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POSTAL COSTING AND PRICING: Top Down Discounts versus Bottom Up Surcharges

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By

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1. Introduction

This paper addresses the arcane subject of postal pricing, a topic that could cause the eyes of most to glaze over in short order. Nevertheless, since postage constitutes an important cost center for tens of thousands of businesses, it is a subject of great import to the American economy.

This paper is organized as follows. First, it explains "top down" and "bottom up" pricing of postal products (sections 2 and 3). Second, it describes similarities in the two approaches (section 4). Third, it discusses the cost concepts that underlie the two approaches, and explores differences between the two (section 5). Bottom up costs, and the rates that would result from using such costs, differ significantly from the top down costs and rates. A final section sets out conclusions (section 6).

2. What is Top Down Pricing?

Prior to 1976, the Postal Service exercised a complete monopoly over all aspects of processing and delivering letter mail, and rates for most classes of mail were all-inclusive. That is, rates charged covered the complete "bundle" of services, final delivery by carriers – the so-called "last mile" – *plus* all other

services upstream of delivery, such as sortation and transportation, necessary to ready mail for delivery.¹ In 1976, the Postal Service began allowing downstream access to its network, with a small discount for First-Class Mail presorted by mailers. This opportunity to purchase delivery plus only such additional services as may be necessary has spread to most other subclasses of mail. The advent of worksharing and downstream access requires a rethinking of the way in which rates for postal products are developed.²

Today, for mail in the same subclass — e.g., Standard Enhanced Carrier Route ("ECR") Mail — rates differ according to how much worksharing is performed.³ Rates for worksharing options were introduced as "discounts" from the all-inclusive monopolistic rate, and they continue to be shown in the rate schedule as "discounts."

The treatment of weight was the principal exception to all-inclusive rates. In every class, heavier weight mail always has paid higher rates. Moreover, in some instances — *e.g.*, parcels — rates also increased with distance. Prior to the Postal Reorganization Act of 1970, P.L. No. 91-375 (the "PRA"), rates based on weight and zone (where applicable) constituted the principal effort to have rates reflect cost differences *within* classes of mail. A minor amount of presortation was required to qualify for some subclasses prior to the PRA.

For discussions of worksharing, see Billette de Villemeur, *et al* [2002), Bizzotto (2003), Cohen, *et al.* (2002), Elcano, *et al.* (2000), and General Accounting Office (2003).

When a subclass contains pieces of different shapes with different cost functions, a cost-based rate structure generally would include shape-based rate differentials; *i.e.*, different rates for letters, flats and parcels.

Figure 1

Per Piece Rates for Standard Enhanced Carrier Route Letter Mail (2003)

	Rate
Basic Rate	\$0.194
Discounts for level of presort/density:	
Automation Basic	0.023
High Density	0.030
Saturation	0.042
Discounts for destination entry:	
Bulk Mail Center (BMC)	0.021
Sectional Center Facility (SCF)	0.026
Destination Delivery Unit (DDU)	0.032
• • •	

Figure 1 displays in a top down format the per piece rates in effect in 2003 for Standard ECR letters.⁴ Calculation of rates begins with the highest rate — the Basic Rate of \$0.194 — which is the rate for mail with the least amount of worksharing (and, correspondingly, the highest unit attributable cost). All applicable presort or destination entry discounts are *subtracted* to calculate rates charged when mailers (or their private sector mailing agents) elect to perform increasing amounts of worksharing. This method of displaying the rates applicable to different worksharing options has been described aptly as "top down" pricing. The size of each discount is based on an estimate of the

Enhanced Carrier Route is one of two subclasses within the Standard Mail class.

attributable costs *avoided* by the Postal Service, or the estimated amount saved, when the mailer or mailer's private sector agent performs the indicated work; *e.g.*, presorting or transporting and entering mail at destination facilities.

3. What is Bottom Up Pricing?

The other way to present postal rates is from the bottom up. Under bottom up pricing, calculation of rates begins with the lowest rate. Additional fees or surcharges are *added* for optional mail processing and transportation services, which are available from both private sector providers and the Postal Service. In other words, rather than deduct discounts from the highest rate in order to determine the applicable rate, an explicit charge is added to the lowest base rate for each optional service — *e.g.*, barcoding, sortation and transportation — based on an estimate of attributable costs *incurred* by the Postal Service.

To illustrate, in Figure 1, within ECR letters, the lowest available rate is for saturation letters entered at a destination delivery unit ("DDU") — namely, \$0.120 [= 0.194 – 0.042 – 0.032]. This mail bypasses the entire upstream portion of the postal network, and would serve as the "base rate," or starting point, to compute rates applicable to all ECR letter mail. Then the discounts shown in Figure 1 would be expressed as surcharges for mail (i) that is entered upstream of the DDU, or (ii) that fails to have the presortation/density

necessary to qualify as Saturation Mail. Thus, presenting rates in a bottom up fashion can be viewed as the reverse of top down pricing.

Bottom up pricing is not difficult to comprehend, because it corresponds generally to the way many firms quote prices for the various optional services which they offer. For example, the price of a new car is quoted this way – *i.e.*, a base rate for a "stripped down" car plus the price of various options offered by the manufacturer. Similarly, in the printing industry, incremental prices for optional services, such as folding, collating, binding, etc., customarily are quoted separately.

4. Similarities Between Top Down and Bottom Up Pricing

Key features of the top down and bottom up approaches are summarized in Figure 2. From a mailer's viewpoint, the reality is that for mail of similar weight, shape, etc., the *differences* in the published rates — whether subtracted from a higher rate or added to a lower rate — represent prices charged by the Postal Service for providing those upstream services that now have become optional. This point can be illustrated using the rates shown in Figure 1.

Figure 2

Summary of How Rates Are Presented
Under Top Down and Bottom Up Methods

	TOP DOWN	BOTTOM UP					
Cost Basis	Compute Postal Service's cost savings from avoiding specified work	Compute Postal Service's additional cost of performing specified work					
Starting Point	Highest rate charged for mail with the least amount of worksharing	Lowest rate charged for mail with the maximum amount of worksharing					
Rate Setting	Offer <i>discount</i> s based on cost savings	Impose surcharges based on additional costs incurred					

When Saturation Mail is entered at destinating BMCs, the rate is \$0.131;⁵ and, when it is entered at destinating SCFs, the rate is \$0.126.⁶ Thus, by entering mail at destinating SCFs instead of destinating BMCs, mailers can "save" an additional \$0.005 per piece (or \$5/thousand), which is

The Basic Rate of \$0.194 less discounts of \$0.042 and \$0.021.

The Basic Rate of \$0.194 less discounts of \$0.042 and \$0.026.

the difference between \$0.131 and \$0.126. This difference in rates can be viewed as charging a price of \$5 per thousand to have the Postal Service transport mail from destinating BMCs to destinating SCFs. A generic term (used herein) that encompasses both discounts and surcharges is *rate differentials*; *i.e.*, the difference in rates for mail that is more workshared and similar mail that is less workshared, which represents the implicit rate charged for individual links in the postal value chain.⁷

The end rates resulting from top down and bottom up pricing would be the same, provided that the same rate differentials for each activity are utilized. A simple arithmetic example illustrates the potential equivalence of the top down and bottom up approaches. Consider pieces of mail with comparable shape and weight, and in the same subclass (i.e., comparable content and service standard), and having the rate relationships shown in Figure 3.

For the Periodicals Class, the rates are not always shown as discounts or surcharges. Separate rates are shown for basic, 3-digit, 5-digit, carrier route, high-density and saturation presort levels, as well as barcoded letters, basic, 3-digit and 5-digit barcoded flats (as well as basic, 3-digit and 5-digit barcoded letters). The difference between any two rates — i.e., the rate differential — would be the implicit price for the sorting and/or barcoding.

Figure 3

Hypothetical Example Showing the Equivalence of Top Down and Bottom Up Approaches

Activity	Rate Element
Sorting	4¢
Transportation	4¢
Delivery (including retail and acceptance)	12¢ (includes contribution to institutional costs)
TOTAL	20¢

One could, with equal logic, (i) establish a bundled rate of 20 cents, with worksharing discounts of 4 cents each to cover some or all of the "avoided costs" of sorting and transportation, or (ii) establish an unbundled access charge of 12 cents for delivery,⁸ with surcharges of 4 cents each to cover some or all of the costs incurred for sorting and transportation.

Using the rates for ECR letters shown in Figure 1 above, Figure 4 illustrates how the same identical rates can be displayed in either a top down

The charge for delivery includes an amount sufficient to cover the Postal Service's universal service obligation to provide universal retail service and collect mail from the existing network of collection boxes (acceptance).

or a bottom up presentation mode. In Figure 4, the upper portion, Part 1, displays, from a *top down* perspective, all ECR letter rates resulting from every combination of available discounts. The first four columns and rows show the 16 possible rates. Each rate in Figure 4 is referred to as a rate cell. In the top down approach, the upper left-hand rate cell displays the *highest* rate (\$0.194), which is the Base Rate in Figure 1. All other rates are derived from this Base Rate by *subtraction*. The *lowest* rate (\$0.120) appears in the lower right-hand rate cell, at the intersection of column 4 and row 4.

For each *level of preparation*, incremental rate differences (discounts) are shown in column 5, and the cumulative rate differences are shown in column 6. For the various *destination entry points*, incremental rate differences are shown in row 5, and the cumulative rate differences are shown in row 6. Note that the *cumulative differences* shown in column 6 and row 6 are equal to the corresponding discounts shown previously in Figure 1.

The lower portion of Figure 4 — *i.e.*, Part 2 — shows the same ECR letter rates from a *bottom up* perspective. Here, the upper left-hand rate cell displays the *lowest* rate available to mailers (\$0.120), which would be the "Base Rate" in a bottom up approach. All other rates are derived from this rate by *addition*, and the *highest* rate (\$0.194) now appears in the bottom right-hand rate cell.

Figure 4

ENHANCED CARRIER ROUTE RATES FOR LETTERS
(2003

1. Rates from Top Down Perspective

		(1)	(2)	(3)	(4)		(5)	(6) Cumulative
		Destination Entry					paration	Preparation
	Preparation Level	None	BMC	SCF	DDU	Differential		Differential
1.	Basic	0.194	0.173	0.168	0.162			
						>	0.023	0.023
2.	Automation Basic	0.171	0.150	0.145	0.139			
						>	0.007	0.030
3.	High Density	0.164	0.143	0.138	0.132			
						>	0.012	0.042
4.	Saturation	0.152	0.131	0.126	0.120			
		•	▼ ▼	_ ▼				
5.	Dest. Entry Differential	0.0	0.0	0.0	06			
6.	Cum. Dest Entry Difference:	0.0	0.0	26 0.0	32			

2. Rates from Bottom Up Perspective

	(1)	(2)	(3)	(4)		(5)	(6) Cumulative
	Destination Entry				Preparation		Preparation
	DDU	SCF	BMC	None	Diff	erential	Differential
1. Saturation	0.120	0.126	0.131	0.152			
					>	0.012	0.012
2. High Density	0.132	0.138	0.143	0.164			
					>	0.007	0.019
3. Automation Basic	0.139	0.145	0.150	0.171			
					>	0.023	0.042
4. Basic	0.162	0.168	0.173	0.194			
	•	•	T	7			
5. Dest. Entry Differential	0.0	0.0	05 0.0	21			
6. Cum. Dest Entry Difference:	0.0	0.0 0.0	11 0.0	32			

Source: Postal Rate Commission, Docket No. R2001-1, Opinion & Recommended Dec Appendix I, p. 13, Standard Mail, Rate Schedule 322.

Incremental rate differences for each *level of preparation/density* again are shown in column 5, with cumulative rate differences again shown in column 6. Similarly, incremental differences for progressively more distant *destination entry points* again are shown in row 5, with cumulative differences shown in row 6. In bottom up pricing, the rate differentials are viewed not as discounts, but as surcharges or add-ons that are charged to mailers who either fail to qualify for the lowest rate or elect to rely on the Postal Service for the indicated services.

To sum up, a *top down* approach to displaying postal rates uses discounts to arrive at rates paid by mailers who workshare. Conversely, a *bottom up* approach to displaying postal rates uses surcharges, or additional fees, to arrive at rates paid by mailers who procure optional upstream services from the Postal Service. The identical rates can be displayed just as easily in either a top down or a bottom up format, as Figure 4 clearly demonstrates. Thus, it readily should be apparent that *the use of discounts to determine postal rates has no intrinsic significance, being nothing more than a convention for displaying the various rates*. Moreover, it is a somewhat unusual convention at

Although discounts are the predominant way of quoting postal rates, surcharges are not entirely foreign to the Postal Service's rate schedules. For example, First-Class Mail has a surcharge for letters of non-standard dimensions (DMM §R100.12.0). Standard Mail has a surcharge for parcel-shaped pieces (DMM §R600.1.3, note 1).

that. For many products, the more customary convention is either (i) to quote a full rate for each product (*e.g.*, gasoline stations historically have shown the full service and self service price for each grade of gasoline), or (ii) to quote a base price for the product or service in question, and then quote separately the price of optional features (*e.g.*, the price for a new automobile is quoted from the bottom up).¹⁰

5. Differences Between Top Down and Bottom Up Pricing

Despite the obvious similarities between top down and bottom up pricing, they should not be thought of simply as mirror images; they are not simply the flip side of the coin. Important substantive differences exist between the two, discussed in the following sections.

5.1 Different Information Requirements: Costs Avoided versus Costs Incurred

A fundamental difference between the top down and bottom up approach to pricing is that each requires costs to be developed in different ways.

Essentially, the top down approach places primary reliance on the concept of

If the price of new cars were displayed using a top down approach, the quoted price would be for a fully-loaded car — imagine the sticker shock — and customers then would get discounts for options not desired. (Of course, discounts are used for various marketing reasons, but not as the means to communicate basic pricing information).

"costs avoided," whereas a bottom up approach relies exclusively on the concept of "costs incurred." The top down and bottom approaches to cost development are described below.

The discussion in section 4, *supra*, noted that both top down and bottom up pricing are capable of arriving at the same set of rates, *provided that the same rate differentials for the same activities are utilized*. As explained herein, it is reasonable to believe that costs avoided, as used in the top down approach, differ from and generally are less than costs incurred, which would be used in a bottom up approach.

Costs avoided: top down costing. The Postal Service costing system, which underlies the current top down rate setting procedure, starts at the top; *i.e.*, with aggregate total cost. Through separate analyses of each cost segment, the Postal Service determines the portions of aggregate costs that are volume variable, attributable, and institutional. Through a complex procedure, based on various sampling systems, the costing system then *allocates* 100 percent of the aggregate volume variable and attributable costs to all mail within each subclass. By design, therefore, the costs for all the various subclasses shown in the Cost and Revenue Analysis ("CRA") report always add up to the Postal Service's total costs.

The discussion hereafter refers throughout to *attributable* costs, unless otherwise indicated.

To illustrate, First-Class Mail has two subclasses: one for cards, letters, flats and parcels under 11 ounces, and another for Priority Mail (which consists mostly of flats and parcels). Standard Mail also has two subclasses: Regular and Enhanced Carrier Route. Within each subclass, the Postal Service's sample-based costing system is also designed to develop separate costs for broad homogeneous subsets of mail. In First-Class Mail, for instance, the costing system develops separate costs for single-piece mail and mail entered in bulk. Within each of those two subsets, it also develops separate costs for cards, letters and flats.

The extent to which costs can be broken down accurately is limited by

(i) size of the sample, and (ii) the amount of detail collected in the sample. As costs are broken down to progressively finer levels of detail within each subclass — e.g., as between letters, flats and parcels, then as between presorted and unpresorted letters, etc. — the level of uncertainty increases because size of the sample applicable to each subgroup becomes progressively smaller. The sample that underlies this top down costing process operates on an ongoing basis, thus consuming a considerable portion of the Postal Service's budget for cost analysis.

Below a certain level of detail, the top down system described above cannot address a variety of important cost issues, such as (i) the cost of handling bundles of different sizes, or (ii) the cost of handling sacks compared

to pallets, or (iii) the cost of handling relatively full sacks vs. sacks containing only a few pieces (known as "skin sacks"). Oftentimes, the sample does not collect any pertinent information whatsoever (*e.g.*, when a bundle is being handled, the sample does not record bundle size in terms of weight or number of pieces). At other times, the sample data are too few to give any meaningful or reliable results.¹² To address such detailed issues, the Postal Service supplement its basic approach with a variety of specially developed engineering cost models. It is worth noting that these specially developed engineering cost models tend not to be updated continuously; they are prepared and updated only when deemed necessary.

Rate differences for worksharing activities reflect the Postal Service's estimate of costs avoided. In order to estimate cost avoidances, the Postal Service utilizes a hybrid costing approach that also includes engineering cost models. These cost avoidance models focus on and are restricted to major functions or activities that the Postal Service believes are avoided by workshared mail.¹³ It can be expected that this approach to development of

As Comptroller General David Walker recently observed, "its [the Postal Service's] cost measurement systems are geared to providing aggregate data at the subclass level." GAO (2004), p. 26.

The models focus on what the PRC describes as "clearly capturable costs avoided." Such models may make little or no effort to ascertain the cost of opening and preparing for processing, moving mail within the facility from (continued...)

worksharing cost differences will fail to capture the full amount of costs incurred or avoided for at least four reasons.

First, engineering cost avoidance models are usually narrow, making no attempt at comprehensive cost development. Consequently, they may fail to capture various factors that can cause significant cost differences between workshared and non-workshared mail.¹⁴

Second, the discounts applicable to workshared mail within each subclass are based on the estimates of costs *avoided*. By definition, these are estimates of costs *not* incurred by the Postal Service on account of worksharing. It is a truism, of course, that the purpose of cost systems is to record *costs incurred*. *No cost system records costs not incurred*. Consequently, although it might be possible to develop an estimate of aggregate *avoided* costs, it is impossible to check any such estimate against the extensive data contained in the Postal Service's accounting records or costing systems.¹⁵

¹³(...continued) one workstation to the next, etc.

Cost avoidance models need to be distinguished from models of cost incurrence. The latter is exemplified by a recently developed study of costs incurred to deliver mail.

The lack of any kind of aggregate check of this nature could be considered a critical problem in transparency and accountability when relying on cost avoidances to develop top down discounts. The Postal Service has stated that mailers realized discounts of some \$15.2 billion in FY 2002, but it has no estimate of aggregate avoided costs to compare with this number. One (continued...)

Third, cost avoidance models tend to be updated intermittently, only when necessary for a rate case.

Fourth, "the Postal Service cannot develop independent national estimates of unit costs for most rate categories of mail" even though the results of its modeling efforts are tied back to the most disaggregated level of data in the cost systems that underlie the CRA report. In other words, even after detailed estimates of unit cost avoidances have been developed, for most rate categories (or rate cells), it is not possible to estimate the actual unit cost, either by subtracting the avoided unit costs from the average cost in the basic rate cell, or by any other method, despite the substantial volume of data contained in the Postal Service's costing systems. Thus, when the Postal Service proposes rates for each rate cell in a subclass such as Standard Mail, those rates are not based on an explicit estimate of the underlying unit cost within each rate cell. No such estimate exists, nor, according to the Postal Service, can its system develop one. Consequently, neither the Postal Service, nor the Postal Rate Commission, nor anyone else knows what the implicit markup over cost is for any rate cell. Such is the arcane nature of top down pricing, and the Postal Service's costing systems that underlie it.

¹⁵(...continued) effort at estimating aggregate avoided costs can be found in Cohen, *et al* (2002).

¹⁶ U. S. Postal Service (2003), p. 13.

Costs incurred: bottom up costing. In order to set prices from the bottom up, the Postal Service would need to develop and put primary reliance on a *comprehensive* bottom up costing system. The backbone of such a system would consist of detailed engineering cost models that are similar to, but more comprehensive than, those used in the current hybrid top down system. The chief difference between existing models and those envisioned here is that the models would endeavor to document and incorporate every aspect of postal operations that cause costs to be *incurred*. That is, they would endeavor to be as comprehensive as possible, and would become the essential building blocks for the annual CRA report.

Detailed engineering cost models would be used to estimate aggregate costs for each subclass and for the whole Postal Service. The ultimate goal, of course, would be to have the aggregate bottom up cost figure equal the Postal Service's total attributable costs. Of course, no assurance can be given that the two will be equal, hence a final "grossing-up" adjustment to the bottom up aggregate cost may be necessary. *Updating and refinement of these models would be a continuous, ongoing process*, always seeking to narrow any difference between aggregate modeled cost and total attributable cost. If the Postal Service relied on a costing system such as that described here, far more of its budget for cost analysis would be devoted to refining cost models,

including gathering the data needed to implement the models, and fewer resources would be allocated to sampling in-office operations.

In a prior major reclassification case, PRC Docket No. MC95-1, the Postal Service used such a comprehensive bottom up approach to estimate the cost of its proposed new categories within Standard Mail. (For obvious reasons, the Postal Service could not sample categories that did not exist.) However, those models omitted various allied labor functions (some of which have since been modeled), and used an adjustment factor to bring the estimated costs into alignment with audited aggregate costs.¹⁷ Regrettably, rather than refine and expand this admirable effort, the bottom up approach to comprehensive costing was abandoned in the very next omnibus rate case, PRC Docket No. R97-1, and has not been returned to since.

Any failure of modeled aggregate cost to equal 100 percent of actual attributable cost should drive continuous expansion and refinement of bottom up models. Over time, the iterative process of model refinement and reestimation of aggregate cost would help identify with increasing accuracy the full unit costs incurred within each individual rate cell, including the various cost drivers that underlie those costs. An important benefit of this approach

In a subsequent classification case, Docket No. MC 96-2 [??ck] the Postal Service also used a bottom up approach, and increased quite substantially the percentage of aggregate costs captured by the models.

would be to help the Postal Service identify: (i) where it is failing to cover the cost of worksharing services which it provides; and (ii) where certain rates far exceed cost, making it vulnerable to "cherry picking" by competitors, and possibly making further de-averaging of rates desirable.¹⁸

A detailed approach to the development of costs incurred, such as that described above, also would help the Postal Service address another increasingly important issue. Namely, a precedent-setting negotiated service agreement (NSA) was approved by the PRC in May of 2003, and the prospect of additional NSAs substantially increases the need for mailer-specific cost information. As recently noted by the GAO, "it is reasonable to ask how the Service can effectively identify, prioritize and negotiate mutually beneficial NSAs if little reliable data are available on the cost savings that the Service should realize as a result of the mailer-specific requirements of each NSA."²⁰

Setting of bottom up rates would start with the cost *incurred by* mail that makes the least use of the postal network — e.g., Standard ECR saturation letters or flats prepared in carrier walk sequence, and entered at the facility from which carriers depart for their routes. This would constitute the unit

For further discussion of de-averaging, see Haldi and Olson (2004). The Postal Service's current Product Redesign efforts may lead to proposals for further de-averaging of some rates.

¹⁹ PRC Docket No. MC2002-2.

GAO (2004), p. 26.

"Base Cost" for all similar pieces within the subclass (e.g., one unit base cost for letters, one for flats, etc.). The next step would estimate the costs that the Postal Service incurs to process mail that uses its various "upstream" optional services. The unit costs actually *incurred* for performing those upstream services would be the basis for incremental charges to the base rate. The development of a specific unit cost for each rate cell would be a straightforward matter, by adding the increment in unit costs to the base cost. Note that in the bottom up approach, the focus is on the actual costs incurred to process mail using the upstream network, not on hypothetical costs avoided by mail that does not use some or all of the upstream network. Importantly, since the bottom up approach deals with costs *incurred*, it would be relatively straightforward to aggregate such costs and check them against the costs and revenues recorded in the Postal Service's accounting records; see Haldi and Olson (2003). For this reason, bottom up cost-based surcharges would be much easier to verify. Bottom up cost differentials therefore would have far more accountability and transparency than top down discounts.²¹

A critical issue between the top down approach and the bottom up approach is whether the estimate of costs *avoided* is equal to the estimate of

Curiously, it is this characteristic of verifiability [ck sp] that may be the very reason this approach has been rejected thus far, as it narrows the arbitrary discretion of postal rate setters.

costs *incurred*. The similarity described in section 4 was wholly dependent on the *assumption* that the two are equal; *i.e.*, *that the same rate differentials for the same activities are utilized*. A study by Haldi and Olson (2003) demonstrates that the two approaches most definitely are not equal. Specifically, even though top down rate differentials may reflect approximately 100 percent of the estimate of costs *avoided*, the revenues derived from those implicit rates fail by a substantial amount to recover 100 percent of costs *incurred*. Bottom up rate differentials, on the other hand, would be designed to recover **at least** 100 percent (or more) of additional costs incurred for each additional service rendered.²²

One reason why the engineered cost models used to estimate cost avoidance fail to reflect costs incurred may be the narrow focus on specific activities, such as sortation, and the exclusion of many less visible allied activities. Moreover, output from cost avoidance models lack a meaningful check against accounting data to ascertain whether increments in rates based on cost avoidance cover the full increments in costs.

The Postal Service is faced with a number of critical cost issues. They could be addressed more meaningfully with a costing system such as that

Whether these surcharges should incorporate a markup over cost is a separate issue. Refer to section 5.2, *infra*, for more discussion of this issue.

described here than with the existing sample-based top down system. One such issue involves the extent to which costs vary because of (i) various characteristics of the mail itself, versus (ii) internal differences between various postal facilities (i.e., the unit cost to process mailings with identical characteristics can vary, perhaps substantially, depending on the facility where the mail is processed). Such variation was highlighted in the recent report of the President's Commission on the United States Postal Service, which noted that (i) the largest facilities tend to have higher unit costs, and (ii) postal facilities vary significantly in layout and equipment, and therefore recommended that the Postal Service build standardized state-of-the-art facilities. In a bottom up approach to costing, the detailed models used to develop aggregate costs would capture at least some, if not all, of the cost differences that arise from processing on different types of machines (or manual processing, where machines aren't available), whereas the top down approach does not easily develop reliable data on such issues.

5.2 Different Perspectives

Even if ratemaking could be improved to the point it would arrive at the same set of rates as bottom up pricing, bottom up costing is still preferable.

The two approaches encourage somewhat different mind sets, and any dialogue

about the adequacy of rate differentials (as well as rates) is likely to differ in important ways, depending on which approach is used.

Top down pricing developed out of a monopoly situation where rates reflected a substantial amount of averaging over widely varying unit costs. For those mailers willing to undertake cost-saving activities, the incumbent monopolist could be viewed as relenting its grip on the market and deigning to "grant" them a small discount from the cost-averaged rate (initially, all discounts had a "passthrough" that constituted less than 100 percent of the estimated costs avoided). Over time, both the number and size of worksharing discounts have increased, and that has fostered more competition from the private sector. The entire panoply of upstream mail services — mail processing, freight consolidation and transportation — are all now available separately from a veritable plethora of private sector providers who compete with the Postal Service for such work. Looking back nostalgically to the days when the Postal Service exercised a monopoly over all links in the postal network and performed virtually all work in-house, the American Postal

Worksharing has been referred to a "partnering" by the Postal Service. By reducing the cost of mailing, which increases volume, worksharing does indeed "partner" with the delivery portion of the postal network. It competes head-to-head, however, with the upstream portion of the network.

Workers Union ("APWU") prefers to characterize worksharing discounts as "subsidies" that are "given" to the direct mail industry.²⁴

As the lower portion of Figure 4 clearly shows, however, the simple act of converting rates to a bottom up format completely eliminates "discounts." Consequently, if the same rates were displayed in a bottom up format, the rate schedule would contain only surcharges — *i.e.*, no "discounts" — and nothing could be characterized as having been "given away." Instead, mailers who rely on the Postal Service for some amount of sorting or transportation would be viewed as paying higher rates to cover some or all of the costs which they cause the Postal Service to incur. See the appendix for additional discussion of this issue.

All mail passes through the "downstream" portion of the postal network (e.g., DDUs) on its way to final delivery. Mail within each subclass is treated in essentially the same manner, once it reaches the destinating delivery unit. If the "Base Rate" represented the price charged for taking mail from destinating delivery units to addressees, as it would in a bottom up presentation, the anti-discrimination prohibition in the Postal Reorganization Act could lead one to the belief that all mail within a subclass would incur the same charge for this

See advertisement published in the *Washington Post* (July 1, 2002); also see Association for Postal Commerce, PostCom Bulletin 31-02 (July 26, 2002), pp. 3-4.

service. This "Base Rate" would be the *explicit* price for presorted mail entered at DDUs, and the *implicit* price for mail entered upstream of DDUs.²⁵

If rates were presented in a bottom up format, any issue concerning the adequacy of rate differentials — *i.e.*, surcharges in addition to the "Base Rate" for mail that costs more to process and transport — would tend to focus on whether the increments in rate differentials are sufficient to cover the cost of providing those optional services that are identified with the different rate increments. Under a bottom up pricing structure, the focus is on costs actually *incurred* — not costs theoretically *avoided* — and nothing is treated as a discount that could be said to be "given" to mailers. In a bottom up approach, in order to give something away, it would be necessary to establish rate differentials at levels that intentionally and knowingly fail to cover the incremental cost of the services provided. Any incremental costs not recovered by the corresponding increments in rates could be viewed as something "given" to those mailers who use the service. Any shortfall caused by setting incremental rates below incremental costs of course would need to be

In Docket No. MC78-3, which concerned electronic mail service, the PRC "concluded that the Postal Service should make its delivery services available to all electronic carriers at the same rates as those it charges itself. We find . . . that this rate constraint is required not only by §§403(c), 3622(b)(1) and 3623(c)(1) of the Act, but also by §3622(b)(4)...'(footnote omitted)" *See* PRC Order No. 1389 (issued January 16, 2004). If the Postal Service should charge others what it charges itself, then it likewise should charge itself (for delivery) what it charges others.

subsidized.²⁶ Since any such subsidy would be the difference between the costs *incurred* and rates charged, it likely would be more visible than it is with discounts and top down pricing. To sum up, using a bottom up approach to quote rates embodies a somewhat different perspective, and it can substantially alter any dialogue concerning adequacy — or inadequacy — of rate differentials.

5.3 Different Outlook Concerning Markups on Cost Differences

Once cost differentials have been estimated, the rate setter must decide whether rate differentials should be limited to the cost difference itself, or include a markup. A real world illustration drawn from the way the Postal Service sets rates illustrates the different results that can be obtained from using top down and bottom up pricing.

For major classes, such as Standard Mail (advertising matter), the Postal Service uses top down pricing. The rate differentials for destination entry are

As noted above, if the *explicit* price charged to mailers that do not use the upstream portion of the network and the *implicit* price for downstream access are assumed to be equal, then revenues derived from the existing rate differentials are several billion dollars short of covering the incremental cost of upstream services provided; *see* Haldi and Olson (2003). The shortfall is covered by overcharging *all* mail within the subclass for downstream access. The resulting "surplus" covers the deficits caused solely by mail that uses the upstream portion of the network. Mailers that do maximum worksharing are thus forced to pay a sizeable share of this upstream deficit.

stated as "discounts," the concern is not to "give away" too much, and generally the rate differentials are *less than* or *at best equal to* estimated differences in transportation costs; *i.e.*, the passthrough of avoided costs is not more than 100 percent. When determining the size of discounts, no consideration is given to increasing the avoided costs by a markup factor. As a result, for Standard Mail, almost invariably the rate differentials for entering the mail either farther from or nearer to the final place of delivery reflect *no more than* 100 percent of the Postal Service's estimate of costs avoided from not having to transport the mail.²⁷ The consequence is that all institutional costs are received from the delivery function, and the Postal Service derives no contribution to overhead from intermediary processing and transportation.

Quite unlike Standard Mail, for Priority Mail the Postal Service's approach is more akin to bottom up than top down. As part of the process of designing Priority Mail rates, explicit, detailed cost estimates are developed for each rate cell,. For any given weight, the various Priority Mail rate cells correspond to zones that reflect progressively longer distances. The difference in cost between zones reflects the cost of transporting Priority Mail that is entered either farther from or nearer to the final destination. After unit costs

The top down approach to rate setting, when establishing discounts, easily could add the subclass markup to the estimate of avoided costs, thereby increasing the rate differentials. In practice, however, this has not occurred.

have been estimated for every rate cell, the approved procedure for determining Priority Mail rates adds a substantial percentage markup to the estimated unit costs in each rate cell. Historically, this markup has ranged from 70 to over 100 percent. Consequently, for pieces of Priority Mail of identical weight, the rate differentials from one zone to the next reflect *substantially more* than the estimated difference in transportation costs.²⁸

The result for Priority Mail is exactly opposite to transportation rate differentials for Standard Mail (as well as Periodicals Mail), as discussed above. In the bottom up approach used for Priority Mail, transportation costs are viewed as "additive" (as opposed to "avoided"). The PRC has never explained why a markup should be added to costs *incurred*, but not added to costs *avoided*. Whatever the rationale, the PRC has exhibited no reluctance to add a markup to bottom up costs, and the resulting rate differentials in Priority Mail substantially exceed the underlying cost differentials. (Some implications arising from this issue are discussed in the appendix.)

The bottom up approach to rate design starts with developing an explicit unit cost estimate for each rate cell within the subclass (estimates of costs avoided, or "savings," are noticeable by their absence), and then proceeds to develop rates from those unit costs. Attention is thus focused on the cost of services provided to users of each rate cell. It is not a requirement of the bottom up approach that the unit cost in each rate cell be increased by any percentage amount, much less by an equal percent markup. For Priority Mail, the markup has generally been different for three subdivisions: under 2 pounds, 2-5 pounds, and over 5 pounds.

5.4 Differences in Dealing with Uncertainty About Costs

In Section 4, *supra*, the discussion about similarities between the top down and bottom up approaches assumed that avoided costs (in a top down system) or additional costs (in a bottom up system) are known with total accuracy and complete certainty. That usually is not the case. One critical difference between a top down versus a bottom up system can be the way uncertainty about cost estimates is dealt with.

In a top down pricing system, the average unit cost of mail is derived from the total costs taken from the Postal Service's accounting system, which are audited annually. Estimates of *avoided* costs, or "savings," on the other hand, are derived from engineered cost models and can be construed to be somewhat less certain for a number of reasons.

First, uncertainty exists about the extent to which the Postal Service can capture estimated cost savings after some volume of mail ceases to use part of the system. A substantial volume shift to workshared status can require a workforce reduction plus realignment of facilities and the transportation network.

Second, the savings are estimated from cost models. Such models may fail to capture all cost-causing factors, because every such model is necessarily a simplification of reality. Moreover, the PRC has preferred that models focus

on cost savings that it deems "clearly capturable." This narrow focus can give any model a tendency to underestimate actual cost savings.²⁹

Third, as previously discussed, the engineered cost models used to estimate avoided costs are not reconcilable to any aggregate cost data in the Postal Service's accounting or information systems.

When translating estimated cost savings into discounts, in order to allow for uncertainty, the custom for many years was to pass through less than 100 percent of the cost savings.³⁰ Under a top down approach, one immediate result of uncertainty about estimated cost differentials occurs between (i) mail that uses the entire postal network and (ii) mail that uses only a small portion of the network: the resulting rate differentials were *compressed*. In the top down pricing approach, any failure of discounts to reflect actual avoided costs often has been described as a "conservative" approach. ³¹

²⁹ ADD CITE

The Postal Rate Commission now has adopted a guideline to have discounts between each link in the postal value chain set equal to 100 percent of the estimated differences in attributable cost, but all discounts do not conform to the guideline. Setting the passthrough at 100 percent is described as "Top down Efficient Component Pricing" by Crew and Kleindorfer (1995). Those authors do not deal with the issue of whether the models used to estimate costs avoided in fact capture all costs savings that arise from worksharing activities.

ADD CITE.

If a bottom up pricing system were used, there is reason to believe that the reverse situation would be more likely to prevail. The base rate would reflect the cost of handling mail that is fully prepared and entered at a final destination facility. An appropriate amount would be added to cover transportation cost for mail entered immediately upstream. If such mail required one or more additional sortations, that cost also would be added to the base rate. For mail that is entered yet further upstream in the postal network, still more surcharges to cover those costs would be added to the base rate. As the adding-up process moves further and further upstream, the appropriate amount of costs to include would become progressively less certain.

No matter how elaborate and detailed, studies of additional costs (like avoided cost studies) would be only estimates, subject to some degree of uncertainty. Because it may not be altogether clear exactly how much to add when one is in a bottom up pricing mode, any desire to avoid setting incremental charges that are less than the incremental cost — and thereby avoid subsidies within each subclass while assuring financial breakeven — would mean that the most reasonable procedure would be to add a little extra margin for safety. Under a bottom up approach, the end result of uncertainty about costs as between (i) mail that uses all of the postal network and (ii) mail that uses only a small part of the network, is that the rate differentials are

likely to be *expanded*. In a bottom up pricing approach, any tendency to overestimate the additional costs of extra services likely would be described as "conservative." To sum up, when taking into account the uncertainty of cost estimates for intermediate links in the postal network, rate differentials resulting from using bottom up pricing can differ dramatically from the rate differentials that result from using top down pricing. And whatever is deemed "conservative" under one approach gets stood on its head under the other approach.

5.5 Differences in Lowest Combined Cost

For various reasons, private sector firms often are able to provide mail preparation and transportation services at a lower cost than the Postal Service. When rates accurately reflect differences in the Postal Service's costs, they provide incentives and act as signals that promote social efficiency. Having others who can provide those services more efficiently and at lower cost than the Postal Service is sometimes referred to as the principle of lowest combined cost. Cost-based rate differentials are fully congruent with the principle of lowest combined cost, which both the Postal Service and the PRC have endorsed. Conversely, however, when rate differentials fail to reflect Postal

Service costs accurately, they are not fully congruent with the principle of lowest combined cost.³²

As discussed previously, revenues derived from top down discounts fail to cover the aggregate costs of services provided by billions of dollars, hence top down discounts should not be viewed as an accurate reflection of unit cost differences. Since aggregate bottom up costs can be checked against costs recorded in the Postal Service's financial data, rates based on bottom up costs should be able to reflect more accurately the costs that the Postal Service incurs to provide worksharing services. In this respect, bottom up pricing can be considered more congruent with the principle of lowest combined cost than top down pricing.

Bottom up pricing should result in rate differentials that are designed to cover at least the cost of additional services provided. Setting rates in this manner should result in upstream services becoming financially self sufficient. If the upstream portion of the postal network were to be unbundled and operated independently (e.g., like a nationwide presort bureau and freight consolidator), such financial self sufficiency would be an absolute necessity. Financial self sufficiency of the upstream services also would represent

When unit costs are averages of mail with widely disparate costs, rates based on those averages will not be wholly consistent with the principle of lowest combined cost. *See* Haldi and Olson (2004) for more discussion on this subject.

competitive pricing by the Postal Service for those services that it provides.

Competitive markets are generally viewed as promoting lowest combined cost, hence bottom up pricing is also congruent with unbundling and full liberalization of the market for upstream postal services.

6. Conclusions

Should anyone feel that little difference exists between the top down and bottom up approaches, they should take note that the APWU is on record as being strongly opposed to the bottom up approach. The bottom up approach presented in this paper, both to costs as well as design and presentation of rates, differs in important ways from the top down approach currently used for most subclasses of mail. First, it calls for an explicit estimate of the full unit cost incurred to handle mail in each rate category. Second, it promotes accountability and transparency by requiring that the costs of handling mail in each rate category be aggregated, summed, and the resulting total checked against the Postal Service's actual costs. Third, more accurate cost differences would help a decentralized competitive market do a better job of promoting lowest combined cost. Fourth, it would change the nature of any dialogue about the adequacy (or inadequacy) of rate differentials.

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Appendix

Rate Differentials, Costs Avoided, and Costs Incurred and Postal Reform Legislation

A-1. Rate Differentials

Every subclass of mail has a multiplicity of rates, depending on various factors such as weight, shape, distance, or degree of presortation. As a matter of simple mathematics, it always is possible to compute the difference between any two rates within a subclass merely by subtracting the smaller from the larger. Differences between any two rates within a subclass are referred to here as "rate differentials." The extent to which any such computation has any significance, we discuss later.

A-1.1 Parcel Post Rates

By way of illustration, we begin with four discrete rates, drawn from the complete table of parcel post rates, and shown here in Figure 1. For each column, comparing rates in the two rows in Figure 1 indicates that parcel post rates change with weight. The rate for a 3-pound parcel sent to zone 5 costs \$5.65, while a 4-pound parcel sent to the same zone costs \$6.93. The difference, or the "rate differential" between 3 and 4-pound parcels to zone 5 is thus \$1.28 (\$6.93 – \$5.65). Similarly, the rate differential between a 3- and 4-pound parcel to zone 6 is \$1.43 (\$7.14 – \$5.71).

Figure 1
Parcel Post Inter-BMC Rates

(1)	(2)	
Zone 5	Zone 6	
\$5.65	\$5.71	
6.93	7.14	
	Zone 5 \$5.65	Zone 5 Zone 6 \$5.65 \$5.71

For each row, comparing rates between two columns in Figure 1 indicates that rates change from one zone to the next. A to send a 3-pound parcel to zone 5 costs \$5.65, while the same 3-pound parcel sent further, to zone 6, costs \$5.71. The rate differential in this instance is only \$0.06 (\$5.71 – \$5.65). Similarly, for a 4-pound parcel the rate differential between zones 5 and 6 is \$0.21 (\$7.14 – \$6.93).

Even within the confines of this limited example, one can see fairly readily that parcel post rates (i) go up as weight and distance increase, or, alternatively, (ii) go down as weight and distance decrease. These changes in rates are perceived to bear some direct relationship to underlying changes in cost, as weight and/or distance vary. When analyzing parcel post rates, if one wanted to observe how rate differentials *increase* with weight and distance, the focus would be on *increments* to rates. Alternatively, if one wanted to focus on

the way in which rate differentials *decrease* with weight and distance, the focus would be on *decrements* to rates.³³

Should the analysis center on the *additional* rate for a 4-pound parcel, as shown in Figure 1, it is **not** customary in this instance to refer to the incremental rate differential as a "surcharge" which is added to the rate for a 3-pound parcel. Nor is it customary to refer to the additional rate for a parcel to zone 6 as a "surcharge" on the zone 5 rate. By the same token, should the discussion center on the *decrement* in the rate from 4 to 3 pounds, or the *decrement* in the rate from zone 6 to zone 5, one customarily does **not** refer to either of these two rate differentials as a "discount." Even though it is not customary to refer to rate differences between zones as "discounts" for partial or complete dropshipping, this is the effect, as mailers can reduce the amount they pay for postage by entering their parcels closer to the final destination.

For an inter-BMC parcel, the rate for any given weight and zone simply "is what it is," and the complete set of parcel post rates simply "are what they are." Similarly, although rate differentials can be computed readily from the complete table of parcel posts rates, those rate differentials simply "are what

The discussion here has a limited purpose; namely, to introduce the concept of rate differentials. The point here is that rate differentials can be either positive or negative, depending on how one elects to view them.

they are;" they are not though of as reflecting either discounts or surcharges.³⁴

A-1.2 First-Class Mail

Like parcel post, First-Class Mail ("FCM") consists of a multiplicity of separate rates. Rates increase with each additional ounce (up to the maximum allowable weight for the class of 13 ounces). In addition, the rates for FCM contain rate differentials for presortation and prebarcoding ("worksharing" activities), known as "discounts," as well as some other less well known rate differentials, known as "surcharges." The surcharges within FCM apply to (i) non-standard size envelopes (*e.g.*, square envelopes) that weigh less than one ounce, and (ii) flat-shaped pieces that weight less than 1.0 ounce, known as "flimsies."

It stands to reason that when rate differentials are quoted as "discounts," they need to be deducted from something. Similarly, when rate differentials are quoted as "surcharges," they need to be added to something. It thus is possible to turn any "discount" into a "surcharge" by simply adding the rate

Similar observations can be made about the tables of rates for Priority Mail and the other parcel subclasses. As discussed in the subsequent sections, however, rates are presented differently in some of the other subclasses.

³⁵ DMM, §130.2.5.

differential to the lower rate. Likewise, a "surcharge" could be quoted as a "discount" by deducting it from the higher amount. Quoting rate differentials as either discounts or surcharges is essentially nothing more than a convenient way to compress the presentation of rates.

A-1.3 Periodicals

The rate structure for the Periodicals subclass is perhaps the most complex of any subclass. For purposes of the discussion here, it suffices to note that Periodicals rates contain a number of rate differentials for presortation, prebarcoding and destination entry ("worksharing" activities). All of these rate differentials are described as "discounts."

A-1.4 Standard Mail

The rate structure for Standard Mail contains even more rate differentials than First-Class Mail. For example, letter-shaped and flat-shaped mail have separate rates. As between Standard letters and flats, the rates "are what they are." Any rate differential between letter and flat-shaped mail is simply that — a letter-flat differential; it is **not** referred to as either a "discount" or a "surcharge." However, the rates for Standard Mail do contain a "surcharge" for

parcel-shaped pieces, while rate differentials for worksharing activities are referred to as "discounts." 36

A-2. Costs Incurred

Parcel post rates are developed by estimating the costs that the Postal Service incurs to transport parcels of various weights to each of the eight different zones. That is, the rate in each cell is based on an explicit estimate of the average cost that the Postal Service will incur for parcels in that cell.³⁷

During the course of the year, the Postal Service records the actual costs that it incurs for labor, transportation, etc., and its cost systems are designed to develop the costs incurred by each subclass, such as inter-BMC parcel post. The Postal Service's cost systems do not develop routinely the costs that actually are incurred within each rate cell on an after-the-fact basis. The Postal Service does know the volume of mail within each rate cell. Consequently, it would be a fairly straightforward matter to check the

Technically, the parcel surcharge is known as a "residual shape surcharge." DMM, § C600.3.0. Letters and flats are each well-defined pieces of mail, whereas parcels are "defined" as pieces that are neither a letter nor a flat.

A similar statement could be made for the Priority Mail subclass, and the Express Mail and Parcel Services classes. Development of detailed costs for these products is akin more to a bottom up approach than to a top down approach.

reasonableness of the estimated unit costs against the aggregate costs that materialized during the year.

When rate differentials are expressed as surcharges, they are based on estimates of costs that the Postal Service *incurs*. That is, the Postal Service's surcharges for handling (i) non-standard envelopes and flimsies in FCM, and (ii) parcels in Standard Mail, reflect costs incurred.

A-3. Costs Avoided

When rate differentials are presented in a rate schedule as discounts, the amount of the discount is based on an estimate of "costs avoided" — that is, an estimate of *unit* costs that the Postal Service believes it will **not** incur should mailers or third-party service providers perform functions that the Postal Service otherwise would need to undertake. The estimate of *unit* cost savings is based on detailed models of the Postal Service's costs.

An interesting aspect of costs avoided is that they are an estimate of costs **not** incurred. The concept of costs **not** incurred differs in some important ways from costs that **are** incurred. The latter are recorded systematically by the Postal Service's accounting system, which is subject to an annual audit. Cost **not** incurred, on the other hand, are **not** recorded and **cannot** be audited. In fact, the aggregate total of costs avoided **cannot** even be subjected to some kind of rough reasonableness check against any of the

Postal Service' financial data. Costs avoided thus represent a rather strange concept, one that is somewhat foreign to the accounting profession and other businesses. In brief, the existing system does not lend itself to accountability. The Postal Service estimates that each year mailers currently receive worksharing "discounts" to the tune of about \$15 billion. That in turn means the Postal Service should be avoiding *at least* \$15 billion of costs annually. This is not small change.

A thorny issue — and one that is unresolved — is whether mail processing and transportation costs incurred are representative of costs avoided. A study by Haldi and Olson (2003) treated rate differentials for worksharing ("discounts") as the implicit prices that the Postal Service charges for performing the indicated functions itself. That study found that the resulting aggregate implicit revenues fell several billion dollars short of covering such costs. To the extent that costs avoided and costs incurred should be equivalent, the finding by Haldi and Olson indicates that total costs avoided exceed the \$15 billion of aggregate discounts by several billion dollars.

A-4. Application to Postal Reform

For example, in a postal reform bill (S. 1285) introduced by the Senator Thomas Carper (D-DE) on June 18, 2003, Section 3623(i) sets out a provision that has been strongly supported by the American Postal Workers Union

()"APWU") that prohibits rate discounts for the preparation, processing or transportation of mail that exceed costs avoided by the Postal Service by virtue of the additional functions performed by the mailer. This language raises a number of questions.

- Since rate differentials expressed as surcharges could, with little difficulty, be expressed as discounts, does the language in Section 3623(i) apply to surcharges?
- If Section 3623(i) does apply to surcharges, does it mean that:
 - Surcharges must be less than or equal to costs incurred?
 - Surcharges must be greater than or equal to costs incurred?
- If Section 3623(i) is not applicable to surcharges, does that mean that the Postal Service can avoid completely any prohibition in Section 3623(i) by simply converting from a top down to a bottom up format when quoting rates?
- Does the above-cited language apply to any rate differentials contained in the rate schedules for parcel post and Priority Mail?
 - o If not, why not?
 - o If so, then within Priority Mail must rate differentials between zones, which reflect transportation cost, be not more than the Postal Service's cost of transportation?³⁸

Within Priority Mail, rate differentials between zones currently reflect full transportation cost plus a substantial markup.

• Suppose the Postal Service were to quote rates for FCM, Periodicals and Standard Mail in a manner similar to the complete tables of rates for parcel post, Express Mail and Priority Mail. That is, within each class, the rates "are what they are," without any references to discounts or surcharges. How would Section 3623(i) then apply?

- Are costs avoided equivalent or equal to costs incurred?
 - If so, does Section 3623(i) mean that rate differentials cannot be less than costs incurred?
 - If costs avoided are not equal to costs incurred, what applicability, if any, does Section 3623(i) have with respect to costs incurred?
- Suppose the provision in Section 3623(i) were challenged in court. That is, suppose some party asserted that Postal Service discounts exceed costs avoided.
 - Since accounting records are of no help, what type of evidence will be proffered to support the challenge?
 - What level of proof will the court require in order to determine whether specific discounts, or all discounts in aggregate, do or do not exceed costs avoided?

A-5. Conclusion

The preceding discussion has endeavored to cover the limited subject matter in a reasonably detailed manner, at the risk of becoming laborious, even tedious. However, the purpose was to provide the reader with sufficient

background to have a better appreciation for problems inherent in postal reform of the type being urged by the APWU.