NM-T-1

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

Docket No. R2000-1

POSTAL RATES AND FEE CHANGES, 2000

DIRECT TESTIMONY OF

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CONCERNING

RATES FOR PERIODICALS MAIL

ON BEHALF OF

ALLIANCE OF NONPROFIT MAILERS

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CONTENTS

CONTENTS (cont.)

Autobiographical Sketch

My name is John Haldi. I am President of Haldi Associates, Inc., an economic and management consulting firm with offices at 1370 Avenue of the Americas, New York, New York 10019. My consulting experience has covered a wide variety of areas for government, business and private organizations, including testimony before Congress and state legislatures.

In 1952, I received a Bachelor of Arts degree from Emory University, with a major in mathematics and a minor in economics. In 1957 and 1959, respectively, I received an M.A. and a Ph.D. in economics from Stanford University.

From 1958 to 1965, I was an assistant professor at the Stanford University Graduate School of Business. In 1966 and 1967, I was Chief of the Program Evaluation Staff, U.S. Bureau of the Budget. While there, I was responsible for overseeing implementation of the Planning-Programming-Budgeting (PPB) system in all non-defense agencies of the federal government. During 1966 I also served as Acting Director, Office of Planning, United States Post Office Department. I was responsible for establishing the Office of Planning under Postmaster General Lawrence O'Brien. I established an initial research program, and screened and hired the initial staff.

I have written numerous articles, published consulting studies, and co-authored one book. Items included among those publications that deal with postal and delivery economics are an article, "The Value of Output of the Post Office Department," which appeared in *The Analysis of Public Output* (1970); a book, *Postal Monopoly: An Assessment of the Private Express Statutes*, published by the American Enterprise Institute for Public Policy Research (1974); an article, "Measuring Performance in Mail Delivery," in *Regulation and the Nature of Postal Delivery Services* (1992); an article (with Leonard Merewitz), "Costs and Returns from Delivery to Sparsely Settled Rural Areas," in *Managing Change in the Postal and Delivery Industries* (1997); an article (with John Schmidt), "Transaction Costs of Alternative Postage Payment and Evidencing Systems," in *Emerging Competition in Postal and Delivery Services* (1999); and an article (with John Schmidt), "Controlling Postal Retail Transaction Costs and Improving Customer Access to Postal Products," in *Current Directions in Postal Reform* (2000).

I have testified as a witness before the Postal Rate Commission in Docket Nos. R97-1, MC96-3, MC95-1, R94-1, SS91-1, R90-1, R87-1, SS86-1, R84-1, R80-1, MC78-2 and R77-1. I also have submitted comments in Docket No. RM91-1.

I. Summary and Purpose

Periodicals suffer an excessive amount of expensive manual sortation because of the Postal Service's admitted shortage of flat sorting machines. The Postal Service's growing amount of manual sortation of periodicals and other non-letters is reflected in the secular decline in Total Factor Productivity, which faces mailers of periodicals and other non-letter mail yet again with excessive increases in unit cost. The Base Year shortage of flat sorting capacity is the cumulative result of years of under-investment by the Postal Service.

The Postal Service has failed utterly to deliver on its mandate to provide mailers with economic and efficient management. Although it is not the Commission's responsibility to manage the Postal Service, neither should it rubber-stamp the revenue requirement, no matter how inefficient the underlying operating plan, and pass all resulting costs on to mailers. The appropriate remedy for the Commission is to disallow and exclude from the revenue requirement the extra costs resulting from inefficiency, not shift those costs to other mailers.

The purpose of this testimony is to explain the root source of the problem and why the proposed remedy is appropriate.

II. Rising Costs and Falling Productivity Growth: An Enduring Problem of Postal Ratemaking

One central issue of postal ratemaking has been the persistence of increasing costs. In recent years, many large business enterprises in the United States and elsewhere in the industrialized world have achieved significant productivity gains and reduced their real (inflation-adjusted) operating costs by investing in computerized technology and downsizing their workforces.[1] By 1999, real private investment in equipment and software in the United States had risen to approximately 11 percent of real gross domestic product ("GDP").[2] Productivity growth in manufacturing averaged 4.2 percent per year between 1993 and the third quarter of 1999.[3]

The Postal Service's customers and competitors have participated fully in this trend. The 1997 report of the Postal Service's Blue Ribbon Committee noted:

> Price increases are just not acceptable. Our customers won't allow it. In many of the products and services that we buy today, we're getting more value for money because of technology. Price increases have gone the way of cost-of-living increases and defined-benefit plans: all those standard ways of incrementing business costs have gone out the door.

Finding Common Ground: The Report of the Blue Ribbon Committee (1997), p. 25 (statement of Randy Lintecum, president, International

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[1] *See* President's Council of Economic Advisors, *2000 Economic Report of the President* (Feb. 2000), pp. 28-30, 34-35, 97-128.

[2] *Id.* at 29.

[3] *Id.* at 103.

Billing Services). *See also id.*, p. 36 (statement of Harry V. Quadracci, president, Quad/Graphics, Inc.):

> Automation is a key to cost control. Over the last 25 years, since I started Quad/Graphics, the CPI has moved at a compounded rate of 5.3 percent per year. Paper prices actually have gone up 5.2 percent per year. First-class postage went up 5.5 percent per year; second and third-class somewhat higher. But print prices actually went down 1.1 percent per year over those 25 years, resulting each year in a 6.3 percent productivity increase by the printers, which, passed on, is reflected in the prices all of you are paying for it today.
>
> If we hadn't made those investments in automation your print prices today would be more than five times more than what you're paying.

By contrast, Postal Service unit costs—especially for periodicals and non-letter mail—have exceeded the rate of inflation by a wide margin. Moreover, rising costs have gone hand-in-hand with a long term slowdown in productivity growth. Table 1 (on the following page) shows the year-to-year change in the Postal Service's total factor productivity ("TFP") for the years 1971-2000 (to date).[4] The year-to-year fluctuations should not obscure the underlying trend: long-term productivity growth

[4] Total factor productivity equals total output divided by a weighted index of all inputs, not just labor or equipment.

has been slowing.[5] Cumulative growth in total factor productivity has declined during each of the past three decades.[6]

1971-1980	6.9%
1981-1990	3.7%
1991-2000 (to date)	1.3%

[5] This is illustrated by the period 1993-1999. The reorganization of 1992/93 reduced the complement dramatically, by approximately 48,000 employees in early FY 1993, and the immediate result was a 3.8 percent increase in TFP. In five out of the next six years, however, TFP was negative, and the sum of those negative years was -4.6 percent, as shown in Table 1.

[6] In Table 1, the annual percentage changes are summed. Computing the long-term change by compounding (i.e., by multiplying the successive annual changes) leads to essentially the same result.

Table 1

U.S. Postal Service
Total Factor Productivity (TFP)
FY 1971 - AP 5 FY 2000 YTD

Fiscal Year	TFP: Percent Change From Previous Year
1971	1.2%
1972	1.2%
1973	4.0%
1974	-1.7%
1975	-0.9%
1976	-0.5%
1977	2.0%
1978	3.3%
1979	-2.1%
1980	0.4%
Subtotal	**6.9%**
1981	0.2%
1982	-1.3%
1983	-0.6%
1984	0.3%
1985	-0.2%
1986	2.1%
1987	0.4%
1988	0.3%
1989	-0.5%
1990	3.0%
Subtotal	**3.7%**
1991	-1.7%
1992	0.4%
1993	3.8%
1994	-0.1%
1995	-1.8%
1996	-1.2%
1997	1.3%
1998	-1.2%
1999	-0.3%
2000 to date	2.1%
Subtotal	**1.3%**

Source: Attachment to Response of USPS witness Tayman to DMA/USPS-T9-31 (2 Tr. 291).

These results are both discouraging and alarming. Over each successive decade, the Postal Service's cumulative investment in mechanization and automation has grown, yet TFP has responded in reverse. As technological innovation has improved the speed and sophistication of the equipment available on the market, productivity growth in the Postal Service has slowed. Indeed, for the categories of mail incurring the above-average increases in reported attributable costs, the productivity changes implied by Postal Service cost data have been *negative.*

Larry Buc, Rita Cohen, Michael Nelson, Halstein Stralberg and other intervenor witnesses explore in their testimony a variety of potential causes of this seeming paradox. My testimony focuses on perhaps the most fundamental reason of all: the Postal Service's chronic underinvestment in up-to-date mail processing equipment, particularly for non-letter mail. As I explain below, this underinvestment has inflated the Postal Service's test year revenue requirement—and the costs attributed to processing non-letter mail—to levels far above those consistent with economical and efficient management.

In raising this issue, I am mindful that the Postal Service's base year accrued costs, and its operating plan for the period from base year to test year, are conventionally assumed in postal rate cases to reflect optimal management and operations. The Postal Service has gone even further in recent rate cases, asserting that the efficiency of its actual operations and accrued costs is completely irrelevant to postal ratemaking. In Docket No. R97-1, USPS witness Panzar stated:

> [T]he efficiency of the Postal Service operating plan is not an issue for the analyst. *As long as it is given that postal services will be produced following Postal Service practices and procedures, the relevant marginal and incremental costs for pricing purposes are those calculated based on the Postal Service' operating plan.*

USPS-T-11 (Docket No. R97-1) at 17 (emphasis in original).

The Postal Service has been equally assertive in this docket. Invoking Dr. Panzar's testimony in Docket No. R97-1, the Service boasts that "[n]o postal witness in this case has attempted to analyze whether the Postal Service's operating plan is actually cost minimizing."[7]

In Docket No. R97-1, the Commission expressed skepticism that economic efficiency could be dismissed so readily. Addressing Dr. Panzar's testimony, the Commission noted that "the usual economic definition of a cost function . . . derives the function C(M,w) by selecting labor and other inputs to *minimize* the cost of the vector of mail volumes, (M), at the given prices, (w)."[8]

The Commission went on to analyze some of the consequences of basing cost attributions on the costs of inefficient operations.[9] For example, without cost minimizing behavior, "the marginal cost of any product becomes subject to the whims of the firm's management and does not provide an accurate measure of the efficient cost of society's resources to produce an additional unit of any of the firm's outputs."[10] "Because the marginal costs of a firm not constrained to minimize total production costs in producing its output is endogenous to its choice of an operating plan, these marginal costs are of limited use in setting rates."[11]

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[7] Response to AAP/USPS-1 (21 Tr. 8611).

[8] Docket No. R97-1, Opinion and Recommended Decision (May 11, 1998) at ¶ 4032.

[9] *Id.* at ¶¶ 4031 – 4052.

[10] *Id.* at ¶ 4046.

[11] *Id.* at ¶ 4049.

The Commission's skepticism was well founded. In the face of the Postal Service's chronic failure to control its costs, further disregard for the Service's management efficiency has become an unaffordable luxury. The Postal Reorganization Act entitles the Postal Service only to those revenues needed to cover costs under "honest, economical and efficient management."[12] I am not a lawyer, and leave to others the legal interpretation of this phrase. As an economist, however, I find absurd the notion that the Postal Service and its Governors have a license to formulate and implement any operating plan whatsoever, no matter how inefficient, year after year, and pass on to mailers all the resulting costs.

A basic optimization problem faced by every firm is the selection of a cost-minimizing mix of inputs for producing a given quantity and quality of outputs at a given set of input prices. How much money, for example, should be budgeted for labor vs. machinery? How often should a firm replace older machinery with newer, more productive models? Every firm, large or small, continually faces variations of these questions. Firms that produce a given volume and quality of outputs with a cost-minimizing mix of inputs are said to be operating on the efficiency frontier or production-possibility frontier. Firms that adopt a more costly mix of inputs are said to be operating inefficiently.

In competitive markets, there is no need for any regulator to second-guess the management efficiency of the incumbent firms. The invisible hand of competition performs this task, rewarding efficiency and punishing its absence. All other things being equal, firms with efficient mixes of inputs are able to attain greater profitability than higher-cost rivals, or to attract more business by lowering prices. Firms that fail to maintain an efficient mix of inputs—including firms that underinvest in

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[12] 39 U.S.C. § 3621.

maintenance, improvement and modernization of their physical plant—sooner or later improve their efficiency, or exit the market, or get acquired by other, more profitable firms.

Market power, however, tends to insulate incumbent firms from this competitive discipline. The greater the market power, the greater the inefficiency that can arise, and the longer the quiet life that allows it to persist. At the extreme is an organization like the Postal Service, which enjoys a legal monopoly over much of its business, and is the last remaining nationwide monopoly. That this giant enterprise has not even "attempted to analyze whether [its] operating plan is actually cost minimizing" is evidence of great monopoly power indeed.[13]

When competition fails to provide a reliable check on the efficiency of regulated monopolies, government must replicate this safeguard through the ratesetting process. Hence, the legal directive to limit the Postal Service's revenue to the levels justified by "honest, economical and efficient" management has only one sensible economic meaning: the Postal Service may recover costs from from ratepayers only if efficiently incurred. Just as effective competition prevents firms from recovering the costs of suboptimal, uneconomic and inefficient management, so must the regulatory process disallow recovery of needlessly inflated costs by the Postal Service.

The standard here is not the perfection of 20/20 hindsight. Even the best managers must work with incomplete data and uncertain projections. Fairness entitles Postal Service management decisions to a certain amount of deference. But when management neglect generates massive excess costs, year after year, the standard of "honest, economi-

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[13] *Accord,* 2 Tr. 442-44 (Tayman) ("I am not aware if any [cost-benefit analysis] has" been performed to test the possibility that a larger amount of investment in flat-sorting equipment would have been beneficial).

cal and efficient management" does not allow the Commission simply to rubber-stamp the excess as part of the Service's revenue requirement. The costs of such inefficiency must be excluded from the Service's overall revenue requirement, the attributable costs of individual classes or categories of service, and the "relevant marginal and incremental costs for pricing purposes." Ignoring the possibility that Postal Service costs have been inflated by inefficiency would abdicate the Commission's responsibility as a consumer protection agency.

In the context of the tradeoff between capital and labor, the standard of economical and efficient management requires that the Postal Service invest adequately in capital assets, both in the aggregate and in proportion to labor costs. When the cost of capital makes efficient the substitution of capital for labor, the Postal Service should do so. Likewise, when replacing existing capital equipment with new equipment (embodying the newest proven technology) appears profitable (in the sense of generating cost savings or increased revenues that exceed a reasonable hurdle rate), the Postal Service should replace the capital. In other words, the Postal Service not only has the authority to borrow and invest in its infrastructure, *it also has the responsibility to do so whenever such moves becomes economic and efficient.*

As I show in the following sections, the Postal Service for many years has steadfastly fallen far short of this standard.

III. The Postal Service's Spending on Capital Investment Has Been Grossly Inadequate

The amount of money invested by the Postal Service for the last decade, along with operating revenues, is summarized in Table 2 on the following page. As shown in column 1 of the table, operating revenues have grown each year, from approximately $40 billion in 1990 to almost $63 billion in 1999, and are projected to grow to $69 billion in 2001 on an after rates basis.

Column 2 of Table 1 shows gross investment for each year, while column 3 shows depreciation and amortization. Column 3 is a financial measure of the "using up" or "wearing out" of capital equipment (e.g., vehicles). Over time, depreciation approximates consumption of fixed capital. The Postal Service's reported depreciation expense has averaged about 2.4 percent of revenues, far below the national average for nonfinancial corporate businesses of about 11 percent.[14]

Net investment, shown in column 4, equals gross investment spending minus depreciation and amortization. Beginning in 1993, net investment declined precipitously, as the Postal Service's automation program virtually ground to a halt for several years. The $1.69 billion of net investment in 1992 was higher than any subsequent year except 1999, when net investment finally recovered to $2.1 billion. Considering the inflation creep and volume increases that have occurred over the intervening years, capital spending has experienced virtually no increase whatsoever.

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[14] Council of Economic Advisors, *Economic Indicators: March, 2000*, p. 3. Many observers believe that the Postal Service's reported depreciation is overstated by the assumption of overly short asset service lives. If so, the Postal Service's actual consumption of capital is even smaller.

Column 5 of Table 2 helps put the Postal Service's net investment spending into perspective. It shows net investment as a percentage of the Postal Service's operating revenues. Between 1990 and 1992, the percent of operating revenues spent on net investment grew from 3.0 to 3.7 percent, and then by 1995 the percentage of operating revenues spent on investment dropped by two-thirds, to 1.2 percent—a dramatic decline. On this basis, net investment in 1999, at only 3.4 percent of gross revenues, did not reach the levels achieved in 1991 and 1992. More startling, perhaps, the percentage is scheduled to decline sharply during this year and the next, back down to 2.3 percent.

Table 2

U. S. Postal Service
Operating Revenues, Investment and Depreciation
1990 – 2001

Fiscal Year	(1) Operating Revenues (000)	(2) Gross Investment: Purchase of Property & Equipment (000)	(3) Depreciation and Amortization (000)	(4) NET INVEST-MENT (000)	(5) Net Investment as Percent of Operating Revenues
1990	39,655	1,858	669	1,189	3.0%
1991	43,884	2,321	734	1,587	3.6%
1992	46,151	2,475	784	1,691	3.7%
1993	47,418	1,885	889	996	2.1%
1994	49,383	1,727	992	735	1.5%
1995	54,293	1,808	1,141	667	1.2%
1996	56,402	2,340	1,333	1,007	1.8%
1997	58,216	3,233	1,673	1,560	2.7%
1998	60,072	3,055	1,579	1,476	2.5%
1999	62,766	3,917	1,795	2,122	3.4%
2000	64,817	3,564	1,864	1,700	2.6%
2001	69,117	3,746	2,154	1,592	2.3%

Sources: 1990-1997, Annual Reports of the U.S. Postal Service.
1998-2001, col. 2, 3 & 4, response to ANM/USPS-T9-13 (2 Tr. 150).
Operating revenues for 2000-2001, USPS-9A; FY 2001 revenues are After Rates.

Several factors indicate that these meager rates of net investment fall short of the levels needed to modernize the Service's plant, become more efficient, increase productivity, reduce costs and improve the service given to all classes of mail. I discuss these factors in turn.

A. The Postal Service's Rate Of Net Investment Is Far Lower Than Achieved By Efficient Firms In Competitive Industries.

The Postal Service's recent rate of investment is far below the levels achieved by the best-managed postal authorities in other advanced Western economies, and other capital intensive firms in the United States.[15] Indeed, Quad/Graphics, one of the participants in the Postal Service's own Blue Ribbon Committee, has spent approximately 20 percent of its revenue on investment in automation over the past 25 years.[16]

B. The Postal Service's Rate of Net Investment Falls Consistently Short Of The Service's Own Capital Spending Targets.

The inadequacy of the capital spending portion of the Postal Service's Operating Plan is apparent even without considering the practices of other postal authorities and other businesses. Over the last 12 years the Postal Service has consistently failed to achieve even its own modest capital spending goals. Table 3 (on the following page) provides a summary of the 12-year shortfall by major category.[17] Of $40.2 billion in planned commitments during this period, the Postal Service actually managed to commit only $28.5 billion, a $11.7 billion shortfall. In 6 of the last 8 years, the shortfall has exceeded $1.1 billion (see Appendix, Table A-1). The largest category for planned commitments, mail processing equipment, had the largest shortfall: only 58.3 percent of planned

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[15] *See* p. 4, above.

[16] *Finding Common Ground*, p. 36 (statement of Harry Quadracci).

[17] For detail, see attachment to ANM/USPS-T10-47, as well as response thereto (2 Tr. 408-27).

commitments materialized. In 4 of the last 8 years, actual commitments were less than 50 percent of planned commitments (Appendix, Table A-2).

Table 3

U.S. Postal Service
Capital Commitments
1968-1999
($, millions)

	(1)	(2)	(3)	(4)
	Plan ($, 000)	Actual ($, 000)	Shortfall (Plan - Actual	Actual as Percent of Plan
Category:				
Mail processing equipment	13,603	7,936	5,667	58.3%
Construction & building purchase	12,337	9,179	3,169	74.4%
Building improvements	5,374	5,049	325	94.0%
Vehicles	2,454	2,066	388	84.2%
Retail equipment	1,489	864	624	58.1%
Postal support equipment	4,916	3,381	1,534	68.8%
TOTAL	40,173	28,476	11,697	70.9%

Source: Appendix A.

C. Chronic Underinvestment Has Led To A Severe Shortage of Mechanized and Automated Sorting Capacity For Periodical and Non-Letter Mail.

An undeniable symptom of the Postal Service's underinvestment is a pervasive shortage of mechanized capacity to sort flats and small parcels. The shortage of adequate capacity to sort flats on a flat sorting machine ("FSM") and the consequent need to sort flats manually are discussed repeatedly by the Postal Service's operations expert, witness Kingsley, and also by witnesses O'Tormey and Unger. The testimony of these witnesses demonstrates that the Postal Service has for many years suffered a growing shortage of flat sorting capacity. For example:

- While it is envisioned that the AFSM 100 will ultimately replace the FSM 881s, the first phase of deployment is primarily intended to supplement our existing flat sorting equipment *by providing needed flats sorting capacity.*[18]

- The FSM 1000 has helped reduce the volume of mail that is processed in manual operations.[19]

- There are also heavy volume periods where our existing shortfall in flats sorting capacity results in some flats... being processed in manual operations.[20]

- The AFSM will help reduce the overall amount of mail in manual operations *by providing needed additional FSM capacity.*[21]

- FSM 881s will be relocated to smaller sites *that do not have flats sorting equipment or lack sufficient flats sorting capacity today.*[22]

- Throughput of the AFSM 100 is approximately 2 to 3 times higher than that of the FSM 881... and *much of the distribution that is being performed manually in delivery units* will be automated in plants.[23]

- The utilization [of barcodes] in incoming secondary operations remains relatively low . . . and *it highlights the need for additional flats sorting capacity.*[24]

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[18] USPS-T-10 (Kingsley), page 11, lines 25-28 (emphasis added).

[19] *Id.*, page 12, lines 20-21.

[20] *Id.*, pages 13-14.

[21] *Id.*, page 14, lines 9-10 (emphasis added).

[22] *Id.*, page 13, lines 9-11 (emphasis added).

[23] *Id.*, lines 14-17 (emphasis added).

[24] *Id.*, page 14, lines 24-26 (emphasis added).

- *As the flat mail volume grew throughout the 1990s*, and as we began incoming secondary and automated processing, *it was difficult to eliminate capacity constraints.*[25]

- The main reason [why so many prebarcoded flats were not processed in automated operations] *was due to not enough flat sorting machine capacity*, which required the flats to be sorted manually.[26]

- Though some facilities may have the necessary flats sorting capacity, others do not, and a shortage of FSM capacity does exist, systemwide.[27]

- [W]e have enough capacity in our letter mail system. We have over 250 automated plants. We have plenty of delivery bar code sorter capacity. Where the shortage was [in the fall of 1998] is the significant shortage of flat capacity, and that is what we had to deal with. That hit us heavier and hit deeper . . . .[28]

- [O]ne of the big contributors to flat processing costs is a shortage of automation equipment capacity.[29]

The Postal Service admits that it will require the additional capacity of at least the first 175 AFSM 100s deployed. Since the capacity of one AFSM 100 is equivalent to about 2.6 FSM 881s, this means that the

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[25] Response of USPS witness O'Tormey to ANM/USPS-ST42-6 (21 Tr. 8303-05) (emphasis added).

[26] Response USPS witness Kingsley to MH/USPS-T10-8 (5 Tr. 1691-92) (emphasis added).

[27] Response of USPS witness Kingsley to MH/USPS-T19(b).

[28] 21 Tr. 8347 (O'Tormey).

[29] 21 Tr. 8393 (O'Tormey).

Service is short the equivalent of perhaps as many as 450 FSM 881s.[30] Such a shortage is inexcusable.

The first flat sorting machines, the FSM 775s were deployed in 1982, and the last one was installed in 1988.[31] The FSM 775s were converted to FSM 881s in 1990-92 by changing the configuration in a way calculated to increase throughput. Thus, by 1986-88 the FSM 775/881s constituted an off-the-shelf, proven technology. Its cost and capabilities were both well-known to the Postal Service.

The FSM775/881s were purchased to support expected volume growth only through FY 1992.[32] By 1992, however, when the Postal Service should have been ordering additional flat sorting capacity, it sharply cut commitments for new equipment to only 15 percent of Plan (see Appendix, Table A-2). Under the circumstances, it is not surprising that the Postal Service found itself progressively short of flat sorting capacity after 1992. At the same time, the failure to plan and procure additional FSMs so as to have adequate capacity during the years 1992-2000 has deprived periodical mailers of the benefits of efficient and economical management.[33]

The average cost of the last FSM 881 machines purchased was only $230,000.[34] FSM 881s equipped with a barcode reader (BCR) and

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[30] Response of USPS witness Kingsley to ANM/USPS-T10-21 and 39 (5 Tr. 1570, 1589).

[31] Response of USPS witness Kingsley to ANM/USPS-T10-1 (5 Tr. 1551).

[32] Response of USPS witness Kingsley to ANM/USPS-T10-39 (5 Tr. 1589).

[33] Response of USPS witness Kingsley to ANM/USPS-T10-1 (5 Tr. 1551).

[34] Response of USPS witness Kingsley to ANM/USPS-T10-29 (5 Tr. 1579).

an optical character reader (OCR) cost approximately $290,000.[35] In the context of gross capital spending that ranged between $1.7 and $3.9 billion (Table 1), additional flat sort capacity was clearly affordable.

Throughout the 1990s, the Postal Service has had ample borrowing authority that could have been used to purchase additional flat sorting capacity and build adequate-sized facilities.[36] In addition to, or instead of, acquiring more FSM 881s, the Postal Service could also have acquired more FSM 1000s, another off-the-shelf piece of equipment that was widely deployed in 1996-1998 at a cost of $425,000 per machine.[37]

The FSM 881 represents a more efficient and economical way to process flats than manual sortation, especially when equipped with a barcode reader. All FSM 881s were retrofitted with BCRs during the years 1992-1993.[38] Deployment of optical character readers to the FSM 881s began in 1998, and all 812 FSM 881s will be equipped with BCRs by 2001.[39] The FSM 881 is capable of 94-100 separations, whereas the typical manual flats case has only 60 separations. Thus by any reckoning, the FSM 881 has for years represented a more economical and efficient alternative than manual sortation. Yet for years the Postal Service has been forced to undertake more and more manual sortation of flats because it has failed to invest in and deploy a sufficient number of

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[35] Response of USPS witness Kingsley to ANM/USPS-T10-30 (5 Tr. 1580).

[36] Response of USPS witness Tayman to ANM/USPS-T9-30 (2 Tr. 177-78).

[37] USPS-T10 (Kingsley), page 11, lines 6-17; response of USPS witness Kingsley to ANM/USPS-T10-35 (5 Tr. 1585).

[38] Response of USPS witness Kingsley to ANM/USPS-T10-41 (5 Tr. 1592).

[39] Response of USPS witness Kingsley to ANM/USPS-T10-34 (5 Tr. 1584).

flat sorting machines.[40] Importantly, this is the course that would have been followed by any firm that was motivated to reduce costs wherever it had been proven to be economic and efficient to do so. There is no need to speculate or second-guess. The FSM 881 and the FSM 1000 each represent a fully-developed technology, with known cost, capabilities and payoff.

The critical shortage of flat sorting capacity can rebound to the particular disadvantage of those subclasses (such as nonprofit periodicals) that do not present the Postal Service with sufficient volume to constitute the most efficient utilization of the equipment. Witnesses O'Tormey and Unger describe how Postal Service field managers have striven to maximize utilization of the limited FSM capacity, and send all flat-shaped mail which cannot be machine-processed to manual sortation. No guidelines are in place to protect any subclass from the discrimination that can result from efforts to meet the "bottom line operational budget."

Witness Unger candidly states that "Based on my experience, I believe it is possible that the objective of minimizing total costs does not always translate into results that minimize every subset of costs." The field managers who each day must struggle with how to optimize in the face of such almost overwhelming space and equipment constraints deserve empathy. They try do to the best with what they have, and are not responsible for investment decisions that result in space and FSM

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[40] In prior cases (Docket Numbers R94-1 and R97-1) witness Stralberg observed the extensive number of flats that were manually sorted and hypothesized that such labor represented "automation refugees." The Postal Service has denied the automation refugee hypothesis, and insisted that such manual sortation was necessary to meet service requirements. To the extent the Postal Service is correct, there has been a serious "automation shortfall."

capacity shortages.[41] At the same time, in view of the critical space and capacity constraints acknowledged by every knowledgeable operations witness, the shortage of FSM capacity clearly discriminates against periodical mailers with comparatively small volumes that do not lend themselves to the most optimal use of scarce machine hours. Through no fault of their own, they are too often the ones whose mail is systematically shunted to high-cost manual operations. This costly and inefficient triage, with its less-than-zero-sum consequences, would have been unnecessary if the Postal Service had made adequate investments in automated flat-sorting equipment.

D. Chronic Under-Investment Has Led To A Widespread Shortage of Facility Space For Sorting Equipment For Non-Letter Mail.

Another consequence of underinvestment is the emergence of too many cramped and overcrowded postal facilities, which contributes both to higher costs and the inconsistent quality of service received by the nonprofit subclasses, as well as other subclasses. Construction and building purchase represented the second largest category of shortfalls from planned commitments. During the 12-year period 1988-1999, only 74.4 percent of planned commitments for construction and building purchase were actually made (see Table 3). The shortage of space at Postal Service plants and its effect on costs is candidly acknowledged by Postal Service witnesses on numerous occasions. For instance:

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[41] To the extent that space shortages and capacity limitations are the reason for the increase in wage-adjusted unit costs for periodicals, it should not be surprising that field managers cannot explain the increase in unit costs.

- Manual incoming secondary processing occurs predominantly at delivery units *due to space constraints at plants . . .*[42]

- There are two major reasons for not deploying feed systems to all SPBSs: . . . (2) *Not enough space*—the feed systems have a large footprint.[43]

- When space is inadequate and all other less-disruptive, less-costly alternatives have been exhausted, we resort to an annex . . . There appears to be some form of periodicals processing in these annexes . . . There also are many other annexes that do not process periodicals . . . I would expect that in most cases, additional handling and transportation costs could be incurred with the use of annexes.[44]

- However, during this period [1998] evaluating current capacity needs was complicated by space limitations in some facilities . . .[45]

The Postal Service has failed, for one reason or another, to take meaningful steps to set its own house in order. This continued and persistent gross neglect of investment could be viewed as indicative of a certain lack of confidence by the Postal Service in itself. The drive to reclassify the various classes and subclasses of mail inadvertently may have diverted attention from the critical issue of why the Postal Service was cutting back on its automation program and doing so little to modernize the postal infrastructure. Whatever the reason, the Postal Service

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[42] Response of USPS witness Kingsley to MH/USPS-T10-1(e) (revised April 7, 2000) (5 Tr. 1676-78) (emphasis added).

[43] Response of USPS witness Kingsley to ANM/USPS-T10-13 (5 Tr. 1563) (emphasis added).

[44] Response of USPS witness Kingsley to MH/USPS-T10-7 (5 Tr. 1688-90).

[45] Response of USPS witness O'Tormey to ANM/USPS-ST42-6(e) (21 Tr. 8305).

has failed to use the authority granted under existing legislation to do what needs to be done.

E. Postal Service Spending on Research and Development Has Also Been Inadequate.

Another neglected area of the operating plan is research and development. Spending on research and development is like seed corn. It is a vital investment in the future, because it creates opportunities for productive ways to invest capital. When directed properly, research and development spending can be among the wisest investments of all.

Postal Service spending on research and development since 1990 is shown in Table 4. As can be easily seen, again starting in 1993, research and development expenditures were curtailed sharply.[46] The bottom was reached in 1994, but they have remained at a comparatively low level since that time. In terms of operating revenues, the small increases since 1994 have not been sufficient to lift R&D above the 1994 level (see Table 4, column 2).

The reduction in R&D seems extremely short-sighted for an organization that expects to generate over $69 billion in revenues in 2001, has almost 900,000 employees, and must move increasingly large mountains of mail each year. Unless the necessary research and development takes place today, future opportunities for investment opportunities and major advances in modernization are likely to be delayed if not foregone entirely.

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[46] The internal reorganization in 1992/93 had a fairly dramatic impact in certain areas. One such area was research and development. The separate R&D Department was abolished and functionally reorganized as an office under the Engineering Department, which accounts for the radical reduction in R&D spending in 1993.

Modernization of the Postal Service infrastructure requires that a continuing stream of new developments be implemented to replace less efficient labor-intensive facilities with more efficient capital-intensive facilities. For so long as R&D and net capital spending continue at grossly inadequate levels, however, the Postal Service inevitably will continue to be a highly labor-intensive organization.

Table 4

USPS Research & Development Expenditures
1990-1999
($ millions)

Fiscal Year	(1) Research & Development Expenditures	(2) Percent of Operating Revenues
1990	81	0.20%
1991	115	0.26
1992	168	0.36
1993	58	0.12
1994	50	0.10
1995	52	0.10
1996	56	0.10
1997	68	0.12
1998	77	0.13
1999	67	0.11

Source: USPS Annual Reports, 1990-1999, Auditor's Note 2.

F. The Postal Service's Failure To Invest More Is Unsupported By Cost Benefit Analysis.

The Postal Service has offered no cost-benefit analysis or other evidence indicating that its actual levels of investment in flat-sorting equipment have been efficient or adequate, and no such analysis appar-

ently was ever performed. To the contrary, the Service has made a point of pride out of its failure to "analyze whether the Postal Service's operating plan is actually cost minimizing."[47]

Moreover, the enormous returns predicted (and apparently achieved) by the Postal Service on its existing investment in sorting equipment for non-letter mail are powerful evidence that the Service has failed to exhaust all profitable opportunities for investment of this kind. Received microeconomic theory teaches that an economically and efficiently managed firm should expand investment in labor-saving, cost-reducing equipment to the point where the cost savings and increased revenue generated by the last dollar of investment produce a return equal the hurdle rate for the investment. Postal Service investments in sorting equipment for non-letter mail have not come close to this equilibrium point.

Information submitted by senior Postal Service management to the Board of Governors on purchase and deployment of new flat sorting equipment since 1994 has projected returns on investment (ROI) far above the Postal Service's internal hurdle rate of 20 percent.[48]

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[47] Response to AAP/USPS-1 (21 Tr. 8611). USPS witness Tayman likewise admitted that "I am not aware if any [cost-benefit analysis] has" been performed to test the possibility that a larger amount of investment in flat-sorting equipment would have been beneficial. 2 Tr. 442-44 (Tayman). Mr. Tayman admitted that determining whether "a larger investment in capital of this kind . . . would have had incremental benefits that exceed the incremental costs" would have required a cost benefit analysis. *Id.* at 442 & 454, lines 16-22.

[48] *Compare* USPS Briefing Sheets for Board of Governors' Meetings, reproduced in Response of USPS witness O'Tormey to ANM/USPS-ST42-7, Attachment pp. 1, 4 and 5 (21 Tr. 8307) (projected returns on investment); 21 Tr. 8338-42 (O'Tormey) *with* 2 Tr. 463-64 (Tayman), Responses of USPS witness Tayman to ANM/USPS-T9-59 (2 Tr. 214), and ANM/USPS-T10-19 (2 Tr. 428) (20% hurdle rate). During cross-examination of Mr. O'Tormey, he speculated that the high returns projected for these investments were total returns over their expected life, (continued...)

Date of BOG Mtg	Flat Sorting Machine	No. Requested	ROI
April 4-5, 1994	FSM 1000	102	69.4%
December 3, 1996	FSM 1000	240	37% to 66%
June 1-2, 1998	AFSM 100	175	30% to 45%

Although the Postal Service apparently has failed to conduct any formal after-the-fact studies of the returns experienced on these specific investments,[49] USPS witness O'Tormey has testified that these projected returns have been borne out by experience.[50] By implication, additional investment opportunities with likely returns above 20 percent remain untapped. The "existence of a capacity shortfall implies that there are . . . profitable opportunities for buying more equipment . . . profitable in the sense that the expected returns are expected to exceed the hurdle rate of the investment" (21 Tr. 8393 (USPS witness O'Tormey)).

Moreover, the Postal Service's hurdle rate of 20 percent appears to be conservative. The Postal Service's cost of capital is tied to the U.S. Treasury rate for borrowing, and hence is relatively low. Indeed, when

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[48] (...continued)
not annualized returns. 21 Tr. 8339, lines 1-11. This conclusion is clearly mistaken: total returns at these levels over the multi-year projected lives of the investments would equate to annualized returns well below the 20 percent hurdle rate.

[49] Responses of USPS witness Tayman to ANM/USPS-T9-63-65 (2 Tr. 220-23); 2 Tr. 461-62 (Tayman).

[50] 21 Tr. 8341, lines 22-25; *id.* at 8342, lines 10-24 (O'Tormey). The Capital Investment Plan, FY 1998-2002, FY 2000 Update, states that since 1980 the USPS has invested $5.6 billion in letter mail automation and the salary avoidance since that time amounts to about $15 billion. This indicates quite a fairly spectacular return on investment, and witness Tayman assures that the cost avoidance figure is correct. Response of USPS witness Tayman to ANM/USPS-T9-8 and 51 (2 Tr. 122-45, 204-05).

former Postmaster General Runyon established the 20 percent value in 1995, the the Postal Service's cost of capital was only 7.3 percent; the remaining 12.7 percentage points of the hurdle rate were intended as a risk premium, which is relatively high.[51]

The Postal Service's chronic neglect of these opportunities for profitable investment in flat-sorting equipment is consistent with the Service's myopic focus on short-run cash flow at the expense of long-run optimization. As USPS witness Tayman conceded, an investment is expected to be profitable if the discounted present value of its expected benefits exceeds the discounted present value of its expected cash outflows.[52] The Board of Governors' high priority to conserving cash, however, can result in "disapproving of profitable investments because during some shorter period of years, the outflows are likely to exceed the inflows."[53]

G. Knowledgeable Outside Observers Have Confirmed The Inadequacy Of Postal Service Investment Levels

Many participants in the Postal Service's Blue Ribbon Committee agreed in their 1997 report that the Postal Service's level of capital investment was grossly inadequate. Observed one participant, "I think the Postal Service is budgeting something like six to eight percent" of its revenue on capital investment. "That's not enough." *Finding Common Ground*, p. 36. "Automation . . . has to continue to grow," noted a direct-mail manager. *Id.*, p. 37. "The Postal Service should expand its invest-

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[51] Response of USPS witness Tayman to ANM/USPS-T10-19 (2 Tr. 428); 2 Tr. 463-64 (Tayman).

[52] 2 Tr. 448-51 (Tayman).

[53] *Id.* at 452.

ment in technology to make the necessary measurements that a quality program needs," added a university mail manager. *Id.*

Based on the projections of future-Postmaster Henderson that the Postal Service "would require a yearly investment of $4 billion at a minimum return-on-investment just to keep pace with current USPS programmed labor cost increases," the Blue Ribbon Committee recommended an "expanded capital investment program." *Id.*, p. 40. The Committee also urged the Postal Service to establish a USPS task force to make recommend "more appropriate capital spending targets," and to "identify specific opportunities within the Postal Service for additional investment." *Id.* at 44.

In Fiscal Year 2000, the Postal Service projects that its net investment as a percentage of operating revenue will be *lower* than in 1997—2.6 percent vs. 2.7 percent.[54]

[54] *See* p. 15, above.

IV. Excuses for USPS Under-investment Do Not Withstand Scrutiny

A. The Postal Service Has Substantial Unused Borrowing Capacity

The Postal Service's total debt is subject to a statutory limit of $15 billion, and the annual net increase for capital investments is limited to $2.0 billion.[55] These limits became effective in 1992 (before then, the limits were slightly lower).[56] Since the Postal Reorganization Act became effective, at no time has either of the two statutory ceilings restricted the actual level of capital investment by the Postal Service.

The actual outstanding long-term debt is revealing as an indicator of the Postal Service's ability to have undertaken greater net investment spending. Long-term debt is summarized in Table 5. The highest level of total debt ever incurred by the Postal Service, $9.3 billion, was in 1993. During the subsequent years, 1994-1997, the Postal Service's outstanding long-term debt declined sharply, from $9.2 to $5.8 billion at the end of FY 1997. During 1998-1999, total debt increased, but only by $552 and $504 million, respectively, far below the $2 billion annual limit. At the end of FY 1999, the level of total debt was only 46 percent of the $15 billion statutory limit.[57]

Had the Postal Service continued modernizing at the pace set in 1993, debt might have increased in the short run. The Postal Service has offered no reason to conclude, however, that the statutory debt limits

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[55] Response of USPS witness Tayman to ANM/USPS-T9-2 (2 Tr. 112).

[56] Response of USPS witness Tayman to ANM/USPS-T9-27 (2 Tr. 173-74).

[57] Response of USPS witness Tayman to ANM/USPS-T9-30 (2 Tr. 177-78).

contained in 39 U.S.C. § 2005 would have prevented a major ramp up in investment, even temporarily. Moreover, in the longer run, the cost savings and revenue growth permitted by the foregone investments would have allowed the Postal Service to carry more debt, or accelerate the payoff of existing debt.

The balance sheet may appear to have been strengthened by the reduction in debt between 1994-1997. It was obtained, however, as a result of the meager level of net investment and the concomitant failure of the infrastructure, especially mechanized flat sorting capacity, to keep up with the growth in volume.

Table 5

U.S. POSTAL SERVICE DEBT
1990-1999
(millions)

End of Fiscal Year	Current Portion of Long-term Debt	Long-term Debt	Total Debt Subject to Statutory Limitation
1990	303	6,668	6,971
1991	302	8,139	8,441
1992	750	9,173	9,923
1993	1,062	8,686	9,748
1994	1,261	7,727	8,988
1995	261	7,019	7,280
1996	2,010	3,909	5,919
1997	2,647	3,225	5,872
1998	3,633	2,788	6,421
1999	3,363	3,554	6,917

Source: USPS Annual Reports, 1990-1999.

B. The Postal Service Has Ample Flexibility to Downsize its Workforce.

Every year since at least 1995, the number of career employees in the Postal Service has climbed, sporadically but relentlessly, as shown in Table 6 below. During a period when the labor force in many major firms was being downsized, the Postal Service's has been upsized. Today, the it has almost 800,000 career employees.[58] Including Postmaster Leave Replacements, Rural Associates and Reliefs, and Non-bargaining Temporaries, the Postal Service has almost 900,000 employees.[59]

It is sometimes asserted that the Postal Service has trouble adjusting and reducing the size of its labor force because contracts with its labor unions specify that once career employees have six years of continuous employment they are protected by a no-layoff provision.[60] Such assertions, however, appear to be misplaced. As of accounting period 7, FY 2000, 420,845 career employees had layoff protection. This means, of course, that over 375,000 employees did not have any layoff protection, which affords the Postal Service considerable flexibility with respect to adjusting the size of its labor force.

Furthermore, if the Postal Service wanted to reduce the size of its career labor force, it could also do so easily by taking advantage of the ample turnover that results from retirements, voluntary separations and other reasons. In less than five and one-half years almost 190,000 career employees, or over 25 percent of the number of career employees

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[58] Since 1995 the career labor force has grown at a compound rate of 1.75 percent, even more than the 1.0 to 1.5 percent growth in deliverable addresses.

[59] Response of USPS witness Tayman to ANM/USPS-T9-60 (2 Tr. 215-16).

[60] Response of USPS witness Tayman to ANM/USPS-T9-66 (2 Tr. 224).

in 1995, were separated.[61] The no-layoff provisions in the labor contracts do not provide any excuse for failing to procure an appropriate amount of flat sorting capacity and making the appropriate adjustments to the labor force.

Table 6

Career Employment in the Postal Service

Year	(1) Number of Employees	(2) Year-to-year Increase
1995	730,707	
		23,225
1996	753,932	
		6,818
1997	760,750	
		4,722
1998	765,472	
		28,592
1999	794,064	
		2,897
2000	796,961	

Source: USPS Financial & Operating Statements, A/P 1.

C. The Shortage of Experienced Supervisors Provides no Excuse for Inadequate Investment

Witness O'Tormey's testimony explains how the internal reorganization of 1992/93 stripped the Postal Service of one-fourth of its experienced supervisors.[62] That internal reorganization, no matter how ill-

[61] Response of USPS witness Tayman to ANM/USPS-T9-26 (2 Tr. 172).

[62] USPS-ST-42 (O'Tormey); response of USPS witness O'Tormey to ANM/USPS-ST42-4 (21 Tr. 8300-01).

advised, provides a clear demonstration that the Postal Service does have the flexibility to downsize its labor force.

The Postal Service's failure to recover fully from the internal reorganization may be part of the explanation for the downward trend in FSM operational productivity. That is no excuse, however, for failing to invest in more mechanized/automated flat sorting capacity. The increase in flat volumes throughout the 1990s was entirely foreseeable: the Postal Service's expert, witness Tolley, predicted it in each rate case. In the face of steadily increasing volumes, when the Postal Service deliberately chose to eliminate one-fourth of its experienced field supervisors, it should have redoubled its efforts to expand crowded facilities and provide capacity sufficient to handle the growing volume. It would have been entirely reasonable for the Postal Service to attempt to reduce its labor force by substitution of capital through increased investment. Instead, the Service reduced both the labor force and spending on capital investment, with disastrous consequences for mailers, especially periodicals mailers.

D. Availability of the AFSM in 2000 Provides No Excuse for Previous Failure to Order Other FSMs.

The shortage of FSM capacity did not occur overnight. Witness Kingsley acknowledges that the FSM 775/881s were planned to handle anticipated needs only through 1992.[63] Witness Kingsley notes that "a production line [for the FSM 775/881] did not exist after FSM 775 deployment was completed in 1992 and considerable costs are incurred to restart a production line."[64]

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[63] Response of USPS witness Kingsley to ANM/USPS-T10-39 (5 Tr. 1589).

[64] Response of USPS witness Kingsley to ANM/USPS-T10-40 (5 Tr. 1590-91).

That restarting a production line entails considerable fixed costs is a well known fact of economic life that should have been obvious to Postal Service management in 1988-1992. Moreover, since the Postal Service knew full well that it was the only customer for flat sorting machines, it has no excuse for not anticipating that the production line would be closed down after the last FSM 775s were delivered. During that same period, management should also have been aware that (i) there were no plans to add FSM capacity to handle increased flats volume after 1992, and (ii) an improved, next-generation flat sorting machine was nowhere close to availability. Before the first FSM 775s were purchased, the Postal Service faced an obvious trade-off between ordering more FSMs at that time, and thereby or subsequently (*e.g.*, within a few years, and well before a critical shortage of capacity existed) paying the additional cost of restarting the production line, depending on which course was more economic. But it did neither.

Witness Kingsley states that "The limited long-term value of the FSM 775/881 is supported by the expected replacement of FSM 775/881s starting in FY 2001 with the AFSM Phase 2 deployment."[65] However, the advent of the AFSM 100 as a realistic alternative to earlier machines by FY 1998-99 was no excuse for management inaction extending over a period as long as 10 years. Flats mailers, especially periodicals mailers, are now asked to pay heavily for a long series of non-economic, inefficient decisions — or "non-decisions" — whichever the case may be.

[65] Response of USPS witness Kingsley to ANM/USPS-T10-40.

E. Conclusion

The main problem faced today by the Postal Service is its unwillingness to invest in itself and its core mission as needed. The solution to this problem can be achieved by the Postal Service acting alone.

Over the past three decades, the Postal Service has enjoyed a remarkable growth in mail volume. Between 1978 and 1998 alone, total volume more than doubled, from 96 to 198 billion pieces. Too many of the existing postal facilities were not built to handle today's volume, much less any future increases in volume. Considering the cramped and over-crowded condition in which many postal employees must work, they do an admirable job of getting the mail delivered. One can only marvel at how well they do under such adverse circumstances. However, because the Postal Service has struggled so long with an infrastructure than has been inadequate for the growing volume of mail, it may have become complacent about the fact that it perennially has so many undersized and underequipped facilities. The infrastructure is what will determine whether the Postal Service will be successful over the remainder of this century.

V. Remedy

In this Docket, mailers of periodicals and other non-letter mail are again faced with excessive increases in unit costs because of the persistent failure of the Postal Service to make timely and adequate investments in needed flat sorting capacity and floor space.

What can the Commission do? It can—and should—adjust the unit cost of Periodicals downward to what that cost would be if the Postal Service had made anywhere near the appropriate investments in time for use during the test year.

The Postal Service's failure to produce (and, apparently, to create) the necessary data thwarts precise quantification of the full amount of the costs needlessly generated by the Service's underinvestment. Nevertheless, the costs clearly are large. Every Postal Service witness agrees that manual sortation of flats is undertaken as a last resort because it is more costly than when done on FSMs.[66] Manual flat sortation requires clerks with scheme knowledge, at pay level PS-05, while FSM in BCR or OCR mode only require clerks at pay level PS-04.[67] The FY 2001 projected national average labor rates for clerks, fully loaded with service wide costs are $27.41 for PS-04, and $31.41 for PS-04, or $4.00 per hour more for clerks who sort manully.[68] Manual flats cost $69.00 per thou-

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[66] Responses to the following interrogatories provide information on productivity of FSMs: ANM/USPS-T10 16, 20 and 42-44.

[67] Response of USPS witness Kingsley to TW/USPS-T10-1 (revised 4/10/00) (5 Tr. 1840-42)

[68] Response to PostCom/USPS-T10-11.

sand to sort, while mechanized/automation flats cost on $51.68 per thousand.[69]

Moreover, a conservative analysis does not require the Commission to estimate by how much the efficient deployment of automated equipment would have decreased the costs of mail processing costs: it sufficient to know that inflation-adjusted unit costs would not have increased. Barring war, revolution or other major dislocations, the stock of technology and intellectual capital available for deployment in any economy normally increases, or at a minimum remains constant. Stated otherwise, the technological production possibility frontier does not regress toward the origin; it either remains static or expands.

Hence, barring any drastic shift in the composition of a mail class, or a significant change in its makeup that would make it more difficult or costly to produce, there is no reason why the real (i.e., inflation-adjusted) cost of processing the mail would increase under efficient management. Accordingly, a conservative rule of thumb is that any persistent and unreasonable increase in the inflation-adjusted unit cost of processing a subclass of mail from one rate case to the next should be attributed to internal inefficiency, unless the Postal Service demonstrates otherwise.

With respect to periodical mail, the Postal Service has made no such showing. The two Postal Service witnesses tendered in response to the Order No. 1289, Dennis Unger and Walter O'Tormey, candidly admitted that they had no explanation for the significant and paradoxical increase in such costs since 1993.

Mr. Unger's prefiled testimony (USPS-ST-43) recited a litany of mail characteristics that supposedly make periodicals mail more expensive to process than letters. On cross-examination, however, he was unable to

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[69] Response to PostCom/USPS-T10-7 (5 Tr. 1827-28).

offer any evidence that these characteristics were more widespread or severe in 1998 than in 1993.[70] Indeed, he conceded that several allegedly significant mail-handling problems identified in his prepared testimony had *improved* over this period.[71] And he conceded that he had not studied the cost-saving effects of the growth in destination entry, presorting, pre-barcoding, palletization and other improvements in mail preparation by periodical mailers during the 1993-98 period.[72] "Why the costs for periodicals specifically has gone up, I can't answer," he concluded.[73]

The testimony of USPS witness Walter O'Tormey was in the same vein. His prefiled testimony asserted that increased automation of non-letter mail processing has increased maintenance down time for the

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[70] *See* 21 Tr. 8216-21 (cost-causing characteristics of *Wall Street Journal*); *id.* at 8222-23 (unaware whether physical handling characteristics of newspapers have worsened); *id.* at 8223-24 (unaware whether volume of broadsheet newspapers has increased as percentage of total periodical volume); *id.* at 8224-25 (unaware of percentage of periodicals mail that is polywrapped); *id.* at 8230-31 (unaware whether mail not pre-sequenced to line of travel has increased as a percentage of total periodical volume); *id.* at 8232, 8273-74 (unable to say whether percentage of periodical mail entered in skin sacks has increased); *id.* at 8232-33 ("[m]y personal opinion is that [the rate of flexible acceptance of periodicals] has stayed the same" during 1993-99); *id.* at 8233 ("I do not know if [the frequency of special handling for late-entered newspapers] has gone up or down and it is not a widespread thing"); *id.* at 8235 ("I have no idea" of the percentage of periodical volume that "receives hot pub treatment . . ." [I]t would be very low, but I don't know the specific percent . . . I do not know . . . the trend from '93 to '99."); *id.* at 8236 ("I do not know . . . whether service for periodicals today is as good as it was, say, in 1985").

[71] *See id.* at 8225-28, 8273 (admitting that jam rate of polywrap has declined); *id.* at 8231 (as "a general statement, talking with the plant managers, from '93 to '99, I would say that the [bundle breakage] situation has improved"); *id.* at 8273 (same).

[72] *Id.* at 8237-40, 8246-48, 8273 ("there is no doubt in my mind that machines [for processing periodicals mail] are saving money").

[73] *Id.* at 8279, 8282.

equipment. On cross-examination, however, he admitted that the benefits of the equipment in terms of faster or cheaper processing "far outweigh the cost that you are going to add for the maintenance."[74] Likewise, he admitted that the benefits of automated processing outweighed the costs of the shorter runs required for some mail.[75] "You're making an investment in this technology. You would expect to get the savings."[76]

As shown in Table 7, between 1993 and 1998 the wage-adjusted increase in the average unit costs of processing periodicals mail *increased* by approximately 1.13 to 1.30 cents per piece, while the average unit cost of processing single-piece First-Class Mail, where investment for automated letter sorting capacity has been less inadequate (and no major capacity shortfall is evident), *decreased* by 0.2 to over 0.5 cents per piece. As discussed previously, the Postal Service had all the financial resources necessary to pursue automation of flats processing with as much vigor as it pursued automation of letter mail. Had it done so, it is reasonable to presume that, at a minium, wage-adjusted unit costs should not and would not have increased, and might even have decreased.

A conservative estimate of the increase in the unit cost of periodicals brought about by the failure to make adequate investment for foreseeable needs is 1.2 cents. As shown in Table 8, Part B, this amounts to approximately $94 million for all Regular Rate, Nonprofit and Classroom periodicals mail in the test year. In light of the Postal Service's failure to provide any reasoned explanation for the runup in mail

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[74] *Compare* USPS-T-42 at 14 (O'Tormey); 21 Tr. 8237 (O'Tormey).

[75] *Compare* USPS-T-42 at 14-15 (O'Tormey); 21 Tr. 8238-30 (O'Tormey).

[76] 21 Tr. 8330, 8335, 8391 (O'Tormey).

processing costs during this period, the entire amount should be disallowed as inconsistent with economic and efficient management.

Finally, had net investment by the Postal Service been more adequate over the last 8 years, this rate case could possibly have postponed for some time. To the extent that the Postal Service has filed this rate case because it failed to make timely investment for foreseeable events such as the growth in flats volume, it should not now be given a large contingency for unforeseeable events.

Table 7

Wage Adjusted Unit Cost of Single Piece
First-Class Letter and Regular Rate Periodicals
1993 and 1998
(cents)

A. Mail Processing Costs

	First-Class Mail	Periodicals
1993	6.81	4.98
1998	6.61	6.11
Increase (decrease)	-0.20	+1.13

B. Mail Processing and In-Office City Carrier Costs

	First-Class Mail	Periodicals
1993	8.86	6.49
1998	8.30	7.79
Increase (decrease)	-0.56	+1.20

Source: Response of Postal Service witness Smith to POIR No. 4, Attachment, pp. 1 (First-Class Mail) and 4 (Periodicals).

Table 8

Computation of Reduction in Revenue Requirement and Attributable Cost

A. Periodical Volumes, GFY 1998 (from billing determinants)

		Page
Regular Rate and Science of Agriculture	7,195,165,978	E-1
Nonprofit	585,101,796	E-2
Classroom	60,793,411	E-4
TOTAL	7,841,061,185	

B. Reduction in Attributable Costs and Revenue Requirements (at 1.20 cents per piece)

Regular Rate and Sc. of Agriculture	86,341,992
Nonprofit	7,021,224
Classroom	729,521
TOTAL	94,092,736

Source: Response of Postal Service witness Smith to POIR No. 4, Attachment, pp. 1 (First-Class Mail) and 4 (Periodical Regular Rate).

APPENDIX

Postal Service Capital Commitments
Actual vs. Plan
1998-1999

This appendix shows Postal Service capital commitments, by major category. All data are from the financial & Operation Statements, Accounting Period 13 of each respective year. The appendix contains the following tables:

- A-1 Total Capital Commitments
- A-2 Mail Processing Equipment
- A-3 Construction and Building Purchase
- A-4 Building Improvements
- A-5 Vehicles
- A-6 Retail Equipment
- A-7 Postal Support Equipment

Table A-1

Total Capital Commitments

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	625.0	623.9	1.1	99.8%
1989	1,995.0	1,987.5	7.5	99.6%
1990	2,738.8	2,436.4	302.4	89.0%
1991	2,230.1	1,883.1	347.0	84.4%
1992	3,581.0	1,924.8	1,656.2	53.8%
1993	3,420.0	1,309.6	2,110.4	38.3%
1994	2,804.5	1,635.5	1,169.0	58.3%
1995	3,572.1	2,284.9	1,287.2	64.0%
1996	3,331.8	3,306.9	24.9	99.3%
1997	6,023.6	3,202.6	2,821.0	53.2%
1998	5,592.0	3,947.0	1,645.0	70.6%
1999	3,998.5	3,817.3	181.2	95.5%
SUM	39,912.4	28,359.5	11,552.9	71.1%

Table A-2

Capital Commitments for Mail Processing Equipment

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	96.9	91.9	5.0	94.8%
1989	560.0	560.0	0.0	100.0%
1990	628.3	466.4	161.9	74.2%
1991	511.6	397.7	113.9	77.7%
1992	1,355.4	201.1	1,154.3	14.8%
1993	1,289.0	634.5	654.5	49.2%
1994	1,263.8	326.9	936.9	25.9%
1995	1,443.4	866.8	576.6	60.1%
1996	1,218.3	1,220.5	-2.2	100.2%
1997	2,440.7	808.2	1,632.5	33.1%
1998	1,682.6	1,204.1	478.5	71.6%
1999	1,113.3	1,158.1	-44.8	104.0%
SUM	13,603.3	7,936.2	5,667.1	58.3%

Table A-3

Capital Commitments for Construction and Building Purchase

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	274.1	289.2	-15.1	105.5%
1989	1,002.0	1,037.7	-35.7	103.6%
1990	1,436.9	1,339.5	97.4	93.2%
1991	1,063.2	812.0	251.2	76.4%
1992	1,069.1	675.7	393.4	63.2%
1993	1,489.5	188.3	1,301.2	12.6%
1994	630.7	507.6	123.1	80.5%
1995	828.7	537.5	291.2	64.9%
1996	661.7	654.7	7.0	98.9%
1997	1,297.7	1,034.4	263.3	79.7%
1998	1,475.4	1,116.5	358.9	75.7%
1999	1,108.0	985.4	122.6	88.9%
SUM	12,337.0	9,178.5	3,158.5	74.4%

Table A-4

Capital Commitments for Building Improvements

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	113.2	103.5	9.7	91.4%
1989	235.0	219.4	15.6	93.4%
1990	247.0	271.0	-24.0	109.7%
1991	272.5	306.5	-34.0	112.5%
1992	292.0	264.4	27.6	90.5%
1993	328.6	214.9	113.7	66.4%
1994	485.6	540.0	-54.4	111.2%
1995	588.3	513.0	55.3	90.3%
1996	620.6	542.1	78.5	87.4%
1997	753.0	651.1	101.9	86.5%
1998	745.5	704.0	41.5	94.4%
1999	712.7	719.2	-6.5	100.9%
SUM	5,374.0	5,049.1	324.9	94.0%

Table A-5

Capital Commitments for Vehicles

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	10.5	10.0	0.5	95.2%
1989	17.0	17.6	-0.6	103.5%
1990	242.4	190.0	52.4	78.4%
1991	147.1	143.6	3.5	97.6%
1992	588.8	584.2	4.6	99.2%
1993	36.5	66.3	-29.8	181.6%
1994	154.1	23.5	130.6	15.2%
1995	182.0	36.5	145.5	20.1%
1996	374.7	330.1	44.6	88.1%
1997	132.4	85.1	47.3	64.3%
1998	302.4	294.2	8.2	97.3%
1999	266.3	284.8	-18.5	106.9%
SUM	2,454.2	2,085.9	388.3	84.2%

Table A-6

Capital Commitments for Retail Equipment

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	64.9	64.1	0.8	98.8%
1989	39.0	33.7	5.3	86.4%
1990	42.4	15.6	26.8	36.8%
1991	64.3	44.1	20.2	68.6%
1992	217.7	157.7	60.0	72.4%
1993	25.5	11.1	14.4	43.5%
1994	121.5	26.0	95.5	21.4%
1995	156.0	7.6	148.4	4.9%
1996	79.6	219.6	-140.0	275.9%
1997	103.7	10.9	92.8	10.5%
1998	364.9	79.6	285.3	21.8%
1999	209.3	194.4	14.9	92.9%
SUM	1,488.8	864.4	624.4	58.1%

Table A-7

Capital Commitments for Postal Support Equipment

(1) Postal Fiscal Year	(2) Plan ($, 000)	(3) Actual ($, 000)	(4) Shortfall (Plan - Actual)	(5) Actual as Percent of Plan
1988	66.2	65.2	1.0	98.5%
1989	142.0	119.1	22.9	83.9%
1990	141.8	153.9	-12.1	108.5%
1991	171.4	179.2	-7.8	104.6%
1992	217.7	157.7	60.0	72.4%
1993	250.9	194.5	56.4	77.5%
1994	248.8	211.5	37.3	85.0%
1995	393.7	323.5	70.2	82.2%
1996	376.8	339.9	36.9	90.2%
1997	1,296.1	612.9	683.2	47.3%
1998	1,021.2	548.6	472.6	53.7%
1999	588.9	475.4	113.5	80.7%
SUM	4,915.5	3,381.4	1,534.1	68.8%

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document on all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

David M Levy

May 22, 2000