

Financing

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The U.S. transit industry faces a series of profound economic, social, and political forces that force it to consider alternative ways of providing urban transportation services. Without significant structural change, the industry's ability to survive in its current form has to be questioned. This paper focuses on financial and related operational changes that can provide practical help in the near term. Many of these options have been selected, however, for their potential to assist in resolving long-term problems as well.

How serious is the problem? Despite more than \$100 billion in federal investments over the past quarter century, transit continues to lose market share to the private automobile. For example, between 1980 and 1990, the share of those driving alone to work increased from about 64 percent to about 73 percent, while the fraction of commuters who traveled by car-pool declined from about 20 percent to about 13 percent. Commuters using transit decreased from 6.4 percent to 5.3 percent during the same period. Transit is now the mode of last resort for most urban travelers, and it lost business in both absolute and relative terms between 1980 and 1990. Any private business faced with these losses would be disinvesting.

Five long-term trends appear to account for these problems:

- Increases in personal income mean people can afford to select higher-quality, more expensive forms of transport. This movement to quality can be seen across all markets and reduces the size of transit's captive market.
- Where we work and live is more dispersed. Most jobs and homes are in the suburbs, with a lower density of trips between specific locations—ironically, with greater general congestion. Traditional transit systems have been built along fixed routes and fare poorly when demand is dispersed.
- Changes in lifestyles mean that the classic home-to-work trip no longer dominates urban travel. Two-income families and single-parent families are more common than the traditional nuclear family with its single breadwinner. As a result, fewer trips have a single purpose, and the amount of “trip chaining” (the process of linking multiple destinations into a single trip) has grown. Together, these trends favor modes with greater flexibility—such as the automobile.

- The pace of business has also changed. Reliability and predictability are now more important than cost. The move toward “just-in-time” systems affects workers as much as business.
- Transit remains the last major mode whose market is protected from commercial competition (although in effect personal vehicles compete directly with transit). This lack of competition for provision of transit services has reduced openness to new ideas.

In addition, local and regional transit agencies face numerous more mundane but still daunting challenges. A nonexhaustive list of challenges faced by many transit agencies includes the following:

- Many transit agencies need to find funds to replace federal operating assistance that is no longer available.
- The costs of travel to which consumers are most sensitive—such as the costs of fuel and parking—are either at all-time lows or subsidized by employers and developers. The vast majority of new jobs in the suburbs include free parking.
- Transit agencies are increasingly required to support the mobility needs of society’s most disadvantaged populations.
- Experience has shown that transit can attract single-occupancy vehicle commuters, but only if it enjoys travel time and travel cost advantages. Without preferential treatment for buses including the use of new technologies, transit can only offer limited incentives to “choice” riders.

Together, these challenges create an environment in which it is increasingly costly per passenger mile to operate, increasingly difficult to compete with private vehicles in the service dimension, and increasingly challenging to find funds to maintain service levels.

At the same time, transit agencies have significant opportunities—both technical and strategic—that may help them meet these challenges, including

- More flexible federal funding for transit projects under both the Surface Transportation Program and the Congestion Mitigation and Air Quality Program, and proposals to allow greater flexibility between capital and operating funds;
- Transit agency representation on metropolitan planning organization (MPO) boards, giving transit agencies an institutional role in regional transportation planning;
- Increased congestion on the nation’s roads, making transit an increasingly attractive alternative to the stress of single-occupancy-vehicle travel;
- Growing public pressure to reduce pollutants, including greenhouse gas emissions, making transit systems an increasingly attractive component of air quality and global climate change strategies;
- Growing power and adaptability of technology [via intelligent transportation systems (ITS)] to improve transit efficiency and raise service quality;
- Growing commitment to making suburban employment accessible to urban residents, thus increasing the role and visibility of transit systems as a mechanism for meeting social goals (while offering the potential to generate revenues on reverse commutes as well as on primary commute routes);
- Development of new financing tools such as State Infrastructure Banks (SIBs); and
- Growing recognition of paratransit as a way to complement and supplement traditional transit operations.

Together, this nonexhaustive list of opportunities focuses attention on how transit systems can help society meet many of its important goals, be increasingly competitive with other travel modes, take advantage of new financing tools, leverage private-sector efficiencies, and do what it does better.

In this paper, historic and expected funding trends, financing tools and approaches that can help transit systems meet their needs, and the role these tools and approaches may play in relationship to the other transit operating factors listed above are described.

Four ideas important to keep in mind when considering the usefulness of innovative financing tools are the following:

1. To implement most innovative finance tools and to leverage private-sector participation, it is crucial to be able to think like private-sector partners. These efforts will be most successful, in turn, when they are combined with a good understanding of the direct and indirect economic benefits provided by transit service.

2. In most cases, innovative financing tools and private participation will help reduce reliance of transit system operators on public funds, not replace public funds.

3. Transit system operators must sit at all of the funding tables, not just those to which they are accustomed. As transportation funding sources become more flexible, as the transit environment becomes increasingly multimodal, and as states and MPOs continue to jockey for influence, transit operators must not let innovative finance opportunities pass them by because of a misplaced focus on traditionally reliable revenue sources. New arenas for transit participation could include chamber of commerce committees, business roundtables, and economic development agencies.

4. It is important that transit operators not become caught up in the technical details of innovative finance mechanisms. Such mechanisms are relatively straightforward to write up, and many public documents already describe them in detail. Inevitably, though, these documents present hypothetical scenarios for the implementation of such mechanisms. These scenarios are often coupled with detailed discussions of risks inherent to each mechanism—political risk (e.g., benefit assessment districts), market growth risk (e.g., joint development potential), currency exchange rate risk (e.g., cross-border leases), and so forth. In this environment, it may be easier for transit agency officials to fall back on the tried and true methods of raising funds. But it is important to emphasize that the arena of uncertainty is where hypothetical situations can be developed into reality and where innovation takes place. As a result, the most innovative aspect of any finance tools used by transit agencies will not be the tools themselves, but the creativity, iconoclasm, and persistence that transit agencies show in implementing them.

HISTORIC AND EXPECTED TRENDS FOR FEDERAL, STATE, AND LOCAL OPERATING FUNDING

In 1981, annual federal outlays for transit reached about \$5.4 billion (all figures are in constant 1997 dollars unless otherwise noted). After that date total federal outlays began to decline. Total outlays declined to about \$3.2 billion in 1992 (see Figure 1), and operating assistance declined from about \$2.1 billion in 1981 to \$800 million in 1995 before being eliminated for all but the smallest systems in 1997 (see Figure 2).

In response to these pressures, transit expenditures have increased sharply at the state and local levels, rising from about \$9.7 billion annually in 1982 to slightly more than \$17 billion annually by 1994 (see Figure 3). This increase has several principal components, including replacement of federal funds, operating support for transit new starts for which the federal government has provided only capital assistance, and expanded service in suburban jurisdictions.

The result of these shifts in the sources of transit funding is that today, fare box revenue represents about 40 percent of total transit system receipts, state and local funding sources provide a little over 20 percent each of system receipts, nonfare revenues (including such receipts as those from advertising, interest, and joint development) generate about 13 percent of receipts, and federal sources provide only about 4 percent of all transit system operating income (see Figure 4).

It is not expected that there will be any major change in the magnitude of federal funding for transit operations. To the extent that there are relative changes in levels of state and local support for transit operations, such changes are likely to be determined by the responses of different transit agencies and states. Transit agencies are divided generally

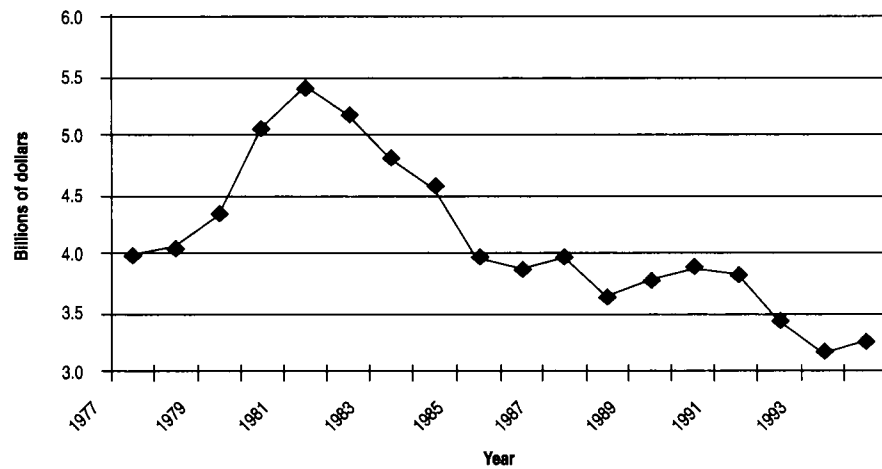


FIGURE 1 Federal outlays for transit, 1977–1994 (constant 1997 dollars). (Source: transportation receipts and outlays in the federal budget, fiscal years 1977–1994, Bureau of Transportation Statistics, U.S. Department of Transportation.)

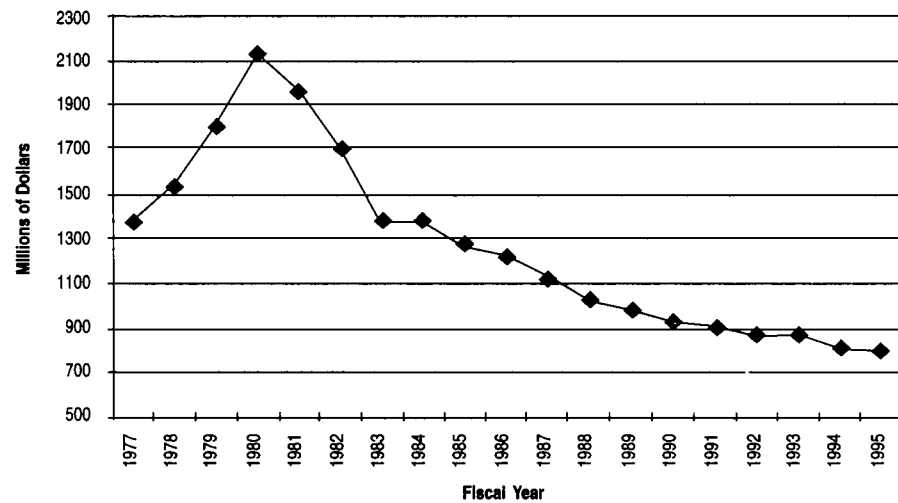


FIGURE 2 Federal operating grant approvals for urbanized areas, 1977–1995 (constant 1997 dollars). (Source: transportation receipts and outlays in the federal budget, fiscal years 1977–1995, Bureau of Transportation Statistics, U.S. Department of Transportation.)

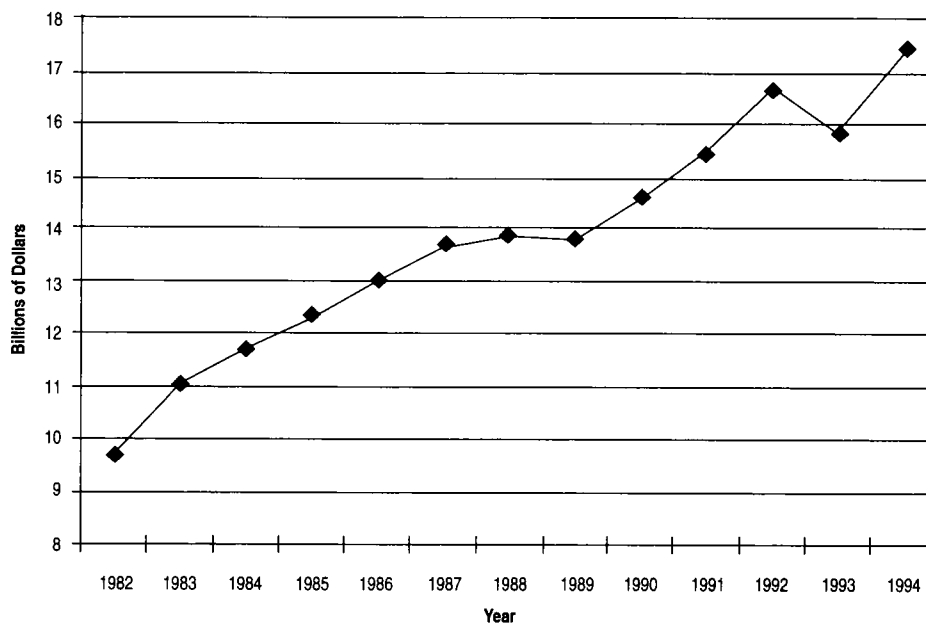


FIGURE 3 Transit expenditures by state and local governments, 1982–1994 (constant 1997 dollars). (Source: transportation receipts and outlays in the federal budget, fiscal years 1982–1994, Bureau of Transportation Statistics, U.S. Department of Transportation.)

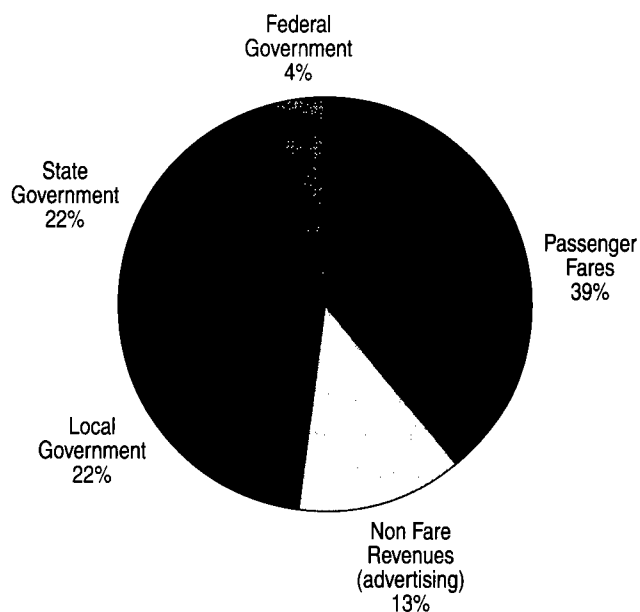


FIGURE 4 Sources of operating income (1995 total = \$17.7 billion in constant 1997 dollars). (Source: *Transit Fact Book*, American Public Transit Association.)

into those receiving the majority of their nonfederal public funding from states (e.g., MTA in New York City) and those receiving the majority of their nonfederal public funding from local sources (e.g., MARTA in Atlanta). As a result, transit agencies can be grouped into two categories for purposes of considering opportunities for innovative funding and financing: those whose greatest opportunities are in the state and “other revenue” categories and those whose greatest opportunities are in the local and “other revenue” categories.

State Sources of Transit Operating Assistance

Of the systems that rely primarily on states as their major source of nonfederal public funding, the largest fraction, slightly more than one-third, is provided by the “other” category. This category predominantly includes general funds but could include state lotteries, toll revenue set-asides, or state special taxes. Gasoline and sales taxes provide slightly less than one-fourth each of all state funding and are followed by income taxes, which provide almost all of the remainder. Property taxes represent a mere 1 percent of all state-provided transit operating assistance (see Figure 5). Examples of how transit agencies use state-based revenue sources to supplement fare box and other revenues are provided in Table 1.

Local Sources of Transit Operating Assistance

For systems that rely primarily on local governments as their major source of nonfederal public funding, most support is provided by dedicated sales taxes. This category provides about 80 percent of all such funds. The remaining 20 percent of local funds is composed of property taxes (8 percent), “other” revenues (7 percent), income taxes (3 percent), and gasoline taxes (2 percent)(see Figure 6). Examples of how transit agencies use locally generated revenue sources to supplement fare box and other revenues are provided in Table 2. Many local governments provide for transit out of their general tax proceeds and do not have dedicated transit taxes.

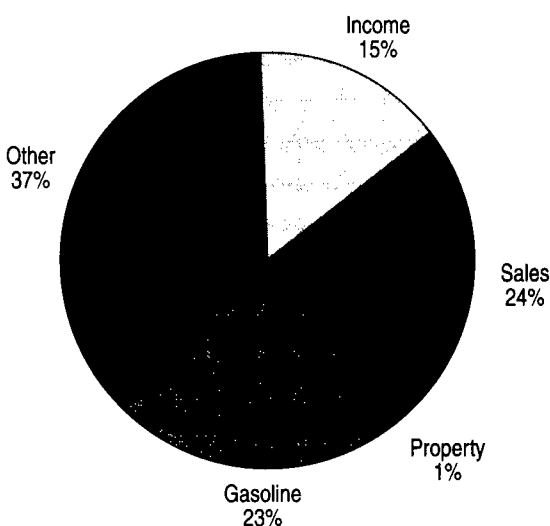


FIGURE 5 Breakdown of state dedicated taxes (1995 total = \$1.45 billion in constant 1997 dollars).
(Source: National Transit Database, Federal Transit Administration.)

TABLE 1 Examples of Systems Receiving State Dedicated Taxes, 1995 (Millions of Constant 1997 Dollars) (National Transit Database, Federal Transit Administration)

Type	Systems	Amount
Income	New York City Transit Authority	199
	San Francisco MUNI	19
Sales	Statewide in California (a one quarter of one percent sales tax is collected statewide in California; these funds MUST be used for transit unless a county certified there are no unmet transit needs; in addition counties can adopt an additional local option tax with voter approval)	
	Chicago	56
Property	New York City Transit Authority	151
	Lansing, MI (CATA)	4
	Oakland-Alameda County Transit	1.5
	Bay Area Rapid Transit (SF)	1
Gasoline	Washington State DOT (Ferries)	13

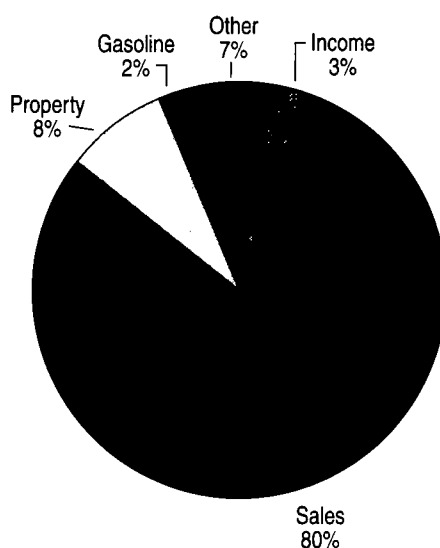


FIGURE 6 Breakdown of local dedicated taxes (1995 total = \$1.73 billion in constant 1997 dollars). (Source: National Transit Database, Federal Transit Administration.)

Sources of Capital Investment

As shown in Figure 7, in 1995 federal sources provided 51 percent of capital investment in transit systems, state sources provided 13 percent of investment, and local sources provided 36 percent. States that are unusual in terms of the support they provide to transit capital investment include California, New Jersey, the District of Columbia, and selected others (Table 3).

TABLE 2 Examples of Systems Receiving Local Dedicated Taxes, 1995 (Millions of Constant 1997 Dollars) (National Transit Database, Federal Transit Administration)

Type	Systems	Amount
Income	Cincinnati (SORTA)	28
	San Francisco MUNI	24
	Cincinnati (TANK)	6
Sales	Los Angeles (LACMTA)	366
	Chicago—Chicago Transit Authority	214
	Chicago—METRA (commuter rail)	127
	Cleveland	127
	Atlanta (MARTA)	114
	Orange County, CA (OCTA)	73
	New Orleans (RTA)	43
	Oakland-Alameda County Transit	32
	Kansas City	25
	San Diego (San Diego Transit)	24
	Bay Area Rapid Transit (SF)	12
	Montgomery County, MD (Ride-On)	15
Property	Minneapolis-St. Paul (MCTO)	59
	Ft. Lauderdale (BCT)	17
	Washington, DC (WMATA)	14

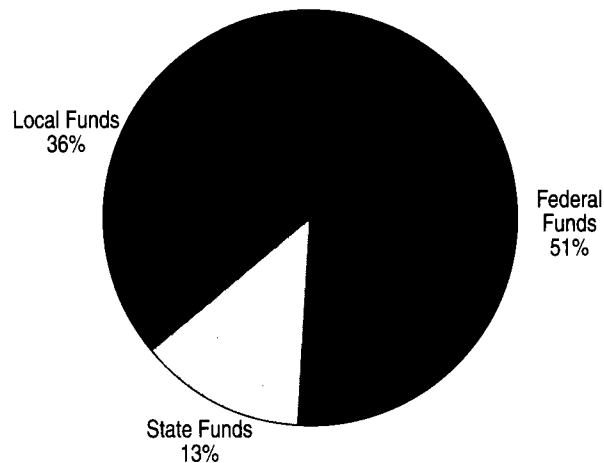


FIGURE 7 Transit capital outlays by source (1995 total = \$7.3 billion in constant 1997 dollars). [Source: *Highway Statistics*, 1995, Federal Highway Administration (from Federal Transit Administration statistics).]

TABLE 3 States with Significant Transit Capital Spending, 1995 (Millions of Constant 1997 Dollars) [*Highway Statistics*, 1995, Federal Highway Administration (from Federal Transit Administration Statistics)]

State	Amount
California	268
New Jersey	146
Pennsylvania	145
District of Columbia	89
Washington	82
Illinois	72
Florida	49
Maryland	42
Connecticut	30

GETTING TRANSIT AGENCIES TO THE TABLE

As transit operators consider how to take advantage of the funding sources available to them, and as they consider how to use these funding sources creatively, it is important for them to take the first step: getting to the table when funding tools are being developed, when funds are being allocated, and when new facilities are being prioritized.

The importance of this principle can be illustrated by analogy to the highway funding environment. Figures 8 and 9 provide an indication of the degree to which state highway funds seem disproportionately targeted toward rural and lightly populated areas. Figure 8 compares the fraction of state capital funds spent on areas with more than 50,000 population with the fraction of state population that resides in such areas. Figure 9 makes a similar comparison but uses road maintenance funds as the basis for the comparison. The two figures suggest that with one or two exceptions, states allocate capital funds disproportionately toward rural and lightly populated areas.

The information presented in Figures 8 and 9 comes with several very important caveats. The sources of data for the two figures use different definitions for areas with more than 50,000 population; the data do not distinguish center cities from suburbs; and the data have not been adjusted to reflect certain important factors (e.g., the fraction of maintenance costs that are incurred simply because of a facility's existence and the fraction of costs attributable to traffic volume; or lane miles per capita, which may be greater in rural areas than in urban areas). Without adjusting for these factors, it is not possible to reach a definitive conclusion. However, the consistent difference between the fraction of state highway funds spent in urbanized areas and the fraction of state populations residing in urbanized areas suggests disproportionate spending practices. The Surface Transportation Policy Project reached a fundamentally similar conclusion in its 1996 report, "Getting a Fair Share: An Analysis of Federal Transportation Spending."

Whatever the reasons for the disproportionate funding levels reflected in Figures 8 and 9, a strong implication of this analysis is that representatives of urban constituencies and providers of service to these constituencies could benefit from spending more time advocating for their transportation interests, whether these interests are highway or transit related.

Two other examples illustrate the importance of "being at the table."

1. In the 1970s, the Georgia Department of Transportation (GDOT) reconstructed the radial Interstate system serving Atlanta. One major component of the effort was to build left-side high-occupancy vehicle (HOV) ramps for future use when HOV was implemented. For the 1996 Olympics, GDOT restriped the existing lanes and narrowed the shoulder areas to create a new inside lane on I-85 and I-75 for HOV 2. While the HOV ramps were being planned and constructed, MARTA was in the middle of building its heavy rail subway system. Three of the four major legs of the rail system parallel GDOT's HOV system now in place.

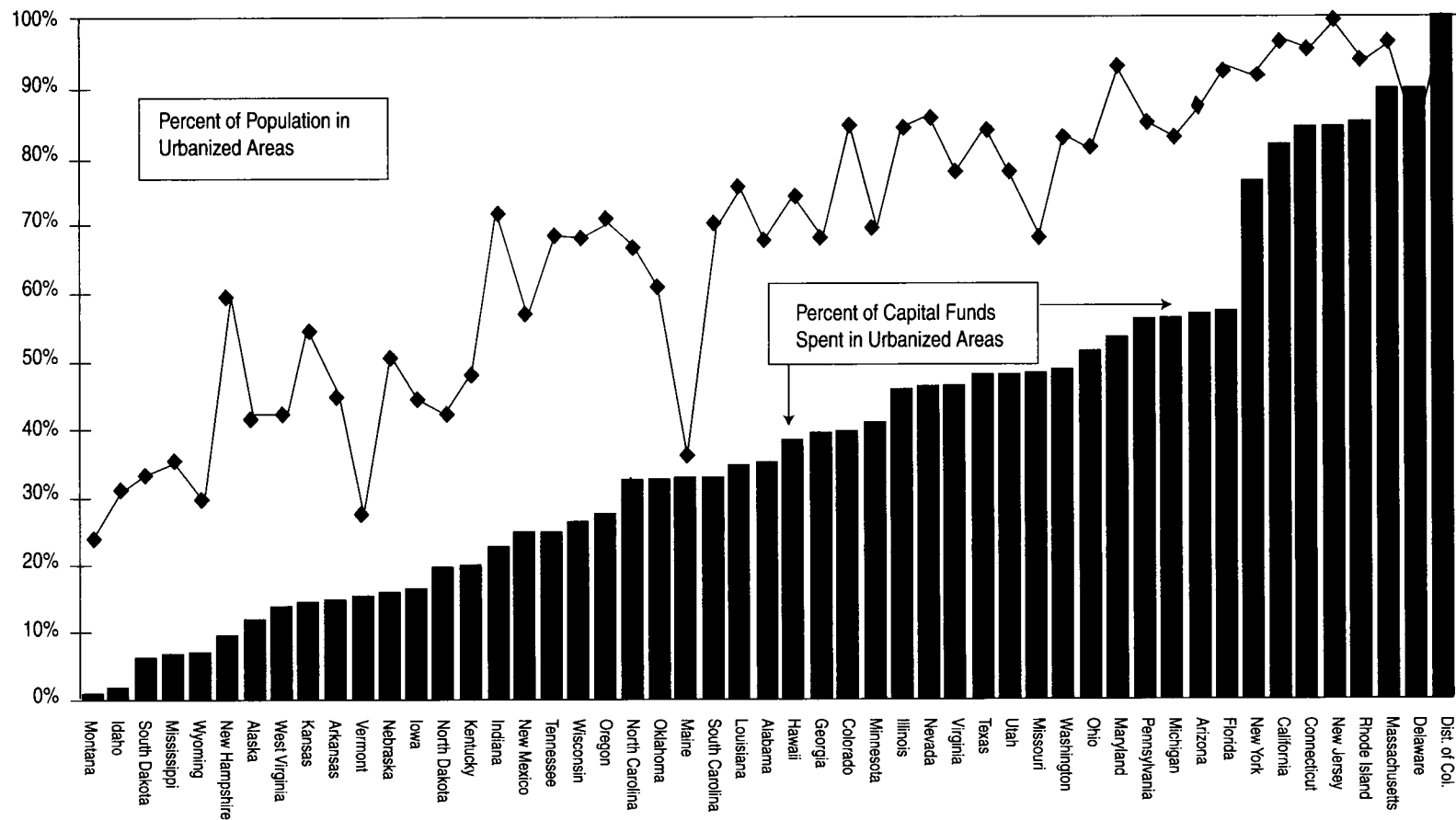


FIGURE 8 Percentage of capital funds spent in urbanized areas (1995) compared with percentage of state population in urbanized areas (1994).
 (Source: *Highway Statistics*, 1996, Table SF 12; *Statistical Abstract of the United States*, 1995, Table 42.)

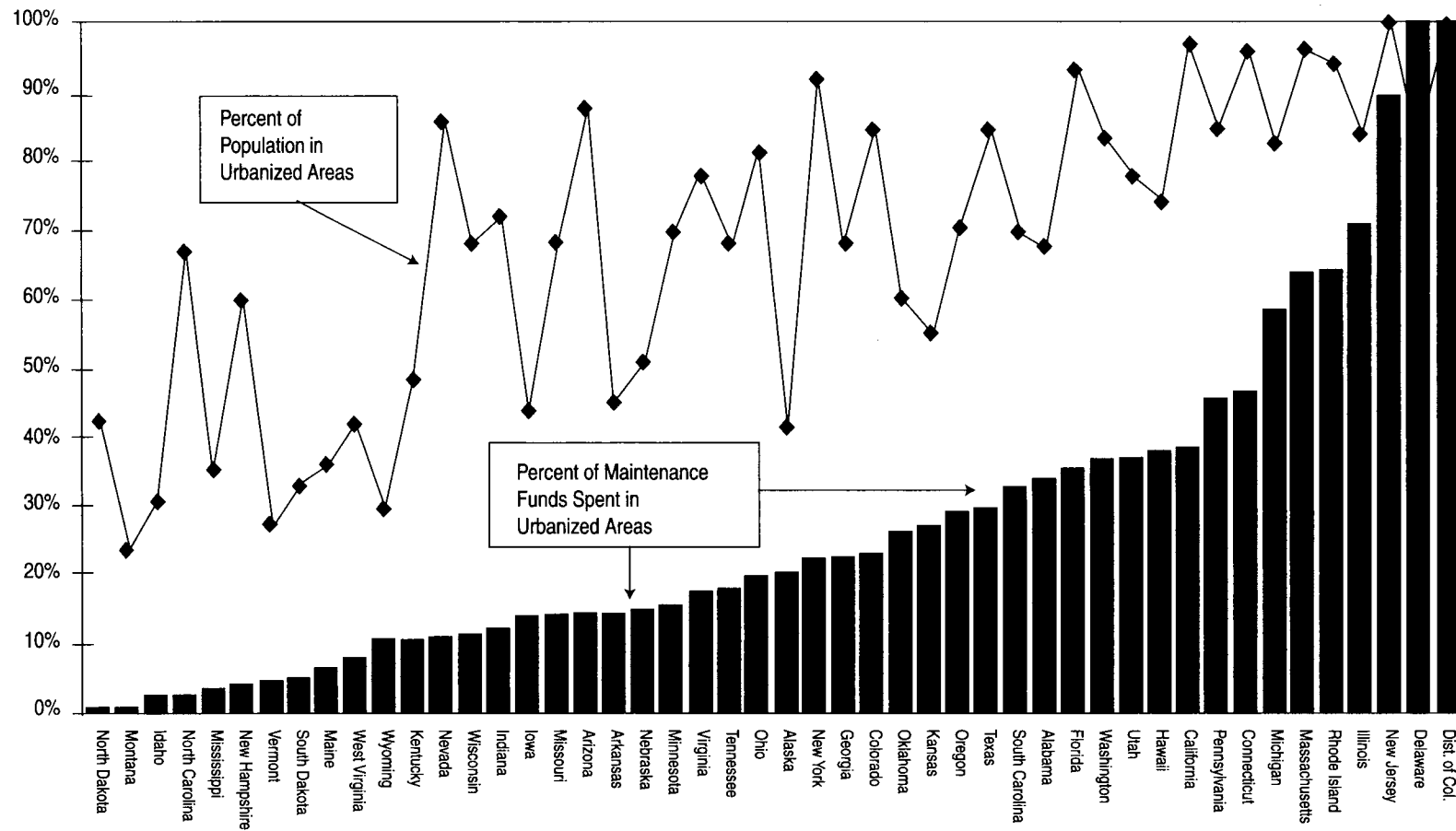


FIGURE 9 Percentage of maintenance funds spent in urbanized areas (1995) compared with percentage of state population living in urbanized areas (1994). (Source: *Highway Statistics*, 1996, Table SF 12; *Statistical Abstract of the United States*, 1995, Table 42.)

While both the rail system and the new HOV system are worthwhile endeavors, they are not coordinated and they operate independently. MARTA does not run express bus service on the Interstate system, preferring to run local feeder bus service to the more efficient rail system. As a result, MARTA is not running any buses on the GDOT HOV system, and there is no sharing of park-and-ride facilities. Had MARTA officials participated in the roadway decision making at the right level and the right time, it is possible that they would have made a different decision about the allocation of their capital resources to take advantage of the facility being built. As it is, the opportunity to use the new highway capacity for bus operations has now been lost without MARTA having the opportunity to strategically evaluate the services it provides in this corridor.

2. When federal SIB legislation was originally written, SIBs were intended to have the flexibility to fund either highway or transit projects. Transit advocates, fearing that highway projects would consume funds that should instead go to transit, lobbied to create separate highway and transit accounts within each SIB. Transit advocates were successful in this effort and helped establish a system wherein funds could not be transferred from one account to the other after SIB allocations are made. The same advocates, however, have not been as vigilant in ensuring that transit accounts are funded. As a result, the rigid separation of SIB highway and transit accounts may make it more difficult, rather than easier, for transit operators to take advantage of the financing opportunities presented by SIBs.

OPPORTUNITIES FOR NEW FUNDING SOURCES

Many state and local transit agencies have clearly identified and taken advantage of new funding sources to replace federal sources that have dried up. Even so, transit agencies around the country continue to confront difficult questions as they consider how to increase their public funding levels or how to pare services.

The preceding summary of transit agencies' recent funding history provides a useful backdrop for a discussion of opportunities for new funding sources. However, the ability of transit agencies to simply "backfill" for lost federal funds is not what is meant by the term "innovative financing." For the purposes of this paper, innovative financing refers to increasing funds for transit by

1. Increasing private participation in transit operations and ownership,
2. Using new financing techniques to leverage existing resources or attract new ones (some of these may also involve public-private partnerships), and
3. Increasing revenue ridership.

As indicated earlier, though, the goal of all the efforts described below is to supplement public funds, not to replace them.

Again, the message here is that there are many opportunities for innovative financing, but almost all involve cooperation of public entities, complex public processes, and negotiation with private parties. To take advantage of any of them, it will be necessary to have transit agency staff who can energetically pursue opportunities and who can clearly see both benefits and potential costs and risks.

Finally, the entrepreneurial spirit advocated here should result in attempts to apply the successes experienced elsewhere to the transit setting. But it is equally important to be clear-eyed about the differences between the transit environment and other transportation environments and about the limits of innovative measures imported from other settings. Projects that are poorly thought through are just as bad as no innovation at all.

Private Participation

Private participation in transit projects can offer many advantages. Involving private-sector entities in transit project development and operation can result in the following nonexhaus-

tive set of benefits: increased likelihood of time-certain completion of projects; increased likelihood that projects are developed when needed, not when public funds are available; more cost-effective service delivery; and development of innovative service delivery options. The arrangements described below all offer at least one of these types of benefits.

- Use of “bridge” financing by the private sector: The construction of the Hudson-Bergen line in northern New Jersey provides a good example of this. The use of grant anticipation notes in this project ensured that construction of the Hudson-Bergen line would begin well before Federal Transit Administration (FTA) funds were available.

- Linking the private sector to the development of transit-related projects: Ideally, the gains that result from these projects can be used to support transit investment and operations. Examples include a recent offer from Bechtel real estate/development partnership to build an airport transit line in Portland, Oregon, that will run through properties that the partnership aims to develop; Commonwealth & Atlantic construction of a transit station at Potomac Yards (eventually); and in Fairfax County, Virginia, developer proffers of land and cash to construct park-and-ride facilities and a bus transfer center in support of the Dulles Corridor Express Bus Park-and-Ride Program.

- Private construction of facilities and related risk sharing: Because claims are a big part of traditional transit construction financing, design-build arrangements may be able to reduce costly and time-consuming disputes. Design-build arrangements also are useful for projects that require time-certain delivery of a functional system. The recently opened extensions of Baltimore’s light rail system relied on a design-build arrangement. FTA also is sponsoring a pilot program to implement design-build procedures more widely.

- Transfer of responsibility for some operations to private operators (paratransit): Taxicabs offer an example of one paratransit option, but privately operated jitneys, shuttle buses, and minibuses have the potential to compete successfully for even more transit traffic.

- Joint development of transit facilities: Partnerships with telecommunications firms for right-of-way, shared facilities, and rider services can enable transit agencies to share costs associated with route construction.

Innovative Financing Techniques

Most innovative finance techniques involve finding ways to reduce interest costs, increase the flexibility of repayment terms, reduce the need for up-front capital costs, share financing responsibilities with parties that traditionally have not assumed these responsibilities, or expand the range of expenditures for which local matches can be credited (typically to include expenditures that local governments would have made anyway but that also happen to support project development). All of the innovative financing techniques described below offer these benefits (although to varying degrees). However, no financing technique will be able to put a project over the feasibility “hump” if revenues and costs are not in line with one another. In other words, transit system fundamentals almost always need to be addressed before innovative finance techniques will be useful.

- Use of state revolving loan funds/SIBs: SIBs are revolving loan funds that have the potential to offer below-market interest rates and flexible repayment terms to projects that might not be built without such terms. There are only a few examples to date of projects that have used SIB financing successfully. A loan from the Florida SIB for development of Orlando’s light rail system is close to closing and provides a good example. The Orlando project will be supported by future federal funds rather than by any permanent increase in funds. The Missouri Department of Transportation has proposed an intermodal facility for St. Louis, and the SIB application for Massachusetts calls for support of park-and-ride lots.

- Private financing/BOT structures: A number of examples of such projects currently exist, including the Tren Urbano, the BART extension to San Francisco International, and the Hudson-Bergen line. However, such projects are more typical abroad than in the United

States. This is because (a) the United States enjoys more established tax-exempt debt financing for public projects, (b) other countries have a poorer public sector compared with the private sector, (c) public requirements for bidding in the United States can be relatively cumbersome, and (d) lenders like the World Bank get involved in projects in less developed countries but not in the United States.

Unlike the preceding examples, most uses of innovative financing by transit agencies appear to involve a relatively large amount of paperwork for moderate financial benefits. Examples of highly touted but frequently only moderately effective mechanisms include the following:

- **Certificates of participation (COPs):** COPs are issued by special-purpose entities that can purchase assets and lease them back to transit systems. An example of how these special-purpose entities can offer access to savings is by obtaining discounts on bulk purchases of equipment that can then be leased to transit agencies.
- **Cross-border leases:** Cross-border leases involve the ownership of transit (or other) assets by entities outside U.S. borders. These assets are then leased back with the tax advantages associated with foreign ownership passed through. The acquisition of Baltimore's light rail transit vehicles involved cross-border leases. Note that savings from these complex transactions rarely total more than 2 or 3 percent of capital costs.
- **Joint development:** Joint development involves the private development of transit-owned property or the cooperative development of property adjacent to transit facilities. Joint development projects can provide tangible benefits. For example, the Washington Metropolitan Area Transit Authority enjoys an annual revenue stream of about \$5 million from leases on its joint development projects. In most existing applications, however, transit authorities have not been able to acquire significant amounts of excess real estate to develop, or are constrained in the ways that they can use such property. An important point regarding joint development projects is that they are typically not able to provide much cash up front to assist with facility construction costs.
- **Delayed local matching:** Delayed local matching refers to a practice (permitted by FTA) in which local project sponsors can defer their local match share of transit projects from early to later years.
- **Toll revenue credits:** FTA also permits toll revenues to be used to provide the local match for the nonfederal portion of a federal transit grant. This flexibility in crediting local governments for their local matches may make it easier in some locations to generate funds to support transit facility development.
- **Benefit assessment districts:** Benefit assessment districts represent the attempt to capture a portion of the value enabled by newly constructed transit facilities. Typically, a fee representing some fraction of the estimated benefit per development unit is assessed on private development that is constructed within a specified impact area around a transit station or other transit facility. Benefit assessment districts were used in the Denver Tech Center project, but this dedicated funding source was not sufficient to meet capital and operating needs. In Los Angeles, attempts to impose special assessment districts around heavy rail stations encountered resistance in the courts for many years. These two issues—funding capability insufficient for systemwide support and vulnerability to judicial and political challenge—will continue to characterize the funding potential and institutional environment associated with benefit assessment districts.

Increasing Revenue Ridership

Despite the history of declining market share over the past several decades, real opportunities exist to attract new ridership—often with some combination of technology and innovative service. Successful implementation of these approaches will often require private-sector involvement. Others will require significant shifts in how transit authorities provide service.

Though the focus of this paper is not on innovations in transit service, these approaches are mentioned because the ability to increase transit ridership and transit efficiency has significant implications for the role that innovative methods can play in the financing of transit service improvements. The more that transit agencies can close the gap between revenues and costs, the more important that innovative financing methods will become to the establishment of new and improved transit operations. In other words, the smaller the difference between costs and revenues, the greater the role of financing schemes in supporting the viability of new transit projects.

Examples of methods that could potentially increase revenue ridership include the following:

- Use of ITS to increase ridership and reduce operating costs: A good example of this is New York's introduction of electronic fare cards. In this and other instances, technology offers not only a service improvement for riders but also an opportunity to develop a relationship between an operator and a third-party information service provider through integrated advanced passenger information systems. Other examples include the adoption of advanced passenger information systems, implementation of high-tech/user-friendly fare collection, and use of high-tech customer services (such as interactive trip planning via the Internet or cable TV).

- Use of ITS technology to improve transit service: For instance, technology currently exists to allow smaller buses to provide on-call service for door-to-door service in certain corridors. This has the potential to support service comparable with private automobile use at a fraction of the cost. This approach could actually involve two innovations: implementation of ITS and use of ITS to establish franchise agreements with small-scale operators.

- Joint development of transit facilities: Joint development is often touted for its potential to support financing of transit facilities. However, joint development with transit-compatible land uses (mainly higher-density, mixed use, pedestrian-friendly development) also has the potential to increase system ridership and increase revenues without increasing operating costs.

- Improvements in transit service levels and focusing service improvements on corridors with high ridership potential: Adopting a customer-service orientation and adapting to changing travel patterns and purposes are important areas for increasing ridership and efficiency. These approaches could well involve cutting service to areas with low ridership and encouraging paratransit operations to serve marginally productive routes.