

GAO

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Committee on Transportation and Infrastructure
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HIGHWAY FINANCING

Factors Affecting Highway Funding Fluctuations and Revenue Trends

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Mr. Chairman and members of the subcommittee:

We appreciate the opportunity to provide testimony on important Highway Trust Fund issues. Our statement today is based on our recent reports, our ongoing work on the impact of alternative and replacement fuels on the Highway Trust Fund, and our review of the fiscal year 2003 Revenue Aligned Budget Authority adjustment.¹ As you know, the Highway Trust Fund is the principal mechanism for funding federal highway programs authorized by the Transportation Equity Act for the 21st Century (TEA-21). TEA-21 “guaranteed” specific annual funding levels for most highway programs on the basis of projected receipts to the Highway Trust Fund and provided for annual adjustments to these funding levels based on actual receipts and revised projections of trust fund revenue. These adjustments are referred to as the Revenue Aligned Budget Authority or RABA. In fiscal year 2003, for the first time, the RABA adjustment is negative—decreasing the guaranteed level of highway funding by \$4.369 billion. Consequently, the highway funding level for fiscal year 2003 will be over \$8 billion lower than the fiscal year 2002 level.

Concerned about the significant drop in highway funding due to the RABA adjustment, you asked us to assess the fiscal year 2003 RABA calculation. Additionally, you expressed concerns about the amount of future revenue forgone by the Highway Trust Fund due to gasohol usage and asked about ways to increase revenues into the trust fund. In response, our statement discusses (1) the reasonableness of the fiscal year 2003 RABA calculation; (2) the \$600 million error in the initial RABA adjustment released by the administration; (3) the impact of gasohol usage on the Highway Trust Fund; and (4) ways to reduce fluctuations in the RABA adjustment and industry proposals to increase Highway Trust Fund revenue. (See app. I for information on our objectives, scope, and methodology.)

In summary:

- The fiscal year 2003 RABA calculation appears reasonable based on the information we reviewed. While the RABA adjustment is clearly severe, it

¹U.S. General Accounting Office, *Highway Funding: Problems with Highway Trust Fund Information Can Affect State Highway Funds*, [GAO/RCED/AIMD-00-148](#) (Washington, D.C.: June 2000); and U.S. General Accounting Office, *Applying Agreed-Upon Procedures: Highway Trust Fund Excise Taxes*, GAO-02-379R (Washington, D.C.: February 2002). Our work was carried out in accordance with generally accepted government auditing standards.

largely is a reflection of the multiple ways a downturn in the economy affects the calculation. The RABA calculation consists of “look back” and “look ahead” components. About 80 percent of the fiscal year 2003 RABA adjustment is attributable to the “look back” portion of the RABA calculation, which compares the actual Highway Account receipts for fiscal year 2001 to the projections of receipts for fiscal year 2001 included in TEA-21 plus an adjustment for the RABA calculation made for that year. Our review shows that the amounts distributed to the Highway Trust Fund for the first 9 months of fiscal year 2001 were reasonable and adequately supported on the basis of available information. The remaining 20 percent of the fiscal year 2003 RABA adjustment is due to the “look ahead” portion of the calculation, which compares the Department of Treasury’s (Treasury) projection of Highway Account receipts for fiscal year 2003 with the projection of receipts for that year contained in TEA-21. Although we did not independently evaluate the methodology and the economic models Treasury used to develop its revenue projections, our review of a qualitative description of the process, key inputs, and changes to the models gave us no reason to question the resulting projections. Similarly, our comparison of projections prepared by Treasury and the Congressional Budget Office (CBO) did not lead us to question the projections used for the fiscal year 2003 RABA calculation.

- In late January 2002, the administration announced that the fiscal year 2003 RABA adjustment would be a negative \$4.965 billion. Within a few days of the announcement, the administration reported that an error had been made and that the correct amount was a negative \$4.369 billion—a \$600 million difference. The error occurred in Treasury’s allocation of projected highway tax revenues to the various accounts that receive them, rather than in Treasury’s economic models for projecting such revenues. Treasury did not detect the error until after the RABA adjustment had been released to the public and the Federal Highway Administration (FHWA) had made its initial calculations for distributing funds to the states. Treasury is taking steps to improve its internal controls in order to prevent this type of error from occurring again.
- The use of ethanol blended fuel (gasohol) instead of gasoline reduces Highway Trust Fund revenue because it is partially exempt from the standard excise tax on gasoline (18.4 cents) and 2.5 cents of the tax received on each gallon of gasohol sold is transferred to the General

Fund.² Based on our ongoing work, our preliminary estimates show that the Highway Account did not receive about \$6.01 billion (in constant 2001 dollars) from fiscal years 1998 through 2001 due to these tax provisions. Further, gasohol use is projected to increase and thus the impact of these tax provisions will grow as well. Using Treasury's projections of gasohol tax receipts, we estimate that the Highway Account will forgo an additional \$13.72 billion (in constant 2001 dollars) due to the partial tax exemption from fiscal years 2002 through 2012. We also estimate that the Highway Trust Fund will forgo about \$6.92 billion from fiscal years 2002 to 2012 due to the General Fund transfer (in constant 2001 dollars).³ According to Department of Agriculture (USDA) and ethanol industry officials, the partial tax exemption for gasohol helps to create a demand for ethanol and make gasohol price competitive with gasoline.

- There are several ways the RABA adjustment could be changed to help reduce fluctuations in highway funding. For example, the RABA adjustment could be distributed over 2 years. In addition, industry groups have proposed a number of ways to increase Highway Trust Fund revenues. Ultimately, however, the Congress and the administration must weigh the advantages and disadvantages of these and other ways to stabilize highway funding and/or increase Highway Trust Fund revenues.

Background: The Highway Trust Fund and TEA-21

The Highway Revenue Act of 1956 established the Highway Trust Fund as an accounting mechanism to help finance federal highway programs. In 1983, the Highway Trust Fund was divided into two accounts: a Highway Account and a Mass Transit Account. Receipts to the Highway Account are used to fund highway programs, through which billions of dollars are distributed to the states annually for the construction and repair of highways and related activities. Treasury uses a revenue allocation and reporting process to distribute highway user taxes to the Highway Trust Fund.

²For the purposes of this testimony, we use the term gasohol to refer to all types of ethanol blended fuels. While biomass methanol fuels are also eligible for partial tax exemptions, Treasury does not separately track the small amounts associated with them.

³The General Fund transfer expires at the end of fiscal year 2005. To reflect the expiration, Treasury reduces the total federal excise tax on gasohol blends by 2.5 cents starting in fiscal year 2006. Under Treasury's approach, the Highway Account is neither benefited nor harmed by the expiration. For the purposes of this testimony, we estimated the impact of the 2.5 cent General Fund transfer assuming the transfer continued through fiscal year 2012.

Financing for the Highway Trust Fund is derived from a variety of federal highway user taxes including excise taxes on motor fuels (gasoline, gasohol, diesel, and special fuels) and tires, sales of new trucks and trailers, and the use of heavy vehicles. As table 1 shows, the excise tax rates and distribution of the tax revenues vary. The different tax rates reflect federal policy decisions. For example, in the 1970s and 1980s, the federal government adopted numerous policies to encourage the use of alternatives to imported fossil fuels and help support farm incomes. Among these policies were tax incentives that targeted the use of alcohol fuels derived from biomass materials, such as ethanol.⁴ Ethanol blended fuels (gasohol) are partially exempt from the standard excise tax on gasoline (18.4 cents). The proportion of ethanol contained in each gallon of fuel determines the size of the partial exemption. The most common ethanol blend contains 90 percent gasoline and 10 percent ethanol and is currently taxed at 13.1 cents per gallon—an exemption of 5.3 cents.⁵ The federal government also uses the distribution of excise tax receipts to different accounts to achieve policy goals. For example, a small part of the excise tax on most motor fuels is distributed to the Leaking Underground Storage Tank Trust Fund to clean-up contamination caused by underground storage tanks. Additionally, 2.5 cents of the tax received on each gallon of gasohol is transferred to the General Fund, rather than the Highway Trust Fund, for deficit reduction purposes.

⁴Biomass-derived alcohol fuels are chemical compounds made from nonfossil material of biological origin and constitute a renewable energy source.

⁵Ethanol blended fuels containing 7.7 percent ethanol and 5.7 percent ethanol qualify for a 4.058 cents and 2.978 cents per gallon exemption, respectively. TEA-21 extended the exemption for gasohol fuels through fiscal year 2007 and provided for a phased-in reduction in the exemption for gasohol.

Table 1: Excise Tax Rates and Distributions of Highway User Taxes, as of July 2001

Cents per gallon

Type of tax	Tax rate	Distribution of tax			
		Highway Trust Fund		Leaking Underground Storage Tank Trust Fund	General Fund
		Highway Account	Transit Account		
Motor fuels taxes					
Gasoline	18.40	15.44	2.86	0.10	-
Diesel	24.40	21.44	2.86	0.10	-
Alternative fuels taxes					
Gasohol (10% ethanol)	13.10	7.64	2.86	0.10	2.5
Liquefied petroleum gas	13.60	11.47	2.13	-	-
Liquefied natural gas	11.90	10.04	1.86	-	-
M85 (from natural gas)	9.25	7.72	1.43	0.10	-
Compressed natural gas (cents per thousand cu. ft.)	48.54	38.83	9.70	-	-
Truck-related taxes					
Tires:	0-40 lbs, no tax Over 40 lbs – 70 lbs, 15 cents per pound in excess of 40 Over 70 lbs – 90 lbs, \$4.50 plus 30 cents per pound in excess of 70 Over 90 lbs, \$10.50 plus 50 cents per pound in excess of 90				
Truck and Trailer Sales Tax	12 percent of retailer's sales price for tractors and trucks over 33,000 lbs gross vehicle weight (GVW) and trailers over 26,000 lbs GVW				
Heavy Vehicle Use Tax	Annual tax: Trucks 55,000 lbs and over GVW, \$100 plus \$22 for each 1,000 lbs (or fraction thereof) in excess of 55,000 lbs (maximum tax of \$550)				

Note: Tax rates for gasohol mixtures vary according to the amount of ethanol contained in the mixture.

Source: FHWA and Treasury.

TEA-21 continued the use of the Highway Trust Fund as the mechanism for accounting for federal highway user taxes. TEA-21 also established guaranteed spending levels for certain highway and transit programs. Prior to TEA-21, these programs competed for budgetary resources through the annual appropriations process with other domestic discretionary programs. New budget categories were established for highway and transit spending, effectively establishing a budgetary “firewall” between those programs and other domestic discretionary spending programs. Of the \$217.9 billion authorized for surface transportation programs over the 6-year life of TEA-21, about \$198 billion is protected by the budgetary firewall—about \$162 billion for highway programs and \$36 billion for transit programs.

Under TEA-21, the amount of highway program funds distributed to the states is tied to the amount of actual tax receipts credited to the Highway Account of the Highway Trust Fund. TEA-21 guaranteed specific levels of funding for highway programs from fiscal year 1999 through fiscal year 2003, on the basis of projected receipts of the Highway Account. TEA-21 also provided that beginning in fiscal year 2000, this guaranteed funding level for each fiscal year would be adjusted upward or downward through the RABA calculation as the levels of Highway Account receipts increased or decreased. To determine the RABA adjustment, the Office of Management and Budget and the Office of the Secretary in the Department of Transportation rely on information on Highway Account receipts and revised Highway Account projections supplied by Treasury. Specifically, the Bureau of Public Debt provides the actual Highway Account receipts for the prior fiscal year, and the Office of Tax Analysis (OTA) provides a projection of Highway Account receipts for the next fiscal year.

The Calculation of the Fiscal Year 2003 RABA Adjustment Appears Reasonable

On the basis of the information we reviewed, the fiscal year 2003 RABA calculation—a negative \$4.369 billion—appears reasonable. The RABA adjustment for fiscal year 2003 was calculated by (1) comparing the actual Highway Account receipts for fiscal year 2001 to the projections of receipts for fiscal year 2001 included in TEA-21, and an adjustment for the RABA calculation made for that year (the look back portion of the calculation) and (2) comparing projections of Highway Account receipts for fiscal year 2003 with the projection of these receipts contained in TEA-21 (the look ahead portion of the calculation). The sum of these differences is the RABA adjustment. Table 2 shows the RABA calculations for fiscal years 2000 through 2003. As shown, the RABA adjustments for fiscal year 2000 through fiscal year 2002 were positive—increasing highway funding levels by a total of over \$9 billion. However, the RABA adjustment for fiscal year 2003 is negative \$4.369 billion.

Table 2: RABA Calculation for Fiscal Years 2000 through 2003

In millions of dollars

Fiscal year	"Look back"		"Look ahead"		RABA
FY 2000	1998 actual Highway Account receipts	23,135	2000 estimated Highway Account receipts	28,551	1,456
	less: 1998 TEA-21 estimated Highway Account receipts	22,164	less: 2000 TEA-21 estimated Highway Account receipts	28,066	
	less: look-ahead result for 1998	0			
	subtotal	971	subtotal	485	
FY 2001	1999 actual Highway Account receipts	33,815	2001 estimated Highway Account receipts	30,368	3,058
	less: 1999 TEA-21 estimated Highway Account receipts	32,619	less: 2001 TEA-21 estimated Highway Account receipts	28,506	
	less: look-ahead result for 1999	0			
	subtotal	1,196	subtotal	1,862	
FY 2002	2000 actual Highway Account receipts	30,334	2002 estimated Highway Account receipts	31,732	4,543
	less: 2000 TEA-21 estimated Highway Account receipts	28,066	less: 2002 TEA-21 estimated Highway Account receipts	28,972	
	less: look-ahead result for 2000	485			
	subtotal	1,783	subtotal	2,760	
FY 2003	2001 actual Highway Account receipts	26,900	2003 est. Hwy. Account receipts	28,570	(4,369)
	less: 2001 TEA-21 estimated Highway Account receipts	28,506	less: 2003 TEA-21 estimated Highway Account receipts	29,471	
	less: look-ahead result for 2001	1,862			
	subtotal	(3,468)	subtotal	(901)	

Note: Actual receipts reflect certified net tax receipts (excluding fines and penalties) after deduction of transfers and refunds for the first three quarters of the fiscal year plus an estimate for the fourth quarter. To account for the differences between actual and estimated receipts for the previous year's fourth quarter, Treasury makes an adjustment to the current fiscal year's receipts. Treasury prepares forecasts of tax receipts to the Highway Account of the Highway Trust Fund for the president's budget and other analyses. The Congressional Budget Office prepared the estimates of Highway Account receipts contained in TEA-21.

Source: GAO analysis.

Eighty percent of the fiscal year 2003 RABA adjustment is attributable to the look back portion of the calculation. The actual fiscal year 2001 Highway Account receipts were about \$1.6 billion lower than projections in TEA-21. According to Treasury, actual fiscal year 2001 receipts were lower than expected due to the slowdown in the economy, which especially affected heavy truck sales, and increased gasohol use. We reviewed the amounts distributed to the Highway Trust Fund for the first 9 months of fiscal year 2001, and concluded that these amounts were reasonable and adequately supported on the basis of available information. With respect to the look ahead portion of the calculation, we reviewed Treasury's process for projecting Highway Account revenues. Although we did not independently evaluate the methodology and the economic models Treasury used to develop its revenue projections, our review of a qualitative description of the process, key inputs, and changes to the models gave us no reason to question the resulting projections.

Treasury's Excise Tax Distributions to the Highway Trust Fund for the First 9 Months of Fiscal Year 2001 Are Reasonable

The Secretary of the Treasury transfers applicable excise tax receipts, including receipts from gasoline and other highway taxes, from the General Fund to the excise tax related trust funds, including the Highway Trust Fund, on a monthly basis. These transfers are based on estimates because actual data on which to base the allocations are not available when the deposits are initially made. OTA prepares these estimates on the basis of historical IRS certification data and actual excise tax revenue collections. Subsequently, IRS certifies the actual excise tax revenue collections that should have been distributed to the trust funds on the basis of tax returns and payment data.⁶ Using the IRS certifications, Treasury makes quarterly adjustments to the initial trust fund distributions. For example, in March 2001, Treasury made an adjustment to decrease the fiscal year 2001 excise tax revenue distributions to the Highway Trust Fund to correct for actual collections in the fourth quarter of fiscal year 2000. The certified fourth quarter receipts were \$1.2 billion less than the amount initially distributed on the basis of OTA's estimates for that quarter. According to an OTA official, OTA had calculated the original estimated transfer amounts for the quarter using an economic model that assumed a higher rate of economic growth through calendar year 2000 than was actually the case.⁷ As a result, the downward adjustment was made, reducing the fiscal year 2001 distributions to the Highway Trust Fund by \$1.2 billion, which contributed to the fiscal year 2003 negative RABA adjustment.⁸

Our past reports have identified errors and problems with Treasury's excise tax allocation process.⁹ However, Treasury has made and continues to make improvements to this process. On February 11, 2002, we issued a report on the results of procedures we performed related to the distributions of excise tax revenue to the Highway Trust Fund in fiscal

⁶Typically, IRS certifies quarterly excise tax collections 6 months after the end of the quarter. This is to allow sufficient time for receipt and processing of the tax returns, including returns filed late. Even though IRS certifies collections 6 months after the end of a quarter, certifications for any given quarter routinely contain some amounts related to prior quarters.

⁷Prior to December 2000, the distribution process was linked to OTA's receipt estimates for inclusion in the president's budget.

⁸An adjustment of this type is made every year to correct for the difference between the actual amounts received in the fourth quarter of the previous year and the estimated amounts for that quarter.

⁹See, for example, [GAO/RCED/AIMD-00-148](#).

year 2001.¹⁰ On the basis of this work, we believe the amounts distributed to the Highway Trust Fund for the first 9 months of fiscal year 2001, which were subject to IRS' quarterly excise tax certification process and which were adjusted on the basis of this process, were reasonable and were adequately supported according to available information. Additionally, we believe the March 2001 adjustment made by Treasury to reduce fiscal year 2001 excise tax distributions to the Highway Trust Fund by \$1.2 billion was reasonable and adequately supported.

IRS expects to deliver the results of its certifications for distributions of excise tax revenue collected during the period July 1, 2001, through September 30, 2001 to Treasury's Financial Management Service by March 20, 2002. Consequently, the distributions of fourth quarter fiscal year 2001 excise tax revenue were based solely on estimates prepared by OTA. We did not draw any conclusions about the reasonableness of the distributions made to the Highway Trust Fund for the fourth quarter of fiscal year 2001.

Fiscal Year 2001 Receipts Lower Than Expected

One component of the look back portion of the RABA calculation is the comparison of actual fiscal year 2001 Highway Account receipts with projections of those receipts in TEA-21. The actual receipts were about \$1.6 billion lower than the amounts contained in TEA-21. According to Treasury, the lower than expected highway excise tax receipts in fiscal year 2001 were due to several factors. Most importantly, the weakened economy contributed to a decline in highway excise taxes paid. All but one of the Highway Trust Fund receipt sources were lower in fiscal year 2001 than 2000. For example, tax revenue from the retail tax on trucks dropped 55 percent from fiscal year 2000 to fiscal year 2001. It is important to note that the tax is applied to the sale of new trucks only. As the economy weakened, large numbers of used trucks were placed on the market, which depressed prices and sales in the new heavy truck market.

In addition to the economic downturn, the rise in the use of gasohol contributed to decreased Highway Account receipts. The amount of gasohol receipts allocated to the Highway Account rose by 17.5 percent between fiscal years 2000 and 2001, which Treasury believes is evidence of an ongoing substitution of gasohol fuels for gasoline. Because gasohol is taxed at a lower rate than gasoline and a portion of the tax on gasohol is

¹⁰ [GAO-02-379R](#).

transferred to the General Fund, increases in gasohol use and corresponding reductions in gasoline use decrease Highway Account revenues.

Treasury Uses Seven Economic Models to Forecast Receipts

While not the main factor, the look ahead portion of the RABA calculation also contributed to the overall negative RABA adjustment. As discussed earlier, the look ahead is the difference between TEA-21's projections for the next fiscal year to current projections from the president's budget, which are prepared by Treasury. Based on the general qualitative description Treasury provided us about its methodology and economic models used to develop Highway Trust Fund revenue projections, we have no reason to question the projections for fiscal year 2003. Treasury generally performs two forecasting exercises each year, including one for the president's budget. Treasury uses seven econometric models to forecast each highway excise tax revenue source, such as the tax on gasoline. These models seek to approximate the relationship between historical tax liability and current macroeconomic variables, such as the gross domestic product. This estimated relationship is the baseline, and Treasury uses it to project future excise tax liability, given current law and the administration's economic assumptions. After calculating future tax liability, Treasury forecasters convert the tax liability forecast to a tax receipts forecast using information on deposit rules, payment patterns, and actual collections.

The administration's economic assumptions drive the projections made with each model. According to Treasury, receipts forecasting is a policy exercise conducted for the president to show the state of the Highway Trust Fund if the administration's economic assumptions were to come to fruition. Consequently, Treasury's forecasts incorporate economic assumptions formulated for the budget by the "Troika," which consists of the Council of Economic Advisors, the Office of Management and Budget, and Treasury. Because the goal is to provide a forecast consistent with these economic assumptions, the models use these assumptions directly as explanatory variables, or link other explanatory variables to the assumptions provided. Several of the administration's economic assumptions are publicly available, such as the gross domestic product and consumer price index. However, most Troika assumptions are not publicly available. Other variables specific to the Highway Trust Fund are included in the economic models. Treasury generally obtains this information from other federal agencies. For example, Treasury incorporates USDA's forecast of ethanol use in its gasohol model. However, according to Treasury, the forecasters must ensure that the

addition of these other variables does not create inconsistencies between the projections and the administration's assumptions.

It should also be noted that Treasury does not try to predict future regulatory or legislative changes at the federal or state levels that could affect Highway Trust Fund revenue but bases its projections on current law. Any legislative or regulatory changes that affect Highway Trust Fund revenue will affect the accuracy of the forecasts. Treasury continuously updates its models to incorporate legislative, economic, and other relevant changes—which are then reflected in the next forecasting exercise.

Treasury's Highway Trust Fund Forecasting Framework Has Remained Consistent

According to Treasury officials, Treasury's modeling framework for projecting highway excise tax receipts has not changed in recent years. Treasury's framework consists of a series of econometric models that approximate the relationship between historical tax liability and current macroeconomic variables, which are then used to project future tax liability given current law and certain economic assumptions. Although the overall framework has remained consistent, Treasury officials noted that the specific economic models used to project receipts are continuously evolving to reflect current circumstances. For example, the models are constantly updated to incorporate the most current information on tax collections and reported tax liabilities, as well as enacted legislation. In addition to these routine changes, the models have occasionally undergone other modifications. Treasury identified 15 major changes to the models since 1998. These changes ranged from moving the highway-type tire tax from an annual model to a quarterly model and revising the ethanol forecast in the gasohol model to reflect the phasing out of methyl tertiary-butyl ether (MTBE) in certain states. According to Treasury, the identified changes were designed to improve the models' forecasting ability.

Although Treasury does not use an independent reviewer to validate the models, Treasury officials noted several ways they validate them. First, the Director of Treasury's Office of Tax Analysis reviews the results of the model for accuracy and soundness at least twice a year. Second, Treasury officials compare the projected receipts with actual receipts to assess the validity of the models. In comparing the projected and actual receipts, Treasury forecasters try to determine the cause of any substantial differences and make changes to the model, as appropriate. Third, trust

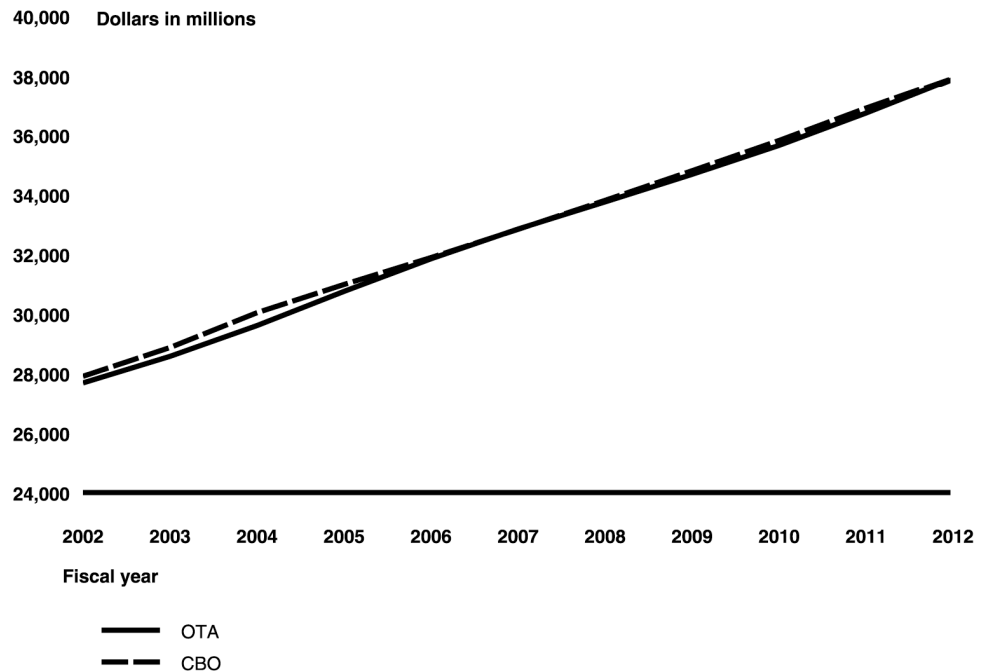
fund agencies, such as FHWA, receive the forecasts semiannually and may offer comments to Treasury on the projections.¹¹

Treasury's Current Projections Are Similar to CBO's Forecast

In order to help determine the reasonableness of Treasury's projection, we compared it with CBO's forecasts. This comparison does not raise any questions about the reasonableness of Treasury's projections. For example, despite different methodologies and assumptions, Treasury and CBO projections of Highway Account receipts for the budget window are very similar. (See fig. 1.) Both agencies forecast steady growth in receipts from fiscal years 2002 through 2012. For example, both Treasury and CBO project the average annual growth of highway-related excise taxes will be about 3 percent.

¹¹FHWA is developing a model to project Highway Trust Fund receipts.

Figure 1: Comparison of Treasury and CBO Projections of Highway Account Receipts, 2002 to 2012



Source: Treasury and CBO.

\$600 Million Error in RABA Adjustment Occurred Outside of Treasury's Models

In January 2002, the administration announced that the fiscal year 2003 RABA adjustment would be a negative \$4.965 billion. The administration subsequently announced that an error had been made in calculating the RABA adjustment and that the correct amount was a negative \$4.369 billion—a \$600 million difference.

The error, which was made in Treasury's allocation of projected highway tax revenues to various accounts rather than in its economic models, affected the look ahead part of the fiscal year 2003 RABA calculation. Specifically, it occurred in Treasury's allocation of projected revenues from gasohol sales to the General Fund, the Leaking Underground Storage Tank Trust Fund, and the Highway and Transit Accounts within the Highway Trust Fund. In short, the error resulted in the incorrect distribution of projected gasohol receipts among the funds.

Because gasohol has six different blends—all with different tax rates and distributions—the gasohol allocations are complicated and require many “links” among several spreadsheets. With respect to gasohol, the Highway Account receipts are calculated after allocations for the other accounts—the Mass Transit Account, the Leaking Underground Storage Tank Trust Fund, and the General Fund—have been calculated. This is because the Highway Account is a “catch-all” for taxes not already attributed to other accounts. A misalignment occurred between the different spreadsheets used to distribute gasohol tax revenues to the different accounts, which caused too much of the gasohol revenues to be transferred to the General Fund. Therefore, the error incorrectly lowered projected Highway Account revenue beginning with fiscal year 2002.

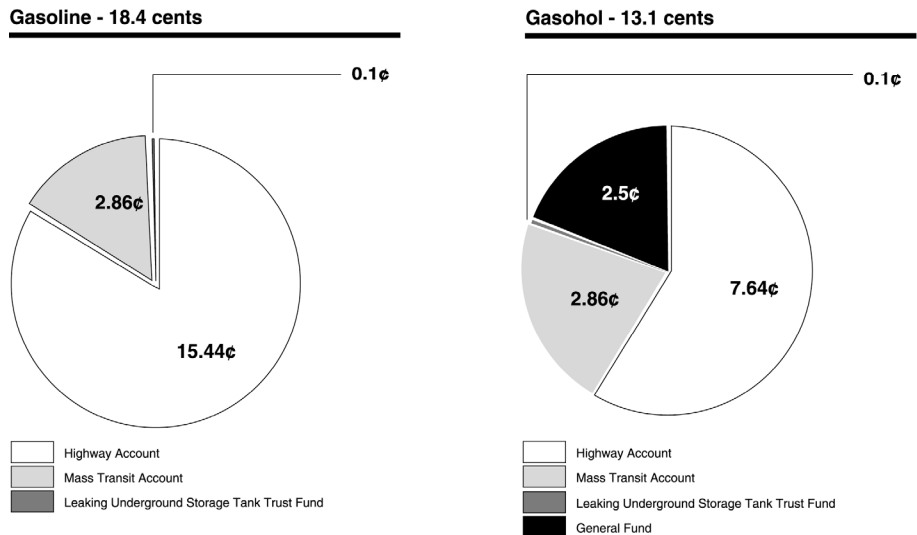
According to a Treasury official, a number of factors contributed to the error, including tightened time constraints during this budget cycle for Treasury forecasters to calculate and review their projections for the fiscal year 2003 budget. Each forecaster is responsible for reviewing his/her own calculations. In hindsight, however, this official said that the internal quality checks his office made were insufficient, especially on the gasohol calculations, which are very complex. He noted that Treasury plans to take several steps to avoid such an error in the future, including requiring another Treasury forecaster to spot check the projections.

Gasohol Usage Has Significant Impact on Trust Fund

The use of gasohol instead of gasoline affects the amount of Highway Account revenue for two reasons. First, gasohol is partially exempt from the standard gasoline excise tax. Second, 2.5 cents of the tax received on each gallon of gasohol sold is transferred to the General Fund. (See fig. 2.) Based on our ongoing work, our preliminary estimates show that the partial tax exemption resulted in \$3.86 billion in revenue forgone by the Highway Account during fiscal years 1998 through 2001.¹² We also estimate that the General Fund transfer caused a reduction of \$2.15 billion in Highway Account revenue during the same period.

¹²All estimates of revenue forgone by the Highway Account are presented in constant 2001 dollars.

Figure 2: Distribution of Gasoline and Gasohol Taxes to Different Accounts



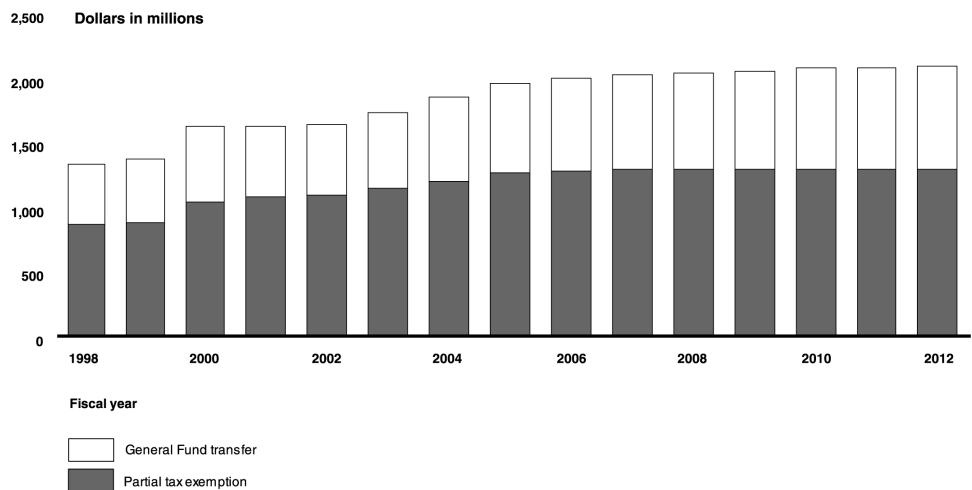
Source: GAO analysis.

Treasury projects that gasohol use will continue to rise steadily through fiscal year 2012. According to Treasury, such an increase will occur at the expense of gasoline as some states ban the use of MTBE as an oxygenate additive. Using Treasury's highway excise tax revenue projections, we estimate that the partial tax exemption will lower Highway Account revenue by a total of \$13.72 billion from fiscal years 2002 through 2012. (See fig. 3.) We also estimate that the Highway Account will not receive \$2.36 billion due to the General Fund transfer from fiscal years 2002 through 2005, when the transfer ends.¹³ In addition, if the amount of the transfer is not dedicated to the Highway Account following fiscal year 2005, we project that the Highway Account will forgo \$4.56 billion from fiscal years 2006 through 2012. State or federal legislation or regulations that result in gasohol use above what is currently projected, such as a

¹³The General Fund transfer expires at the end of fiscal year 2005. To reflect the expiration, Treasury reduces the total federal excise tax on gasohol blends by 2.5 cents starting in fiscal year 2006. Under Treasury's approach, the Highway Account is neither benefited nor harmed by the expiration. For the purposes of this testimony, we estimated the impact of the 2.5 cent General Fund transfer assuming the transfer continued through fiscal year 2012.

nationwide ban on MTBE, would increase the negative impact on the Highway Account absent other changes.

Figure 3: Estimated Revenue Forgone by the Highway Account Due to Gasohol Tax Provisions, 1998 to 2012



Note: Estimates for fiscal years 1998 to 2000 are based on actual excise taxes collected. We estimated fiscal year 2001 receipts using actual receipts collected for the first three quarters and a projection of receipts collected for the fourth quarter. Estimates for fiscal years 2002 to 2012 are based on Treasury's projections. Estimates are in constant 2001 dollars.

Source: GAO analysis.

According to USDA and ethanol industry officials, the partial tax exemption for gasohol is intended to create a demand for ethanol that will raise the price of ethanol at least to the point where producers can cover costs. These officials stated that if the partial tax exemption on ethanol was removed, the price of ethanol would no longer be competitive with gasoline and the demand would disappear. In this case, ethanol fuel production would, for the most part, not continue. Furthermore, ethanol industry officials we talked to warned that because a substantial amount of the corn grown in the United States is used for ethanol, the collapse of the ethanol industry would affect the corn and agriculture markets which could in turn affect the federal government's agricultural support payments.

Ways to Reduce Highway Funding Fluctuations and Industry Proposals to Increase Revenues

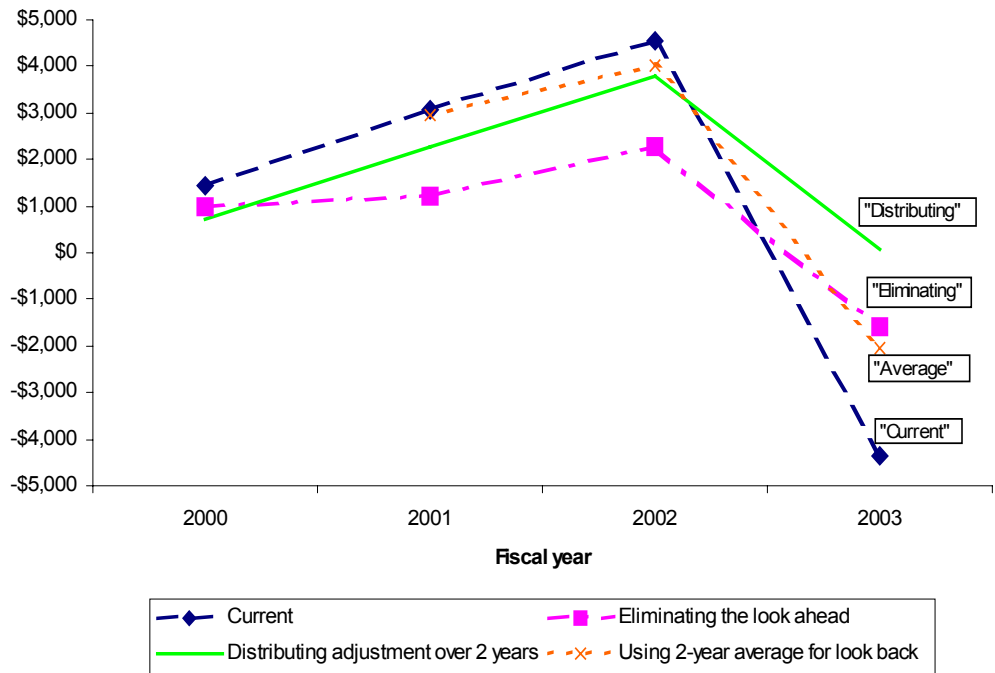
As the Congress considers the reauthorization of surface transportation programs, there are several ways it could restructure the RABA adjustment to reduce fluctuations in highway funding. Furthermore, industry officials have identified a number of possible ways to increase Highway Trust Fund revenues. Ultimately, the Congress and the administration must weigh the advantages and disadvantages of changing the RABA adjustment and/or Highway Trust Fund revenue streams. The discussion that follows is not intended to show support for any possible alternatives but instead to describe some of the ways highway funding could be increased.

The RABA formula as defined by TEA-21 contains look back and look ahead components that tend to accentuate the impact of any shifts in Highway Account receipts. For example, the recent downturn in the economy is reflected in several elements of the fiscal year 2003 RABA calculation. First, the actual receipts for fiscal year 2001 were lower than expected. Second, the downturn caused a need to correct for optimistic projections of fiscal year 2001 receipts made in December 1999. Third, the fiscal year 2003 projections are lower than those contained in TEA-21 because the updated projections reflect the current economic conditions.

There are several changes that could be made to reduce the potential for dramatic swings in funding for highway programs but maintain a tie to actual receipts credited to the Highway Account. For example, changes to the RABA adjustment that could smooth out the impact of significant funding changes would include (1) eliminating the look ahead part of the RABA calculation, (2) averaging the look back part of the calculation over 2 years, and (3) distributing the RABA adjustments over 2 years. In figure 4, we show the actual RABA adjustments under the current structure and the adjustments that would have been made using these three options from fiscal years 2000 through 2003.

Figure 4: Comparison of Different RABA Options

Dollars in millions



Source: GAO analysis.

As shown, the three options appear to produce less dramatic shifts in funding than the current RABA mechanism over the past four years. However, we did not analyze how these options would perform against different trust fund scenarios or economic cycles in the future.

Industry groups have proposed various ways to increase Highway Trust Fund revenue such as crediting the Highway Trust Fund for the interest earned on its balances, increasing the use of tolls, and/or establishing an indexing system to help ensure that gas tax revenues are linked to inflation. Although each of these actions would increase Highway Trust Fund revenues, we have not evaluated their fiscal or public policy implications.

Another way to enhance Highway Trust Fund revenues would be to increase highway excise taxes. Although no tax increase is attractive,

there are some equity arguments that support an increase in certain highway user taxes. For example, for some time FHWA has reported that heavy trucks (trucks weighing over 55,000 pounds) cause a disproportionate amount of damage to the nation's highways and have not paid a corresponding share for the cost of the pavement damage they cause. Currently, heavy vehicles are taxed at the rate of \$100 per year plus \$22 for every 1,000 pounds (or fraction thereof) they weigh over 55,000 pounds. However the tax is capped at \$550. In 2000, we reported that the Joint Committee on Taxation estimated that raising the ceiling on this fee to \$1900 could generate about \$100 million per year.¹⁴

Mr. Chairman, this concludes my prepared remarks. I would be pleased to answer any questions you or other members of the Subcommittee may have.

Contact and Acknowledgements

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¹⁴U.S. General Accounting Office, *Budget Issues: Budgetary Implications of Select GAO Work For Fiscal Year 2001*, [GAO-OCG-00-8](#) (Washington, D.C.: March 31, 2000).

Appendix I: Objectives, Scope, and Methodology

To determine the reasonableness of the Revenue Aligned Budget Authority (RABA) calculation we relied in part on previous work done by GAO under an agreement with the Department of Transportation's Inspector General which resulted in a February 2002 report: [Applying Agreed-Upon Procedures: Highway Trust Fund Excise Taxes \(GAO-02-379R\)](#). Under that agreement we (1) performed detailed tests of transactions that represent the underlying basis of the amounts distributed to the Highway Trust Fund, (2) reviewed the Internal Revenue Service's quarterly certifications of these amounts, and (3) reviewed the Office of Tax Analysis' process for estimating amounts distributed to the Highway Trust Fund in the fourth quarter of fiscal year 2001. We also interviewed knowledgeable Department of Treasury, Office of Management and Budget, and Department of Transportation officials who provided documentation and described the processes used to develop the calculation. We obtained from the Treasury's Office of Tax Analysis (OTA) a general description of its economic models, including key inputs and changes made to the models since 1998, which are used to estimate future Highway Trust Fund revenues. Additionally, we reviewed related OTA internal analyses and reports. However, we did not evaluate or certify Treasury's economic models that forecast future Highway Trust Fund revenues. We met with Congressional Budget Office (CBO) officials who described their process for projecting Highway Trust Fund revenues. CBO officials also provided their Highway Trust Fund revenue forecast, which we compared to Treasury's projections.

To determine how the \$600 million error in the initial RABA adjustment was made, we interviewed Treasury and DOT officials. We also reviewed Treasury's workpapers to determine the source and cause of the error.

To evaluate the impact of gasohol usage on the Highway Account we interviewed Department of Energy, Transportation and Agriculture officials and representatives from the Renewable Fuels Association, the American Road and Transportation Builders Association and the Alliance of Automobile Manufacturers. We reviewed Department of Energy and Agriculture reports and analyses on ethanol production and consumption. To calculate the revenue forgone to the Highway Trust Fund as a result of the gasohol tax provisions we used a methodology we developed in a prior study of alcohol fuel tax incentives.¹ In particular, we used actual and

¹U.S. General Accounting Office, *Tax Policy: Effects of the Alcohol Fuels Tax Incentives*, GAO/GGD-97-41 (Washington, D.C.: March 6, 1997).

projected excise tax receipts on gasohol and gasoline used for gasohol; tax rates for gasohol, gasoline used for gasohol, and gasoline; and information on the distribution of the receipts from these fuels to the Highway Account, Mass Transit Account, the Leaking Underground Storage Tank Trust Fund, and General Fund to calculate the revenue forgone by the Highway Account due to gasohol tax provisions. Our data sources included the Statistics of Income Bulletin and Treasury's latest projections of gasohol tax receipts and refunds and credits. In addition, Treasury provided information on the tax rates and the distributions of the tax receipts to different accounts by year. Our estimates of the future impact of gasohol use are based on Treasury's projections of gasohol tax receipts and as a result, our projections incorporate the same assumptions used by Treasury.

The estimates that we present are "static" estimates in that they do not take into account the potential changes in motor fuel consumption in response to the elimination of the exemptions. The projections do not represent the amount of revenue that would be saved if the exemptions were eliminated because they do not account for the behavioral responses that might alter the total consumption in the future. Rather, the estimates that we have made are of the reduction of excise tax revenues due to the exemptions.

To identify possible ways to change the RABA adjustment to reduce the wide shifts caused by the current formula, we relied on discussions we had with Treasury and DOT officials. We attempted to show how the options we identified would result in less fluctuation if they had been applied throughout the TEA-21 time period. We did not attempt to project how these alternatives would affect future funding levels under different highway receipt scenarios. To identify ways to enhance Highway Trust Fund revenues we used our past work on heavy truck use. In addition, we interviewed government and industry officials from such organizations as the American Road and Transportation Builders Association. We did not attempt to evaluate the fiscal or public policy implications of any of these proposals.