail, Express Mail, and Other Products & Services Pieces.
[7,11,15] VVC divided by Pieces.
[8] Other (Fixed and Common) C/S 7 Costs multiplied by Percent of Total Pieces.
[9] Piece Allocation of Other Costs divided by Pieces.
[10] VVC/Piece plus Piece Alloc./Piece.
[12] Other (Fixed and Common) C/S 7 Costs multiplied by Percent of Total Revenue.
[13] Revenue Allocation of Other Costs divided by Pieces.
[14] VVC/Piece plus Rev. Alloc./Piece.
[16] Other (Fixed and Common) C/S 7 Costs multiplied by Percent of Total VVC.
[17] VVC Allocation of Other Costs divided by Pieces.
[18] VVC/Piece plus VVC Alloc./Piece.

The results in the above table show that there is a relatively small difference between the three allocation methods for First-Class Mail – the FDC delivery unit cost only ranges from $0.035 to $0.0438. The FDC unit delivery cost for Express Mail, however, ranges between $0.369 and $1.6492 – a difference of $1.2802. On the surface, both product volume and product revenue would appear to be reasonable methods of allocating common costs – product volumes may serve as a proxy for the workload that needs to be performed and revenue represents a product's "ability to absorb" the organization's fixed and common costs. However, neither measure captures causality. The sizable difference in these allocation methods makes it impossible to determine the true cost of the product in this example. Furthermore, this example shows that the cost of one product (First-Class Mail in this example) may not be affected much by the allocation mechanism, while another product's cost (Express Mail in this example) varies wildly.

The problem with choosing an allocation factor for common costs is that there is no cause-and-effect relationship between *individual products* and a pool of *common costs* – if a causal relationship to individual products existed, these costs would not be classified as common. This example shows that FDC estimates are unreliable and the allocation methods underlying them are arbitrary. The resulting product costs can vary widely depending on the selected allocation method.

Furthermore, the effects of using cost estimates developed through FDC approaches for pricing can be disastrous. For example, if an FDC approach based on one set of allocation factors results in an artificially low product cost, the prices may be set too low, thereby harming both the Postal Service and its competitors. If, on the other hand, another set of allocation factors results in a product cost and price that are artificially high, then consumers may be harmed. In either case, with an FDC approach, one is never quite sure that prices are set accurately, and one never quite knows who is being harmed.

Both the Commission and the Postal Service have long recognized the serious problems associated with FDC approaches, and have consistently stated their disapproval for such methodologies.[9] As I argue in greater detail below, however, the OCA's and Witness Prescott's proposals in this case contain certain elements of FDC frameworks, and should be avoided in this and other cases.

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[9] See, for example, PRC Op., R87-1, vol. 2, Appendix J, CS IX, p.9. The Commission has shown its discomfort with FDC approaches for many years. In PRC Op., R74-1, the Commission stated:

> In the prior case, we expressed statutory reservations regarding a fully distributed costing method under which costs are first assigned to the classes and services on the basis of causation, and the remainder mathematically apportioned on a uniform basis. See PRC Op. 1-280, n. 1. We now believe those reservations were well taken; and that fully distributed costs, as defined above, would not satisfy the standards of § 3622. We reject a fully distributed costing method here in favor of the concepts of variability and demand discussed throughout this opinion (PRC Op., R74-1, vol. 1, p.124, n.3).

III. ANALYSIS OF THE OCA'S AND WITNESS PRESCOTT'S ARGUMENTS CONCERNING THE TREATMENT OF ADVERTISING COSTS

It is against this backdrop of the critical nature of causality in postal product cost development that I now analyze the specific proposals made by the OCA and Witness Prescott. The OCA makes two related points:

- advertising costs for MOL/POL are volume variable;
- these costs should be distributed to the individual products sold through the POL channel (*e.g.*, MOL) based on a distribution key determined by relative transaction counts.

Witness Prescott does not argue that advertising costs are volume variable, but he does propose that they be distributed using an approach similar to the OCA's. I believe that the OCA's and Witness Prescott's points are wrong because their analyses ignore important cost causality principles in both the development of volume variable costs and their distribution to products.

A. Are MOL Advertising Costs Volume Variable?

The OCA asserts that advertising costs in general are volume variable (marginal) because ". . . each extra unit of advertising cost is expended to induce a purchase by an additional buyer" (*OCA Response*, p.2). The OCA's assertion is wrong on several levels, but most importantly it misrepresents the role of causality in determining marginal costs. The textbook definition of marginal costs is the change in a firm's total costs *caused* by a marginal change in volume. The OCA's notion of marginal cost turns this definition on its head – instead of changes in volume causing changes in advertising costs, the OCA asserts that changes in advertising costs cause changes in volume. This may be true (assuming the advertising is successful), but it misses the point in defining marginal costs. From a marginal-cost/volume-variable cost development standpoint, the OCA's position is akin to the "correlation trap" discussed above. Simply because changes in advertising costs may be *correlated* with changes in volume (through a reverse causality process), it does not mean they are *caused* by them. In this case, it is clear that changes in advertising costs are not caused by subsequent changes in volume, and therefore, cannot properly be treated as volume variable.

The OCA's blanket assertion that advertising costs are designed to "induce purchases by an additional buyer" further erodes its argument that these costs should be considered volume variable. Although I am not an expert in advertising, it seems to me that advertising expenditures can be made for any number of reasons, including the following:

- to induce purchases by a new customer;
- to induce new purchases by an existing customer;
- to increase brand awareness among new and existing customers;
- to increase customer loyalty.[10]

Not all of these reasons can be directly tied to increases in sales volume, as the OCA attempts to do through its blanket assertion. Companies often undertake advertising campaigns to increase brand awareness, and not necessarily to increase sales of any one particular product. Consider, for example, the advertising campaign currently

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[10] In its response to USPS/OCA-6, the OCA questions "the wisdom of an enterprise going to the expense of advertising a non-competitive, monopoly product." This statement illustrates the OCA's fundamental lack of understanding of both advertising and monopolies. I can cite numerous examples of "monopolies" advertising their products (*e.g.*, electric utilities, cable television, etc.). They do so for many reasons, including the ones I discuss above. Furthermore, the Postal Service faces competition in First-Class Mail from a variety of sources (including the telephone, electronic mail, fax, and messenger services), despite the Private Express Statutes.

underway for my firm, PricewaterhouseCoopers. Through a variety of media, we have a campaign designed to increase PwC's brand awareness among the general public, particularly in light of our recent merger and name change. This advertising is not caused by any particular service within our firm and is not meant to drive (directly) increases in sales. Similarly, it is my understanding that POL advertising is meant to increase the public's awareness of the POL channel, and not necessarily to promote any specific product. It is also my understanding that as a convenient channel, POL promotes use of Express Mail, Priority Mail, First-Class Mail, and Standard (A) Mail.

B. How Should Advertising Costs be Distributed?

In my discussion of the distribution of volume variable costs, I noted the Commission's longstanding practice of distributing volume variable costs to individual products based on a cost driver chosen for causality reasons. In contrast to this precedent, the OCA and Witness Prescott propose to use the relative number of transactions for products sold through the POL channel to allocate POL advertising costs to specific products. The OCA claims:

> advertising and promotion of PostOffice Online is undoubtedly for the purpose of increasing public awareness of MOL, which, in turn, is intended to stimulate MOL usage....Consequently, the relative usage of POL for access to the various services available at the site is the logical distribution key.

OCA Response, p.10. Similarly, Witness Prescott suggests:

> advertising for POL is designed to attract customers to the USPS' Mailing Online and Shipping Online services. A potential customer who responds to the USPS' advertisements is not tied to a specific revenue level or size of the transaction that occurs (*i.e.*, number of pieces). Therefore, the advertising is designed to attract transactions and the advertising costs should be allocated on that basis.

Tr. 9/2136. However, as I have discussed previously, the notion that advertising costs are incurred for the purpose of attracting transactions is irrelevant from a cost allocation standpoint, because it turns the causality relationship on its head. Changes in the number of transactions do not cause changes in advertising costs (nor are they claimed to by the OCA or Witness Prescott). Therefore, the relative number of transactions is not a "cost driver" and consequently is not an appropriate distribution key for POL advertising costs.

As I demonstrated above, when one ignores causality in the development of cost drivers/distribution keys, one gets arbitrary results. Although transactions clearly do not cause advertising costs, using the relative number of transactions as a distribution key generates one specific distribution of costs to the individual products sold through the POL channel. However, following the OCA's and Witness Prescott's apparent belief that a distribution key does not have to have a causal relationship to the cost in question, a case could be made for any number of different (arbitrary) distribution keys (*e.g.*, total revenues from each product; the contribution from each product; etc.), each resulting in a different (arbitrary) distribution of costs. The fundamental problem with the OCA's and Witness Prescott's approach is that, because it ignores causality, it opens itself to arbitrariness. Any approach to cost development which does not include *at its heart* the notion of causality is inappropriate for postal costing.[11]

Witness Prescott and the OCA also appeal to the notion of *benefit* to justify their distribution of POL advertising costs to MOL (*OCA Response*, p.9; Tr. 9/2136, 2155). As I discussed in Section II above, the concept of *benefit* does not always correspond

[11] It is interesting to note that the OCA and Witness Prescott advocate similar, but not identical allocation/distribution factors (compare the OCA's response to USPS/OCA-5 to Witness Prescott's response to USPS/MASA/PB-T1-28). Each approach will result in somewhat different cost distributions. Neither approach is correct, because they are not based on causality. This example demonstrates the arbitrariness of non-causality based cost allocation methods.

to *causality*, and therefore, approaches which rely on *benefits* to distribute costs should be viewed suspiciously. In this case, MOL may benefit from POL advertising, but MOL does not cause these costs, and therefore, these costs should not be allocated to MOL.

C. OCA's Analogy to Special Delivery Messengers

The OCA tries to draw analogies between the Commission's treatment of the costs associated with Special Delivery Messengers in Docket No. R87-1 and POL advertising costs in this case (*OCA Response*, pp.8-10). The OCA, however, misses the point by ignoring the Commission's reliance on cost causality in its treatment of Special Delivery Messengers. The Commission's treatment of Special Delivery Messengers is not analogous to POL advertising costs, as I argue below.

The Commission's allocation in Docket No. R87-1 of the fixed and common costs of Special Delivery Messenger costs was based on its view that the fixed and common costs in question are "causally related to a unique service characteristic of Express Mail and Special Delivery."[12] The Commission found that the cost-causative relationship for the fixed and common costs in Special Delivery Messengers was not product volume, but the provision of an "output characteristic."[13] In the case of Special Delivery Messengers, the output characteristic is expeditious delivery for Express Mail and Special Delivery, and it is this characteristic that causes the fixed cost to accrue.

The Commission described in detail its rationale for distributing the fixed and common costs associated with Special Delivery Messengers to distinguish its approach from Fully Distributed Costing (FDC).[14] In order to distribute a fixed and common cost to products, the Commission put forth the following guidelines,

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[12] PRC Op., R87-1, vol. 2, Appendix J, CS IX, p.2.

[13] PRC Op., R87-1, vol. 1, p.122.

[14] Please see PRC Op., R87-1, vol. 1, p. 121 and PRC Op., R87-1, vol. 2, Appendix J, CS IX, pp.8-9.

> Where there are (i) a well-defined cost element, (ii) a well-defined output characteristic serving, by its presence or absence, to distinguish among classes, and (iii) a causal relationship between these two, it may be possible to attribute even a fixed common cost element on the basis of relative responsibility. (emphasis added)[15]

In the case of POL advertising costs, it is difficult to discern what "well-defined output characteristic" is provided to MOL by POL advertising. It would be difficult to claim that advertising provides a "unique service characteristic" in the same way that Special Delivery Messengers provide expeditious delivery for Express Mail and Special Delivery.[16] In addition, condition (iii), the causal relationship between the fixed cost and the unique characteristic, is clearly not met – the Postal Service has stated that there are no plans for advertising MOL only, and if MOL did not exist, the advertising plan for POL would not be affected (Tr. 4/881).

The Commission further summarized its reasoning for making this cost part of the attributable cost base of Express Mail and Special Delivery by saying,

> Put differently: we can say that the fixed cost in question could be eliminated by abolishing the special entitlement to expeditious delivery rather than the classes as a whole.[17]

POL advertising costs would not be eliminated by abolishing the entire MOL product, as the Postal Service has stated. This result stands in clear contrast to the OCA's claim

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[15] Id. At p. 122.
[16] Please see PRC Op., R87-1, vol. 2, Appendix J, CS IX, p. 2. PRC Op., R80-1 at ¶ 0330, which gives examples of characteristics such as speed, reliability, or protection from theft.
[17] PRC Op., R87-1, vol. 1, p.123.

that "the marketing costs for MOL would appear to meet every condition established by the Commission in Docket No. R87-1."[18]

The Commission also discussed how to handle cost distribution to products, such as First-Class Mail, that were handled by Special Delivery Messengers, but did not require expeditious handling. The Commission determined that the handling of First-Class Mail on Special Delivery Routes was "incidental" to the activities undertaken on behalf of Express Mail, Special Delivery, and their international counterparts.[19] The Commission, therefore, did not distribute any of the fixed and common costs of Special Delivery Messengers to products such as First-Class Mail. Again, the same claim can be made for MOL. MOL is not causing POL advertising costs to accrue – it is incidental to POL advertising plans (Tr. 4/881). Therefore, no advertising costs are caused by MOL, and none should be allocated to MOL, contrary to the OCA's assertions.

D. Should Institutional Costs be Distributed to Subsets of Products?

The OCA states that "it becomes clear that the most equitable treatment for fixed costs incurred by only a small subset of classes is to make that cost part of the attributable cost base and mark it up" (*OCA Response*, p.7). The approach to cost allocation that the OCA is proposing represents a fundamental departure from causality-based cost analysis, and resembles a proposal for fully distributed costing (FDC), despite its protestations that it does not want to employ FDC.

The OCA's costing approach, when taken to its logical conclusion, could lead to absurd results. Consider the fixed costs associated with Postal Service delivery. City delivery street activities contain over $5 billion in fixed and common costs.[20] City delivery

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[18] *OCA Response*, p.9.
[19] PRC Op., R87-1, vol. 2, Appendix J, CS IX, p.10.
[20] FY 97 CRA.

activities also serve only a subset of the Postal Service's total products – Money Order costs, for instance, are not incurred for city delivery routes. The OCA proposal for allocating costs, therefore, would imply that all institutional costs associated with city delivery street activity be distributed to individual products.[21]

Relying on costing rules that are not grounded in cost causality represents a fundamental departure from Postal Service and Commission precedent. City Carrier costs are clearly not all attributed to products – nor should they be. Only those costs which are caused by specific products should be allocated to those products, as is currently done by the Postal Service and the Commission through their respective approaches. The OCA's recommendation to start allocating institutional costs misses this critical point.

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[21] The OCA may argue that it was only talking about cases involving "small" subsets of classes. This begs the question, however, "how small is 'small'?" I question the validity of any costing system which must rely on one set of rules when the subset is "small" and another when the subset is "larger." Furthermore, this concept of "small" subsets contradicts its response to USPS/OCA-4.

IV. THE PROPER TREATMENT OF ADVERTISING COSTS

In the preceding discussion, I have argued that advertising costs generally should not be considered volume variable. My conclusions are based on long-standing Commission precedent concerning the important nature of causality in the cost development process and on common sense regarding the direction of causality between volume and advertising costs. I do not, however, want to leave the impression that advertising costs should never be included in product costs. On the contrary, as I presented in several instances in my testimony in Docket No. R97-1, advertising costs should be included in incremental costs for an individual product when they are incurred to promote that product solely. In other words, they should be included in a particular product's incremental cost when these costs would not be incurred if the product did not exist.[22] In these instances, advertising costs fit the definition of product-specific costs, as I have described above. Advertising costs are not volume variable, but some advertising costs are incurred solely to promote a particular product (*e.g.*, Express Mail) and therefore should be allocated to that product on a causal basis as product-specific costs.[23]

However, sometimes advertising costs are intended to promote a group of products, and not any one individual product.[24] In that case, the advertising costs should be considered specific to the group of products, but not to any one product within the group. If advertising costs are incurred for a group of products, then they should be allocated to the group as a whole for incremental cost test purposes, but not to any specific product within the group for either product pricing or incremental cost test

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[22] Again, this statement illustrates the important nature of causality in the cost development process.

[23] Please see Witness Panzar's Rebuttal Testimony in Docket No. R97-1 (USPS-RT-13) for a more detailed discussion of this point regarding the nature of advertising costs.

[24] It is my understanding that POL advertising expenses are designed to promote the POL channel, which supports a number of different products.

purposes.[25] Any attempt to allocate advertising costs to individual products within the group in this case would necessarily have to rely on arbitrary allocation mechanisms (such as the relative number of transactions) that are not based on causal principles.[26]

Perhaps the OCA's confusion on this point stems from a misreading of the intent of Professor Baulmol's and Professor Sherman's quotes included in OCA's response to NOI No.1. I agree wholeheartedly with the conclusions these two economists present. Their statements clearly imply that advertising costs incurred for POL are incremental to the group of products sold through the POL channel and should be included in any incremental cost test for the group of products sold through POL *as a whole*. However, their comments also support the conclusion that since these costs cannot be causally linked to any individual product sold through the POL channel (such as MOL), they should not be attributed or allocated to any individual product sold through POL (such as MOL).

I believe this point illustrates the fundamental difference between my testimony and the proposals put forth by the OCA and Witness Prescott – *because there is no causal relationship between the individual products sold through the POL channel and these common advertising costs, they should not be allocated to individual products such as MOL*. The Postal Service has stated that if MOL were to be eliminated, the advertising costs for POL would remain unchanged (Tr. 4/881). As I stated above, the only time advertising costs can be allocated to individual products is when these costs would not be incurred if the product did not exist (*i.e.*, when they are incremental or product-

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[25] Please see Witness Panzar's Testimony in Docket No. R97-1 (USPS-T-11) for a complete discussion of the cost bases for product pricing and incremental cost tests in both single product and appropriate group settings.

[26] Such an approach would be tantamount to fully distributed costing approaches, which, as the OCA states, are contrary to Commission practice (*OCA Response*, p.8).

specific). This situation is clearly not present in this case. There is causality at the group level, but not at the individual product level.

The Postal Service should allocate, for the purpose of an incremental cost test, general advertising costs for the POL channel to the group of products sold through this channel *as a whole*, and not to any particular products sold through the POL channel. These costs are caused by the POL channel as a whole, and not by MOL or any other product specifically. The Postal Service should ensure that the revenues (including postage) for the group of products sold through the POL channel cover all costs (including POL advertising costs), but the revenues of any particular product sold through the POL channel should not necessarily have to cover any arbitrarily allocated POL advertising costs.

V. VERTICAL INTEGRATION ISSUES

I have also been asked to provide a few brief comments on Witness Prescott's statements about vertical integration and the supposed negative effects of the Postal Service's contracting with private printing companies to provide MOL services. Like Witness Prescott, I have not performed a complete analysis of the short- and long-run dynamics of the Postal Service's presence in this market. However, even a cursory review of Witness Prescott's assertions reveals shortcomings in his analyses and conclusions, which I highlight below.

A. "Potential" Harms versus "Actual" Harms

Witness Prescott discusses at length the *potential* harms associated with vertical integration. These include the following:

- vertical integration in the presence of a monopoly may raise barriers to entry (Tr. 9/2117);
- vertical integration may place competitors at a relative disadvantage (Tr. 9/2118-19);
- certain printers may enjoy competitive advantages by contracting with the Postal Service (Tr. 9/2119-20);

Witness Prescott provides a list of *potential* harms, but his testimony provides little empirical evidence to support his opinion that MOL will harm some firms that will compete with MOL and its printing contractors. While listing potential harms may be useful as an academic exercise, Witness Prescott does nothing to prove actual harm by the MOL experiment.

B. Specific Competitive Concerns

Witness Prescott presents a series of unsubstantiated claims about the effects of MOL on the printing industry and MOL's competitors, and then draws several broad conclusions from these claims. As I discussed above, I have not performed a detailed analysis of the printing industry or MOL competitors either. However, it is relatively easy to come up with plausible alternative assumptions that are no less justified than his assertions in these areas. These alternatives cast doubt on his conclusions. In the following section, I present four of his unsubstantiated claims and a set of alternative assumptions to rebut his broad conclusions.

Witness Prescott claims that the Postal Service's rate proposal provides MOL with a pricing advantage relative to its competitors (Tr. 9/2119). Specifically, he expresses concern that MOL will have an unfair advantage by being able to offer delivery services at discounted rates even if the volume minimums are not met in a given mailing. In fact, Witness Prescott presents only half of the story since he fails to consider that competing services may be able to receive additional discounts based on finer presort. By contrast, MOL, as proposed, would not be eligible for any additional discounts based on volume.[27] This fact seems to indicate a competitive disadvantage for the Postal Service.

Witness Prescott is also concerned with MOL's effect on competition in the printing industry. He argues that the presence of sunk capital costs will provide incumbent printers with an unfair advantage in subsequent bidding for MOL printing contracts (Tr. 9/2119-20, 2122). However, Witness Prescott does not give enough weight to the practice of equipment leasing, and how it would affect his conclusion that sunk costs could place some bidders at a competitive disadvantage (see Tr. 9/2167). The potential

[27] See Witness Plunkett for a discussion of pricing discounts associated with MOL (USPS-T-5, pp.11-12).

for equipment leasing reduces the incumbent advantage, as production levels with or without MOL can be smoothed to a certain extent by leasing the necessary capacity.

Witness Prescott also claims that the selection of printers by geographic area will prevent competition and favor certain printers (Tr. 9/2109, 2120, 2122). To support this opinion, he points out that the second lowest bid in one region may be lower than the winning bid in another region (Tr. 9/2120). Witness Prescott does not appear to have considered that just because a bidder provides the second lowest bid in one region that does not demonstrate that this bidder would have entered the same bid for the right to service the second region, especially if costs are higher in that region.

It may also be helpful to put the volume of printing that is projected for MOL into perspective. Although I am not an expert in the printing industry, I performed some simple analysis of it in preparing my testimony. Revenues in the on-demand digital printing industry for 1999 are projected to be approximately $17 billion, and revenue is expected to reach well over $20 billion for 2000 with continued rapid growth into the future.[28] By contrast, annual revenues for MOL for 1999 are projected to be $90 million or just over 0.5 percent of the projected industry revenues for 1999.[29] Obviously, there will be geographic differences in the level of competition of the printing market, but to presume that the modest revenues projected for MOL will have substantial effects on the printing market seems unrealistic.

While Witness Prescott's concerns about the effects of vertical integration may be valid in other cases, with regard to his specific concerns for the competitive effect of MOL on its competitors or the printing industry, he fails to consider factors that would appear to alleviate those concerns.

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[28] CAP Ventures, Inc., *U.S. Print On Demand Market Forecast 1996 – 2001* (CAP Ventures, Inc. 1997), p.27; See Tr. 6/1495.

[29] Attachment to Response to PB/USPS-T5-5 (Tr. 8/1767, as corrected in Presiding Officer's Ruling No. MC98-1/24).

C. Potential Benefits to Consumers and Industry

Witness Prescott also appears to ignore the potential economic benefits that may arise from MOL. In fact, MOL will likely create benefits for printers, other firms and consumers. For instance, demand for printing services may increase due to the MOL service. Such an increase in demand will come from mailings that had previously been printed by the sender and from mail that did not exist prior to the MOL service. As noted by Witness Garvey, MOL will promote the growth of direct mail and newsletter publishing among small businesses by providing convenient and easy-to-use access to sophisticated digital printing technology to small- and home-based businesses, who would not otherwise have such access (USPS-T-1, p.1,12). MOL will also benefit its consumers by providing them a new and convenient source for print and mailing services. The increased flow of information that MOL is expected to generate will ultimately also benefit the public in general.

VI. SUMMARY AND CONCLUSIONS

In Section I above, I laid out several arguments presented by various participants in this case that I have addressed in the preceding sections of my testimony. These include the following:

- *The OCA's assertion that advertising costs for POL are volume variable:* I have shown that advertising costs are not volume variable because they are not caused by changes in volume.

- *The OCA's and Witness Prescott's proposal that POL advertising costs be distributed to products using relative transaction counts:* I show that such an approach is arbitrary because it does not reflect cost causality. Such an approach violates longstanding Postal Service and Commission precedent.

- *The OCA's argument that even if advertising costs are not volume variable, they should still be distributed to products sold through the POL channel:* I have shown that in some cases, advertising costs can be considered product-specific to individual products. In many cases, however, advertising costs are shared by a group of products and cannot be allocated to any particular product within the group. The present POL case is such an example of shared costs across a group of products. Advertising costs for POL should be included in the incremental costs of the group of products sold through the POL channel, and not allocated to any one product individually (such as MOL).

- *The OCA's use of the testimony of witnesses appearing before the Commission in previous Dockets to support its position in this case:* I have shown that the OCA has mischaracterized these testimonies.

- *The OCA's use of past Commission treatment of the costs associated with Special Delivery Messengers to support its position in this case:* I have shown that this example is inappropriate in this case and (if taken to its logical conclusion) could lead the Commission to allocate a vast array of costs that have previously been considered institutional – resulting in a form of fully distributed costing.

My conclusion concerning POL advertising costs is that the Postal Service should include the advertising costs for POL in the incremental costs of the group of products sold through the POL channel *as a whole*, and not allocate them to any particular products sold through the POL channel. These costs are caused by products sold through the POL channel as a whole, and not by MOL or any other product specifically. The Postal Service should ensure that the revenues for the group of POL-related products cover all costs (including POL advertising costs), but the revenues of any particular product sold through the POL channel should not necessarily have to cover any arbitrarily allocated POL advertising costs.

Finally, I address several of the concerns raised by Witness Prescott regarding the supposed harmful competitive effects of the MOL service. I argue that witness Prescott has failed to consider a number of factors that would alleviate or eliminate these supposed harms. Witness Prescott also ignores the economic benefits for consumers, printers, and other firms that are likely to ensue from allowing the Postal Service to offer the MOL experiment.