Baltimore Regional Transit Governance and Funding Study

BRTB

Technical Memorandum #5

Transit Funding Measures

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Transit Funding Measures

INTRODUCTION

The Baltimore Regional Transit Governance and Funding Study will develop alternatives for the structure, organization, and funding of public transit in the Baltimore region. The study is being developed through an iterative process that involves collaboration among the Baltimore Regional Transit Board (BRTB) and regional stakeholders supported by research and analysis. The goal of the study is to develop four governance options that are based on an understanding of transit's historical development in the region, realistic about constraints, but creative in providing opportunities for change.

This technical memorandum, the fifth in a series, explores potential transit funding measures to understand both the potential to raise additional funding to support transit and how specific transit funding measures may integrate with different governance models.

Overview and Organization

The goal of this technical memorandum is to explore potential new sources of revenue – at the state, region, county, and city level – to support transit services in the Baltimore region. The memo estimates levels of revenue from various sources and compares new funding sources in a variety of ways, including appropriateness to support transit, applicability in Maryland and alignment with potential new governance models.

The memo is organized in four sections:

- Transit Funding in Maryland.
- Potential Transit Funding Sources.
- Challenges and Opportunities.
- Implications for Developing Transit Governance and Funding Alternatives.

Methods and Assumptions

As described in previous technical memo, in 2021, transit services in Central Maryland are provided through one of two primary programs:

- The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) Baltimore Core (or Link) services.
- Locally Operated Transit Systems (LOTS).

The MDOT MTA Baltimore Core services are managed and governed by the MDOT MTA, with MDOT's Secretary of Transportation and MDOT MTA Administrator responsible for most of the decision making on transit service operations and investments. MDOT MTA also funds Baltimore Core transit services through a combination of Federal Transit Administration (FTA) grants and state revenues collected through the Transportation Trust Fund (TTF).

An exception to these general rules occurs in cases where the Maryland State Assembly mandates specific funding, which have occurred recently. In 2019, when the Maryland General Assembly directed a permanent dedicated capital fund for WMATA, it also established a $29 million funding minimum investment (investment floor) for years dedicated to MDOT MTA. This minimum investment level, however, was limited to three years. In the 2021 legislative session, the Maryland General Assembly passed a bill strengthening its commitment to the MDOT MTA by mandating an annual minimum investment level[1]. The bill was vetoed by the Governor on May 28.

The Baltimore Core service transit governance and funding model contrasts with the LOTS, which are funded by a combination of federal (FTA), state and local revenues. LOTS are managed and governed at the local level; most LOTS operate as either city or county-based systems so the ultimate responsibility for service and investment decision-making rests with the city mayor/county executive and city councils and county commissions. In Central Maryland, most of the local revenues used to support LOTS services are raised through general fund contributions. Also noteworthy, in several of the Central Maryland jurisdictions, including the City of Baltimore and Baltimore County, MDOT MTA provides Link service, and the local jurisdictions manage and fund LOTS programs.

Current practices employed in Central Maryland help illustrate the relationships between transit governance and funding. Except for the federal government, there is a direct link between funding and decision-making authority. As discussed, the Baltimore Transit Funding and Governance Study will develop four governance and funding models that offer different ways to share decision-making and funding decisions regarding local and regional transit services.

The study team developed Transit Funding Measures Technical Memo using a variety of primary data sources for this analysis include the following:

- Final Report to the Governor and Maryland General Assembly by the Blue Ribbon Commission on Transportation Funding, November 2011
- Final Report to the Governor and Maryland General Assembly by the Local and Regional Transportation Funding Task Force, December 2013
- Report of the Maryland Board of Revenue Estimates on Estimated Maryland Revenues, December 2020
- Comprehensive Annual Financial Reports (CAFRs) from relevant Maryland counties, 2020
- Maryland Transportation Authority FY2021 Traffic and Toll Revenue Forecast Update, November 2020

[1] Maryland House Bill 114, 2021 Legislative Session.

TRANSIT FUNDING NEEDS

Technical Memo 3: Financial Review prepared for this study summarizes MDOT MTA's existing funding sources. This technical memo describes how the collective investments guided and directed by MDOT are funded through a consolidated Transportation Trust Fund (TTF). The TTF is a dedicated funding source, segregated from Maryland General Fund, funded by a combination of transportation taxes, user fees and other revenue. Sources include taxes on fuel, vehicle titling, vehicle registration fees, operating revenues (e.g., transit fares), a portion of Maryland's corporate income tax revenue, a share of sales and use tax revenues on short-term vehicle rentals, proceeds from bond issuances, and funds from federal grants (formula and discretionary).

Fiscal Year 2019 Investments

Operating Funds

In Fiscal Year (FY) 2019, the MDOT MTA invested approximately $882 million to support transit operations, including funding provided to Baltimore-oriented services (56%), regional commuter oriented services (MARC trains and Commuter Bus) (23%) and the statewide Locally Operated Transit Service Systems (LOTS) program (10%). The remaining 10% in operating expenditures was associated with administrative and police functions.

Capital Funds

Capital expenditures are episodic and vary by program and geography over time in response to specific programs and investments. Between 2011 and 2019, MDOT's capital investments for transit statewide projects ranged from between $500 and $800 million annually. In FY2019, MDOT MTA invested just under $700 million in transit capital projects, including expenditures associated with Baltimore-oriented core services, Regional MARC and Commuter Bus, LOTS, WMATA and the Washington Region Purple Line project.

MDOT funds major capital projects through a combination of federal and TTF funds. The exception to this is the State of Maryland's annual capital funding obligation, which dedicates $167 million annually to WMATA's capital program. These dedicated funds are paid through Maryland's general fund revenues, rather than the TTF.

Indicative Funding Needs

An important part of discussing transit funding measures involves evaluating the relationship between revenue potential and funding needs. The Baltimore Region Transit Funding and Governance Study did not include a needs assessment. Instead, the study team relied on recommendations outlined in the "Connecting Our Future: A Regional Transit Plan for Central Maryland". While this plan does not include a cost estimate, it lays out a vision for a strong transit future. We used this plan to broadly guide development of three needs scenarios:

- **Meet Basic Needs – 4% annual growth.** Our assumptions suggest 3% of the annual growth is associated with "maintenance of effort" and would be funded by MDOT MTA through the TTF and other dedicated funds. The difference (1%) would need to be raised through new funding measures.
- **Moderate Growth – 5.5% annual growth.** Our assumptions suggest 3% of the annual growth is with "maintenance of effort" and would be funded by MDOT MTA through the

TTF and other dedicated funds. The remaining 2.5% would need to be raised through new funding measures.

- **Strong Transit Future – 7.5% annual growth.** Our assumptions suggest 3% of the annual growth is with "maintenance of effort" and would be funded by MDOT MTA through the TTF and other dedicated funds. The remaining 4.5% would need to be raised through new funding measures.

<u>These scenarios are for planning purposes only.</u> They are broadly estimated with the goal of providing an indication of needs (i.e., a "yardstick) and to compare funding measures.

Estimated Needs - Operating Costs

In FY2022, MDOT MTA will invest approximately $756 million to support transit operations in the Baltimore region[2], the breakdown of this investment will be generally:

- $583.2 million associated with the Baltimore-oriented services (Local Bus, Light Rail, Subway and ADA paratransit services)
- $17.3 million to support LOTS programs and services (Baltimore region only)[3]
- $155.9 million for portion of regional commuter oriented services (MARC Trains and Commuter and Express Bus) that can be attributed to Central Maryland

As discussed, the study team assumed MDOT MTA would continue to fund transit at the current level plus "maintenance of effort" level increases (assumed to be 3%). Additional funding would need to be raised by new sources to fund growth beyond this level. The indicative scenarios include raising additional amounts between 1% (basic needs) to 2.5% (moderate growth) to 4.5% (stronger transit growth) (see Figure 1).

For purposes of this analysis, the level of investment is assumed to increase by between 4% and 7.5% across all three of MDOT MTA's primary transit programs, the Baltimore-oriented services, the LOTS program, and regional commuter oriented services. Because the level of increased investment is estimated based on a percentage of total investment, increases for the LOTS program are relatively modest. In addition, the estimated funding needs do not include any local funds associated with the LOTS program. Further, for purposes of this analysis, it is assumed that the LOTS will be able to match an increase in federal and state funds.

[2] Assumes FY2019 estimate increased by 3.0% per annum.

[3] Number reflects National Transit Database, including City of Annapolis, Anna Arundel County, Baltimore City, Baltimore County, Carroll County, Harford County, Howard County, and Queen Anne's County.

Figure 1 Estimated Additional Operating Cost Needs by Scenario and by Funding Partner ($ millions)4

	Basic Needs (4% growth)	Moderate Growth (5.5%)	Stronger Transit Future (7.5%)
Baltimore Services			
MDOT MTA (3%)	$17.5	$17.5	$17.5
New Sources	$5.8	$14.6	$26.2
LOTS*			
`MDOT MTA (3%)	$0.5	$0.5	$0.5
New Sources	$0.2	$0.4	$0.8
Regional Commuter Oriented Services**			
MDOT MTA (3%)	$4.7	$4.7	$4.7
New Sources	$1.6	$3.9	$7.0
Total (with MDOT funding)	**$30.3**	**$41.6**	**$56.7**
Total New Sources ONLY	**$7.6**	**$18.9**	**$34.0**

Totals may not sum due to rounding.

*Includes only LOTS program funded by MDOT MTA with federal and state funds.

**Includes Regional Commuter Oriented Services allocated to the Baltimore region based on revenue miles

Source: Nelson\Nygaard Consulting Associates (see also TM 3)

Estimated Needs - Capital Costs

Annual spending on transit capital needs is episodic and more challenging to estimate, but data collected between FY2010 and FY2019 suggests that MDOT MTA spent roughly[5]:

- $150 million annually on Baltimore-oriented services (Local Bus, Light Rail, Subway and ADA paratransit services) and an additional $50 million on Agency-wide capital items largely associated with providing Baltimore-oriented service.
- $3 million annually to support LOTS programs and services (Baltimore region only)
- $60 million annually for regional commuter oriented services allocated to the Baltimore region

Assuming MDOT MTA continues to fund transit operating expenses at existing levels plus a maintenance of effort (assumed to be 3%), the study team assumed future investments in transit operations will also require increased spending on transit capital. For purposes of this analysis, a 30% ratio of capital spending to operating investments was broadly assumed; this means for every $100 spent on transit operations, a corresponding capital investment of $30 is needed. Based on this assumption, supporting the operating increases inclusive of the maintenance of

[4] Uses 2019 as the base year

[5] Cost estimates listed below are from Technical Memo 3: Financial Review.

effort funding contributed by MDOT MTA would require between (an additional) $9.1 million and $17.0 million in additional capital investment annually (see also Figure 2).

Figure 2 Estimated Additional Capital Cost Needs by Scenario ($ millions)

	Basic Needs	Moderate Growth	Stronger Transit Future
Baltimore Services	$7.0	$9.6	$13.1
LOTS	$0.2	$0.3	$0.4
Regional Commuter Oriented Services	$1.9	$2.6	$3.5
Total Capital Needs on all Operating	**$9.1**	**$12.5**	**$17.0**

Totals may not sum due to rounding

Source: Nelson\Nygaard Consulting Associates (see also TM 3)

Estimated Needs – Capital and Operating Costs

Based on this analysis, we broadly estimated the range of financial resources needed to support capital and operating investments beyond the current base (including maintenance of effort increases) at between $16.6 million and $51.1 million in FY2022 (see Figure 3); annual costs and needs are expected to increase over time. This estimate is intended to be an indication of the order of magnitude financial needs required from potential transit funding measures.

Estimated funding needs do not include resources needed to address State of Good Repair (SGR) needs or major capital intensive new projects, like light rail. These estimates will be re-evaluated and refined as part of developing draft governance options, recognizing that future governance models may or may not include all three MDOT MTA programs (Baltimore Services, LOTS and Regional Commuter Oriented Services). Thus, funding needs will vary according to the governance models.

Figure 3 Estimated Annual New (Beyond MDOT MTA Contributions) Funding Needs by Scenario and Partner ($ millions)

	Basic Needs	Moderate Growth	Stronger Transit Future
Baltimore Services	$12.8	$24.2	$39.4
LOTS	$0.4	$0.7	$1.2
Regional Commuter Oriented Services	$3.4	$6.5	$10.5
Total (New Sources and Capital)	**$16.6**	**$31.4**	**$51.1**

Totals may not sum due to rounding

Source: Nelson\Nygaard Consulting Associates (see also TM 3)

State of Good Repair

As noted, the funding needs described above do not include resources needed to address existing SGR needs (i.e., the cost of maintaining existing investments) or new, capital-intensive projects. For purposes of this analysis, SGR associated with the existing transit infrastructure, including both the BaltimoreLink services and individual LOTS, is assumed to be

the responsibility of MDOT MTA and LOTS programs. However, SGR also offers a second reference (or yardstick) of potential funding and investments needs.

The 25-year total SGR capital investment needs in Central Maryland as defined by the Central Maryland Regional Transit Plan are estimated to be roughly $13 billion (including MDOT MTA and LOTS programs). The $13 billion in needs over the 25-year period, averages to roughly $500 million per year. Some of the transit capital needs will be paid through MDOT MTA's ongoing program investments with funds provided through federal grants and the Maryland's Transportation Trust Fund. However, there is also a substantial unfunded backlog, especially in the near-term. Based on previous analyses, the estimate of unmet SGR-related funding needs in Central Maryland range between $100 and $300 million annually.

This estimate of annual transit funding needs – ranging from $100 - $300 million is included here as a second example of potential transit funding goals for Central Maryland. As noted earlier, funding needs, including SGR estimates, will be refined as part of developing draft governance options.

POTENTIAL TRANSIT FUNDING SOURCES

Transit Funding

Throughout the United States, transit is funded at the state and local level in a variety of ways. The federal government supports public transportation with an assortment of grants and programs, largely through the FTA and U.S. Department of Transportation (USDOT). Passenger fares are an important source of revenue for many transit agencies, especially urban systems. As a result, all transit agencies in the United States raise revenues beyond federal grants and passenger fares. In most cases, transit agencies raise revenue to support operations and capital programs by receiving funds from state governments and/or raising revenues locally.

Local revenues typically fall into one of two types – dedicated funding sources, like taxes that are specifically levied to support public transportation and assessments, or direct contributions paid by local governments or other transit agency partners. Transit agencies almost always prefer dedicated funding programs because having a dedicated funding source gives agencies resources that they can directly measure and manage without competing with other important public services for funding. Dedicated funding sources often have the added advantage of allowing agencies to raise additional funds through bonding.

Transit agencies use a number of traditional and non-traditional funding measures. These traditional taxes include, property tax, income taxes and sales taxes; taxes on transportation services and investments; user fees; and "sin" taxes on items like alcohol, cigarettes, and lottery revenues. For this effort, the study team inventoried each of these funding measures for their potential application in Central Maryland (see Figure 5). The study team also estimated revenue for funding sources in the inventory that are most feasible and appropriate for the region as well as a handful of other important characteristics associated with individual taxes and fees:

- **Revenue potential** – estimates the revenue potential of the proposed measure and the likelihood of an individual funding measure to generate revenue in line with expected needs.
- **Stability** – reflects the likelihood that funding amounts are relatively certain and/or can be predicted over time.
- **Equity** – any future transit revenue strategy should be fair or equitable in terms of both who pays the tax and who receives the benefits. Transit funding measures are typically measured in terms of horizontal and vertical equity. Horizontal equity requires that people with comparable needs and abilities be treated equally. Vertical equity requires that the allocation of benefits and costs favors disadvantaged people[6].
- **Existing or new revenue source –** identified if the tax or fee is already used in the State of Maryland**.**
- **Expected taxing agency** – evaluates if the tax is logically and appropriately levied at the state, regional or local level (or a combination of multiple levels).

For purposes of this analysis, funding measures were also classified as either "Major" or "Secondary" sources. Major sources represent a single tax or fee that has potential to raise

[6] Victoria Transportation Policy Institute, "Evaluating Transportation Equity: Guidance for Incorporating Distributional Impacts in Transportation Planning", April 2021, Todd Littman.

sufficient funds to meet agency needs. Secondary funds have less revenue potential and thus would require multiple taxes and fees to meet agency needs.

Note that the funding measures included in the technical memo are not recommendations. Instead, they are designed to be examples of different ways that transit ***could*** be funded and include general estimates of how much money ***could*** be raised.

Major Sources

As mentioned, major funding sources the potential to raise sufficient funds to support transit agency capital and operating needs. These funding sources include sales taxes, property taxes, or income taxes. A transit agency's ability to levy sales, property or income tax almost always requires both receiving taxing authority from the state and voter approval. National experience also shows that toll revenues can be a major source of transit agency financial support. Tolls are typically considered a user fee rather than a tax, so while states still need to authorize tolls, they do not typically require voter approval. Since 2015, many cities and regions around the country have had success gaining voter approval for taxes to support transit (see Figure 4).

Figure 4 Major Transit Initiatives Since 2015 and Primary Funding Sources

Source: Nelson\Nygaard Consulting Associates, APTA Center for Transportation Excellence

Figure 5 Inventory of Potential Transit Funding Measures

Traditional Taxes	Transportation-Related Revenue Sources	Transportation User Fees	Excise Taxes and Lottery	Financing Mechanisms
▪ Property Tax ▪ Income Tax (Corporate*, Personal) ▪ Sales Tax	▪ Local Assessments ▪ Transportation Climate Initiative (Carbon Taxes) ▪ Transportation Utility Fee ▪ Developer Impact Fee	▪ Tolls** ▪ Fuel Taxes* ▪ Rideshare Tax** ▪ Vehicle Registration Fee* ▪ Vehicle Miles Travel Fee ▪ Mobility / Congestion Pricing ▪ Parking Taxes ▪ Micro-mobility tax (scooters, etc.) ▪ Fares**	▪ Alcohol Tax ▪ Cigarette Tax ▪ Cannabis Tax ▪ Lottery Revenue ▪ Lodging Tax ▪ Real Estate Transfer Tax ▪ Rental Car Tax**	▪ General Revenue Funds ▪ Land Value Capture

Source: Nelson\Nygaard

Notes

* Denotes funding source already used by Maryland Transportation Trust Fund

** denotes funding already used in Central Maryland

Sales Tax

Sales taxes are the most important source of funding at many of the nation's largest transit systems (see Figure 6). Sales taxes are also the most common way to fund major expansion programs, and examples include:

- Denver
- Maricopa County, AZ (Phoenix area)
- City of Phoenix
- Los Angeles, CA
- Puget Sound, WA (Seattle area)
- Broward County, FL (Ft. Lauderdale area)

Figure 6 Use of Sales Taxes for Transit Operations

City/Transit System	Sales Tax Rate Dedicated to Transit
Boston/MBTA	1.0%
Denver/RTD	1.0%
Los Angeles/LA Metro	2.0%
San Diego/MTS	0.5%
Phoenix/Valley Metro	0.7%
Salt Lake City/UTA	1.2%
Seattle/King County Metro	1.4%
Dallas/DART	1.0%
Fort Worth/Trinity Metro	0.5%
San Antonio/VIA	0.5%-1.0% depending upon jurisdiction

Source: APTA

Historically, sales taxes for transit have been well-supported by voters, and some sources like APTA cite that approximately 70% of transit funding initiatives pass, and in 2020, over 90% have passed.

Sales taxes are only moderately stable and are vulnerable to economic recessions and downturns. This can mean that transit agencies have less revenue during times when demand for transit services is highest. In terms of equity, however, sales taxes are regressive and disproportionately impact lower income residents.

In 2019, Maryland collected $4.9 billion in sales tax revenue. A 0.5% increase in Maryland's sales tax rate would generate approximately $435.9 million per year in additional sales tax revenue statewide. However, a challenge to raising Maryland's current sales tax of 6% on taxable purchases[7] is that it is already higher than its neighbors Virginia (5.30%) and Delaware (0%), and equal with that of Washington D.C, West Virginia, and Pennsylvania.[8] Currently in Maryland, only the state can charge sales taxes; counties and municipalities are not currently legislatively enabled to do so.

Sales tax revenue could also be increased by broadening the number of taxable services beyond the current number of 40 services. As of 2017, the last time a comparative study was conducted, Maryland ranked 29th nationally in terms of the number of services subject to sales tax.[9] In March 2021, a small number of additional products, including digital products and codes, were added to the list of taxable services, but the list of those that remain untaxed is extensive.

[7] https://www.marylandtaxes.gov/business/sales-use/index.php

[8] Sales tax rates in West Virginia and Pennsylvania may exceed Maryland's in some localities, as those states have legislatively enabled localities to raise their own sales taxes in addition to the statewide rate.

[9] https://www.taxadmin.org/sales-taxation-of-services

Property Tax

Several transit systems use property taxes as their major source of funding. One recent example includes the Seattle area where voters recently approved a 25¢ per $1,000 of assessed value increase in property taxes to fund the Sound Transit 3 expansion program. An even more recent example is Austin, TX, where voters just passed an 8.75¢ per $100 of assessed value increase to fund a transit investment program.

Property taxes are relatively predictable and stable over time. They are also generally considered to be equitable because property owners benefit from access public transit. Property ownership increases with income, so taxing property can be considered relatively progressive with respect to income.

For the State of Maryland, each 1¢ increase per $100 in assessed value (on residential real estate) would generate $76.9 million per year. Currently the State of Maryland does not have a sales tax on personal property, but counties and municipalities typically do. Existing residential real estate property tax rates in Central Maryland counties vary widely; property tax rates on residential real estate range from $0.85 per $100 of assessed value in Queen Anne's County to $2.25 per $100 of assessed value in Baltimore City. An additional property tax of 1¢ per $100 in assessed value on residential real estate dedicated to transit would generate the following revenues for each county (see Figure 7).

Figure 7 Existing County-Level Property Tax Rates in Central Maryland and Potential Additional Revenue (in $millions)

County	Residential Real Estate Property Tax Rate (per $100 of assessed value)	Personal Property Tax Rate (per $100 of assessed value)	Estimated Additional Revenue from 1¢ Increase in Residential Real Estate Property Tax Rate (in millions)
Anne Arundel County	$0.93	$2.34	$9.1
Baltimore City	$2.25	$5.62	$3.5
Baltimore County	$1.10	$2.75	$8.7
Carroll County	$1.02	$2.52	$2.0
Harford County	$1.04	$2.60	$2.9
Howard County	$1.01	$2.54	$5.3
Queen Anne's County	$0.85	-	$0.8

Source: Maryland Department of Assessments and Taxation

Income Tax (Resident)

Income taxes are also used to support transit. Indianapolis, for example, is funding its $1.2 billion Indy Connect transit program through a 0.25% income tax increase. In 2018, the State of Oregon implemented an income tax of 0.1% to fund general transit improvements. The Oregon tax must be paid by all working residents of Oregon, no matter where they work, and by all non-residents who work in Oregon.

Income taxes are a relatively stable source of revenue. Personal incomes taxes can be equitable, especially if higher income individuals pay a higher rate. Corporate income taxes are generally considered equitable because higher income individuals are more likely to pay them.

In Maryland, state income tax rates are 2%, 3%, 4%, 4.75%, 5%, 5.25%, 5.5%, and 5.75% based on income, with most people falling into the 4.75% bracket. Counties also have an additional flat tax bracket, with most Central Maryland counties collecting an additional 2.81%-3.20% income tax. Combined, most Maryland residents are subject to an income tax rate between 4.81% and 8.95, and Maryland ranks third in the country for income tax collected per capita ($2,470).

Virginia has variable income tax rates that range from 2% to 5.75%, D.C. has variable rates that range from 4% to 8.85%, Pennsylvania has a flat tax rate of 3.07% but also allows local jurisdictions to raise income tax revenue, and Delaware has variable rates of 2.2%-6.6. A 0.25% increase in Maryland's eight income tax rates would generate $607.6 million per year.

Maryland's counties can raise income tax rates to a maximum rate of 3.2%. In Central Maryland, Anne Arundel County, Harford County, and Carroll County currently have an income tax rate below the maximum, and these counties would collect the following annual additional income tax revenues with either a 0.25% increase or a new tax rate of 3.2%, whichever is lower (Figure 8).

Figure 8 Potential Additional Annual Income Tax Revenue in Central Maryland Counties below State Income Tax Rate Max. ($2021)

County	Existing Income Tax Rate	Potential Additional Income Tax	Additional Annual Revenue ($2021) (in millions)
Anne Arundel County	2.81%	0.25%	$62.4
Harford County	3.06%	0.14%	$14.4
Carroll County	3.03%	0.17%	$12.4

Source: Maryland Department of Assessments and Taxation and Nelson\Nygaard Consulting Associates

Income Tax (Corporate)

Maryland's Transportation Trust Fund is funded in part by Corporate Income Taxes. Maryland's corporate income tax is currently set at 8.25%, which is higher than its neighbors Virginia (6%) and West Virginia (6.5%) and equal to DC. Pennsylvania's corporate tax rate of 9.99% and Delaware's at 8.7% exceed Maryland's rate.

Currently, 17.2% of all corporate income tax revenue goes to the TTF.[10] An increase of 0.25% to Maryland's 8.25% corporate income tax rate, with all additional revenues going to the TTF, would raise approximately $45.7 million per year.

Tolls

Toll revenues are used to fund transit in Northern Virginia, San Francisco, CA, and New York City. Maryland's toll revenues are collected by the Maryland Transportation Authority to pay construction, operating, maintenance and law-enforcement costs and the debt on bonds that are

[10] Chapter 397 of 2011 changed the allocation of corporation income tax revenue to the Department from 24% to 17.2%. Effective July 1, 2012, the Department received 9.5%; from July 1, 2013, through June 30, 2016, the Department received 19.5%. Effective July 1, 2016, the Department receives 17.2%. Source: https://mdot.maryland.gov/OOF/CAFRall1_27_21.pdf page 111.

issued to fund major projects. Tolls are collected at 8 sites, including on I-95 Express Lanes. Maryland could raise an additional $38.8 million per year by raising tolls for all vehicles at all sites except for the variably priced I-95 Express Lanes by 25¢. A $1.00 increase on the tolling locations in the Central Maryland region (JFK/I-95, Hatem Bridge, Bay Bridge, Harbor Tunnel, Key Bridge, and Fort McHenry Tunnel) could raise approximately $115.8 million. If a $1.00 increase were applied to tolls on only the Harbor Tunnel and Bay Bridge, it would raise approximately $34.4 million.

Tolls are a relatively stable source of funding. Tolls are also generally considered to be equitable because they charge drivers for the impacts associated with congestion, emissions, and roadway costs. They can be vertically equitable if drivers are able to drive on alternative corridors.

Secondary Transit Funding Sources

Many other funding sources are also commonly used to fund transit, which include:

- Fuel tax
- Local assessments
- Special Assessment Districts
- Rideshare fee
- Vehicle registration fee
- Real estate transfer tax
- Rental car tax
- Lodging tax
- Alcohol excise tax
- Alcohol sales tax
- Cigarette sales tax
- Transportation Utility Fee

All of these would reliably provide less revenue than the five major sources discussed above, and in most cases meeting transit needs would require one or more of the following taxes.

Fuel Tax

A large share of the TTF is funded by the motor vehicle fuel tax, which as of May 2021 is 36.3¢ per gallon. This value is the effective tax per gallon, which includes regular sales tax. Maryland is one of the three states in the United States that indexes its fuel tax to inflation.[11] In 2020, Maryland raised about 1 billion dollars from fuel taxes.

Each one cent increase in Maryland's gas tax would generate approximately $27.6 million in new revenue per year. A five-cent increase would generate $138.1 million per year. At present, Maryland's effective fuel tax rate is higher than that of D.C. (23.5¢ per gallon), Virginia (29.4¢), and Delaware but lower than in Pennsylvania (58.7¢) and West Virginia (35.7¢) (see call out box on page 16).

Traditionally, fuel taxes have been a relatively stable source of funding. As discussed, increased fuel efficiency and the expansion of electric vehicles is eroding the stability of fuel taxes, especially in the long term. Fuel taxes, as a consumption tax, are regressive taxes; however, improving public transit can help off-set some of the equity impacts.

[11] https://taxfoundation.org/state-inflation-indexing-gasoline-taxes/

Gas Tax Revenues

The federal government and states have relied on fuel taxes to fund transportation investments for the past century.[12] In 2021, all 50 states and the federal government tax motor vehicle fuels and these taxes are one of the most important revenue sources for transportation investments nationally. Motor vehicle fuel taxes are attractive because they can be communicated to tax-payers as a "user fee" with revenues directed to fund roadways and transportation infrastructure and support systems.

Gas Tax Per Gallon in Adjacent States (July 2020)

Maryland	$0.363
Delaware	$0.23
District of Columbia	$0.235
Pennsylvania	$0.587
Virginia	$0.294
West Virginia	$0.357

Source: Tax Foundation (https://taxfoundation.org/state-gas-tax-rates-2020/)

For many years, taxing motor vehicle fuels successfully raised revenue for transportation infrastructure. More recently, however, the revenue power of taxing gasoline and other fuels has diminished. Diminished revenues reflect a variety of factors, including a reluctance (in some states) to increase the fuel tax or tie it inflation. The federal government has not increased the federal gas tax in 25 years and some 20 states have not increased fuel taxes in the past 10 years.

However, about half of the states, including Maryland, levy variable rate gas taxes. Maryland ties its motor vehicle fuel taxes to both gas prices and the consumer price index (CPI). This puts the state at a slight disadvantage as compared with neighboring states (see call-out box) that either don't adjust fuel taxes or only tie taxes to fuel prices.[13]

Gas and other motor vehicle fuel taxes are also challenged by larger changes to the transportation industry, including fuel efficiency standards and electric vehicles. As the fuel efficiency of cars and trucks increases, gas taxes as a portion of vehicle miles traveled are decreasing. In addition, as electric vehicle become more common, they will have an increased impact on motor vehicle revenues. Some states are exploring taxes on electric vehicles, either through direct fees, or taxing all vehicles on a fee per vehicle mile traveled. See Appendix A for more information.

[12] Oregon was the first state to introduce a gas tax in February 1919. The federal government introduced a national gas tax in June 1932 as part of the Revenue Act of 1932 (Source: https://www.irs.gov/pub/irs-soi/00gastax.pdf)

[13] Institute on Taxation and Economic Policy: Most Americans Live in States with Variable-Rate Gas Taxes. June 27, 2019.

Local Assessments (General Fund)

Some transit districts assess local communities in return for service each year. In Massachusetts, communities served by the MBTA are assessed based on a state-mandated formula that considers local population, access to other transit authorities, and proximity to Boston. The amount each community pays does not correlate to the level of service received. In 2018, MBTA assessments represented about 8% of its operating costs. Local transit districts in Connecticut rely more heavily on municipal contributions. The method for assessing these contributions vary by district.

Local assessments are generally stable sources of funding. In times of economic downturns, however, local governments may be challenged to meet local obligations. In terms of equity, if local assessments are tied to the portion of funds received, then they would be horizontally equitable. But local assessments may not be vertically equitable because lower income communities may be asked to pay more.

If enabled, a 5% local assessment applied statewide could generate an average of approximately $41.8 million per year. The allocation of this assessment to individual communities could be based on any number of factors, such as population, employment and/or transit investments. While many communities in Maryland are not directly assessed an allocation of regional transit costs. However, each jurisdiction in the Baltimore Region already contributes local general revenue funds to support LOTS programs. Local funds are used to match state and federal grant funds, with many jurisdictions contributing more than the amount needed to match grants to support transit.

Special Assessment Districts

One common way to fund major projects is to develop special assessment districts in the area that is served by and benefits from the transit improvement. The taxes are typically based on property value, or sales, special business fees, or other measures of value; they are typically used to support specific transit projects or discreet service areas as opposed to entire transit systems. Examples include:

- **Kansas City, MO:** Kansas City has developed Transportation Development Districts (TDDs) to fund construction and operation of its streetcar line. The TDD consists of an area of approximately ½ mile to each side of the line. The first TDD was approved by voters within the proposed district and funded development of current streetcar line. In 2017, voters approved the creation of a second district to extend the line 3.8 miles southward. The TTDs impose a variety of taxes and fees:
  - 1% sales tax within the TDD boundary
  - A special assessment (property taxes) on real estate within the TDD boundary, with maximum rates as follows:
    - 48¢ for each $100 of assessed value for commercial property
    - 70¢ for each $100 of assessed value for residential property
    - $1.04 for each $100 of assessed value for property owned by the City
    - 40¢ for each $100 of assessed value for real property exempt from property tax, such as religious, educational, charitable, etc. property, but only on market value more than $300,000 and less than $50 million.

  - An assessment on surface pay parking lots within the TDD boundary (not garages and not free parking lots). The maximum rate for the supplemental special assessment on surface pay parking lots is $54.75 per space per year.

- **Northern Virginia:** In northern Virginia, two counties created Special Assessment Districts to fund the extension of Silver Line rapid transit service from Washington, D.C. to Dulles International Airport:
  - **Fairfax County** established a special tax district on commercial and industrial properties in 2004 to fund the county's portion of Phase 1 of the extension. The district consists of most of the Tysons Corner Urban Center and an area around the Phase 1 stations and assesses a property tax of 22¢ per $100 of assessed value. In 2009, the county established a second special tax district consisting of the area around its Phase 2 stations. In that district, the property tax rate started at 5¢ per $100 and increased five cents each year to 20¢ in FY 2014.
  - **Loudoun County** implemented a "Metrorail Service District" to pay for its portion of Phase 2 of the project. That district consists of properties around the Phase 2 stations in Loudoun County with a levy of 20¢ per $100 of value.
- **Columbus, OH:** In 2018, a downtown assessment district in Columbus provides free transit passes for downtown workers. An estimated 14,800 out of 30,000 eligible workers in the district have registered for the pass and made about 25,000 weekly trips during the first year of the program. Bus ridership during rush hour increased by about 24%. Funding is matched by the local planning commission.

Special assessment districts are stable sources of funding. They are also generally considered equitable because assessments are tied to services received. They may not be as vertically equitable as other measured because it may be harder for lower income districts to raise funds.

As indicated, there are many different types of Special Assessment Districts, and the amounts generated depend on the approaches used. It is possible that Special Assessment Districts could fund the non-federal portion of light rail and/or BRT projects, or an average of $23 to $50 million per year (or about $1.25 billion over 25 years).

Rideshare (TNC) Tax

Cities and states are beginning to impose taxes on rideshare trips (also known as Transportation Network Companies e.g., Uber and Lyft), in part because increases in ridesharing are increasing financial strains on transit systems and increasing urban congestion.

As a new tax, the long term sustainability of rideshare taxes are not yet known but given travelers have used vehicles for hire for many years, they are expected to be a relatively stable source of revenue. Rideshare taxes are generally equitable because they tax consumption of transportation and balance impacts of ridesharing on roadways to transit users.

In Maryland, Uber and Lyft pay a 25-cent tax on each ride originating in Annapolis, Brunswick, Frederick, Montgomery County, Prince George's County and Ocean City, because of the laws in those municipalities. Currently, no counties in Central Maryland charge the tax although they are legislatively enabled to do so. Only limited information on rideshare use is available, but if residents, on average, make 10 rideshare trips per year, a 25-cent tax on all rideshare (Uber and Lyft) trips would generate $6.9 million per year combined for all counties in Central Maryland (see Figure 9).

Figure 9 Potential Revenue by Jurisdiction with 25-cent Rideshare Tax

Jurisdiction	Potential Additional Annual Revenue (in millions)
Statewide Revenue	**$15.1**
Baltimore Regional Transportation Board Area Revenue	$6.9
Baltimore City Revenue	$1.6
Baltimore County Revenue	$2.1
Anne Arundel County Revenue	$1.4
Howard County Revenue	$0.76
Harford County Revenue	$0.62
Carroll County Revenue	$0.42
Queen Anne's County Revenue	$0.12

Source: Nelson\Nygaard Consulting Associates

Vehicle Registration Fee

Different forms of vehicle taxes and fees are occasionally used to fund transit, and in Maryland the TTF is funded in part by vehicle registration fees.

Vehicle registration fees are stable sources of revenue. Registration fees can be considered equitable if they are paid by motorists who benefit when transit successfully encourages fewer vehicles on the road. Lower income individuals tend to drive less and thus may pay more on a per-mile basis as compared with higher income individuals.

Maryland's base vehicle registration fees are collected biennially by the state Motor Vehicle Administration (MVA) and vary based on the weight of the vehicle being registered, but with most charged $187. An increase in bi-annual fees of $20 would generate approximately $43.3 million per year for the state of Maryland. Individual counties and cities could levy a voluntary local-option vehicle registration fee within their jurisdictions. Revenue potential would vary by individual jurisdiction.

Real Estate Transfer Tax

Real estate transaction taxes and fees are used to fund transit in Virginia and Florida. Virginia's fee ranges from $21 to $54 per transfer. Florida charges a real estate documentary tax of $0.70 per $100 of the transaction value, 10% of which is used to match federal transit funding.

Real estate transfer taxes are a stable source of revenue. The fees are equitable because everyone is treated equally, and higher income individuals are more likely to be real estate transfer fees.

Maryland's real estate transfer tax is 0.5% (0.25% for first time buyers). Surrounding states and cities have higher rates (D.C.'s transfer fee is 1.1%, Delaware's is 1.75%, and Pennsylvania's is 1.0%). A 0.5% increase in this fee (an additional $2.50 per $500 in value, for a total tax rate of 1% to match Pennsylvania's) would generate approximately $222 million per year for the state.

A few counties within Maryland collect an additional real estate transfer tax. For example, Howard County recently increased its transfer tax rate for residential and commercial transactions from 1% to 1.25%. A list of all the transfer tax rates of all counties in Maryland that collect an additional

tax is below (see Figure 10), with the potential additional revenue that those counties could earn from increasing their real estate transfer tax by 0.5%.

Figure 10 Real Estate Transfer Tax Rates and Potential Additional Revenues

Jurisdiction	Existing Transfer Tax Rate (of purchase price)	Additional Revenue from Additional 0.5% (in millions)
Statewide Rate	**0.5% (0.25% for first-time buyers)**	**$222.1 (assumes no first-time buyers)**
Anne Arundel County	1.00%	$13.1
Baltimore City	1.50%	$13.1
Baltimore County	1.50%	$28.7
Charles County	0.50%	$8.0
Harford County	1.25%	$4.1
Howard County	1.00%	$13.0
Montgomery County	1.00%	$13.1
Prince George's County	1.40%	$28.7

Rental Car Taxes

Rental car taxes are implemented in various ways, for example, as a sales tax or on a per rental basis. For example, Allegheny County, PA, which is where Pittsburgh is located, imposes a $2 tax on vehicle rentals to fund Port Authority services.

Rental car taxes are a moderately stable tax; in times of economic recessions, rental car sales will slow down, reducing sales. The tax is equitable because everyone is treated equally, and people renting cars are bearing the costs associated with congestion, emissions, and other transportation externalities.

Maryland currently applies its sales tax to rental car and adds a 4.5% surcharge. A 1% increase in the rental car surcharge would generate $2.5 million per year for the state.

Lodging Taxes

The 2016 Let's Move Nashville campaign would have imposed a tax on hotels and motels that would have started at 1.4% of the room rate and over time increase to 3.75%. Lodging taxes are typically easily accepted by residents because it is largely visitors who pay them.

In Maryland, counties are legislatively enabled to apply a lodging tax. Anne Arundel has a 7% tax and Baltimore County and Baltimore City both have a 10% tax. Increasing the taxes by an additional 1% would generate about $1-2 million per year per county.

Alcohol Taxes

Every state in the United States taxes alcohol and these revenues can be used for any purpose. The only significant example of alcohol taxes being used for transit is a 10% tax on poured drinks in bars in Allegheny County, Pennsylvania (Pittsburgh).

The two most common ways to tax alcohol are excise taxes charged to producers, distributers, and manufacturers and sales taxes charged to consumers. Maryland currently does both.

Maryland charges a 9% rate on alcoholic beverages (and does not charge an underlying sales tax). An increase to 10% for the alcohol tax would yield about $3.6 million annually for the state.

Cigarette Taxes

Like alcohol, every state in the United States taxes cigarettes and these revenues can be used for any purpose.

Counties and cities in nine states also tax cigarettes. For the jurisdictions that charge local taxes, the taxes are frequently $2 to $3 dollars per pack on top of state taxes. When these are considered, state and local taxes are as high as $7.16 a pack (in Chicago).

However, there are currently no significant examples of cigarette taxes being used to fund transit.

Maryland currently taxes cigarettes at $3.75 per package. A 25¢ increase would generate $21 million per year based on 2019 sales but would decline over time as cigarette sales continue to decline.

Transportation Utility Fees

Some regions consider transportation to be a utility and apply a transportation fee to utility bills. Vancouver, BC levies a $1.90 month fee on water bills to fund transit; this scheme is also used by a handful of smaller cities and towns in Oregon, Washington, Idaho, Utah, Colorado, Texas, Missouri, and Florida. In most cases the fees are used to fund roadway projects[14].

Transportation utility fees can be levied in different ways but most of the existing fees require residents and business to pay a fee based on their use of the transportation system rather than the value of their property and have been tied to factors, such as the number of trips generated, such as the number of parking spaces, square footage, or gross floor area. One area of disagreement is whether transportation utility fees are indeed fees or are effectively taxes. This distinction reflects statutory authority and voter approval. Taxes require voter approval and taxing authority is typically granted by states, where fees are collected based on services provided[15].

A flat $1 monthly fee imposed on all Maryland households would generate $26 million per year; a fee that is tied to parking spaces or land uses could potentially double the revenue potential of this source. A flat $1 monthly fee imposed on all Central Maryland households would generate about $12.3 million per year.

Transportation utility fees are stable and predictable. They are equitable in terms of the fact that residents who pay the fee will have access to transit services. However, as a flat fee per household, the fee will impact lower income residents at a higher rate.

Other Potential Approaches

Scholars[16] note a long list of potential funding sources for transit, but many are unfeasible due to the very low amount of revenue that could be earned and/or their lack of domestic precedent. The

[14] U.S. Department of Transportation, Federal Highway Administration, Center for Innovative Finance Support. https://www.fhwa.dot.gov/ipd/value_capture/defined/transportation_utility_fees.aspx#:~:text=Transportation%20utility%20fees%20are%20a,value%20of%20property%20they%20occupy.

[15] Ibid

[16] Todd Littman, Victoria Transport Policy Institute. https://www.vtpi.org/tranfund.pdf

following list of other potential funding sources were reviewed for this memo but were not studied due to limited precedent and/or administrative feasibility relative to revenue potential:

- Tire Tax
- Weight-Based Vehicle Sales Tax
- Vehicle Battery Tax
- Weight Mile Truck Fee
- Development Impact Fees
- Storm Water Fee
- Parking Tax
- New License or Title Fees (regionally)

Five additional potential sources were studied in more depth because they may have potential for raising significant funding for transit in the Baltimore region. These sources were Cannabis Tax, Vehicle Miles of Travel (VMT) Charges, Fare Increases, Membership Dues, and City/County In-Kind Resources. The following section describes the potential and feasibility of these sources to fund transit:

Cannabis Tax

The sale and use of cannabis for recreational purposes is currently illegal in Maryland. However, trends in the Mid-Atlantic and the United States are towards legalization. A Bill was introduced into the 2021 session of the Maryland General Assembly, but transit was not considered as a potential use for any revenues expected from Cannabis taxes or fees as proposed. HB 32 was referred to Committee, but no other action was taken. If Maryland decides to legalize Cannabis, experience from other states indicates that sales would be about $100 per capita. If Maryland matched the high end of the existing cannabis tax rate in other states of 20% and dedicated the revenue to transit, a cannabis tax could generate $120 million per year.

The predictability of a cannabis tax is unknown. The tax is equitable because all users are taxed evenly.

Vehicle Miles of Travel (VMT) Charges

VMT charges have long been discussed but have not yet been enacted in the United States. Given the political unpopularity of the scheme, as well as the apportionment challenges of distributing VMT revenue across state lines to areas where out-of-state commuters are traveling daily, it is inadvisable and unlikely that Maryland solely implements a VMT fee on its own.[17] However, if this fee becomes acceptable, a study by the Tax Foundation found that an average tax rate of $0.039 per mile on all drivers residing in Maryland would raise $2.34 billion for the state -- the same amount of revenue as Maryland's current state and local motor fuel taxes, motor

[17] State-Level Strategies for Reducing Vehicle Miles of Travel A Research Report from the University of California Institute of Transportation Studies. Source: https://d3n8a8pro7vhmx.cloudfront.net/climateplan/pages/44/attachments/original/1509403808/2017-PTA-Handy_UCDavis_VMT_Report_1.pdf

license taxes, and highway fees. However, this funding source would likely need to replace the fuel tax to avoid double taxing drivers with gasoline powered vehicles.[18]

A VMT tax has not yet been implemented in the United States, so its predictability is unknown. The tax is equitable because all users are taxed evenly and individuals driving more pay higher taxes, in line with the impact caused to society and on transportation infrastructure.

Fare Increase

In most urban transit systems, current adult fares average $2–$3 per trip or $50– $80 for a monthly pass, with discounted (concession) fares for youths, older adults, and people with disabilities. It is possible to increase all fares, selected categories, or change price structures, for example, to include higher fares for longer-distance trips or for special services such as light rail or express commuter buses.

Fares for MDOT MTA funded transit services are set by state law and any increase would require legislative action. In May 2021, fares on the Baltimore-oriented services vary based on the mode taken and distance traveled. Experience nationally demonstrates that increasing transit fares will impact ridership, although not significantly. The price elasticity of transit ridership with respect to fares is about -0.22. This suggests that a 10 percent fare increase typically increases revenue by about 3%. A 10-cent across the board fare increase to every transit trip on BaltimoreLink, Light RailLink, SubwayLink, Mobility Link, Taxi, and MARC fares would raise about $6 million per year.

Membership Dues

Some regional authorities are supported by membership fees or dues. There are a variety of ways that dues or fees can be levied, with a per capita charge being among the most common. The Middle Tennessee Regional Transportation Authority (RTA) operations are funded by dues. Cities and counties in the RTA service area may join the RTA Board by paying dues based on their population. The dues are used to offset overhead and administrative costs such as salaries and rents, but not transportation services or projects.

City/County In-Kind Resources

There are ways of encouraging and bringing value to transit investment and improve efficiency of service operations beyond new fees or taxes. These include transit supportive policies, programs and investment that help increase the efficiency and effectiveness of transit operations as well as programs and policies that effectively increase transit ridership. Examples of transit supportive policies, programs and investments that can only be led by local jurisdictions include transit supportive street design, transit oriented design, transit friendly land use policies, and improvements to multimodal access and connections. Other potential examples include:

- Transit Signal Priority (TSP)
- Dedicated Right of Way (bus lanes and queue jumps)
- Passenger Amenities (Bus Stops and Stations)
- Enforcement of Bus Lanes and Bus Stops

Becoming a more transit friendly region would improve service reliability and reduce operational costs associated with bus travel time. The City of Baltimore has already successfully

[18] https://taxfoundation.org/road-funding-vehicle-miles-traveled-tax/

implemented red bus lanes and other transit priority measures; further investment and commitment to expand these investments should equate to operational cost savings for MDOT MTA. The financial value of these investments is not explicitly defined but could be measured or estimated. In addition, local jurisdictions can provide local capital funds for physical improvements to transit corridors as well as investment in stops and stations, including maintenance, offer other ideas to leverage state and federal dollars to benefit transit.

Local investments in transit can demonstrate a clear commitment and measurable benefit to regional transit services. Many cities across the U.S. are developing local mobility or transit master plans to create municipal or county-based frameworks to support their transit network. Others are establishing city transit programs within their Departments of Transportation to provide dedicated staff to identify funding, develop transit supportive policies, and coordinate with transit providers to guide capital projects. In addition to transit improvements in city roadways, other efforts that create measurable value to transit agencies include:

- Invest accessible paths (sidewalks, crosswalks, and bike lanes) to transit stations.
- Assume responsibility for the purchase, installation and maintenance of transit stop amenities that make it more comfortable and attractive for people to ride transit.
- Identify City agencies and private sector partners that can play a role in supporting and promoting transit.
- Bulk purchase of transit passes for students and city employees
- Set clear targets for mode shift, safety, and environmental impacts
- Align city plans, policies, and funding to create a more transit friendly neighborhoods, including zoning and parking policies, location of affordable housing and complete streets programs.

Transit Financing and Partnerships

Using financing to support public infrastructure involves borrowing money to build the project and paying it back over time, either through user fees like tolls or with a dedicated funding source, like a tax or fee. In some cases, private partners will build roadways, bridges, or tunnels in exchange for access to toll revenue for a set period. There are a handful of advantages associated with financing infrastructure projects, among the most important is that projects can occur sooner. Another important advantage, financing on the type of financing, is that future payments are predictable for a set period allowing for easier budgeting. The State of Maryland has and does use project financing and public-private partnerships to build transportation infrastructure, such as modernizing toll plazas on I-95.

Transit project in the United States rarely attract financing because passenger fares would not generate enough revenue to pay the costs of building the service. Instead, some transit agencies or cities in the United States use dedicated funding stream (taxes or fees) to leverage financing to advance specific projects. Without some sort of dedicated funding, transit agencies are not able to use financing tools to raise funds.

There are also a handful of cases in the United States where transit projects have been built through partnerships with private industry and philanthropists. In some of these cases, private industries have provided funds in exchange for naming rights, such as the Cleveland's HealthLine; the Greater Cleveland Regional Transit Authority raised $6.25 million through naming rights deal and is using funds to maintain stations and service levels. Another example is the M-1

Rail Line in Detroit, which was funded through a combination of grants from private foundations, the federal government and bonds issued by the City of Detroit. Other private partners helped sponsor individual stations.

REVENUE POTENTIAL

As demonstrated, while there are many ways to fund public transit programs, there is no best or recommended way. Ultimately, the best approach must be tailored to local circumstances, including identifying a funding package that will produce the required revenue and achieve the highest levels of public and political support. Further, as discussed, there are at least two ways to fund major transit initiatives: enact a single tax that is set high enough to fund the entire program or create a diverse funding package with multiple taxes and fees.

Individually, and at the common statewide rates indicated in Figure 11, some of the most common taxing methods could each generate tens of millions of dollars in revenue per year for the State of Maryland or the Central Maryland Region. With different rates, amounts would be proportionally higher or lower. Many other sources could provide supplemental revenue, while others would provide only minor amounts. Two sources – Transportation and Climate Initiative funds and Vehicle Miles Traveled (VMT) charges – could provide future funding but are not yet at the point where they could be implemented soon.

Figure 11 Potential Funding at Statewide Level for Transit Funding Measures Appropriate for Central Maryland

Source	Additional Rate Unit	Estimated Annual Revenue ($2021) (in millions)	
		Statewide	Central Maryland (if feasible at the regional level)
Alcohol Tax	Per additional 1%	$3.4	$1.99
Cigarette Tax	Per additional 25¢ increase in excise tax	$19.6	$6.48
Corporate Income Tax	Per additional 0.25%	$45.7	N/A
Fare Increase	Additional 10¢ across the board fare increase	$5.9	$5.9
Fuel Tax	Per $0.05 additional tax	$138.1	$45.6
In-kind Cooperation	Partnership between city and transit agency	N/A	N/A
Lodging/Hotel Tax	Per additional 1%	N/A	$3.1
Legalized Cannabis Tax	Total at 10% tax rate	$60.5	$20.0
	Total at 20% tax rate	$120.9	$39.9
Permits and Licenses	5% increase in revenue from existing	N/A	$1.7
Membership Fees	Assumes $1.00 per capita for participating jurisdictions	N/A	$2.7
Property Tax	Per $0.01 per $100 in Real Property	$77.0	$32.4
Real Estate Transfer Tax	Additional $2.50 per $500 sale price	$222.1	$73.3
Rental Car Excise	Per additional 1%	$2.6	$3.5
Sales Tax	Per additional 0.5%	$435.9	143.9
Statewide Income Tax	Additional 25¢ per $100 income	$607.6	N/A
Rideshare/TNC Fee	25¢ per TNC trip	$15.1	$6.8

Source	Additional Rate Unit	Estimated Annual Revenue ($2021) (in millions)	
		Statewide	Central Maryland (if feasible at the regional level)
Tolling Revenue	Per additional $0.25 charged per vehicle at toll gantries	$38.9[19]	$28.9[20]
Utility Bill Levy	$1 monthly charge per month per household		$12.3
Vehicle Miles Travelled	3.9¢ per mile	$2,341.9	$772.5
Vehicle Registration	Per additional $20 biennial fee	$43.3	$14.3

source: Nelson\Nygaard Consulting Associates

[19] Includes increases at JFK/I-95, I-95 Express Toll Lanes, Hatem Bridge, Nice/Middleton Bridge, Bay Bridge, Harbor Tunnel, Key Bridge, Fort McHenry Tunnel, and Intercounty Connector. Does not include I-95 Express Toll lanes because those prices are variable.

[20] Includes increases at JFK/I-95, Hatem Bridge, Bay Bridge, Harbor Tunnel, Key Bridge, and Fort McHenry Tunnel only.

CHALLENGES AND OPPORTUNITIES

Instituting new taxes and fees is challenging. Experience nationally, however, suggests that residents and businesses have been receptive to transit taxes, especially in cases where taxes are directly tied to increased investments in transit services. As mentioned, the study team evaluated individual taxes and fees in terms of a handful of characteristics, including revenue potential, stability, and equity together with if the tax or fee represents an existing or new revenue and if the tax/fee is most logically implemented at the local, regional, or state level (see Figure 12).

Traditional transportation taxes such as fuel tax, sales tax, income tax, property tax, real estate transfer taxes and increasing tolls offer the most revenue potential. In all cases, relatively low levels of increase can raise significant revenues and meet or exceed funding requirements for some level transit improvements and/or partially address State of Good Repair gaps. In Maryland, most of the traditional transportation taxes are already in existence and most are levied statewide. They also offer challenges and opportunities in terms of equity and stability. Fuel taxes, for example, in Maryland are already high relative to neighboring states as are sales, income, and property taxes. Fuel and sales taxes are also regressive and property taxes, while generally neutral or progressive are significantly higher for residents of Baltimore City as compared with other jurisdictions in Central Maryland.

Two funding measures stand out in terms of revenue potential, stability, and equity: Real Estate Transfer Taxes and tolling. Real Estate Transfer taxes offer some potential because rates imposed by the State of Maryland are low relative to neighboring states, the tax also offers a stable source of revenue and is progressive. Increasing tolls has the potential to raise significant revenue. The funding is relatively stable and equitable, depending on the exact structure, with express lane tolling being less stable. An important challenge to increasing toll rates is that tolls are already collected and used to support the Maryland Transportation Authority, including debt secured by existing toll revenue. The relationship between tolls and the Maryland Transportation Authority is set by a trust agreement; any change in this relationship would require legislation.

There are also a handful of smaller taxes and fees that used in combination could provide a local source of revenue to support transit investment. Among the most promising taxes and fees include taxes on ridesharing or Transportation Network Companies (TNCs). At relatively low levels, these two taxes have potential to raise between $16 and $51 million annually statewide. At these levels, the fees could meet the lower end of revenue needs for Maryland or Central Maryland; slightly higher rates may meet revenue needs for modest improvements without addressing State of Good Repair. The fees vary in terms of stability; a ridesharing tax is not expected to be as stable as a transit utility fee, but ridesharing taxes are more equitable as compared with a transit utility fee.

Figure 12 Comparison of Transit Funding Strategies

	Statewide Revenue Potential (in millions $)	County-Level Revenue Potential (in millions $)	Equity	New/Existing	Legislatively Enabled (is it allowable)
Alcohol Tax	$3.4	None	Regressive	Existing	Statewide
Cigarette Tax	$19.6	None	Regressive	Existing	Statewide
Corporate Income Tax	$45.7	None	Neutral to progressive	Existing	Statewide
Fare Increase	$5.9	None	Regressive	Existing	Yes
Fuel Tax	$138.1	None	Neutral to progressive	Existing	Statewide
Lodging/Hotel Tax	None	$1-3	Regressive	Existing	Countywide
Legalized Cannabis Tax	$60.5	None	Regressive	New	No
Developer Permits and Licenses	None	$0-2	Neutral	Existing	Countywide
Property Tax on Residential Real Estate	$76.9	$0.8-10	Progressive	Existing	Statewide and Countywide
Real Estate Transfer Tax	$222.1	None	Neutral to progressive	Existing	Statewide and Countywide
Rental Car Excise	$2.5	None	Regressive	Existing	Statewide
Sales Tax	$373.6	None	Regressive	Existing	Statewide
Personal Income Tax	$607.6	$0-62.4	Varies	Existing	Statewide and Countywide
TNC Fee	$15.1	$0-2	Somewhat progressive	Existing in some counties	Countywide
Tolling Revenue	$38.8	None	Somewhat progressive	Existing	Statewide
Utility Bill Levy	$26.0	$0.25-4	Somewhat regressive	New	Unknown
Vehicle Miles Travelled	$2,340	N/A	Neutral to progressive	New	No
Vehicle Registration	$43.3	$4-60	Somewhat regressive	Existing	Statewide

Source: Nelson/Nygaard Consulting Associates and "Evaluating Public Transportation Local Funding Options," Journal of Public Transportation, Vol. 17, No. 1, 2014, pp. 43-74

IMPLICATIONS FOR DEVELOPING TRANSIT GOVERNANCE AND FUNDING ALTERNATIVES

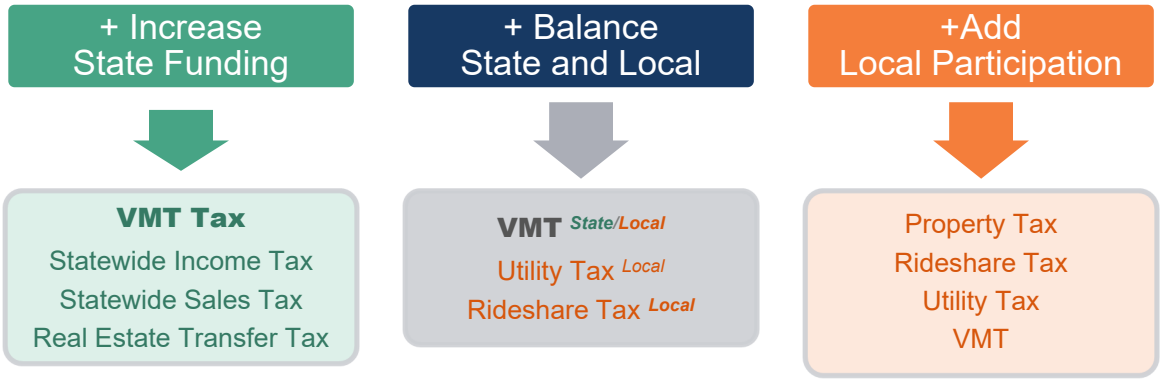
The Baltimore region requires additional funding to fulfill transit plans and address a backlog state of good repair. Also important, is identifying funding measures that allow individual cities and counties to raise additional resources and participate in the cost of funding and operating transit services. Information presented in this technical memorandum is relevant to the development and consideration of alternatives for transit governance and funding in the Baltimore region. Increased transit investment, including how new funds are assessed and distributed, must be considered within the context of how transit might be governed in the future. Funding sources vary on what opportunities, or challenges, increased investment presents as well as how transit decisions are made.

In the development of funding alternatives, the magnitude of funding needs (i.e., ranging from $16 million to increase transit service investments by 1% and up to $100 million annually for State of Good Repair needs), one strategy would be to focus on alternatives that generate the highest potential revenue. While these may present the highest fiscal return, they are also often dependent on continued statewide sources of revenue. The Baltimore region would most likely need to compete or share new transit revenues with other parts of the state and/or other MDOT programs, i.e., roads and bridges, airport, and port.

Other factors to consider when identifying new sources of transit funding are how revenues align with potential governance alternatives and who participates in decision making around transit investment and services. Options include a new rideshare tax or utility tax, lend themselves to a regional boundary, creating a dedicated stream of funding outside of state sources. Other sources, such as VMT and state income tax, can be assessed and collected within a regional framework. Regional sources of revenue present the opportunity for city and county participation in how those revenues are distributed to the benefit of local users of the system.

Ideally, future transit funding represents the potential for increasing revenues to meet near and long-term needs, as well as opportunities to align funding mechanisms with more participation in decision making as to where those funds are directed (see Figure 13).

Figure 13 Potential Revenue Stream Considerations



Appendix A: Viability of Gas Taxes

The gas tax is a common method of raising funds for transportation, potentially including public transportation. It refers to a tax on gasoline and diesel fuel used for motor vehicles, usually set, and collected on a per gallon basis. It is paid by consumers of motor fuels when they purchase fuel and is generally collected by fuel vendors at the wholesale and/or retail level. It is generally regarded as a regressive tax, falling more heavily on lower income consumers, and in many places is defined as a user fee with the revenues dedicated strictly to highway maintenance and construction.

Maryland began collecting motor fuel taxes in 1922. Currently the motor fuel tax makes up one element of the overall funding for the Transportation Trust Fund (TTF), and so is not restricted in terms of funding one mode. The state's Transportation Infrastructure Investment Act of 2013 set the tax rate but also indexed the tax to the Consumer Price Index (CPI) and added an increment that is equivalent to the 5 percent overall state sales and use tax, so the overall rate per gallon reflects all these elements and is adjusted periodically. As of July 1, 2020, the motor fuel tax rates were 36.3 cents per gallon for gasoline, and 37.05 cents per gallon on diesel fuel.

Gas Tax Per Gallon in Adjacent States (July 2020)

Delaware	$0.23
District of Columbia	$0.235
Pennsylvania	$0.587
Virginia	$0.294
West Virginia	$0.357

(source: Tax Foundation (https://taxfoundation.org/state-gas-tax-rates-2020/)

For the current six-year revenue projection contained in the FY 21-26 MDOT Consolidated Transportation Plan (CTP), the CPI effect is estimated to average 4.5 cents per gallon, and the sales and use tax equivalent to average 9.5 cents per gallon. Over the six-year period the total revenue from the motor fuel tax is projected to be $6.7 billion, down by $600 million from the previous final CTP because of the effects of the COVID-19 pandemic. In the current CTP, the motor fuel tax is estimated to provide 21% of the overall revenue, about the same as federal funding (22%), and less than the combined total of registration/MDOT MVA fees (14%) and vehicle titling taxes (17%)—this contrasts with many states where the gas tax provides the majority of state transportation funding.

As noted above the reduction in travel associated with COVID-19 lockdowns and increased working from home have had a significant short term effect on motor fuel tax revenues, both nationally and in Maryland. After an initial crash in travel volumes in the spring of 2020, statewide weekly traffic had generally recovered to less than a 20% decline in weekly averages by the end

of 2020[21]. In the near term it is not clear what the effect will be—potentially more working from home should reduce commuter travel, but there is evidence that being at home with a car available can lead to more auto trips for other purposes. As of May 2021, published forecasts for motor fuel tax revenues only go out to 2022. Actual Fiscal Year 2020 motor vehicle fuel tax revenues of $1,070,060 (thousands) are projected to decline to $1,040,104 in FY 2021, and then recover somewhat to $1,047,088 in FY 2022[22]. Forecasts for overall TTF net revenues from taxes and fees (which includes Motor Fuel Taxes) show an increase from $2,708 million actual in 2020 to $3,220 million in 2026[23] suggesting a projected recovery.

In the longer term it is not clear that the traditional per gallon motor fuel tax will continue to be the stable funding source it has been. Over the past several years general federal and state gas tax revenues have declined with the improved fuel efficiency of vehicles, and some reductions in vehicle miles traveled. In the longer term there may be significant impacts on revenues as sales of fully electric vehicles increase. Currently a very small proportion of the nation's vehicle fleet, some forecasts[24] are now predicting that electric vehicles will outsell internal combustion vehicles in the U.S. by 2030. Several major automakers have announced their plans to sell only electric vehicles. Combined with potential federal funding and policy support for national development of charging stations and other support for electrification, it may be that the move to electric vehicles happens sooner than predicted. Several states have recognized the potential loss of a major transportation funding source. Some have added an electric vehicle fee in lieu of gas tax revenue (in many states it is estimated that these fees are higher than the gas tax that would have been paid), others are looking at options for taxing such as a fee per vehicle mile traveled or perhaps taxes on other fuels used for motor vehicles.

Maryland had been part of the 11-state northeastern regional Transportation Climate Initiative (TCI), but in December it joined with seven of the other states in declining to sign the Memorandum of Understanding for the regional program. States participating in the TCI-Program require fuel suppliers to purchase allowances for carbon emissions—a cost that they would pass on to fuel users. In effect this would have been an increase in the gas tax with the revenues dedicated to efforts to reduce carbon emissions, potentially including expanded public transportation. Among adjacent states only the District of Columbia has signed the MOU to participate. In the wake of the pandemic support for a fuel tax increase, even targeting on fighting climate change, may be a difficult sell.

Other considerations of an increase in the fuel tax as a source of funding for expanded public transportation in the Baltimore region include issues with collecting it on a regional basis—both from the difficulties collecting it only in particular jurisdictions, and with users driving to nearby untaxed jurisdictions to purchase cheaper gas. Also, in the longer run its viability as transportation funding source generally is likely to be affected by the electrification of the vehicle fleet.

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[21] Maryland Department of Legislative Services, Office of Policy Analysis, Maryland Department of Transportation Fiscal 2022 Budget Overview, January 2021, p. 5.

[22] Maryland Board of Revenue Estimates, Estimated Maryland Revenues Fiscal Years Ending June 30,2021, and June 30, 2022, submitted to Larry Hogan Governor December 11, 2020, p. 12.

[23] Op Cit, p. 10.

[24] Xavier Mosquet, Aakash Arora, Alex Xie, and Matt Renner, Boston Consulting Group, "Who Will Drive Electric Cars to the Tipping Point?", January 02, 2020, https://www.bcg.com/en-us/publications/2020/drive-electric-cars-to-the-tipping-point