CBO TESTIMONY

Statement of
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Status of the Highway Trust Fund: 2007

before the
Subcommittee on Highways and Transit
Committee on Transportation and Infrastructure
U.S. House of Representatives

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Note

Numbers in the text and tables may not add up to totals because of rounding.

Mr. Chairman and Members of the Subcommittee, I am pleased to be here today to discuss the status of the Highway Trust Fund and to present the Congressional Budget Office (CBO)'s projections of the fund's revenues and outlays.

My testimony has four main conclusions:

- The revenues that finance the Highway Trust Fund have grown at a moderate pace in recent years, increasing by an average of about 2 percent per year since 1998. Before that, from 1997 to 1998, revenues rose sharply, when receipts from a portion of the gasoline tax were redirected from the Treasury's general fund into the trust fund. Spending from the trust fund has increased steadily since 1998, by an average of about 4 percent per year. Spending began to outpace revenues in 2001 and since then has exceeded revenues by about $16 billion.

- If annual obligation limits are set at the levels authorized in 2005, CBO projects that the highway account of the Highway Trust Fund will become exhausted at some point during fiscal year 2009; the Administration also projects that the balances in the highway account will be exhausted that year. CBO expects that the mass transit account will have sufficient revenues to cover its expenditures until 2012; the Administration estimates that the mass transit account will become exhausted in 2011.

- Projections of trust fund revenues are subject to uncertainty. Changes in oil prices, the economy, and the fuel efficiency of vehicles can all cause future revenues to differ from current projections. Consequently, the highway account could exhaust its resources either before or after 2009.

- Fuel taxes provide a relatively stable source of revenues with generally low collection costs and minimal evasion. However, fuel tax revenues do not grow as rapidly as the economy. CBO projects that if fuel taxes are extended, revenues from them will grow about 1.5 percent per year from 2007 to 2017, less than the nominal growth of the economy, at 4.6 percent. Fuel tax rates are fixed in nominal terms, so revenue growth is driven by increased fuel use. Fuel use, in turn, is driven by real economic growth, price changes, fuel economy, and the types of fuel used.

Overview of the Highway Trust Fund

The Highway Trust Fund is an accounting mechanism in the federal budget. It records specific cash inflows (revenues from certain excise taxes on motor fuels and trucks) and cash outflows (spending on designated highway and mass transit programs). The fund comprises two separate accounts, one for highways and one for mass transit. By far, the largest component of the trust fund is the Federal-Aid Highway program, which will account for about 90 percent of the fund's outlays in 2007 (see Table 1).

Table 1.

Major Components of the Highway Trust Fund, 2007

(Billions of dollars)

	Estimated Receipts[a]	Budget Authority and Obligation Limitations[b]	Estimated Outlays
Highway Account			
Federal-Aid Highway program	n.a.	39.8	33.9
Motor carrier safety	n.a.	0.5	0.5
Highway traffic safety	n.a.	0.8	0.6
Other	n.a.	0	0.3
Subtotal	35.2	41.0	35.3
Mass Transit Account			
Discretionary grants	n.a.	0	0.1
Trust fund's share of transit programs[c]	n.a.	7.2	2.9
Subtotal	5.1	7.2	3.0
Total, Highway Trust Fund	**40.2**	**48.3**	**38.3**

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. Receipts are deposited in the highway and mass transit accounts but are not earmarked for specific components.

b. Obligation limitations enacted in appropriation acts limit the amount of budget authority available to most Highway Trust Fund programs. The amounts in this column are the sum of obligation limitations and budget authority that is not subject to any such limitations.

c. Includes only outlays from 2007 funds. Outlays from previous years' funding were attributed to those years.

Spending from the Highway Trust Fund is not automatically triggered by the collection of tax revenues. Authorization acts provide budget authority for highway programs, mostly in the form of contract authority (the authority to incur obligations in advance of appropriations). Annual spending from the fund is largely controlled by limits on the amount of contract authority that can be obligated in a particular year. Such obligation limitations are customarily set in annual appropriation acts.

The most recent authorization law governing spending from the trust fund—the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—was enacted in 2005 and is due to expire at the end of 2009. The law provides specific amounts of contract authority over the 2005–2009 period and authorizes appropriations for certain programs that are not funded through contract authority. It also specifies annual obligation limitations, which may be superseded each year by limitations set in annual appropriation acts.

In addition, the 2005 law includes a funding mechanism, known as revenue-aligned budget authority (RABA), that is designed to strengthen the relationship between the highway account's revenues and spending. Under RABA, the Administration estimates revenues for the highway account and compares those estimates with the revenue amounts anticipated in SAFETEA-LU and with the estimates made the previous year. On the basis of that comparison, the Administration, as part of the President's annual budget request, is required to adjust contract authority for programs funded from the highway account. (If the current revenue estimates are higher than the revenue amounts anticipated in SAFETEA-LU, contract authority is increased. If the revenue estimates are lower than the anticipated amounts, contract authority is reduced, as long as the highway account balance is less than $6 billion.) The obligation limitations set in appropriation acts, however, do not necessarily reflect RABA adjustments.

History of the Highway Trust Fund's Revenues and Spending

Many changes have been made to the highway program, to the taxes dedicated to the Highway Trust Fund, and to trust fund operations since 1983. One of the most significant changes occurred in the Taxpayer Relief Act of 1997, which increased amounts deposited into the trust fund by 4.3 cents per gallon of gasoline sold, in addition to the 14.0 cents per gallon previously allocated to the fund.[1] Spending started increasing rapidly in 1999, resulting from changes enacted in the Transportation Equity Act for the 21st Century (TEA-21). TEA-21, which provided contract authority of $218 billion over the 1998–2003 period (an average of $36.3 billion per year), and SAFETEA-LU, which provided contract authority of $286 billion (an average of $57.2 billion per year) over the 2005–2009 period, represented significant increases in spending over previous authorizations.

Balances in the highway account were steady during the 1980s and the first half of the 1990s, in the vicinity of $10 billion (see Figure 1). Receipts substantially exceeded outlays from 1996 to 2000, and the unexpended balance in the highway account (sometimes called the cash balance) grew from $10 billion in 1995 to a peak of about $23 billion in 2000.[2] Since then, spending, boosted by TEA-21, has

1. The total gas tax is 18.4 cents per gallon. Of that, 18.3 cents is deposited in the Highway Trust Fund, and 0.1 cents goes to the Leaking Underground Storage Trust Fund.

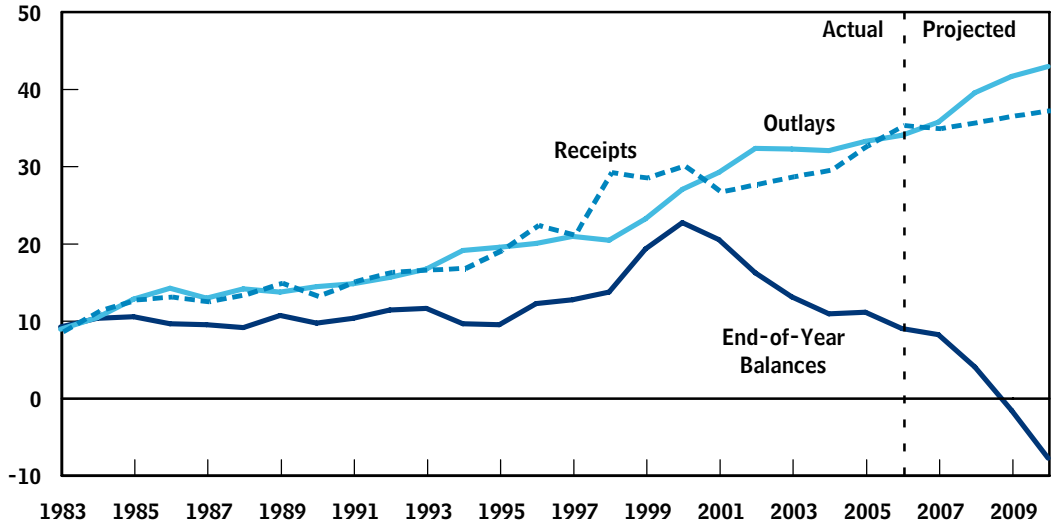
   The 1993 Omnibus Budget and Reconciliation Act increased the gas tax by 4.3 cents, but those funds were not initially deposited into the trust fund, but into the general fund of the Treasury.

2. Section 901(e) of the Taxpayer Relief Act of 1997 allowed taxpayers to delay depositing estimated fuel tax liabilities that would otherwise have been required in August and September of 1998 until October 5, 1998—effectively delaying a deposit of about $5 billion to the highway account and about $900 million to the mass transit account from fiscal year 1998 until fiscal year 1999.

Figure 1.

The Highway Account, 1983 to 2010

(Billions of dollars)



Source: Congressional Budget Office.

Note: Receipts are adjusted to remove the effects of a legislated shift in payment dates that reduced receipts by $5 billion in 1998 and increased them by the same amount in 1999.

generally exceeded revenues, which fell sharply in 2001. As a result, unspent balances fell over the next several years, to about $9 billion in 2006. In general, balances in the mass transit account also have been falling since 2000, although at a slower rate than those in the highway account. At the end of 2006, the balance in the mass transit account totaled about $6 billion.

After declining in 2001, revenues have increased steadily, at an average rate of about 5 percent per year through 2006. Revenue growth was especially strong in 2005, following changes in the tax treatment of certain fuels.[3] Outlays have not grown as rapidly, rising at about 3 percent per year from 2001 through 2006; nonetheless, they have generally exceeded revenues.

Projections of the Highway Trust Fund's Revenues and Spending

The status of the Highway Trust Fund is generally assessed by projecting the balances in it, which indicate whether the expected revenues will be sufficient to

3. The American Jobs Creation Act of 2004 increased the fuel tax on ethanol to equal that on gasoline for the purpose of the Highway Trust Fund, and that law retained a tax subsidy for ethanol production in the form of a tax credit paid from the Treasury's general fund. The law also included other provisions to increase revenues to the trust fund.

cover the anticipated spending. Those balances represent the cumulative difference between revenues and outlays over the life of the fund and indicate how much the fund has available, at any particular time, to meet its current and future obligations.

Highway Trust Fund Balances

CBO has estimated the trust fund's future balances by projecting revenues and outlays independently of each other because they have different bases—revenues depend on the collection of various taxes, and current-year outlays depend on the obligation limitations set in appropriation acts as well as the timing of spending for obligations that have been made in prior years. For those projections, CBO assumes that policymakers will continue to control spending through such limitations. Further, the agency assumes that appropriation acts will set obligation limitations equal to the amounts specified in SAFETEA-LU plus any RABA adjustments.[4] As that adjustment for 2007, the Administration projects an increase of $842 million and, for 2008, $631 million; for illustrative purposes, for 2009, CBO has estimated an increase of about $250 million (however, the Administration is responsible for preparing and implementing the adjustments of RABA). On the basis of those assumptions, the amounts available for obligation from the highway account would rise from about $38 billion in 2006 to $43 billion in 2009 (see Table 2).[5]

Under SAFETEA-LU, the amounts available for obligation from the mass transit account would rise from $8.3 billion in 2006 to $9.4 billion in 2009.[6]

Highway Trust Fund Revenues: Sources and Projections

The largest contributor of revenues to the Highway Trust Fund is the tax of 18.3 cents per gallon on gasoline and gasohol. Under current law, such taxes are scheduled to expire in 2011. The gas and gasohol tax currently produces about two-thirds of the fund's total revenues (see Table 3). About 2.8 cents per gallon is dedicated to the mass transit account. The second-largest source is the levy of 24.3 cents per gallon on diesel, which accounts for about one-quarter of the revenues.

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4. That assumption differs from the one underlying CBO's baseline budget projections, which are governed by the rules set forth in the Balanced Budget and Emergency Deficit Control Act. In its most recent baseline, CBO projected highway spending over the next decade by assuming that the budget authority and obligation limitations in future years would equal those enacted in the 2007 appropriation act for the Department of Transportation, adjusted for inflation. With that projection method, baseline funding levels for highways are lower than the levels specified in SAFETEA-LU.

5. The $43 billion obligation limit in 2009 is 1.5 percent above the amount projected in CBO's baseline.

6. The obligation limit in 2009 is about 8 percent above the amount projected in CBO's baseline.

Table 2.

CBO's Estimate of Funds Available for Obligation from the Highway Trust Fund, 2006 to 2009

(Billions of dollars)

	Actual 2006	2007	2008	2009	Total, 2006-2009
Federal-Aid Highway Program					
Obligation limitation in SAFETEA-LU	35.6	38.2	39.6	41.2	154.6
RABA adjustments to obligation limitation[a]	0	0.8	0.6	0.3	1.7
Contract authority not subject to obligation limitation	0.7	0.7	0.7	0.7	2.9
Safety Programs (Obligation limitation)	1.3	1.3	1.2	1.3	5.2
Total Funds Available for Obligation[b]	**37.6**	**41.0**	**42.1**	**43.1**	**164.4**
Mass Transit Account					
Obligation limitation[c]	8.3	8.3	8.9	9.4	34.8

Source: Congressional Budget Office.

Notes: SAFETEA-LU = Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users; RABA = revenue-aligned budget authority.

a. Estimates assume funding levels authorized in SAFETEA-LU.

a. The figures shown as RABA adjustments in 2007 and 2008 come from the Administration, which is responsible for specifying them. The figure for 2009 is an illustrative estimate by the Congressional Budget Office.

b. CBO assumes that future appropriation acts will provide for SAFETEA-LU funding levels and any RABA adjustments.

c. The figures include about $1 billion annually that is transferred from the highway account to the mass transit account, through a mechanism known as "flexing."

Thus, taxes on motor fuels generate about 90 percent of the trust fund's total revenues. The rest come from a 12 percent tax on the first retail sale of a truck or trailer above a certain weight, taxes on truck tires for highway use, and an annual use tax on heavy trucks. CBO projects all five of those revenue sources separately, along with refunds on amounts paid by certain taxpayers, such as state and local governments, which are exempt from the taxes.

Revenues from the taxes on gasoline and diesel fuel are credited to the trust fund, and then the highway account and the mass transit account receive shares.[7] Revenues from the three different taxes on trucks are credited entirely to the highway account. Currently, more than 85 percent of the revenues in the Highway Trust Fund go to the highway account.

7. About 85 percent of the gasoline and gasohol revenues and about 90 percent of the diesel revenues are credited to the highway account. The remainder go to the mass transit account.

Table 3.

Estimated Highway Trust Fund Revenues, 2006

Revenue Source	Billions of Dollars	Percentage of Total Trust Fund Revenues
Gasoline and Gasohol Tax	25.5	65
Diesel Tax	9.7	25
Retail Sales Tax on Trucks	3.5	9
Heavy-Vehicle Use Tax	1.4	3
Tax on Truck Tires	0.5	1
Refunds	-1.0	-3
Total	**39.6**	**100**

Source: Congressional Budget Office.

If the current taxes are extended beyond their 2011 expiration date, revenues credited to the Highway Trust Fund will rise at an average annual rate of about 2 percent per year over the coming decade, CBO projects (see Table 4). Trust fund revenues are projected to grow from about $40 billion in 2006 to about $42 billion in 2009—at a slower rate than nominal GDP, which CBO expects to rise at an average annual rate of 4.6 percent over the next 10 years. In large part, the difference exists because the fuel tax rates are fixed in nominal terms, so revenues depend on the quantity of fuel consumed, not its dollar value.

Outlay Projections

CBO bases its estimates of trust fund outlays primarily on historical spending patterns, which reflect states' multiyear projects to plan and build roads, bridges, and other transportation infrastructure. In the case of the fund's highway account, most of the obligations involve capital projects on which money is spent over a number of years. For example, the Federal-Aid Highway program typically spends about 27 percent of its budgetary resources in the year they are made available for spending and the rest over the next several years. The mass transit program typically spends about 15 percent of budgetary resources in the first year. Most of the highway programs' existing obligations will therefore be met using future tax revenues because those obligations far exceed the amounts now in the account. At the end of 2006, the balance of the highway account stood at $8.9 billion, whereas the outstanding obligations of highway programs totaled about $45 billion. The mass transit account had a balance of about $6.2 billion and outstanding obligations of about $3 billion (see Table 5).

If the Congress sets obligation limitations at the amounts authorized in SAFETEA-LU and adds RABA adjustments (as estimated), outlays from the trust fund's highway account will gradually increase from about $34 billion in 2006 to

Table 4.

CBO's Current Projections of Highway Trust Fund Revenues, 2006 to 2017

(Billions of dollars)

Revenue Source	2006	2007	2008	2009	2010	Average Annual Percentage Change 2007	2007-2009	2010-2017
Gasoline and Gasohol Tax	25.5	25.8	26.2	26.6	26.9	1.1	1.4	1.2
Diesel Tax	9.7	9.9	10.1	10.4	10.6	2.1	2.3	2.0
Retail Sales Tax on Trucks	3.5	3.7	3.8	4.0	4.2	3.9	4.3	4.1
Heavy-Vehicle Use Tax	1.4	1.4	1.4	1.5	1.5	2.3	2.8	2.6
Tax on Truck Tires	0.5	0.5	0.5	0.6	0.6	2.4	2.8	2.6
Refunds	-1.0	-1.0	-1.0	-1.0	-1.1	0.7	1.1	1.2
Total	**39.6**	**40.2**	**41.1**	**42.0**	**42.8**	**1.7**	**2.0**	**1.8**

Source: Congressional Budget Office.

about $42 billion in 2009, CBO estimates. Those outlays would exceed revenues by about $500 million in 2007, $3.5 billion in 2008, and $5 billion in 2009. In addition, CBO anticipates that about $2 billion from the highway account will be transferred to the mass transit account over that period.[8] By CBO's estimates, balances in the highway account will be exhausted during fiscal year 2009, falling short of obligations coming due in that year by about $1.7 billion.

The exhaustion of the highway account does not mean that spending would end. Annual spending would, instead, be limited to the amount of revenues flowing into the account each year, and there would be limited funds for new projects. Such balancing of spending and revenues could be accomplished by reducing future obligation limitations and budget authority below the levels assumed in CBO's projections, by reducing the rate of spending on projects for which funds have already been obligated (for example, by requiring states to delay the start or completion of projects), or a combination of the two.

Under SAFETEA-LU and with obligation limits adjusted for inflation after 2009, the mass transit account will have sufficient resources to meet spending demands until 2012, according to CBO's estimates.[9] Including transfers from the highway account, the obligation limit for mass transit will grow from $8.3 billion in 2006 to

8. Under SAFETEA-LU, states are allowed to use some of their highway funds for transit projects; the highway account transfers funds to the transit account when states choose to use such flexibility.

9. The Administration estimates that the mass transit account will run out of cash one year earlier. CBO and the Administration have made different estimates about how quickly spending from the fund will occur.

Table 5.

CBO's Projections of Highway Trust Fund Balances, 2006 to 2010

(Billions of dollars)

	2006	2007	2008	2009	2010	Total, 2006–2010
Highway Account						
Estimated outlays	33.9	35.7	39.4	41.5	42.8	193.3
Transfer to mass transit account[a]	1.4	0.3	0.7	0.9	0.9	4.1
Estimated receipts	33.6	35.2	35.9	36.7	37.5	178.9
Difference	-1.7	-0.8	-4.2	-5.7	-6.3	-18.7
Projected End-of-Year Balance	**8.9**	**8.1**	**3.9**	**-1.7**	**-8.1**	**n.a.**
Change from Previous Year's Balance	-1.7	-0.8	-4.2	-5.7	-6.3	-18.7
Mass Transit Account						
Estimated outlays	1.9	3.7	5.5	6.9	8.1	26.1
Estimated receipts	4.8	5.1	5.1	5.2	5.3	25.6
Receipts from highway account[a]	1.4	0.3	0.7	0.9	0.9	4.3
Difference	4.3	1.6	0.3	-0.8	-1.8	6.1
Projected End-of-Year Balance	**6.2**	**7.8**	**8.1**	**7.3**	**5.5**	**n.a.**
Change from Previous Year's Balance	4.3	1.6	0.3	-0.8	-1.8	6.1

Source: Congressional Budget Office.

Notes: n.a. = not applicable.

Estimates assume funding levels authorized in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

a. States are allowed to use a certain portion of their highway funds for mass transit programs, resulting in transfers from the highway account to the mass transit account.

$9.4 billion in 2009. However, by CBO's estimates, outlays will exceed revenues by less than $500 million in 2008 and by about $1.5 billion in 2009.

The Uncertainty of Projections

Projections of the Highway Trust Fund's revenues and spending face a variety of uncertainties. For example, the Congress could choose to limit obligations from the trust fund at different levels from those under SAFETEA-LU. In addition, a number of factors could significantly affect the use of gasoline, which would, in turn, affect the trust fund's income. The economy could grow faster or more slowly than expected. Oil prices could climb higher or fall substantially. Consumers might adjust more or less to changes in fuel prices (for example, by driving fewer miles in the short term or purchasing more-fuel-efficient vehicles in the longer term).

Historical Analysis of CBO's Revenue Projections

An analysis of CBO's historical track record is one way to illustrate the sensitivity of revenues to a variety of factors and the resulting uncertainty of the projections of revenues for the Highway Trust Fund.[10] In the 1990s, highway revenues tended to exceed the projections because of unexpectedly strong economic growth and a rapid increase in purchases of sport utility vehicles, which have below average fuel efficiency. Conversely, projections of revenues made in the years just before 2002 generally turned out to be too high. The 2001 recession reduced revenues well below expectations. The projections made since 2001 have been more accurate than the average.

As noted earlier, CBO projects that, under current law, the highway account will become exhausted before the end of 2009. CBO's analysis of past forecast errors indicates that if actual revenues fell short of projections to the extent that occurred with CBO's forecasts produced in and just before 2001, then the highway account could run out of funds as early as 2008. However, if revenues exceeded the projections by amounts consistent with the 1990s deviations, then the highway account could be in surplus until 2010 or 2011.

However, the historical performance of revenue projections may not be a good indicator for the future. In particular, the increase in fuel prices in recent years has persisted and may lie outside the range of experience. Also, alternative sources of powering motor vehicles, not subject to taxes, may be developed. Those developments potentially introduce more uncertainty, especially in the longer term.

The Sensitivity of CBO's Current Revenue Projections

The uncertainty of revenue estimates can also be assessed by looking at CBO's current revenue projections in more detail, especially by identifying the effects of higher fuel prices. CBO projects that the fuel price increases of the past several years will largely persist over the 10-year projection period. Relative to overall prices in the economy, fuel prices over the next 10 years are projected to average about 50 percent above their average over the 1984–2003 period. As a result, CBO expects individuals to purchase vehicles with higher fuel efficiency and to drive fewer miles, reducing gasoline use by amounts that become more significant over a number of years. The effects of the higher fuel prices reduce CBO's projection of growth in highway revenues by about 0.4 percentage points per year, on average, over the next decade. Cumulatively over the 2008-2017 period, the higher prices reduce projected revenues to the Highway Trust Fund by about $9 billion (under an assumption that the taxes are extended beyond their scheduled expiration in 2011).

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10. Statement of Donald B. Marron, Acting Director, Congressional Budget Office, *CBO's Projections of Revenues for the Highway Trust Fund,* before the Subcommittee on Highways, Transit, and Pipelines, House Committee on Transportation and Infrastructure (April 4, 2006).

The projections of revenues are also sensitive to assumptions about the substitution of alternative fuel sources for gasoline, but CBO expects that factor to have a limited effect on the trust fund over the 10-year projection period. The mandated increase in the use of ethanol fuels affects revenues even though the tax rates on gasoline and ethanol are the same for the purpose of the trust fund. Ethanol has a lower heat content than gasoline and therefore reduces fuel efficiency compared with gasoline. However, the effect on the trust fund is limited because ethanol is expected to replace a relatively small share of gasoline use over the coming decade. Other technologies, furthermore, may emerge to replace gasoline and ethanol. For example, if technological advances allow fully electric-powered vehicles to become a significant share of the vehicle stock, then growth in the use of taxed motor fuels would be reduced. However, CBO expects that such technological changes will cause only small impacts on the trust fund over the 10-year period.

The tax rates on gasoline, ethanol, and diesel fuel are fixed in nominal terms and thus do not rise with inflation, which contributes to a long-term decline in the purchasing power of the revenues accruing to the Highway Trust Fund. If the tax rates rose with inflation, revenues to the Highway Trust Fund would be about $44 billion higher over the 2008–2017 period, according to estimates of the Joint Committee on Taxation. The lack of indexed tax rates explains about two-thirds of the difference between CBO's baseline projection of average annual growth in fuel tax revenues (1.5 percent) and in nominal gross domestic product (4.6 percent) over the next 10 years.

Fuel Taxes as a Highway Revenue Source

Issues in the use of fuel excise taxes to fund federal highways include the extent to which the taxes are economically efficient, their costs of collection and ease of ensuring compliance, the stability of the revenue stream that they provide, and the growth of that revenue stream over time.

Economic Efficiency

Economic efficiency would require that highway users face the full resource cost of driving. That resource cost includes not only the private costs of owning and using a vehicle but also public costs such as the wear and tear that driving inflicts on roads (which increases with vehicle weight and the distance traveled), delays from traffic congestion and accident risks imposed on occupants of other vehicles, and pollution and other external costs. Some of those public costs may be accounted for through other means—tolls, for example, can address some costs of road use and congestion, insurance premiums and liability rules can address some accident risks, and emissions regulations may address some pollution costs. If those other measures do an incomplete job of accounting for those costs, however, it may be economically efficient to address them with fuel taxes.

Fuel taxes can only approximate those costs, though. Heavier vehicles and longer trips generally require more fuel, but fuel costs and public costs are not closely

linked. A driver pays the same fuel tax for going a given distance at a given speed whether driving on a busy urban highway or an empty rural highway, for example, even though congestion costs are higher in the first case. Two vehicles with the same gas mileage pay the same tax to travel a given distance, even though they may differ in weight and thus impose different costs on the highway system.

Further complicating the issue, roads have high fixed costs, while the marginal cost of adding a single vehicle is very low (except in those situations where a road is very congested). Therefore, pricing vehicles' use of the roads on a marginal cost basis could make it difficult to recoup the cost of building and operating the system.

Compliance

Collection costs for fuel taxes are fairly low, and evading them is difficult. Because the fuel excise taxes are levied on fuel producers (who then pass the added costs on to consumers), tax authorities collect the revenues from only a small, stable (and therefore easily monitored) group of taxpayers. Some difficulties posed by highway use of fuels intended for off-highway use (which are typically not taxed) have occurred but have been fairly well controlled, especially since a requirement to dye off-road diesel and diesel-substitute fuel was implemented.

The Stability of the Revenue Source

Despite fluctuations in the economy and long-term improvements in fuel efficiency, fuel taxes have provided a relatively stable stream of revenues. In part, that stability results because motor fuel use is not very sensitive to changes in price. Annual growth in motor fuel use has varied less historically than has growth in the income bases for the individual and corporate income taxes, which are affected more by changing economic conditions.

Future Revenue Growth

Several factors could influence the long-term outlook for fuel revenues. Most important, the tax rates are fixed in nominal terms and thus do not increase with inflation. All else being equal, future revenues will grow only with future fuel use. If the cost of building and maintaining highways rises in the future as it has in the past, fuel tax revenues will support a declining amount of investment in and maintenance of the transportation infrastructure.

In addition, increased production of vehicles that run on alternative sources of power that are taxed less or not at all (like fully electric cars) may reduce the tax base provided by fossil fuels and fossil fuel blends. Even discounting the influence of such vehicles, improvements in fuel efficiency will probably limit the growth of fuel use—and thereby limit the growth of excise tax receipts.

However, increasing use of certain alternative fuels may also build the tax base. Ethanol's lower energy content than gasoline's means that vehicles running on an ethanol-blended fuel get fewer miles per gallon than they would using pure gasoline, increasing the fuel consumed for a given number of miles driven. Because fuel taxes are levied on a per-gallon basis, substituting ethanol for gasoline increases the trust fund's revenues from the excise tax.[11] Continued taxation on the basis of volume (instead of energy content) will increase revenues if other alternative fuels contain less heat per gallon than gasoline.

Alternative Revenue Sources

Highway and mass transit programs could be financed in a variety of ways—including other types of taxes and charges and financing from the Treasury's general fund.

Road Usage Charges

Tolls can be used to raise prices specifically for busy roads, and congestion pricing can adjust charges to motorists for travel on particular roads depending on the amount of traffic. Technology is increasingly making possible the routine assessment of usage charges without the delays associated with toll booths in the past. Those methods of revenue collection could be a major improvement over fuel taxes in their ability to link the prices paid by drivers to travel distances and traffic congestion.

Other Excise Taxes

The federal government currently levies excise taxes on the sale and use of heavy trucks and trailers and on the manufacture and importation of tires for heavy vehicles. Like the fuel excise taxes, those taxes are collected from a relatively small group of retailers and manufacturers, making the taxes relatively easy to collect and difficult to evade. Although receipts from truck sales taxes have been highly variable (owing partly to the price-basis on which they are levied), truck use taxes and tire sales taxes have provided a revenue stream of comparable stability to the one from fuel taxes. Those other excise taxes could be relied on more; for instance, they could be increased or expanded to cover light trucks and cars. Such taxes vary more directly with vehicle weight and miles traveled and can be made to mirror even more closely those factors affecting public costs.

General Fund Revenues

Another approach is to finance road construction and maintenance with general fund revenues, which may have a particular rationale for costs that cannot be attributed to individual users. As a result of tax preferences provided to producers of ethanol and other alternative fuels, several billion dollars a year are already

11. However, a credit for ethanol production (which is in place until the end of calendar year 2010) draws from the Treasury's general fund.

directed, in effect, from the general fund to the Highway Trust Fund. Currently, those producers get tax credits, the effect of which is to tax those fuels at a lower rate and have transfers from the general fund make up the difference.

Extending and Indexing Current Taxes

Short of major overhauls of the financing mechanism, the existing motor fuel taxes could be altered in a variety of ways. To achieve higher revenues, policymakers could increase the per-gallon tax rates or index them to inflation. To tax fuels comparably, policymakers could apply rates consistent with the fuels' energy content and bring new fuels under this rubric as they emerge. For example, fully electric cars, if they become practical alternatives to conventional vehicles, could somehow be taxed.