Postcom, et al.-T-1

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

POSTAL RATE AND FEE CHANGES, 2000 **Docket No. R2000-1**

DIRECT TESTIMONY OF SANDER A. GLICK ON BEHALF OF THE ASSOCIATION FOR POSTAL COMMERCE AND MAIL ADVERTISING SERVICE ASSOCIATION

Communications regarding this document should be served on

Ian D. Volner
N. Frank Wiggins
Venable, Baetjer, Howard & Civiletti, LLP
1201 New York Avenue, N.W.
Suite 1000
Washington, DC 20005-3917

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AUTOBIOGRAPHICAL SKETCH

My name is Sander A. Glick. I co-manage the Economic Systems practice at Project Performance Corporation (PPC), a consulting firm based in McLean, Virginia. PPC provides economic and technology consulting services to private and public sector clients. I joined PPC in 1994 as an Analyst and am now a Program Manager. Since joining the firm, I have worked on a number of economic and cost issues for mailer associations, the Department of Defense, and the Department of Energy.

In Docket No. R97-1, I testified regarding the fee for Qualified Business Reply Mail (QBRM) and the appropriate method for distributing rural carrier costs to mail classes and subclasses. In this case, I am also testifying for the Magazine Publishers of America (MPA) regarding the Postal Service's costing methods and joint Postal Service/Industry efforts to reduce Test Year costs and for the Recording Industry Association of America (RIAA) regarding the appropriate method for determining the cost difference between Standard (A) flats and parcels. I am an industry representative on the Mailers' Technical Advisory Committee's (MTAC) Package Integrity Work Group and was an industry observer on the MTAC Package Integrity Study.

I attended the Maxwell School of Citizenship and Public Affairs at Syracuse University, where I received a Masters of Public Administration in 1994, and Carleton College, where I received a Bachelors Degree, magna cum laude, in Physics in 1993. I am a member of the American Economic Association and the System Dynamics Society.

I. PURPOSE AND SCOPE OF TESTIMONY

In this testimony, I propose a rate design for Standard (A) with two important attributes. First, it provides mailers with the appropriate incentives to prepare their mailings in a way that minimizes the combined mail processing and transportation cost to mailers and the Postal Service in the Test Year. Second, it encourages mailers to barcode flats, which will facilitate the Postal Service's automation program.

My proposed rate design passes through 100 percent of destination entry cost savings. This rate design will not only increase the amount of Standard (A) mail that is dropshipped, but will also increase the amount of mail that is presented on pallets (see witness Schick's (PostCom, et al.-T-2) testimony). As I describe in my testimony for MPA, increased palletization will reduce the number of bundles that will break in the Test Year, which in turn will lower Postal Service costs. Further, as described by witness Unger, pallets are much less costly to handle than similarly presorted sacks. USPS-ST-43 at 4-5.

Second, while I believe that witness Moeller's (USPS-T-35) proposed automation discounts for Standard (A) flats are reasonable, they are based upon flawed cost studies. Specifically, the modeled cost savings upon which he bases his discounts are understated. Thus, the proposed passthroughs are a considerably smaller proportion of costs saved than witness Moeller presents them to be. Also, the Postal Service's flats cost model ignores the value that barcoded flats will provide to the Postal Service's flats automation program and a large portion of the savings that result directly from automation requirements pertaining to address quality. While these benefits are hard to quantify, they are high and justify a passthrough of more than 100 percent of the quantifiable cost savings in this case. The remainder of my testimony provides detail to support these points.

Section II of my testimony summarizes the Postal Service's proposed dropship discounts, estimates dropship discounts based on full passthroughs, and describes precedents for passing through 100 percent of destination entry cost savings. Section III discusses several reasons why the Postal Service has understated the cost savings that result from barcoding, quantifies the degree to which the Postal Service understated the value of automation mail, and briefly describes the value that barcodes will provide to the Postal Service's flats automation program.

II. DROPSHIP DISCOUNTS SHOULD REFLECT ALL DESTINATION ENTRY COST SAVINGS

A. The Postal Service's Proposal Passes Through Only About 75 Percent of Destination Entry Cost Savings

In this docket, witness Moeller proposes passthroughs of destination BMC (DBMC) and destination SCF (DSCF) cost savings of 73 percent and 77 percent, respectively, for the Standard (A) Regular subclass (USPS-T-35 at 15) and passthroughs of 73 percent for DBMC, 77 percent for DSCF, and 77.5 percent for destination delivery unit (DDU) entry for the Standard (A) Enhanced Carrier Route (ECR) subclass. Id. at 27.

In contrast, I propose 100 percent passthroughs of all destination entry cost savings because 100 percent passthroughs send the appropriate price signal to mailers and, as described by witness Schick,[1] will result in a more efficient mailstream.[2] Also, full passthroughs of destination entry cost savings

[1]Witness Schick notes that increased dropship discounts will increase palletization as well as the volume of mail that is dropshipped. Data provided by witness Crum (USPS-T-27) further support this point. Specifically, Crum shows that approximately 72 percent of Standard Mail (A) pounds entered at destination BMCs and 88 percent of Standard Mail (A) pounds entered at destination SCFs is prepared by mailers on pallets, whereas only 3 percent entered at origin associate offices, 20 percent entered at origin SCFs, and 38 percent entered at origin BMCs are prepared on pallets. USPS-T-27, Attachment C, Table 6.

[2]Increased palletization will reduce Postal Service costs including container handling costs. USPS-ST-43 at 4-5.

are more consistent with recent Commission recommendations for both Standard (A) and other mail classes.

B. Full Passthroughs Send the Appropriate Pricing Signals

In Docket No. R97-1, witness Bernstein described why passing through 100 percent of cost savings, an example of efficient component pricing (ECP), sends the theoretically correct price signal:

> ...any activity that can be performed by more than one agent should be performed by the most efficient (least cost) agent. In the case of postal services, the principle of Efficient Component Pricing can be applied to the establishment of a discount granted to mailers for performing some task that would otherwise be performed by the Postal Service, such as mailer presorting instead of Postal Service sorting. ECP minimizes the total cost of providing mail service, where the total cost is the sum of the Postal Service's cost plus the mailer's cost of worksharing (known as a user cost) if the mailer chooses to workshare. Under ECP, the price difference between a non-workshared mail category and its workshared component should equal the difference between the Postal Service costs of the non-workshared and workshared mail category. Docket No. R97-1, USPS-T-31 at 72-73.

In those situations where the cost for mailers to perform an activity is significantly different than the cost for the Postal Service to perform it, small deviations from ECP will not have a large impact on mailer behavior. Dropshipping, however, is not one of those activities. As witness Schick indicates, increasing dropship discounts will increase palletization and dropshipping.

C. Full Passthroughs Are Consistent With Recent Commission Decisions

Commission precedent also indicates that destination entry passthroughs higher than those proposed by witness Moeller are appropriate. In Docket No. R97-1, the Commission recommended destination entry passthroughs of 85 percent for Standard (A) mail. Op. R97-1 at V-431. Furthermore, the Commission recommended 100 percent passthroughs of destination entry cost savings for all but the non-transportation portion of the DDU entry cost avoidance

for Periodicals Regular mail[3] and nearly 100 percent for Standard (B) parcel post in that case. Id. at V-538 for Periodicals and V-488-495 for Parcel Post.

In Docket No. MC95-1, the USPS proposed 100 percent passthroughs of all destination entry cost savings for the newly proposed Enhanced Carrier Route (ECR) subclass and 95 percent for Standard (A) Regular. Op. MC95-1 at V-152-153. The Commission recommended 100 percent passthroughs for both subclasses. Id. at V-250. In addition, the PRC recommended a 100 percent passthrough of the transportation and non-transportation cost avoidances estimated for DSCF and DDU entry Periodicals Regular mail (again, excluding consideration of the unzoned editorial rate). Id. at V-141-142.

Table 1 presents a summary of the Commission-recommended passthroughs of destination entry cost savings for the major mail subclasses in Docket Nos. MC95-1 and R97-1. Note that except for the passthrough of DDU cost savings for Periodicals Regular mail in Docket No. R97-1, these passthroughs are all higher than the Postal Service's proposal for Standard (A) mail.

[3]The editorial pound rate for Periodicals is flat. Therefore, the effective destination entry discount for Periodicals mail is less than 100 percent.

Table 1. Recent Commission-Recommended Passthroughs of Destination Entry Cost Savings for Major Mail Subclasses

Class/Subclass	MC95-1	R97-1
Periodicals		
Regular		
DSCF (pc/lb)	100/100[1]	100/100[2]
DDU	100/100	100/70[3]
Standard (A)		
Regular		
DBMC	100[4]	85[5]
DSCF	100	85
Standard (A)		
ECR		
DBMC	100[6]	85[7]
DSCF	100	85
DDU	100	85
Standard (B)		
Parcel Post		
DBMC		100[8]
DSCF		92
DDU		99

[1]Op. MC95-1 at V-141-142.
[2]Op. R97-1 at V-537-538.
[3]On the pound rate, passthrough is 100 percent for transportation savings and 70 percent for non-transportation savings.
[4]Op. MC95-1 at V-250.
[5]Op. R97-1 at V-431.
[6]Op. MC95-1 at V-250.
[7]Op. R97-1 at V-431.
[8]Op. R97-1 at V-488-493. DSCF discount of 45 cents per piece and cost avoidance of 48.7 cents per piece; DDU discount of 72 cents per piece and cost avoidance of 72.4 cents per piece.

D. PostCom's Proposed 100 Percent Passthroughs Are Appropriate

Table 2 presents a comparison of the per-piece and per-pound discounts that result from using the Postal Service's reduced passthroughs of destination entry cost savings and the full passthroughs that I propose. As this table demonstrates, increasing the passthroughs to 100 percent in all cases increases the discounts by 0.7 to 0.8 cents on a per-piece basis and three to four cents on

a per-pound basis. Also, it maintains the Postal Service's proposed DBMC-DSCF differential and increases the DSCF-DDU differential. Attachment A presents rates based upon these proposed passthroughs.

Table 2. Comparison of USPS and PostCom Destination Entry Discounts and Passthroughs for the Standard (A) Regular and ECR Subclasses

		USPS Proposal		PostCom Proposal		
Subclass/ Entry Point	**Cost Savings ($ per pc/ $ per lb)[1]**	**Passthrough %[2]**	**Discount ($ per pc/ $ per lb)**	**Passthrough %**	**Discount ($ per pc/ $ per lb)**	**Difference ($ per pc/ $ per lb)**
	[1]	[2]	[3]=[1]*[2]	[4]	[5]=[1]*[4]	[6]=[5]-[3]
Regular Subclass:						
Piece-rated						
DBMC	0.0235	73	0.017	100	0.024	0.007
DSCF	0.0289	77	0.022	100	0.029	0.007
Pound-rated						
DBMC	0.114	73	0.083	100	0.114	0.031
DSCF	0.140	77	0.108	100	0.140	0.032
Enhanced Carrier Route:						
Piece-rated						
DBMC	0.0235	73	0.017	100	0.024	0.007
DSCF	0.0289	77	0.022	100	0.029	0.007
DDU	0.0357	77.5	0.028	100	0.036	0.008
Pound-rated						
DBMC	0.114	73	0.083	100	0.114	0.031
DSCF	0.140	77	0.108	100	0.140	0.032
DDU	0.173	77.5	0.134	100	0.173	0.039

[1]USPS-T-27 at 7; USPS-LR-I-166, wp1_comm.xls, worksheet "drop."
[2]USPS-LR-I-166, wp1_comm.xls, worksheet "drop."

III. THE VALUE OF AUTOMATION IS MUCH HIGHER THAN ESTIMATED BY THE POSTAL SERVICE

In this case, witness Moeller states that the cost studies performed by witness Yacobucci (USPS-T-25) "clearly indicate that the automation discounts are too large, so a reduction is warranted." USPS-T-35 at 13. He therefore proposes automation discounts that are smaller than the current discounts but, in order to mitigate the impact and to limit the percentage changes for individual rate cells, he proposes to maintain these discounts "at nearly 75 percent of their current value." Id.

Witness Moeller's logic is flawed. Incorrect and inconsistent assumptions in the Postal Service's flats cost model, USPS-LR-I-90, understate cost savings by a significant amount:

- The flats cost model overstates FSM 881 accept rates for nonbarcoded flats.

- The flats cost model fails to take into account the lower wage rates that are paid to BCR/OCR clerks as compared to keyers and clerks who manually sort flats.

- The flats cost model understates the proportion of incoming secondary sorts that will be performed on flat sorting machines in the Test Year.

- The flats cost model uses inconsistent assumptions regarding FSM 1000 keying and FSM 1000 BCR productivities. This results in a data anomaly.

Furthermore, as described by witness Lubenow (PostCom, et al.-T-3), the Postal Service has not quantified all of the cost savings that result from the higher address quality that result directly from automation requirements. Finally, while Postal Service witnesses clearly understand the effect that barcoded flats have on automated flat sorting productivity, Unger, Tr. 21/8275, the Postal Service has failed to quantify this value.

Therefore, given these points and the rapidly changing flats processing environment, it is appropriate to maintain automation discounts at the level proposed by witness Moeller. The remainder of this section discusses the reasons why the Postal Service's model underestimates cost savings, models automation cost savings using a revised version of the flats cost model, and

discusses additional reasons why witness Moeller's proposed automation discounts should not be reduced.

A. Incorrect and Inconsistent Assumptions in the USPS Flats Cost Model Lead to Understated Cost Savings

In this section, I first describe the reasons why the Postal Service's cost model understates automation-related cost savings. I then estimate more accurate automation-related cost savings using an improved version of the USPS flats cost model. While my corrections are focused on the Test Year flats processing environment, the value of automation will increase further in the coming years as the Postal Service begins delivery point sequencing (DPS) barcoded flats.[4]

1. FSM 881 Accept Rates

Based upon input from USPS Operations, the Postal Service's flats cost model incorrectly assumes that the FSM 881 OCR accept rate for nonbarcoded flats is between 80 and 90 percent.[5] USPS-LR-I-90, worksheet "Accept Rates." These accept rates are significantly higher than the 70 to 80 percent FMOCR read rates that were cited by the Postal Service in its "Strategic Improvement Guide for Flats Processing," which was just issued in September 1999. USPS-LR-I-193 at 21.

Furthermore, the FSM 881 accept rates for nonbarcoded flats used in the USPS flats cost model are similar to the average accept rates for FSM 881s in "BCR/OCR mode," a mode which processes barcoded flats on the BCR and nonbarcoded flats on the OCR. USPS-LR-I-90, worksheet "Accept Rates"; USPS-LR-I-107, Yrscrub.xls; Unger, Tr. 21/8175-8177. Because accept rates

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[4]Delivery Point Sequencing flats will increase USPS efficiency because the unit cost for performing a manual incoming secondary sort for flat-shaped mail is more than four cents while the unit cost of an incoming secondary sort on an AFSM 100 is approximately one cent. USPS-LR-I-90, worksheet "Mailflow Model Costs", column 21.

[5]Note that the notation "FSM 881 OCR" in USPS-LR-I-90 denotes an FSM 881 in BCR/OCR mode processing nonbarcoded flats. Yacobucci, Tr. 5/1439. This is different than what "FSM 881 OCR" denotes in MODS. In MODS, "FSM 881 OCR" indicates an FSM 881 in BCR/OCR mode processing all flats. Unger, Tr. 21/8175-8177.

are much higher for barcoded flats than for nonbarcoded flats, using what amounts to average accept rates for FSM 881s in BCR/OCR mode as proxies for the accept rates for nonbarcoded flats is inappropriate. Using actual incoming secondary FSM 881 BCR and FSM 881 BCR/OCR accept rates for FY 2000, Institutional Response to PostCom/USPS-ST43-6, I was able to calculate an average accept rate for nonbarcoded flats on the FSM 881 BCR/OCR. My calculations, which were confirmed by witness O'Tormey, result in an average FSM 881 BCR/OCR - Incoming Secondary accept rate for nonbarcoded flats of approximately 75 percent. Tr. 21/8353-8354.

Since there is no reason to believe that the accept rate for other sorts (e.g., outgoing primary) will be higher than that for the incoming secondary sort and to be consistent with the "Strategic Improvement Guide for Flats Processing," I use this accept rate for all FSM 881 BCR/OCR sorts of nonbarcoded flats. By increasing the effect of the presence of a barcode on the FSM 881 BCR/OCR accept rate, using this more accurate FSM 881 BCR/OCR accept rate for nonbarcoded flats increases automation-related cost savings.

Table 3. FSM 881 BCR/OCR Accept Rates for Nonbarcoded Flats

Scheme	USPS Flats Cost Model[1]	PostCom Model
Outgoing Primary	80%	75%
ADC	80%	75%
Incoming Primary	85%	75%
Incoming Secondary	88%	75%

[1]USPS-LR-I-90, worksheet "Accept Rates."

2. Average Labor Rate

Witness Kingsley indicates that the Postal Service's flats cost model uses identical labor rates for all clerks despite the fact that automated (BCR/OCR) operations are staffed primarily by PS-04 and casual clerks while manual sorting operations are staffed by PS-05 clerks, and FSM keyers are PS-05 or PS-06 clerks. Kingsley, Tr. 5/1803-1804; Kingsley, Tr. 5/1840-1841. (Table 4 shows FY 2001 average labor rates for each type of clerk.) Since automation flats are more likely to be sorted in automated operations, using an average labor rate for all operations understates automation-related cost savings.

Table 4. FY 2001 National Average Labor Rates[1]

Level	Rate
Casual	$11.49
PS-04	$27.41
PS-05 (Manual Sorting and Keying)	$31.41
PS-06 (Keying)	$32.93

[1]Kingsley, Tr. 5/1941.

To estimate worksharing-related cost savings, the Postal Service should develop operation-specific wage rates in the next case and use them in their worksharing cost models. Lacking such information in this case, I have used data from witness Kingsley's interrogatory responses to develop approximate operation-specific wage rates for flat sorting operations. I use these rates in the revised flats cost model (filed as MPA-LR-2), which I developed with witness Stralberg (TW-T-1).

In implementing this adjustment, I generally use PS-05 wage rates for manual sorting, PS-05 and PS-06 wage rates for FSM keying, and casual and PS-04 wage rates for OCR/BCR operations. Then, I proportionally adjust these wage rates to ensure that the weighted-average wage rate for all piece-sorting operations, $28.24, is consistent with the average wage rate in the Postal Service's model. USPS-LR-I-90, worksheet "Data."

3. Incoming Secondary Operations

The incoming secondary machine/manual factors (IS factors) used in the Postal Service's flats cost model for FSM 881s and AFSM 100s understate the extent to which Standard (A) flats will receive incoming secondary sorts on flat sorters in the Test Year. Witness Yacobucci defines IS factors as "the percentages of flats by machine type that flow to a machine for incoming secondary piece handlings that the machine actually processes. The remaining flats not actually processed on the machine are processed manually." USPS-T-25 at 16. For example, the IS factor of fifty percent in the USPS flats cost model for AFSM 100s and FSM 881s for Standard (A) Regular flats, USPS-LR-I-90,

worksheet "Data," indicates that the Postal Service performs a manual incoming secondary sort on fifty percent of flats that meet all machinability requirements, receive all other sorts on a flat sorter, and are sorted at plants that have machines.

On cross examination, witness Kingsley justified the use of a fifty percent IS factor for AFSM 100s and FSM 881s by first indicating that flats in small zones would not be sorted on machines: "So, for flats, if we already know that they are small zones, we aren't going to put them on a flat sorter, that automatically is 30 percent." Kingsley, Tr. 5/1977.

Then she indicated that another twenty percent of flats are not sorted on an FSM because they are rejected or cannot be handled by a machine. Specifically, when asked, "So you are projecting that between the things that cannot be handled by a machine, for one reason, and the pieces that are rejected by a machine, for some reason, those are going to make up 20 percent of the universe of flats in a test year. You add that to 30 and you get the 50, is that right?" she responded "Approximately, yes." Kingsley, Tr. 5/1978.

While witness Kingsley's argument that less than 100 percent of machineable flats will receive an incoming secondary sort on a flat sorter is reasonable, the appropriate percentage for Standard (A) Regular flats should be seventy percent (the percentage of flats that destinate in zones with ten or more routes), not fifty percent, for several reasons.

First, witness Kingsley indicated that, at the end of the Phase I AFSM 100 deployment, there will be no shortage of flat sorting machines. Kingsley, Tr. 5/1631. Therefore, the capacity problem, which she identified as the primary reason for manual flat sorting, will be alleviated by the Test Year. USPS-T-10 at 15; Kingsley, Tr. 5/1691. Her assessment can be verified using evidence on the record. According to witness Yacobucci's model, there will be approximately 13 billion machineable, non-carrier route flats in the Test Year.[6] Excluding witness

[6]This number was calculated by summing machineable flat volumes for First-Class Mail, Standard (A) Regular, Standard (A) Nonprofit, Periodicals Regular, and Periodicals Nonprofit from USPS-LR-I-90. To do this, I used the method recommended by witness Yacobucci during

Kingsley's thirty percent of flats that destinate in small zones leaves approximately nine billion machineable, non-carrier route flats that will destinate in zones where the Postal Service plans to perform incoming secondary sorting on flat sorters.

The Postal Service will have more than enough capacity to sort all of these flats to carrier route on flat sorters. In the Base Year, before the OCR modification to FSM 881s[7] and the Postal Service's effort to increase FSM utilization (USPS-T-10 at 10 and 15), the Postal Service performed approximately five billion incoming secondary sorts on FSM 881s. USPS-LR-I-107, Yrscrub.xls. Phase I of the AFSM 100 deployment will provide an additional 16 billion sorts in the Test Year.[8] Based upon witness Tayman and witness Kingsley's confirmation that the primary use of the Phase I AFSM 100 machines will be to automate incoming secondary sorting and witness Kingsley's estimate that at least half of the savings from Phase I will be from automating incoming secondary sortation, witness Buc (DMA, et al.-T-1) calculated that Phase I of the AFSM 100 deployment will provide at least six billion incoming secondary sorts. Kingsley, Tr. 5/1782; Tayman, Tr. 2/314; Kingsley, Tr. 5/1660; DMA, et al.-T-1.

The 11 billion Test Year incoming secondary sorts (6 billion on AFSM 100s and 5 billion on FSM 881s) that will be provided by FSM 881s and AFSM 100s is more than enough to automate the incoming secondary sorting of all machineable flats that are not in small zones.[9] Given the capacity available, the significant productivity gap between AFSM 100 sorting and manual sorting, and the AFSM 100's capability to combine zones, O'Tormey, Tr. 21/8370, the Postal Service may even want to consider (as it did for the delivery point sequencing of

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cross-examination. Yacobucci, Tr. 5/1485-7. These calculations are made in MPA-LR-2, worksheet "Total Volumes."

[7]Witness Kingsley noted that the FSM 881 modification significantly increased the volume of flats that received their incoming secondary sort on a flat sorter. USPS-T-10 at 14.

[8]I calculated this figure using the method described by witness Kingsley. Kingsley, Tr. 5/1981. I multiplied 166.5 Test Year machine-equivalents (USPS-LR-I-83 at I-12) by 52 weeks/year, 6 days/week, 20 hours/day, and 15,000 pieces per hour. USPS-LR-I-90, worksheet "Productivities," footnote 7. Also, note that this completely ignores the Phase II AFSM deployment.

[9]Even if you use witness O'Tormey's 13.5 billion Test Year AFSM 100 sorts, O'Tormey, Tr. 21/8371, which is approximately twenty percent less than the figure I developed, there will still be enough capacity to sort all machineable flats that are not in small zones.

letters) sorting some flats that destinate in zones with less than ten routes in automated operations. Kingsley, Tr. 5/1980.

Second, on cross examination, witness Kingsley's explanation of the reason why the IS factor is fifty percent, rather than seventy percent, is unsatisfactory. Specifically, she states:

> I think that Mr. Yacobucci's models [the USPS flats cost model] take into account most of those situations, where it is too small of a zone, we have reject rates, we have nonmachinability issues, and some of it, again, is coverage factors. We will not have AFSM 100s everywhere. There are only 173 machines, and there are 250 processing facilities. So we know that it is not going to be available to cover every zone with 10 or more carrier routes. Kingsley, Tr. 5/1979.

While witness Kingsley is correct that the USPS flats cost model does take these "situations" into account, she is wrong that these situations should reduce the IS factor to fifty percent. Specifically, as discussed above, the IS factor represents "the percentages of flats by machine type that flow to a machine for incoming secondary piece handlings that the machine actually processes." USPS-T-25 at 16. First, nonmachineable flats and flats that destinate at facilities without AFSM 100s and FSM 881s do not "flow" to AFSM 100s and FSM 881s for incoming secondary sorting in the first place. Second, rejects do flow to AFSM 100s and FSM 881s but, based upon machine-specific accept rates, are explicitly rejected from these machines.

4. FSM 1000 Productivities

The flats cost model uses actual productivities from MODS for FSM 1000 keying operations, but assumption-based productivities for FSM 1000 BCR operations. USPS-LR-I-90, worksheet "Productivities," footnotes 4 and 6. Specifically, due to a lack of Base Year FSM 1000 BCR productivity data, the Postal Service assumed that FSM 1000 BCR productivities are exactly the same as FSM 881 BCR productivities. The inconsistent treatment of FSM 1000 keying productivity and FSM 1000 BCR productivity results in a significant data

anomaly: the incoming secondary FSM 1000 keying productivity, 863 pieces per hour, in the USPS flats cost model is higher than the incoming secondary FSM 1000 BCR productivity, 798 pieces per hour. USPS-LR-I-90, worksheet "Productivities."[10]

Furthermore, when compared to all other FSM keying operations, the incoming secondary FSM 1000 keying productivity appears to be anomalously high. As Table 5 shows, the incoming secondary FSM 1000 keying productivity is approximately fifty percent higher than the average of all other keying productivities and thirty percent higher than the next-highest productivity. To treat FSM 1000 keying and BCR productivities consistently and to resolve these anomalies, I assume that FSM 1000 keying productivities are the same as FSM 881 keying productivities.[11]

Table 5. PFY 1998 Keying Productivities[1]

Description	FSM 1000	FSM 881
Outgoing	594	664
ADC	543	531
Incoming Primary	599	556
Incoming Secondary	863	488

[1]USPS-LR-I-90, worksheet "Productivities."

5. PostCom Automation-Related Cost Savings

To estimate the extent that the Postal Service's incorrect assumptions reduce automation-related cost savings, I estimated automation-related cost savings using the revised version of the flats cost model, MPA-LR-2, that I developed jointly with witness Stralberg. As shown in Table 6, automation-related cost savings based upon more reasonable assumptions are much higher than those estimated by the USPS flats cost model. Further, based upon these

[10]This clearly is anomalous. According to YTD FY 2000 MODS data, FSM 1000 BCR productivities are about twice as high as FSM 1000 keying productivities. Institutional Response to PostCom/USPS-ST43-6, Attachment 3.

improved automation-related cost savings estimates (and still ignoring address quality-related savings), Moeller's Basic Automation discount represents a 126 percent passthrough and his 3/5-Digit Automation discount is based upon a passthrough of 204 percent.

Table 6. Comparison of Automation-Related Mail Processing Cost Avoidances

Rate Category	Moeller's Effective Passthrough[1]	Cost Avoidance (Cents Per Piece)		
		PostCom Model	USPS Model[2]	Savings Difference
		[1]	[2]	[3]=[1]-[2]
Basic Nonautomation		21.406	19.825	
Basic Automation		17.901	17.915	
Basic Auto Savings	126%	3.505	1.910	1.595
3/5-Digit Nonautomation		12.546	12.004	
3/5-Digit Automation		11.221	11.457	
3/5 Auto Savings	204%	1.325	0.547	0.778

[1]Automation discounts, USPS-LR-I-166, worksheet "regval," divided by PostCom-modeled automation cost avoidances.
[2]USPS-T-25 at 5, Table II-4.

While witness Stralberg and I made several additional improvements to the USPS flats cost model (for a detailed description of these improvements, see TW-T-1), only one of these has a significant impact on automation-related cost avoidances. Specifically, the lower Test Year bundle breakage assumptions used in the revised model reduce automation-related cost savings because they reduce the number of piece sorts that are required for presorted mail. As I describe in my testimony for MPA, these lower Test Year bundle breakage assumptions, MPA-LR-2, worksheet "Control Sheet," are both appropriate and reasonable.

[11]Another option for resolving the anomaly would be using YTD FY 2000 productivites for FSM 1000s.

B. The Postal Service Ignored the Cost Savings That Result Directly From Automation Requirements Pertaining to Address Quality

As described by witness Lubenow, the high address quality of automation flats results in significant (although hard to quantify) cost savings. In this section, I show that address quality is higher for automation mail than for nonautomation mail; describe why better address quality results directly from automation requirements; and explain that while the Postal Service's flats cost model explicitly models some of the cost savings that result from improved address quality (e.g., higher accept rates), it ignores many others.

To set a context for this discussion, a recent Postal Service study of undeliverable-as-addressed (UAA) mail, defined as "all mail that cannot be delivered to the person or business at the address specified", found that the total cost for processing UAA mail is about $1.5 billion. USPS-LR-I-82 at 30. Therefore, address quality does have a large impact on Postal Service costs.

1. High Address Quality Results Directly From Automation Requirements

In his testimony, witness Lubenow explains why address quality is higher for automation flats than for nonautomation flats. In this section, I simply make two additional points: (1) while the Postal Service's Operations witness (witness Kingsley) has no data to prove that automation flats have higher address quality than nonautomation flats, she believes that this is the case; and (2) witness Kingsley agrees that higher address quality stems directly from automation requirements.

First, when witness Kingsley was asked to confirm that there is a difference in address quality between automation flats and nonautomation flats, she states, "I would assume yes, but have no data to support." Kingsley, Tr. 5/1805-1807. Second, when asked whether higher address quality results directly from automation requirements, she stated: "Automation rate flats must bear addresses that are sufficiently complete to allow matching to the current USPS ZIP+4 File and must be matched using current CASS-certified address matching software to obtain the correct numeric ZIP+4 code. These are not

requirements for non-automation non-carrier route presort flats and this could result in some differences in address quality." Id.

2. Address Quality Affects Much More Than Reject Rates

In his testimony, witness Lubenow explains that the higher address quality of automation flats not only reduces the reject rate on flat sorters, but also decreases many other costs to the Postal Service. The Postal Service, however, only explicitly modeled the cost savings from lower reject rates, stating that "LR-I-90 accounts for any other mail processing costs caused by address problems via the CRA cost adjustments." Yacobucci, Tr. 5/1481. Accounting for costs caused by address problems via the CRA cost adjustments essentially ignores them for the purpose of determining automation-related cost savings.

For the vast majority of Standard (A) Regular flats, most of the unit costs added by the CRA adjustment, 3.484 cents, come from the "NOT WORKSHARING-RELATED CRA COST" adjustment, which is added to all Standard (A) rate categories and therefore does not reflect cost differences between rate categories. For 3/5-Digit presort flats, the "PROPORTIONAL CRA ADJUSTMENT FACTOR" increases the automation cost savings by less than 0.1 cent, and this amount accounts for all worksharing-related costs not explicitly modeled, not just the cost of poor address quality. USPS-LR-I-90, worksheets "Cost Averaging" and "Scenario Costs." Because a large portion of the cost of poor address quality is unrelated to the reject rate, the Postal Service's flats cost model understates automation-related cost savings pertaining to address quality.

C. Barcoded Flats Will Facilitate the Postal Service's Flats Automation Program

As witness O'Tormey describes in his testimony, the Postal Service's flats automation/mechanization efforts have been met with mixed results. USPS-ST-42 at 7. As shown in Table 7, these mediocre results can be traced directly to

the large decreases in FSM productivity that have occurred as more flats have shifted from manual processing to machine processing.[12]

Table 7. Flat Sorting Productivity
(TPH in Thousands)[1]

Fiscal Year	Flat Sorting Machine
1993	746
1994	735
1995	719
1996	714
1997	670
1998	613

[1]USPS-LR-I-283, BY98 variability dataset (unscrubbed).

Evidence in this case suggests that this decrease in productivity has at least partially resulted from the challenges presented by nonbarcoded flats:

> The introduction of the FMOCR presents an additional challenge to the management of flats processing operations. Ideally, all FSM 881 machineable flats should be processed on the FMOCR. However, depending on the mailbase being processed, the reality is that only 70% to 80% of the non-barcoded flats inducted will be read by the FMOCR, which means that 20% to 30% of the flats inducted will not be read by the FMOCR. Therefore, occasionally there will not be enough processing time or equipment available to key the non-reads coming from the FMOCR on a multiposition flat sorting machine (MPFSM) keying sort program and still meet service commitments. At times, the high non-read rate of a particular mailbase may make it less productive to process it through the FMOCR and then key the rejects than it would be to key all the flats the first time through. However, the much higher throughput for FMOCR induction versus keyed induction should eliminate the latter consideration in almost all cases.
>
> The ideal scenario for each facility is to maximize automated flat processing and reduce keying operations to a minimum. The bottom line, however, is that each facility will need to evaluate FMOCR versus MPFSM processing

[12]Another data set in USPS-LR-I-283 shows that FY 99 FSM productivity was even lower than FY 98 FSM productivity. USPS-LR-I-283, LR283MPA.xls, BY98 variability dataset (scrubbed).

> for each processing operation, taking into consideration site-specific productivities, machine availability, and mailbase readability. USPS-LR-I-193, Strategic Improvement Guide for Flats Processing at 21.

While it is possible that the challenges presented by nonbarcoded flats may not adversely impact the AFSM 100 deployment to the same extent as they have past FSM deployments, it is also possible that barcoded flats will have an even larger impact on the success of the AFSM 100 deployment:

> [D]uring the initial deployment of the AFSM 100's, the potential volume of suitable mail will be greater than the capacity of the machines to be deployed. We expect to prioritize mail for processing on available AFSM 100's to achieve the best overall results. We have found that bar coded mail generally meets our overall preparation guidelines and processes more efficiently than non bar-coded.
>
> The AFSM has a throughput that is several times greater than either the FSM 881 or the FSM 1000. By placing the best mail available on the AFSM 100, we will maximize throughput and minimize downtime, including downtime that might result from jams that occur when inferior quality mail is presented...
>
> Increasing the volume of bar coded mail is a major part of our strategy for flats, as it was for letters. Unger, Tr. 21/8181-8182

Until we know the extent to which the presence of barcoded flats will affect the AFSM 100 deployment, I believe that it is prudent to continue encouraging mailers to barcode flats with a discount at the level proposed by witness Moeller.

ATTACHMENT A. SUMMARY OF POSTCOM PROPOSED RATES

Regular Subclass

		Entered at destination:		
Automation		BMC	SCF	DDU
Letters				
Basic	0.204	0.180	0.175	
3-digit	0.197	0.173	0.168	
5-digit	0.176	0.152	0.147	
Flats (pc-rated)				
Basic	0.271	0.247	0.242	
3/5-digit	0.235	0.211	0.206	
Flats (lb-rated)				
per piece:				
Basic	0.135	0.135	0.135	
3/5 digit	0.099	0.099	0.099	
per pound:				
Basic	0.661	0.547	0.521	
3/5 digit	0.661	0.547	0.521	

		Entered at destination:		
Presort		BMC	SCF	DDU
Letters				
Basic	0.246	0.222	0.217	
3/5-digit	0.229	0.205	0.200	
Non-letters (pc-rated)				
Basic	0.315	0.291	0.286	
3/5-digit	0.262	0.238	0.233	
Non-letters (lb-rated)				
per piece:				
Basic	0.179	0.179	0.179	
3/5 digit	0.126	0.126	0.126	
per pound:				
Basic	0.661	0.547	0.521	
3/5 digit	0.661	0.547	0.521	

Residual Shape Surcharge	0.180
Barcode Discount	0.030

Enhanced Carrier Route

		Entered at destination:		
		BMC	SCF	DDU
Letters				
Basic	0.182	0.158	0.153	0.146
Auto	0.170	0.146	0.141	0.134
High-D	0.159	0.135	0.130	0.123
Saturation	0.150	0.126	0.121	0.114
Non-letters (pc-rated)				
Basic	0.182	0.158	0.153	0.146
High-D	0.161	0.137	0.132	0.125
Saturation	0.155	0.131	0.126	0.119
Non-letters (lb-rated)				
per piece:				
Basic	0.062	0.062	0.062	0.062
High-D	0.041	0.041	0.041	0.041
Saturation	0.035	0.035	0.035	0.035
per pound:				
Basic	0.584	0.470	0.444	0.411
High-D	0.584	0.470	0.444	0.411
Saturation	0.584	0.470	0.444	0.411

Residual Shape Surcharge	0.150

Source:
Revised version of USPS-LR-I-166, wp1_comm.xls, Worksheet "Sum"
Revised version assumes 100 percent passthroughs of dropship cost savings