Primer on Federal Surface Transportation Authorization and the Highway Trust Fund

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Introduction

Today, travel on roads and rail in the United States requires 10 million barrels of oil per day and is the source of over 23 percent of the nation's greenhouse gas (GHG) emissions. Faced with a real threat to national security from both climate change and oil dependence, the 112th Congress has an opportunity to achieve significant oil savings and GHG reductions from the U.S. transportation sector. The Pew Center on Global Climate Change recently released a comprehensive assessment of opportunities to reduce GHG emissions from the entire sector (Greene & Plotkin, 2011). A white paper was also released called "Saving Oil and Reducing Greenhouse Gas Emissions through U.S. Federal Transportation Policy" that contains strategies and policy options to save oil and reduce GHG emissions with existing transportation law and federal surface transportation reauthorization. This paper provides a primer on both federal surface transportation authorization and the main recipient of funding from the legislation, the federal highway trust fund (HTF).

Federal Surface Transportation Authorization

The Federal-Aid Highway Program (FAHP) began with the passages of the Federal-Aid Road Act in 1916 and the Federal Highway Act of 1921. Congress has continued or renewed the program through multi-year authorizations ever since. Since 1978, Congress has included highway legislation as part of a larger multi-year surface transportation law (FHWA, 2007).

The existing federal surface transportation authorization, SAFETEA-LU[1], is a six-year authorization for highways, transit, and highway safety, which expired on October 1, 2009. Congress has extended this authorization multiple times without passing a new authorization. SAFETEA-LU built on many of the principles and programs of its predecessors, the Intermodal Surface Transportation Efficiency Act or ISTEA (enacted in 1991) and the Transportation Equity Act for the 21st Century or TEA-21 (enacted in 1998). Key features of SAFETEA-LU and its predecessors include:

- **User-Fee Funding**: Highway user fees have traditionally funded federal highway programs, while a combination of the General Fund of the U.S. Treasury and highway user fees pay for federal transit programs. Federal highway user fees include gasoline and diesel fees, excise fees on heavy trucks, and other highway user fees, that the Treasury Department deposits into the federal HTF, which is separated into a Highways Account and a Mass Transit Account (see *The Highway Trust Fund*). Historically, Congress had increased these fees to allow an increase in federal program size, but Congress has not done so since 1993 – over 17 years ago. In 2009 and 2010, as temporary stopgap measures, Congress deviated from the longstanding user fee principle by tapping the General Fund for almost $35 billion, because of a significant drop in highway user fee revenues and a growing gap between the available resources in the HTF and the federal transportation program level.[2]

[1] SAFETEA-LU is an abbreviation for "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users."

[2] The drop in user fee revenues is associated with several factors: (a) reduced driving by private and commercial vehicles due to higher fuel prices (especially the price spike in 2008) and also the 2008 to 2010 economic recession; (b) increased use of vehicles with better fuel economy (e.g., hybrids); (c) reduced excise fees due to fewer purchases of medium- and heavy-duty trucks, as a result of the recession; and (d) use of electricity, ethanol, and other alternative fuels for vehicles, which are not subject to a highway user fee, in full or in part. The federal tax credit for ethanol cost $4 billion in 2008.

- **Significant Funding Level**: ISTEA, TEA-21, and SAFETEA-LU each set a funding level record, with SAFETEA-LU guaranteed funding set to $244 billion ($286 billion in authorized levels, subject to appropriation) over a 5-year authorization (CBO, 2008; FHWA, 2007). For both highways and transit, federal spending accounts for almost half of capital investment by all levels of government and about 25 percent of spending when including operation and maintenance (CBO, 2007).. Thus, while federal funding is a large and important source of transportation revenues, a larger share comes from state and local governments, for both transit and highways. And if one counts all vehicles and repair facilities as part of the transportation infrastructure (as is the case for transit), a very large share of total transportation infrastructure is privately financed, as virtually all the nation's automobile and truck fleets are privately owned.
- **Multi-Year Legislative Cycle**: All three laws were multi-year authorizations and Congress enacted all three laws late, with SAFETEA-LU enactment occurring two years after TEA-21's original expiration.
- **Multi-Modal Scope**: ISTEA, TEA-21, and SAFETEA-LU have each provided authorizations for highways, transit, highway safety, and surface transportation research. Although most of the funding is authorized in modal or programmatic "stovepipes," the legislation explicitly allows program recipients (state Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs)[3], and transit operators) to "flex" (i.e., transfer) most of the funds from highways to transit and vice-versa, and also between programs. Most of the funds may also be used for ferryboats, bicycling, carpooling, vanpooling, and pedestrian travel – and certain programs may be used for funding intercity passenger and freight rail, barges, and airport access – but rail, maritime, and aviation are primarily covered in other legislation.
- **Formula Funding**: The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) deliver most of the federal surface transportation funds to state DOTs, MPOs, and transit operators via statutory formulas for individual programs. These formulas are a major issue during the authorization process – especially how much each state will receive back from the funds that its residents pay into the HTF. In SAFETEA-LU, the Equity Bonus Program guarantees a return of at least 92 percent of the funds sent to the HTF from a state. In addition, the program guarantees each state a "specified rate of growth over its average annual TEA-21 funding level" (FHWA, 2005).[4]
- **Discretionary Programs and Congressional Earmarks**: Historically, legislation has authorized a small number of discretionary programs for specific purposes. Over time, the number of discretionary programs has increased and Congress has come to earmark nearly all discretionary funds, rather than allow the Executive Branch to select projects for funding. SAFETEA-LU contains discretionary programs for rail transit construction; the Ferry Boats Discretionary Program; the Scenic Byways Discretionary Program; the Transportation, Community, and System Preservation Program (TCSP); border crossings; interstate corridors; and other purposes. In addition, Congress earmarked billions of dollars for "High Priority Projects" in SAFETEA-LU.

[3] There are almost 400 MPOs and they are mandated in all urbanized areas with a population of over 50,000.

[4] In the context of Federal funding formulas, equity is the percent of transportation funds that are directed to the different states. Equity considers the share of user revenues paid by residents of each state, historic funding share, transportation needs of sparsely populated states, need for national transportation connectivity, and other matters.

Frequently, the earmarks cover a small percent of the project costs; lacking sufficient funds, many earmarked projects do not advance. When Congress dedicates funds in this way, it effectively "locks up" the funding, since the funds cannot be used for other purposes.

- **Large Number of Programs**: Over time, the number of surface transportation programs has proliferated, reaching 108 separate programs in SAFETEA-LU, and spurring concern that there is too much program fragmentation to allow for efficient, effective transportation decisions. Of these 108 programs, about a dozen are considered to be "core" programs (e.g., Surface Transportation Program). Beyond these large core programs, there are almost 100 smaller, specialized programs, each with their own constituencies (e.g., Safe Routes to School). One of the "core" programs, Congestion Mitigation and Air Quality Improvement (CMAQ), can really help save oil and reduce GHG emissions since Congress created it in ISTEA to provide funding for projects to help meet Clean Air Act (CAA) standards. CMAQ authorizations were $1.8 billion for FY 2009, allocated by formula to states for use in areas not in attainment of air quality standards.[5] In practice many state DOTs defer to nonattainment MPOs on the use of CMAQ funding. 42 percent of the funds have been used for transit, with 32 percent going to highway operations projects that reduce air pollution (FHWA, 2008). Other CMAQ funding has been used for bicycle and pedestrian projects, truck anti-idling programs, diesel engine retrofits, carpool/vanpool programs, public education programs, intercity passenger rail, and barge projects.
- **Transportation Planning Process**: Federal transportation legislation has long mandated both a state and a metropolitan transportation planning process that is comprehensive, continuous, and coordinated. It must also be multi-modal, be subject to public involvement, provide for extensive interagency consultation, support environmental goals, consider freight transportation needs, be fiscally constrained,[6] and meet a host of other planning requirements. To receive federal funds, SAFETEA-LU requires both statewide plans (prepared by state DOTs) and metropolitan transportation plans (prepared by MPOs), covering a 20-year horizon. In addition, MPOs, state DOTs, and transit operators cannot use federal funds for projects unless the projects are contained in a four-year Transportation Improvement Program (TIP). All MPOs must develop multi-modal metropolitan plans and programs. These plans and programs must conform to CAA air quality plans in areas that are either nonattainment or in air quality "maintenance" status.[7] Each authorization cycle has expanded federal planning requirements.
- **Tension between Environmental Protection and "Streamlining"**: Projects which use federal funding or require a federal action must meet environmental requirements in transportation legislation and in federal environmental laws (such as the National Environmental Policy Act or NEPA, the Clean Air Act, and over 40 other federal environmental laws which apply to highway and transit projects funded with federal funds). Over time, both planning and environmental

[5] For criteria air pollutants, areas that do not meet EPA's National Ambient Air Quality Standards (NAAQS) are known as nonattainment areas (EPA, 2010).

[6] Fiscally constrained means the planning processes cannot be mere wish lists. Their costs cannot exceed existing revenue streams or additional revenue that is reasonably expected to be available (e.g., through a planned increase in state/local transportation user fees).

[7] Areas that EPA previously designated nonattainment areas that now meet CAA air quality standards must demonstrate maintenance of the standards.

requirements have increased, even as Congress has also mandated streamlining the process to allow applicants to build the projects faster. In February of 2010, the Council on Environmental Quality (CEQ) issued draft guidance for considering the effects of climate change and greenhouse gases throughout the NEPA process (CEQ, 2010). The legislative tension between environmental and planning requirements and streamlining is likely to continue, as planning and environmental review of major highway and transit projects can be lengthy.

- **Under-Funded Research and Data**: SAFETEA-LU authorized $2.3 billion over six years for a variety of transportation research programs for transit, highway construction, safety, pavements, planning, environment, freight logistics, Intelligent Transportation Systems (ITS), and more. It represents less than 1 percent of the overall federal surface transportation program. This compares to 3.3 percent of U.S. Gross Domestic Product (GDP) being spent on research and development (R&D) in 2008, across the entire economy (NSF, 2010). Federal transportation research funding supports not only traditional research, but also data collection programs, education and workforce training, and dissemination of research information and innovations, for example, through workshops. Earmarking also affects research.[8]

The major stakeholders in the legislative process are defined below.

Stakeholder*	Transportation Reauthorization Role
U.S. DOT	U.S. DOT includes the FHWA, FTA, and other agencies, which are tasked with implementing federal transportation programs. Most of the surface transportation programs are funded by the HTF, which consists of the Highway and Mass Transit Accounts.
State DOTs	State DOTs are very diverse and are represented nationally by the American Association of State Highway and Transportation Officials (AASHTO). They manage highway and some transit projects, and must comply with federal guidelines in order to receive federal transportation funding.
MPOs	MPOs are responsible for the planning, programming, and coordination of federal highway and transit investments in urbanized areas (over 50,000 population). This includes individual MPOs as well as the Association of MPOs and the National Association of Regional Councils. There are major differences between the larger MPOs (generally over a million in population) and the smaller MPOs, in terms of planning capabilities.
Transit Operators	This includes individual public and private transit operators and the American Public Transit Association (APTA).
Advocacy Organizations	This includes environmental organizations like Transportation for America, the Surface Transportation Policy Project, Sierra Club, etc.; highway user groups like the American Automobile Association; business interests like the Chamber of Commerce; and groups like AARP, League of Women Voters; and others. Many organizations have focused agendas (e.g., reducing local air pollution and growing the economy).

[8] Congress earmarked more research funding in SAFETEA-LU than it authorized.

** Beyond the above list, many other important stakeholders have a voice in authorization legislation. A partial list includes: cities, counties, and local governments; highway safety advocates; bicycle and pedestrian advocates; the trucking industry; the American Planning Association, the Transportation Research Board, University Transportation Centers, and private sector researchers.*

The Highway Trust Fund

Congress established the HTF with the Highway Revenue Act of 1956 as a mechanism to finance an accelerated highway building program, including construction of the Interstate Highway System. The U.S. DOT administers the program; the Treasury Department directs taxes from motor fuel and vehicles to the HTF (see Table 1). The United States imposed fuel and vehicle taxes before the HTF but they went directly to the General Fund. The HTF funded only highways until 1983, when Congress created the Mass Transit Account. Any HTF funds not directed by Congress to the Mass Transit Account go to the "Highway Account."[9]

> The HTF was initially set to expire in 1972. Congress has extended the imposition of taxes and their transfer to the HTF ever since through transportation reauthorization.

Funding Sources of the HTF

Until 2008, the HTF was funded exclusively from highway user taxes including fuel and vehicle fees as defined in Table 1. The funding mechanism for the HTF is a user-fee model. It is worth noting that Congress has not increased the fuel tax since 1993.

Table 1: Highway user taxes defined in the last reauthorization known as SAFETEA-LU (U.S. Federal Highway Administration).

Fuel Type	Tax Rate (cents per gallon)	Tax Distribution		
		Highway Trust Fund		Leaking Underground Storage Tank Trust Fund
		Highway Account	Mass Transit Account	
Gasoline	18.4	15.44	2.86	0.1
Diesel[10]	24.4	21.44	2.86	0.1
Gasohol	18.4	15.44	2.86	0.1
General rate	18.4	15.44	2.86	0.1
Liquefied petroleum gas	18.3	16.17	2.13	-
Liquefied natural gas	24.3	22.444	1.86	-
M85 (from natural gas)	9.25	7.72	1.43	0.1
Compressed natural gas (cents per 1000 cu. ft.)	48.54	38.83	9.71	-
Truck Related Taxes – All Proceeds to Highway Account				
Tire Tax	9.45 cents for each 10 pounds over 3,500 pounds of carrying capacity of the tire.			
Truck and Trailer Sales Tax	12 percent of retailer's sales price for tractors and trucks over 33,000 pounds GVW and trailers over 26,000 pounds gross vehicle weight (GVW)			
Heavy Vehicle Use Tax	Annual tax: For trucks 55,000 pounds and over GVW: $100 plus $22 for each 1,000			

[9] This account has come to be known as the Highway Account; it was never legally described or named.
[10] The extra cost from diesel is intended to reflect the additional wear and tear on highways caused by heavy-duty trucks.

	pounds (or fraction thereof, in excess of 55,000 pounds. Maximum tax: $550

Relative Importance of Revenue Sources

The vast majority of the money for the HTF comes from gasoline. For some perspective, below is the funding for the HTF at its inception in 1957, in 1980, and in 2008.

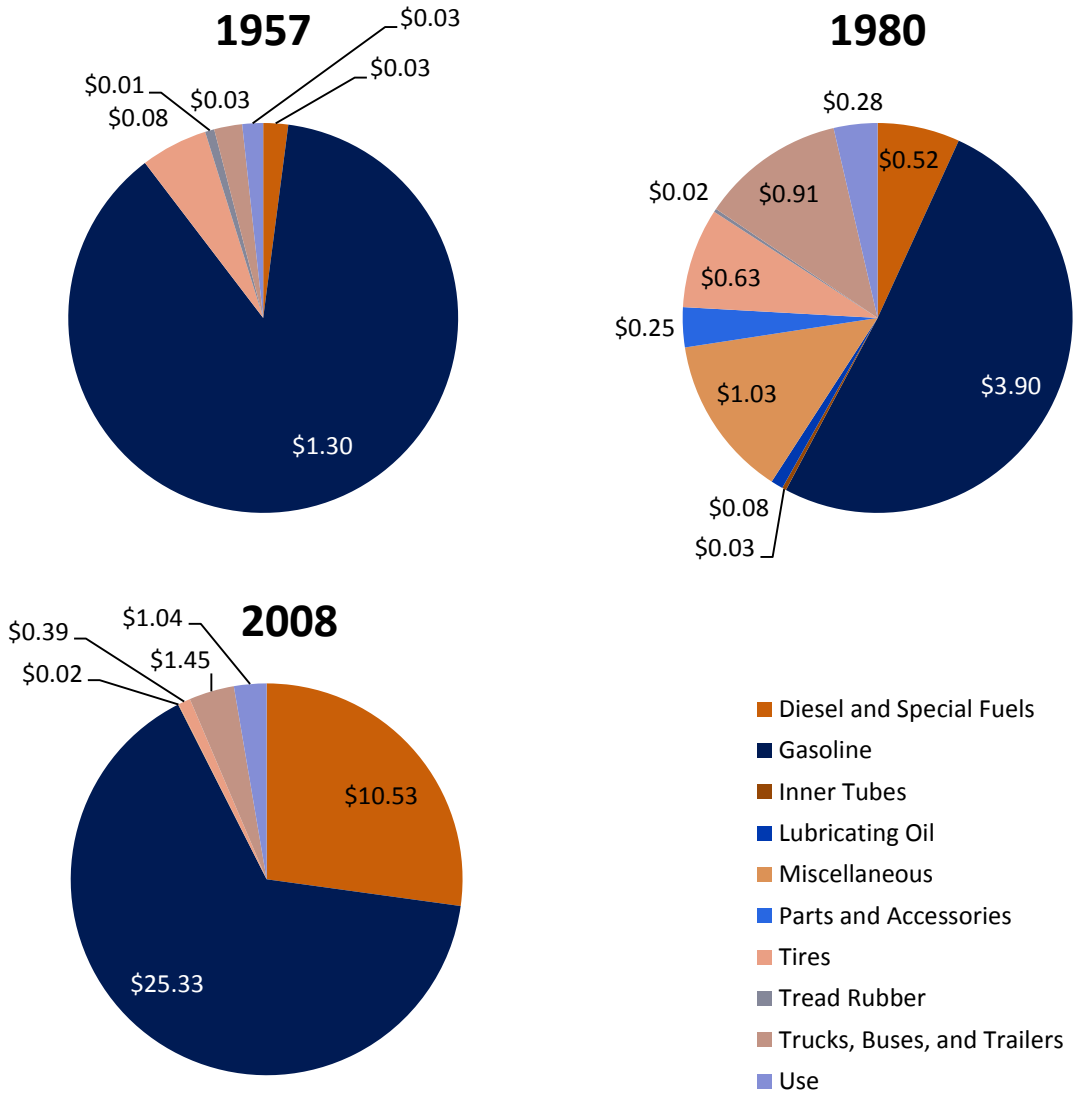

Figure 1: Revenue for the HTF from vehicle and fuel taxes in 1957, 1980, and 2008, in billions of U.S. dollars. Fuel taxes have always been the major source of funding for the HTF. Miscellaneous includes fines and penalties, TIFIA loans, and interest income. Tread rubber and inner tubes are a part of the tire and are no longer taxed.

HTF Expenditures

Money from the HTF is distributed to a vast number of sources today – in contrast to the fund's initial intention of only funding the Interstate Highway System. The last reauthorization bill in 2005 (known as SAFETEA-LU) authorized spending of over $230 billion out of the HTF from FY 2005 to FY 2009 (see Figure 2).[11]

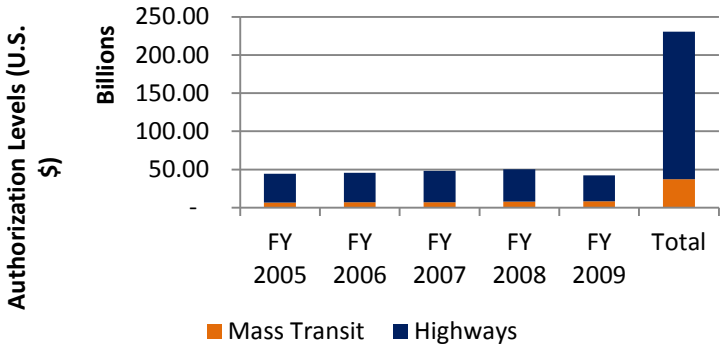

Figure 2: Spending authorization for SAFETEA-LU from the HTF (FHWA; FTA).

Today the DOT uses monies from the HTF to pay for many activities beyond its original intention. Between FY 2004 and FY 2008, DOT spent 32 percent of $243.1 billion from the HTF on projects unrelated to construction and maintenance of highways and bridges. These expenditures cover mass transit, trails, transportation "enhancements" (e.g., historic preservation) safety, planning, and research.

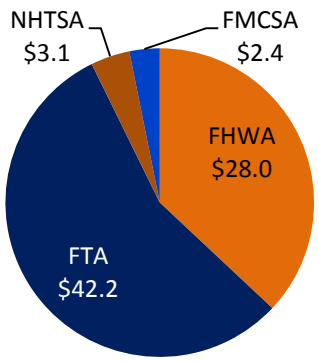

Figure 3: Breakdown of spending on projects unrelated to construction and maintenance of highways and bridges from FY 2004 to FY 2008 (U.S. Government Accountability Office, 2009).

FHWA – Federal Highway Administration
FMCSA – Federal Motor Carrier Safety Administration
FTA – Federal Transit Administration
NHTSA – National Highway Traffic Safety Administration

The Byrd Test

The Byrd Test has existed since the HTF's inception in 1956. The purpose is to ensure solvency of the HTF. The HTF has Contract Authority, which means it can obligate in advance of its annual appropriation. Since construction projects tend to take a long time, the total funds for the project do not need to be available at the project's start date. The Byrd Test serves as a firewall to make sure that the HTF will have enough funds in the future to make good on its commitments. The Byrd Test requires DOT to stop obligating for any new projects if its unpaid obligations and unobligated Contract Authority exceeds the amount of money in the HTF plus what it expects to collect in receipts in the next four years.* The Byrd Test has prompted adjustments twice – in 1961 and 2004. The Mass Transit account has a similar test called the Rostenkowski test.

* SAFETEA-LU doubled the test's length from 2 years.

[11] SAFETEA-LU provided funding for federal surface transportation over five years (FY 2005 to FY 2009) with guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion.

Status of the User-fee Model

Until 2001, the user-fee model for the HTF largely worked. Since that year, however, the income and outlays have been out of balance leading to necessary infusions from the General Fund in 2008, 2009, and 2010 as shown in Table 2. According to the GAO, the account would have failed the Byrd test for FY 2005 through FY 2008 had the test length not been extended from two to four years (GAO, 2009). If the HTF is to remain solvent going forward, reform is necessary through increased revenue or reduced outlays. A third path is also possible where Congress finances federal transportation highway and transit expenditures through a mix of General Fund and existing user fees.

Table 2: Recent infusions to the HTF from the General Fund (FHWA, 2010)*

Year	General Fund Transfer Amount	Highway Account Share	Mass Transit Account Share
2008	$8b	$8b	$0b
2009	$7b	$7b	$0b
2010	$19.5b	$14.7b	$4.8b
Total	$34.5b	$29.7b	$4.8b

** Does not include any spending authorized for transit from the General Fund in SAFETEA-LU.*

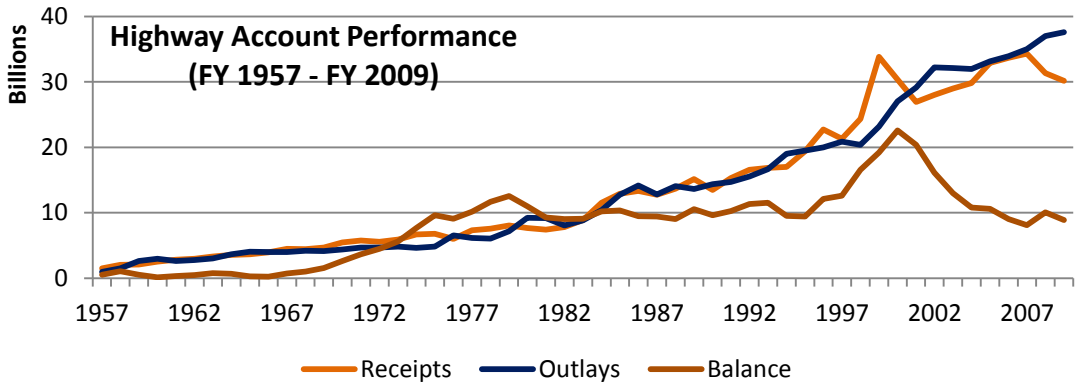

Figure 4: Annual outlays have exceeded annual income since 2001. Congress made transfers from the General Fund into the Highway Account in 2008 and 2009 (FHWA, 2009; FHWA).

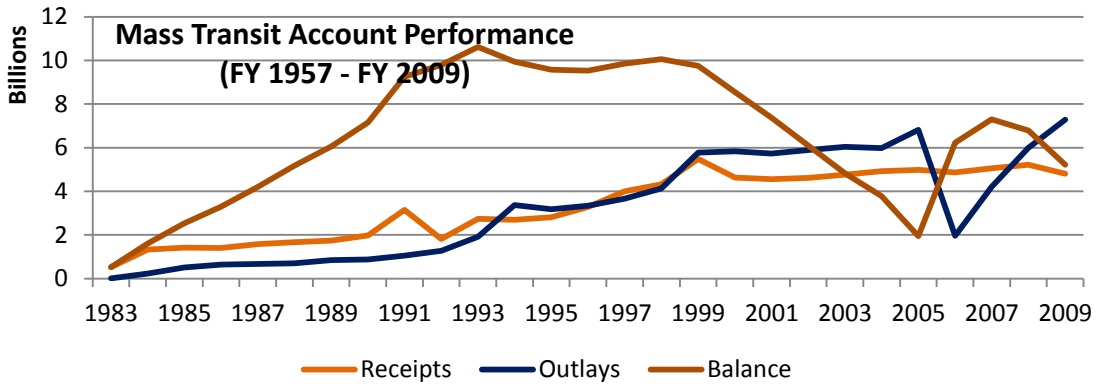

Figure 5: The Mass Transit Account received an infusion from the highway account in 2006 and 2007 of $1 billion and $234 million, respectively (FHWA, 2009; FHWA). This is in addition to the originally authorized General Funds for transit, since transit relies on both the HTF and the General Fund.

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