

Survey of Fare Policies at Large Transit Systems

DENNIS HINEBAUGH AND DANIEL K. BOYLE

The Center for Urban Transportation Research at the University of South Florida designed and conducted a national survey of fare policies for the Metro-Dade Transit Agency (MDTA). The purpose of the survey was to determine fare policies at other large transit agencies nationwide, including fare levels by mode, transfer charges, treatment of intermodal fares, discounts for multitrip purchases, pricing of monthly passes, time of day differentials, and distance-based fares. Seventeen of the 20 systems (including MDTA) responded to the survey. The range of fare policies is summarized by category for the 17 transit agencies that responded. The implications of the results are also discussed.

This paper presents the results of a national survey of fare policies at large transit agencies and has been prepared as part of a larger project undertaken by the Center for Urban Transportation Research (CUTR) to develop a long-term fare policy for the Metro-Dade Transit Agency (MDTA) in Dade County, Florida. The purpose of this survey was to determine fare policies at other large transit agencies nationwide, including transfer charges, treatment of intermodal fares, discounts for multitrip purchases, pricing of monthly passes, time of day differentials, and distance-based fares.

Before the survey CUTR reviewed the American Public Transit Association (APTA) 1991 fare summary (1), which by the time of the survey was outdated and did not contain all of the necessary information. Shortly after the survey was conducted APTA published its new and more detailed 1993 fare summary (2). The survey results provide a greater level of specificity in certain areas, particularly in the comments offered by respondents.

FARE POLICY SURVEY

In February 1993 CUTR contacted 20 of the largest transit systems in the United States to request information on fare policies. Systems were then mailed a Fare Policy Survey form. Seventeen of the 20 systems (including MDTA) responded to the survey. The following sections summarize the range of fare policies by category from the 17 responding transit agencies. A copy of the fare survey is contained in the full report (3), which also includes summaries of each transit system surveyed, pertinent fiscal year 1991 Section 15 information, and additional fare information.

Local Bus Fares

Local bus full fares range from a low of \$0.40 in San Antonio to a high of \$1.50 in Philadelphia, as presented in Table 1 and Figure

Center for Urban Transportation Research, College of Engineering, University of South Florida, 4202 East Fowler Avenue, ENG 118, Tampa, Fla. 33620.

1. The average fare is \$1.06. Discounted fares for elderly individuals range from free (off-peak) in Philadelphia and Pittsburgh to \$0.60 in Atlanta, Chicago, MDTA, and New York, for an average of \$0.35. The average fare for disabled individuals is \$0.44, with a low of \$0.15 in Boston and a high of \$0.75 in Philadelphia. Fares for students range from \$0.20 in San Antonio to \$1.50 in Philadelphia, with an average of \$0.73.

Express Bus Fares

Express bus service is operated in 15 of the 17 systems in the group of survey respondents. Table 2 and Figure 2 present the express bus fares at these 15 systems. Full fares range from a low of \$0.75 in San Antonio to a high of \$4.00 in New York, with a group average of \$1.54. As shown in Figure 3 the ratio of express to local bus full fares averages 1.45, with a range of between 1.0 in four cities and 3.2 in New York. Fares for elderly individuals range from free (off-peak) in Pittsburgh to \$2.00 in New York, with an average of \$0.66. Fares for disabled individuals range from \$0.25 in San Francisco and Dallas to \$2.00 in New York, with an average of \$0.71. Fares for students show an average of \$1.14 and a range from \$0.25 in San Francisco and Dallas to \$4.00 in New York.

Heavy Rail Fares

Metrail service in Dade County is categorized as heavy rail. Heavy rail service is operated in 10 of the 17 systems in the group of survey respondents. Heavy rail full fares are included in Table 3 and Figure 4 and range from a low of \$0.85 in Boston to a high of \$1.50 in Chicago, Cleveland, and Philadelphia, with a group average of \$1.25. Rail full fares in Boston, Chicago, and Cleveland are higher than local bus fares. Fares for elderly individuals range from free in Philadelphia to \$0.75 in Chicago, with an average of \$0.47. Fares for disabled individuals range from \$0.20 in Boston to \$0.75 in Chicago and Philadelphia, with an average of \$0.54. Fares for students range from \$0.40 in Boston to \$1.50 in Philadelphia, with an average of \$0.97.

Light Rail Fares

Light rail service is operated in 10 of the 17 systems. Dade County does not have a light-rail system. Table 4 and Figure 5 present the light rail fare information. Light rail full fares range from a low of \$0.85 in Boston to a high of \$1.50 in Cleveland and Philadelphia, for a group average of \$1.14. Fares for elderly individ-

TABLE 1 Local Bus Fares

City/System	Full Fare	Elderly	Student	Disabled
Atlanta	\$1.25	\$0.60	\$1.25	\$0.60
Baltimore	\$1.25	\$0.45	\$0.85	\$0.45
Boston	\$0.60	\$0.15	\$0.30	\$0.15
Chicago	\$1.25	\$0.60	\$0.60	\$0.60
Cleveland	\$1.25	\$0.50	\$1.00	\$0.50
Dade County	\$1.25	\$0.60	\$0.60	\$0.60
Dallas	\$0.75	\$0.15	\$0.25	\$0.25
Los Angeles	\$1.10	\$0.45	\$1.10	\$0.45
New Jersey	\$1.00	\$0.45	\$0.45	\$0.45
New York	\$1.25	\$0.60	\$0.60	\$0.60
Philadelphia	\$1.50	*\$0.00	\$1.50	*\$0.75
Pittsburgh	\$1.25	*\$0.00	\$1.25	*\$0.60
Portland	\$0.95	\$0.45	\$0.70	\$0.45
San Antonio	\$0.40	\$0.20	\$0.20	\$0.20
San Francisco (MUNI)	\$1.00	\$0.25	\$0.25	\$0.25
San Jose	\$1.00	\$0.25	\$0.50	\$0.25
Washington D.C.	\$1.00	\$0.30	\$1.00	\$0.30
Average of 17 Systems	\$1.06	\$0.35	\$0.73	\$0.44

* Off-peak only

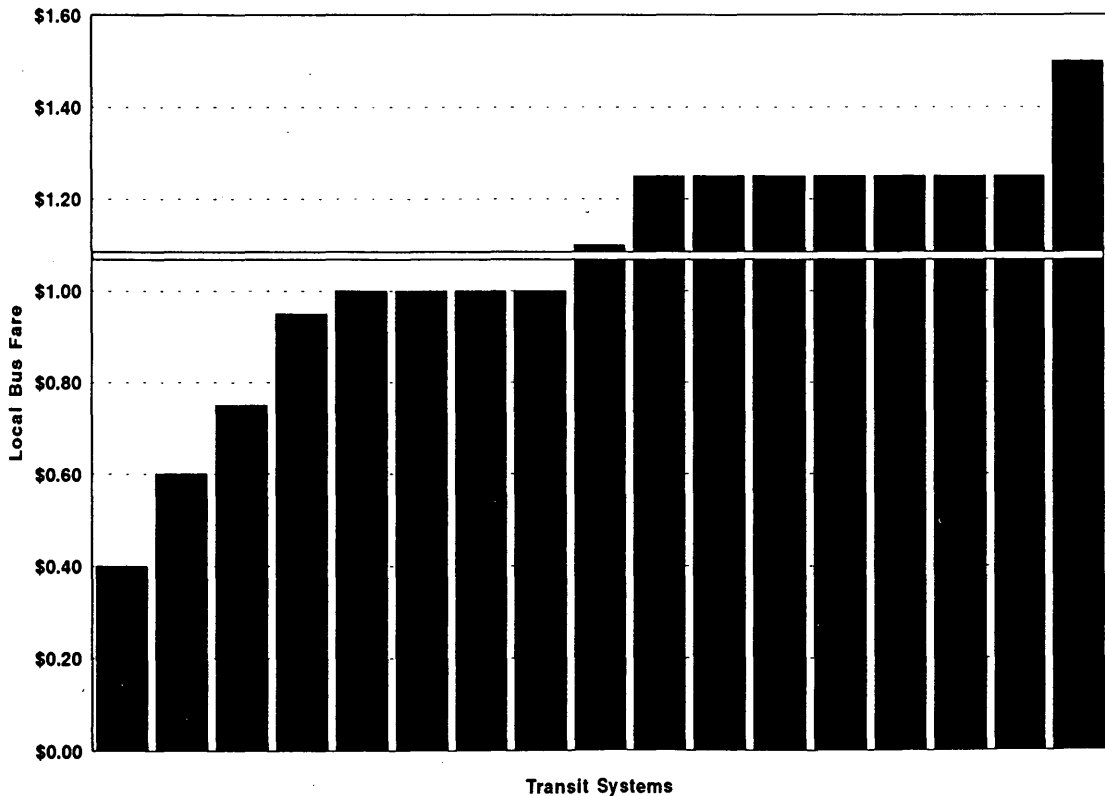


FIGURE 1 Local bus full fares.

TABLE 2 Express Bus Fares

City/System	Full Fare	Elderly	Student	Disabled	Express to Local Full Fare Ratio
Atlanta	\$1.25	\$0.60	\$1.25	\$0.60	1.0
Baltimore	\$1.55	\$0.75	\$1.55	\$0.75	1.24
Boston	\$1.50	\$0.75	\$0.75	\$0.75	2.5
Chicago	\$1.50	\$0.85	\$0.85	\$0.85	1.2
Cleveland	\$1.50	\$0.50	\$1.00	\$0.50	1.2
Dade County	\$1.50	\$0.75	\$0.75	\$0.75	1.2
Dallas	\$1.75	\$0.15	\$0.25	\$0.25	2.3
Los Angeles	\$1.10	\$0.45	\$1.10	\$0.45	1.0
New Jersey	\$1.25	\$0.55	\$0.55	\$0.55	1.25
New York	\$4.00	*\$2.00	\$4.00	*\$2.00	3.2
Pittsburgh	\$1.25	*\$0.00	\$1.25	*\$0.60	1.0
San Antonio	\$0.75	\$0.35	\$0.35	\$0.35	1.88
San Francisco (MUNI)	\$1.00	\$0.25	\$0.25	\$0.25	1.0
San Jose	\$1.50	\$1.50	\$1.50	\$1.50	1.5
Washington D.C.	\$1.65	\$0.50	\$1.65	\$0.50	1.65
Average of 15 Systems	\$1.54	\$0.66	\$1.14	\$0.71	1.45

* Off-peak only

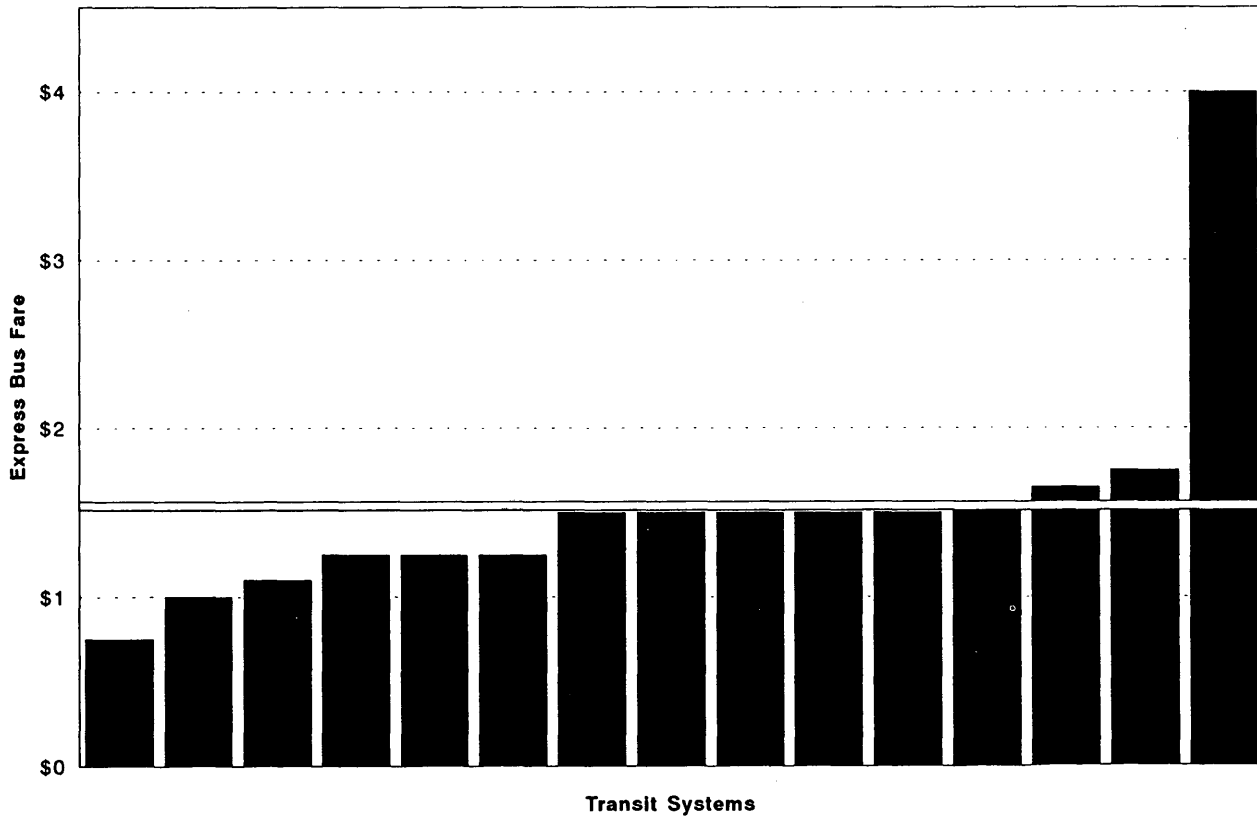


FIGURE 2 Express bus full fares.

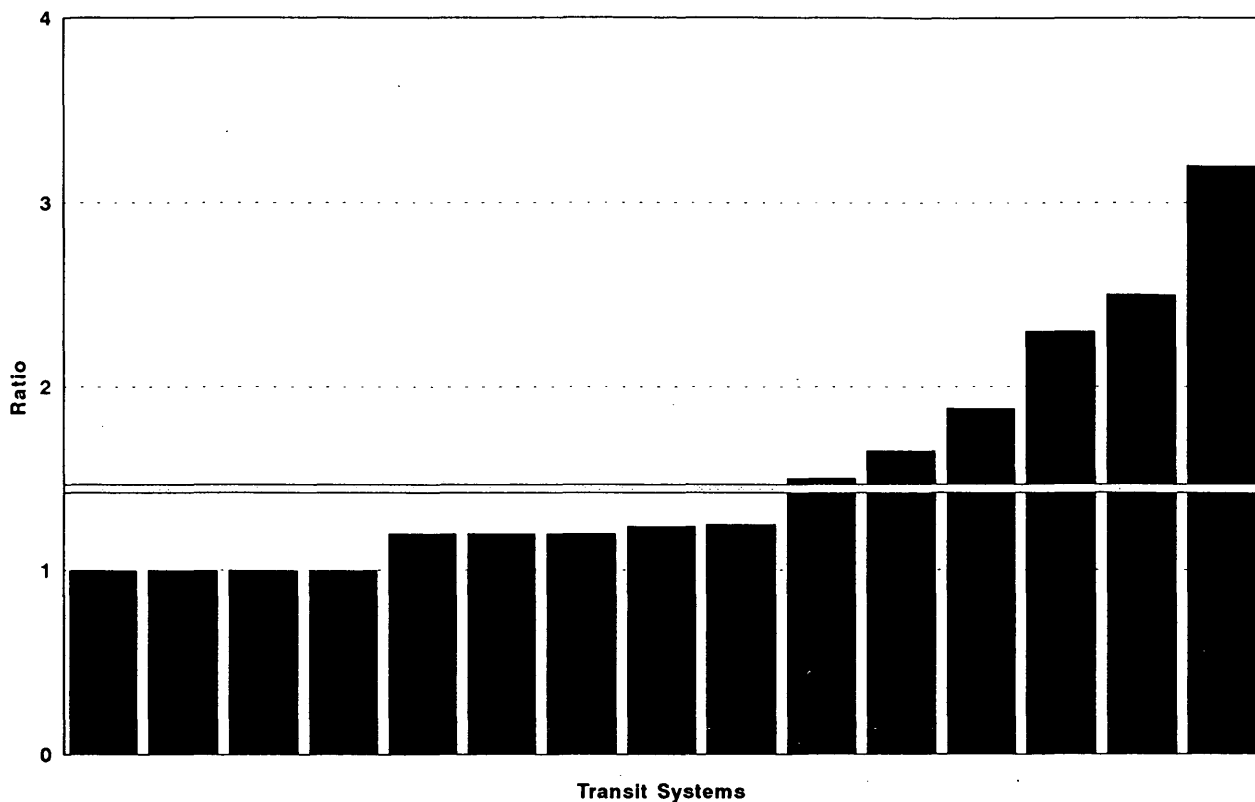


FIGURE 3 Express to local full fare ratio.

TABLE 3 Heavy Rail Fares

City/System	Full Fare	Elderly	Student	Disabled
Atlanta	\$1.25	\$0.60	\$1.25	\$0.60
Baltimore	\$1.25	\$0.45	\$0.85	\$0.45
Boston	\$0.85	\$0.20	\$0.40	\$0.20
Chicago	\$1.50	\$0.75	\$0.75	\$0.75
Cleveland	\$1.50	\$0.50	\$1.00	\$0.50
Dade County	\$1.25	\$0.60	\$0.60	\$0.60
Los Angeles	\$1.10	\$0.45	\$1.10	\$0.45
New York	\$1.25	+\$0.63	+\$0.63	+\$0.63
Philadelphia	\$1.50	*\$0.00	\$1.50	*\$0.75
Washington D.C.	\$1.00	\$0.50	\$1.00	\$0.50
Average of 10 Systems	\$1.25	\$0.47	\$0.97	\$0.54

* Off-peak only
 + \$1.25 fare includes return trip

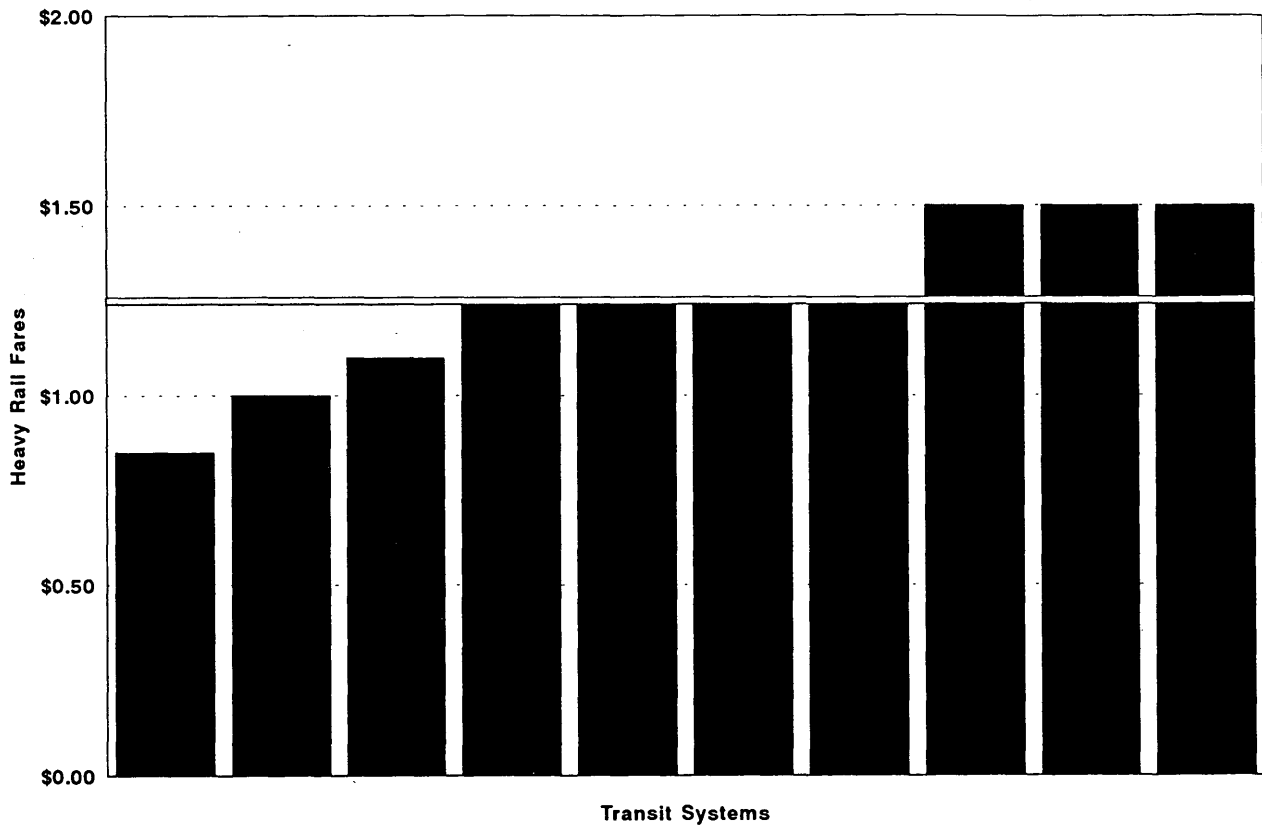


FIGURE 4 Heavy rail full fares.

TABLE 4 Light Rail Fares

City/System	Full Fare	Elderly	Student	Disabled
Baltimore	\$1.25	\$0.45	\$0.85	\$0.45
Boston	\$0.85	\$0.20	\$0.40	\$0.20
Cleveland	\$1.50	\$0.50	\$1.00	\$0.50
Los Angeles	\$1.10	\$0.55	\$1.10	\$0.55
New Jersey	\$1.00	\$0.45	\$0.45	\$0.45
Philadelphia	\$1.50	*\$0.00	\$1.50	*\$0.75
Pittsburgh	\$1.25	*\$0.00	\$1.25	*\$0.60
Portland	\$0.95	\$0.45	\$0.70	\$0.45
San Francisco (MUNI)	+\$1.00	+\$0.25	+\$0.25	+\$0.25
San Jose	\$1.00	\$0.25	\$0.50	\$0.25
Average of 10 Systems	\$1.14	\$0.31	\$0.80	\$0.45

* Off-peak only

+ Cable Car full fare is \$3.00; elderly/disabled/student fare is \$1.00; monthly pass is valid for cable car full fare

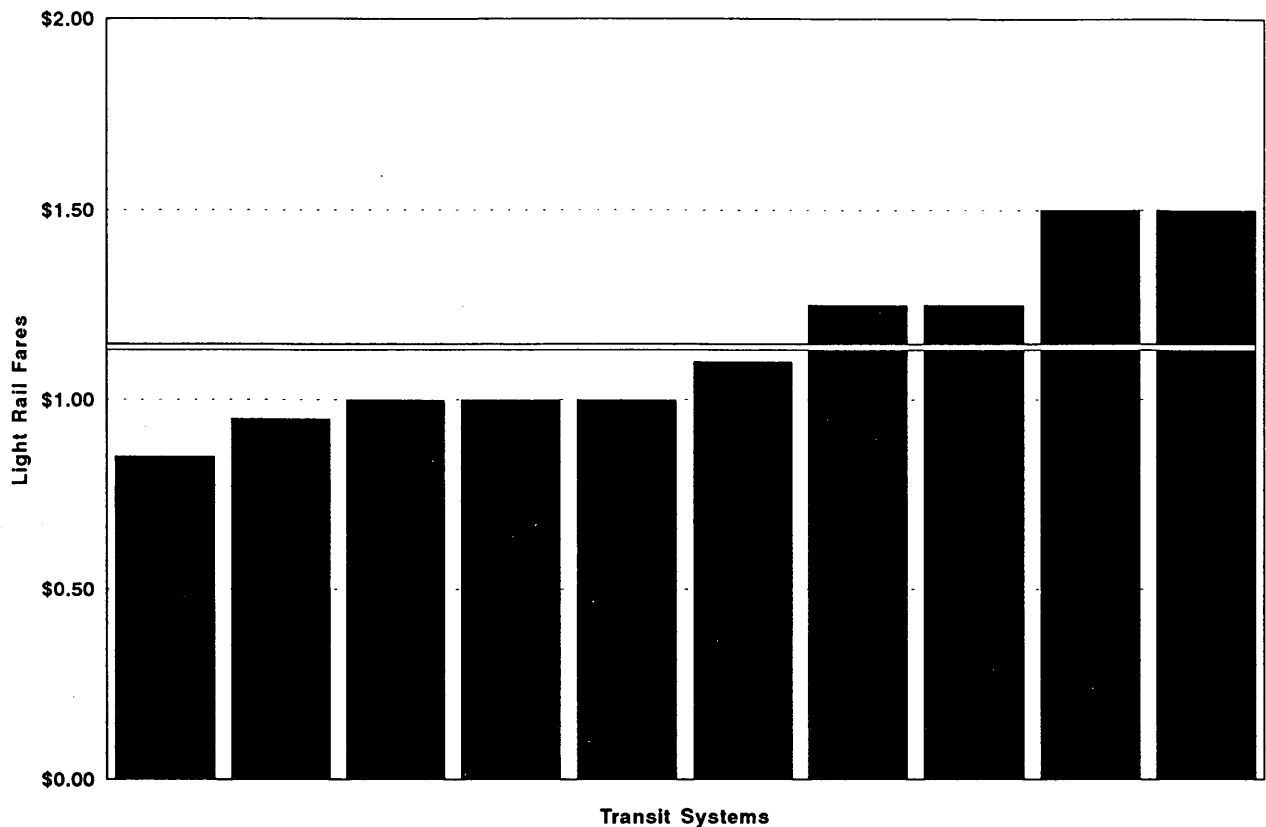


FIGURE 5 Light rail full fares.

uals range from free in Philadelphia and Pittsburgh to \$0.55 in Los Angeles County, for an average of \$0.31. Fares for disabled individuals range from \$0.20 in Boston to \$0.75 in Philadelphia, for an average of \$0.45. Fares for students are lowest (\$0.25) in San Francisco and highest (\$1.50) in Philadelphia, with an average of \$0.80. Light rail fares match either local bus fares in systems without heavy rail or the heavy rail fare.

Peak Differential

Five of the 17 transit systems currently have a peak surcharge. Chicago has surcharges of \$0.25 (full fare) and 0.15 (other fare categories) only on its bus system in the peak, resulting in a \$1.50 peak fare on both bus and rail. Philadelphia has a surcharge on full fares in the peak on only its light rail system (\$0.25 for zone 1; \$0.40 for zone 2). Elderly and disabled passengers must pay full fare in the peak in both Philadelphia and Pittsburgh. San Jose provides a midday discount for full fare bus and light rail passengers, with a midday fare of \$0.50. In Washington, D.C., the number of zones traveled for the base fare is restricted to three in the peak period. Peak surcharges range from a low of \$0.15 for elderly and disabled individuals and students in Chicago to a high of \$1.50 for elderly patrons in Philadelphia.

Transfers

Transfers are currently free on 9 of the 17 systems, as shown in Table 5 and Figure 6. At those systems that charge a transfer the

cost ranges from \$0.25 at three systems (including MDTA) to the full fare rate (no transfers given) in Boston.

Monthly Passes

Of the survey respondents, only New York and Washington, D.C., do not currently offer monthly-passes, although Washington, D.C., is in the process of introducing a 28-day rail-only pass priced at \$100. Table 6 and Figure 7 present the monthly pass costs. Full fare monthly passes range from a low of \$16.00 for local bus in San Antonio to a high of \$78.00 in Chicago. The average cost for a full fare local bus pass (not including zone charges) is \$40.07 and \$13.88 for a discounted pass (not shown in Table 6). The average cost for a full fare light rail pass is lower (\$36.90), whereas express bus and heavy rail pass costs are higher on average.

Table 6 and Figure 8 provide information on the breakeven point for monthly pass purchasers. This is the number of trips at which the cost of the monthly pass equals the sum of the cost of single fares. The average breakeven point is 37 trips per month, with a low of 30 trips in San Jose and a high of 52 trips in Chicago.

Other Passes

Most systems offer passes other than their monthly pass. These passes include weekly passes (seven systems), two-week passes

TABLE 5 Transfer Charges

City/System	Full Fare	Discount
Atlanta	Free	Free
Baltimore	\$0.10	Free
Boston	Additional Fare	Additional Fare
Chicago	\$0.30	\$0.15
Cleveland	Free	Free
Dade County	\$0.25	\$0.10
Dallas	Free	Free
Los Angeles	\$0.25	\$0.10
New Jersey	\$0.45	
New York	*Free	*Free
Philadelphia	\$0.40	\$0.40
Pittsburgh	\$0.25	\$0.10
Portland	Free	Free
San Antonio	Free	Free
San Francisco (MUNI)	Free	Free
San Jose	Free	Free
Washington D.C.	+Free	+Free
Average of 17 Systems	\$0.15	\$0.05

- * Free transfers between same modes and between bus and subway at a limited number of stations; otherwise additional full fare is required
- + Within District of Columbia

(three systems), punch passes (one system), daily-only passes (five systems), weekday-only passes (three systems), weekend-only passes (two systems), student or college student passes (four systems), and annual passes (two systems). Weekly pass prices (with no additional zone charges) range from \$11.00 in Atlanta, Baltimore, and Pittsburgh to \$20.50 in Chicago. The range of costs for daily passes is from \$2.00 (San Antonio and San Jose) to \$5.00 (Boston).

Tokens

Eleven of the systems sell tokens for fare payment, as illustrated in Table 7. In New York and Boston tokens are not discounted. Discounts on tokens range from approximately 5 percent in Atlanta and Baltimore to a high of 30 percent in Philadelphia. Only Chicago offers a token for elderly and disabled individuals and students.

Tickets

Seven of the systems sell tickets as a method of fare payment. These are also shown in Table 7. Dallas does not offer a discount on their tickets. Ticket discounts range from 5 to 10.5 percent.

Distance-Based Fares

Ten of the 17 systems (Baltimore, Boston, Cleveland, Los Angeles, New Jersey, Philadelphia, Pittsburgh, Portland, San Antonio, and Washington, D.C.) currently have distance-based surcharges. These surcharges vary by mode of service and by the number of zones traveled. Some zonal boundaries match political jurisdictions (i.e., county lines), although the size and number of zones also vary.

Magnetic Fare Cards

Six of the systems (Atlanta, Boston, Chicago, Miami, Philadelphia, and Washington, D.C.) currently use magnetic fare cards. Cleveland planned to start using magnetic fare cards later in 1993. All of the magnetic fare card systems are multimodal, but it is unclear from the survey responses whether the fare cards can be used on all modes.

Credit Card Purchases

Eight of the systems (Baltimore, Boston, Dallas, Los Angeles, New Jersey, Philadelphia, Pittsburgh, and San Jose) accept credit cards and checks for the purchase of fare instruments (passes, tokens, tickets).

Average Fare Per Unlinked Trip

The average fare per unlinked trip is derived from Section 15 statistics for fiscal year 1991 (4). The average fare is calculated by dividing passenger fare revenue by unlinked trips on all modes of service. Data for New Jersey and Philadelphia are not included here because their Section 15 passenger fare data incorporate commuter rail, which inflates the average fare. Table 8 and Figure 9 present information on average fares. The average for 15 systems is \$0.52, with a high of \$0.75 in New York and a low of \$0.28 in San Antonio.

Fare Box Recovery Ratio

The 1991 Section 15 report is also the source of the fare box recovery ratio (4). The ratio is obtained by taking the passenger fare revenue as a percentage of operating expenditures on all modes of service. Data for New Jersey and Philadelphia are excluded because of the inability to separate commuter rail data in the Section 15 report. As shown in Table 8 and Figure 10, fare box recovery ratio for the 15 systems ranges from 11 percent in San Jose to 48 percent in Washington, D.C., with an average of 32 percent.

SURVEY OBSERVATIONS AND IMPLICATIONS

The information obtained in the survey has been helpful to MDTA in evaluating its system with respect to similar transit systems nationwide. The findings highlighted below are also of interest beyond Dade County.

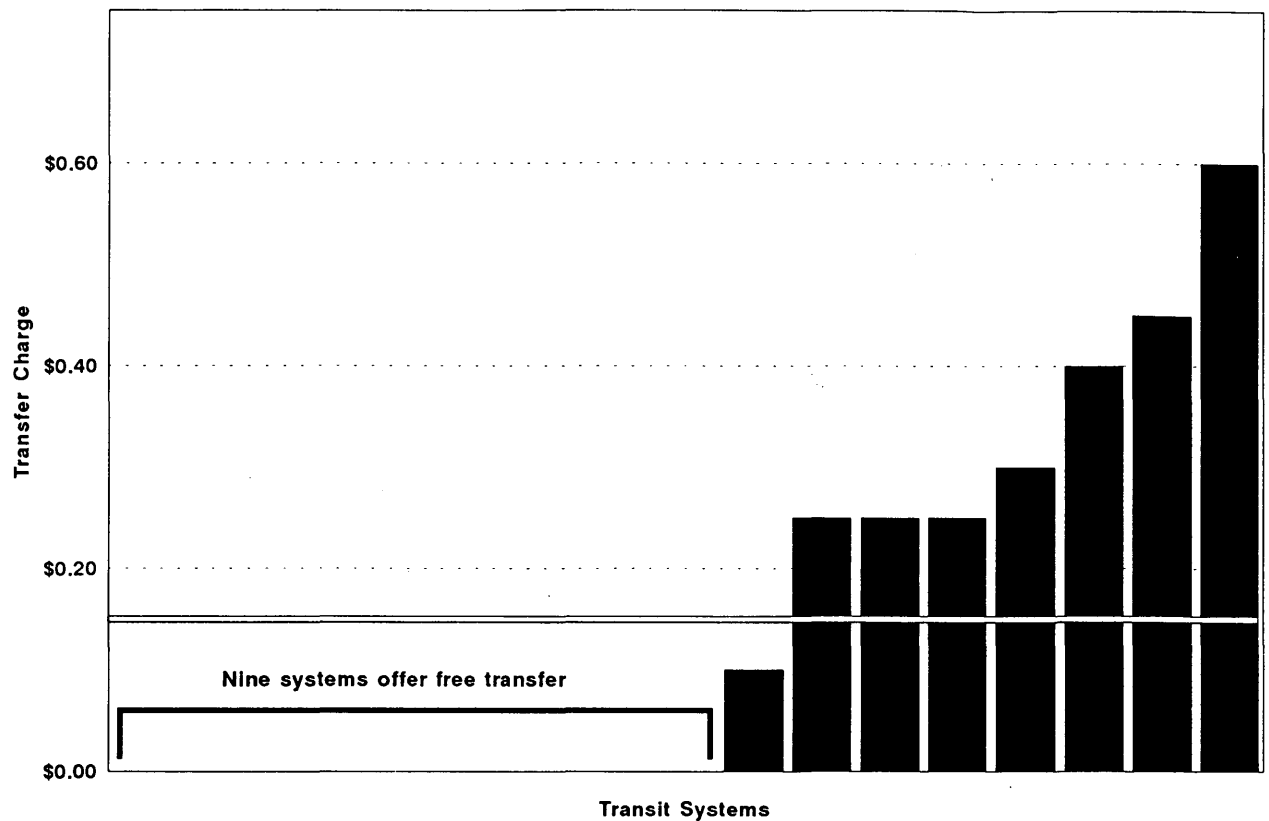


FIGURE 6 Full fare transfer charges.

TABLE 6 Monthly Pass Costs

City/System	Local Bus	Express Bus	Heavy Rail	Light Rail	Break-even Number of Trips (Local)
Atlanta	\$43.00	\$43.00	\$43.00	--	34
Baltimore	\$42.00*	\$52.00*	\$42.00*	\$42.00*	34
Boston	\$20.00	\$64.00	\$27.00	\$27.00	32
Chicago	\$78.00	\$78.00+	\$78.00	--	52
Cleveland	\$45.00	\$54.00	\$54.00	\$54.00	36
Dade County	\$60.00	\$60.00	\$60.00	--	48
Dallas	\$23.00	\$54.00	--	--	31
Los Angeles	\$42.00	\$42.00	\$42.00	\$42.00	38
New Jersey	\$41.00*	\$59.00	--	\$41.00*	41
Philadelphia	\$58.00	--	\$58.00	\$58.00	39
Pittsburgh	\$40.00	\$40.00	--	\$40.00	32
Portland	\$31.00	--	--	\$31.00	33
San Antonio	\$16.00	\$30.00	--	--	40
San Francisco (MUNI)	\$32.00	\$32.00	--	\$32.00#	32
San Jose	\$30.00	\$45.00	--	\$30.00	30
Average of all Systems	\$40.07	\$50.23	\$50.50	\$36.90	37

* Base zone only; zone charges apply to monthly pass price

+ Plus \$0.25 surcharge per boarding

Monthly pass valid on cable car

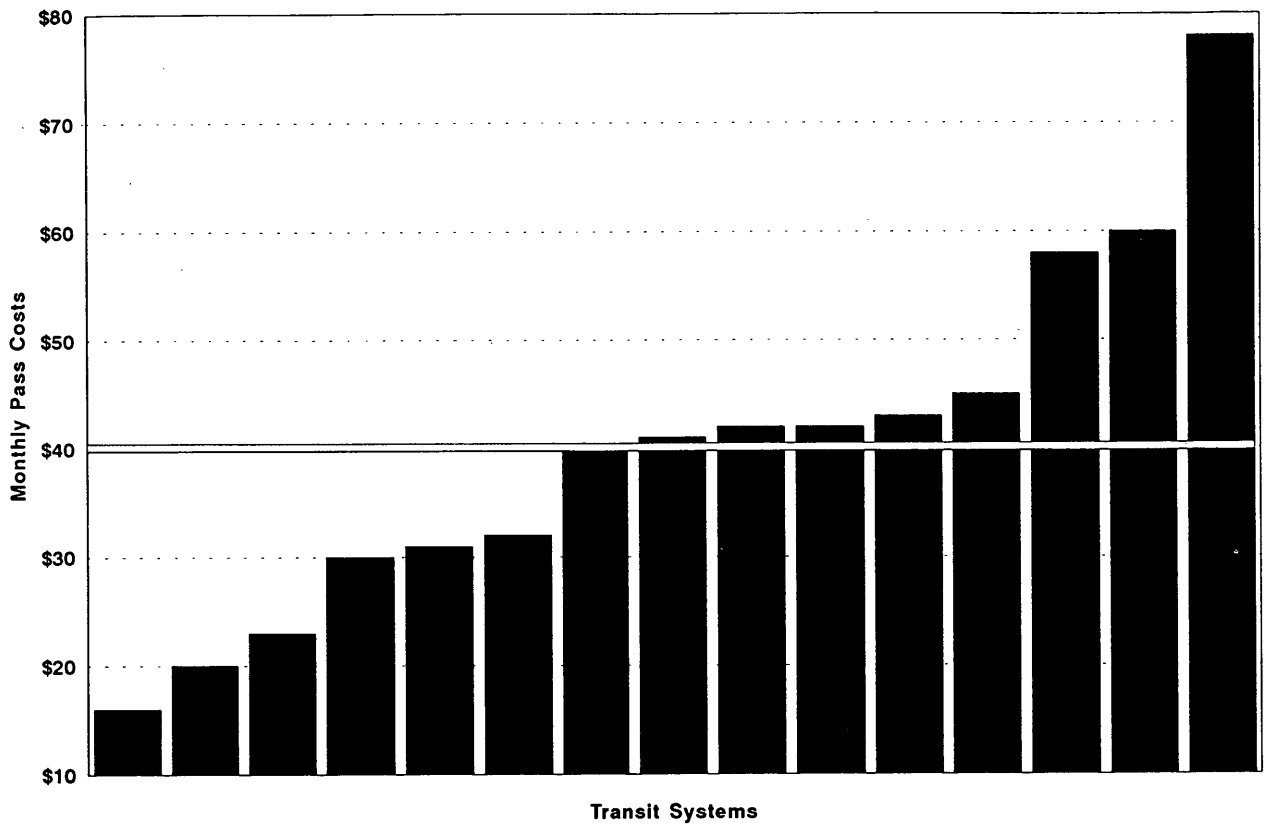


FIGURE 7 Local bus monthly pass costs.

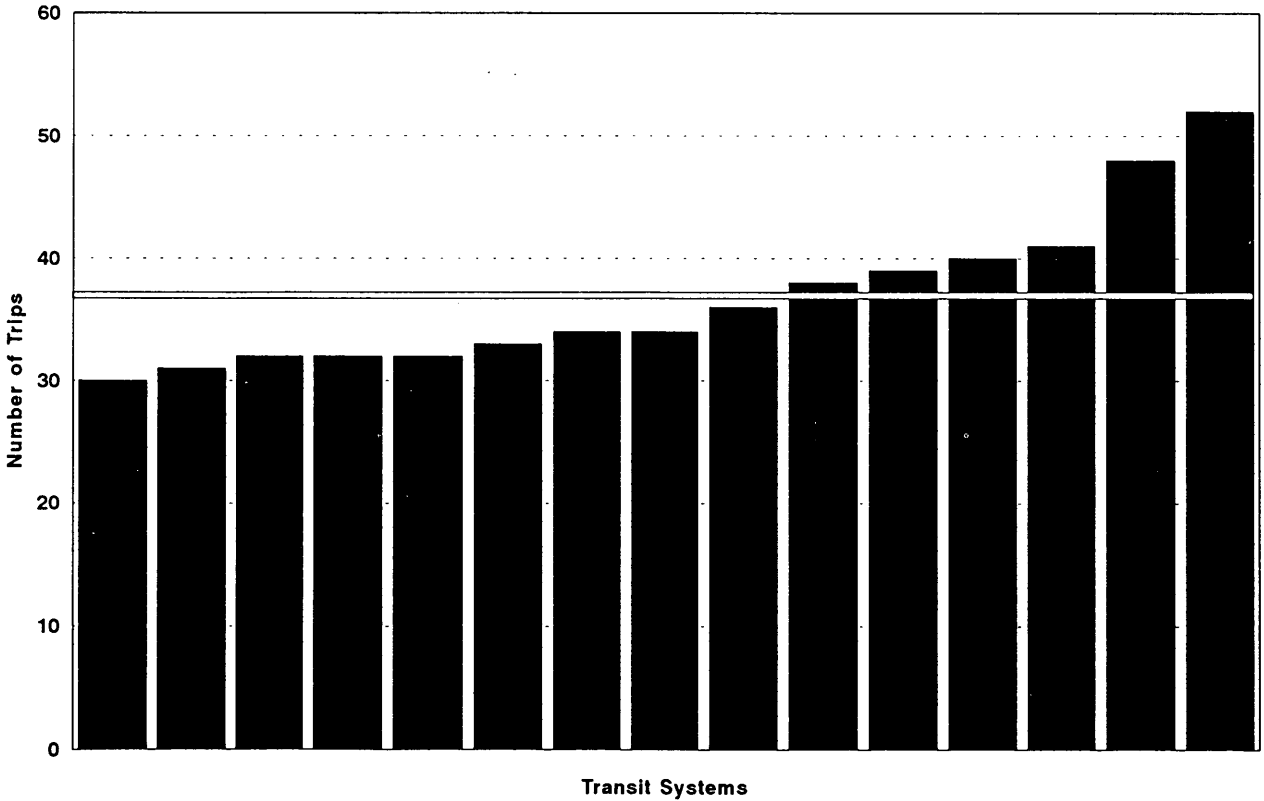


FIGURE 8 Breakeven number of trips (local bus service).

TABLE 7 Token and Ticket Costs

City/System	Token	% Discount	Ticket	% Discount
Atlanta	\$1.20	4.0%	--	--
Baltimore	\$1.20	4.0%	\$1.20	4.0%
Boston	\$0.85	0.0%	\$0.71	16.4%
Chicago	\$1.25	16.7%	--	--
Cleveland	--	--	*\$1.19	4.8%
Dade County	\$1.00	20.0%	--	--
Dallas	--	--	\$0.75	0.0%
Los Angeles	\$0.90	18.2%	--	--
New Jersey	--	--	Varies	Varies
New York	\$1.25	0.0%	--	--
Philadelphia	+\$1.05	+30.0%	--	--
Pittsburgh	--	--	\$1.15	8.0%
Portland	--	--	\$0.85	10.5%
San Francisco (MUNI)	\$0.90	10.0%	--	--
Washington D.C.	\$0.90	10.0%	--	--
Average of all Systems	\$1.05	11.3%	\$0.98	7.3%

Cost is average cost per trip

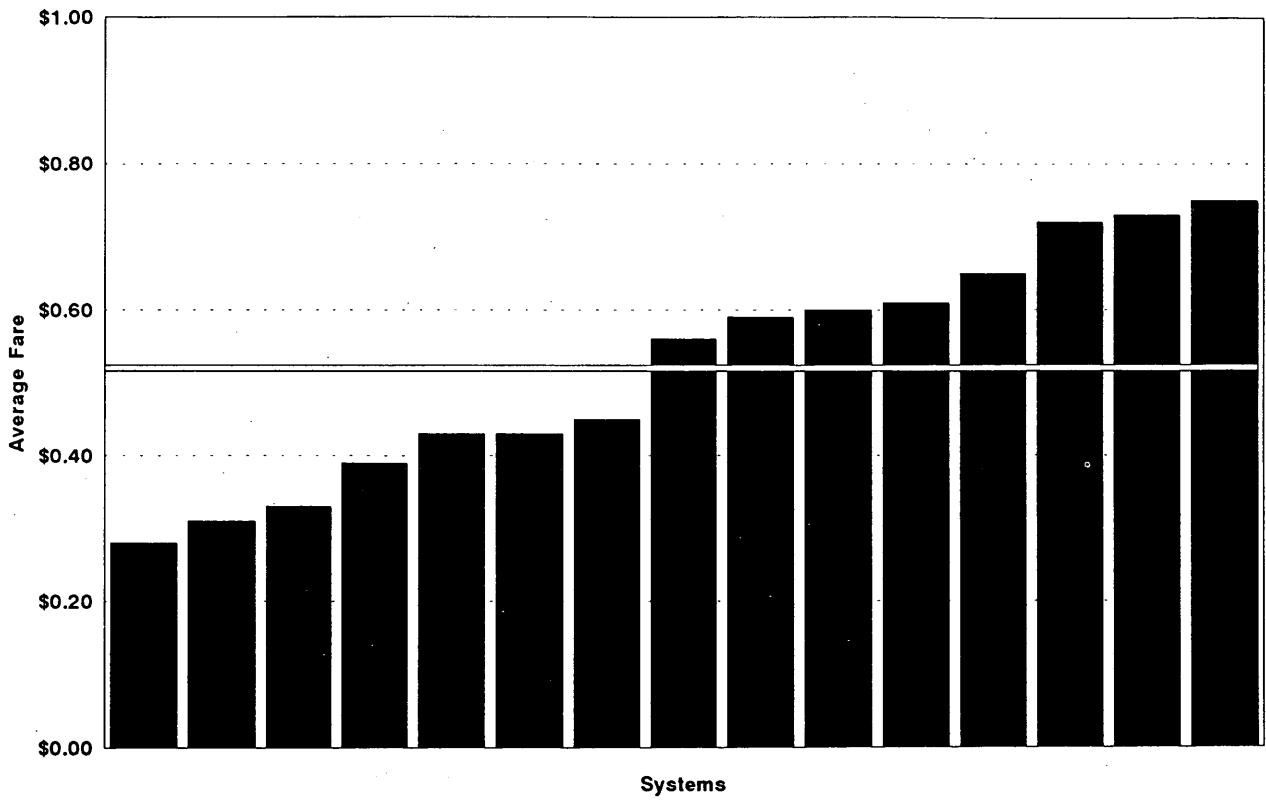
* \$1.43 for rail (4.7% discount)

+ Student only

TABLE 8 Average Fares Per Unlinked Trip and Fare Box Recovery Ratios

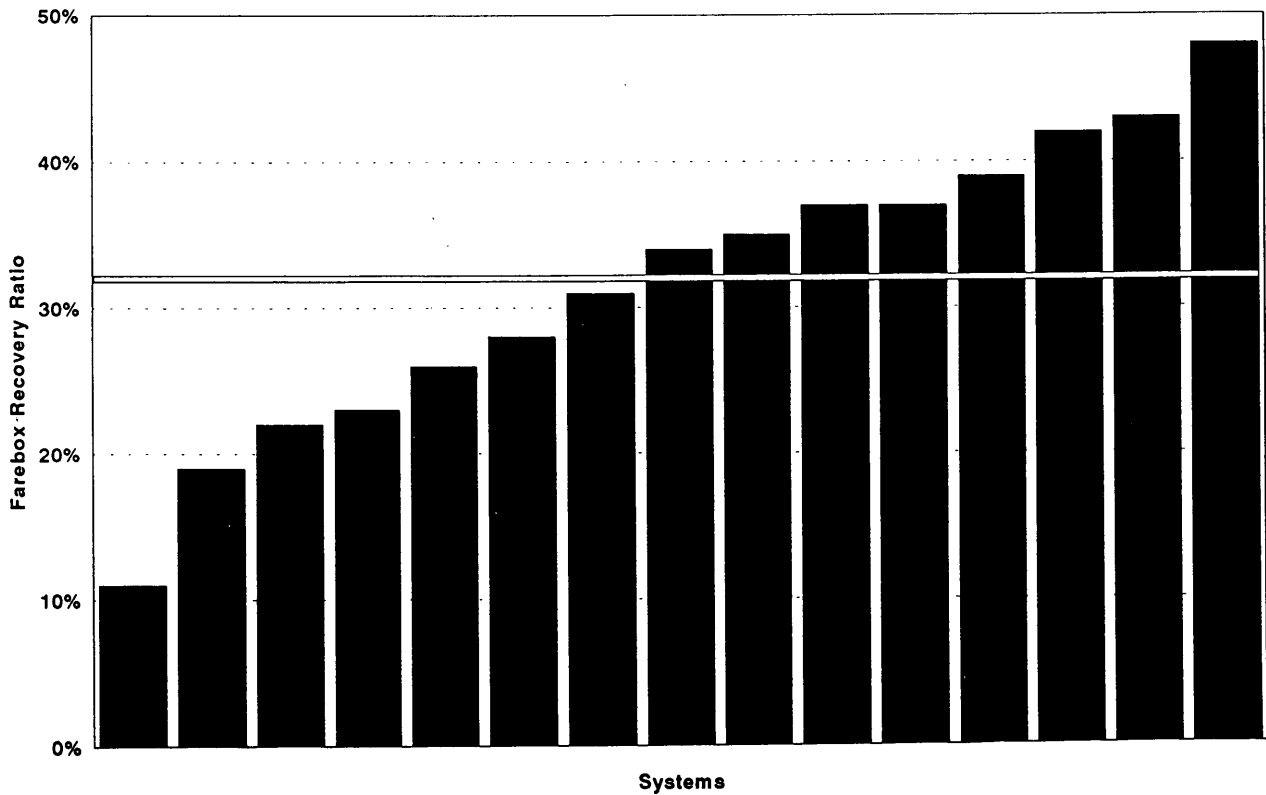
City/System	Average Fare per Unlinked Trip	Farebox Recovery Ratio
Atlanta	\$0.43	37%
Baltimore	\$0.61	37%
Boston	\$0.39	22%
Chicago	\$0.59	42%
Cleveland	\$0.60	26%
Dade County	\$0.72	34%
Dallas	\$0.43	19%
Los Angeles	\$0.56	39%
New York	\$0.75	43%
Pittsburgh	\$0.65	35%
Portland	\$0.45	28%
San Antonio	\$0.28	23%
San Francisco (MUNI)	\$0.33	31%
San Jose	\$0.31	11%
Washington D.C.	\$0.73	48%
Average of 15 Systems	\$0.52	32%

Source: Derived from 1991 Section 15 Statistics



Source: Derived from 1991 Section 15 Statistics

FIGURE 9 Average fare per unlinked trip.



Source: Derived from 1991 Section 15 Statistics

FIGURE 10 Fare box recovery ratio.

One interesting observation is that the concept of pricing transit service in accordance with its cost or its level of service has not been implemented on a large scale. Peak period surcharges are not generally assessed, despite the higher cost of operating peak service. Distance-based fares are more common but are far from universal. The fare differential between premium service (e.g., express bus) and regular service is less than might be expected.

Recent concepts that have developed among transit professionals in the past decade have also not been generally implemented. The extent to which significant discounts are offered for prepaid single-ride fare media (such as tokens or tickets) is not great, indicating that the deep-discount concept has not achieved widespread acceptance. At the same time, monthly passes continue to be priced at relatively low breakeven points, despite resulting revenue losses.

Technological advances and the spread of existing automated fare collection technology have the potential to affect fare policies. Improvements in fare collection methods certainly can affect the feasibility of certain fare options and the ease of administering complex fare structures. There is no evidence that fare collection technology determines fare policy. Essential policy questions have been and will continue to be decided independently of technological considerations.

What drives fare policy decisions? Although the fare survey has produced a considerable amount of technical information, it did not address the political realm. Political feasibility is perhaps the major determining factor in decisions on fare levels and overall fare policy. Low fares, simple fare structures, and a definable sense of equity (often translated to a flat fare structure) among socioeconomic groups and neighborhoods are likely to be higher political priorities than cost recovery issues. These political pri-

orities are reflected in systems for which the existence of a dedicated local funding source allows a transit system to keep its fares low.

The mixture of fare structure issues, technological developments, and political priorities is not complete without a consideration of the extent of customer orientation on the part of a transit agency. Total quality management concepts are migrating from the private to the public sector, and many transit agencies are scrambling to become more customer oriented. Although pricing policies based on market segmentation with regard to fare sensitivity are undoubtedly efficient, these do not necessarily keep the customer as pleased as do low fares and a good deal on a monthly pass.

The fare survey results cannot address all these implications regarding fare policy. What the survey has provided is a clear indication of baseline conditions related to fare levels, policies, and innovations for the larger transit systems in the United States.

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