Glenn Hegar

Texas Comptroller of Public Accounts

September 30, 2016

The Honorable Greg Abbott, Governor
The Honorable Dan Patrick, Lieutenant Governor
The Honorable Joe Straus III, Speaker of the House
Members of the Legislative Budget Board

Ladies and Gentlemen:

The 84th Legislature directed the Comptroller's office in Section 5 of House Bill 32 to conduct a comprehensive study to identify the effects of economic growth on future state revenues. The enclosed report is presented to the Governor and the Legislative Budget Board in fulfillment of that requirement.

The report presents alternative hypothetical scenarios – low, baseline and high growth – for economic and revenue projections over the coming decade. It shows the relationships between major state revenue streams and the state's economy. It also provides projections for possible future revenue growth assuming those relationships hold in the future.

Given the time needed to develop and test models estimating how state revenue sources correlate with measures of state economic growth, it was necessary to project all three scenarios forward based on fiscal 2017 conditions as presented in the October 2015 *Certification Revenue Estimate*.

These hypothetical projections are necessary to complete this study's analysis; they do not, however, constitute new official economic forecasts or revenue estimates from the Comptroller's office. The material in this report is provided for informational purposes only and projections in the January 2017 *Biennial Revenue Estimate* are likely to vary from those presented in this report.

Sincerely,

Glenn Hegar

Enclosure

cc: Ursula Parks, Director, Legislative Budget Board

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Click here for H.B. 32 data spreadsheet

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H.B. 32 Report

Overview

This report — mandated by H.B. 32, 84th Legislature, Regular Session — describes the principal sources of state revenues, examines their relationship to the Texas economy and projects future state revenues based on three alternative hypothetical scenarios for economic growth.

State taxes are examined in detail. Non-tax revenues, including those from licenses, fees, fines and penalties; interest and investment income; lottery proceeds; settlements of claims; and other miscellaneous sources, are estimated in the aggregate. Federal funds, although an important part of state budgeting, are external to discretionary state tax and revenue law and therefore, are not considered in this report.

This study examines state revenues (as shown in **Tables A.1** and **A.2** in the Appendix) and economic conditions from state fiscal year 1996 through 2015. This period was marked by significant variation in state and national economic conditions, including the late-1990s technology boom and stock market bubble, a moderate recession in 2001, the early- through mid-2000s housing bubble and subsequent crash and associated financial crisis, and the Great Recession, as well as extreme variation in energy prices and the hydraulic fracturing boom and its aftermath. From the data for this period, we have correlated state revenue sources with economic variables — nominal and real Gross State Product (GSP), personal income, energy prices and population — to serve as the basis for projecting state revenues under alternative future economic scenarios.

Nominal GSP is the summary measure of the Texas economy used to address the implications of economic growth for state revenue, a measure that is not adjusted for inflation. While economic analyses and business conditions reportage often are based on real (i.e., inflation-adjusted) measures of economic activity, state budgeting is not based on inflation-adjusted dollars. Estimates of tax revenue and GSP in current dollars should be more meaningful than constant dollar estimates.

Because some state taxes changed significantly during the study period, historical tax collections data have been separated into estimates of a base component, as each tax was defined under 1996 law, and a component attributed to legislative changes taking effect after fiscal 1996.

The base component estimates provide a better indication of the general behavior of tax collections with respect to the economy. Because the 2006 amendment of the franchise tax was of such great scope — the replacement of the earned surplus (profits-based) tax with the margin tax, the change from separate-entity to combined reporting, and the application of the tax to most forms of liability-limited business organizations rather than only corporations and limited liability companies — we provide separate estimates of base versus legislative changes for the earned-surplus and margin-tax versions of the franchise tax.

The relationship between school district property value and economic growth also is examined in this report. While property taxation is not an explicit part of the state revenue system — Section 1-e, Article 8, Texas Constitution prohibits levy of a state ad valorem tax — school district taxable property values nonetheless have implications for the state budget. School district entitlements to state aid are determined in part by property values; lower property values generally imply greater disbursements of state revenues, while higher district property values imply less state spending.

Future Revenue Trends

As indicated throughout this report, the past 20 years have seen considerable variation in economic conditions, and we have no reason to suppose the future will be any different. To represent the possible course of future state revenue under a plausible range of economic conditions, this report presents three alternative scenarios regarding future economic growth.

As shown in **Table A.3** in the Appendix, the pessimistic (low-growth) scenario assumes a prolonged period of low oil and natural gas prices combined with a mild U.S. recession followed by anemic growth. In this scenario, the NYMEX oil price is just below $37 in 2018 and remains less than $50 over the entire forecast period. Natural gas prices range from $2.46 per mmBTU in 2018 to $3.85 in 2027. Compared to the baseline scenario, U.S. real Gross Domestic Product (GDP) growth is lower by 1.9 percentage points in 2018, 1.6 percentage points in 2019 and an average of 0.5 percentage points each year thereafter. Texas experiences a moderate recession in 2019 (negative growth in real GSP and no significant growth in nominal GSP) followed by a brief post-recessionary increase in nominal GSP growth of 5.9 percent in 2021 and decreases to 4.8 percent in 2022. Thereafter, GSP growth decelerates to about 4 percent annually.

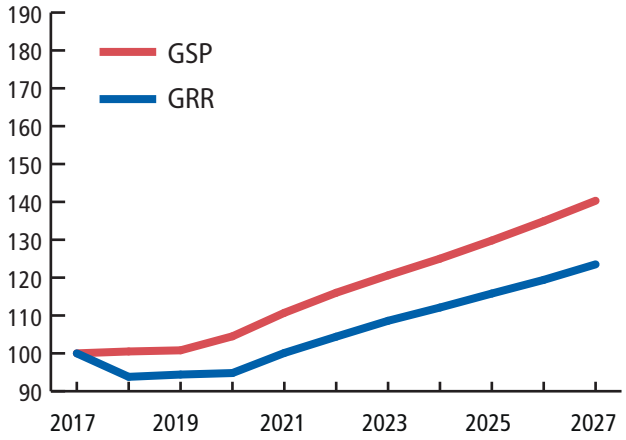
Exhibit 1 compares growth in General Revenue-Related Funds and All Funds, Excluding Trust Funds with Texas nominal GSP under the pessimistic scenario.

Exhibit 1

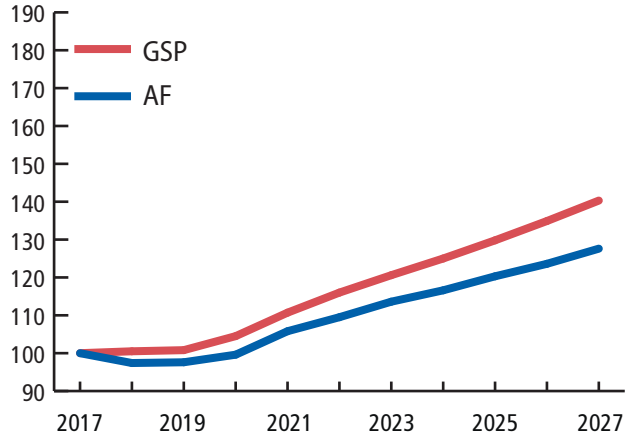
Indexed Values for Total Net Revenues and Texas Nominal Gross State Product

Pessimistic Scenario, Fiscal Years 2017 to 2027
(Indexed Values, 2017=100)

General Revenue-Related (GRR)



All Funds, Excluding Trust (AF)



Note: Amounts are not adjusted for inflation.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

As shown in **Table A.12** in the Appendix, the baseline scenario incorporates oil and natural gas price forecasts from the Comptroller's Fall 2015 economic forecast as well as August 2015 IHS Markit estimates of U.S. GDP, personal income, aggregate wages, employment and other economic variables, used in combination with the oil and natural gas prices to forecast Texas GSP, personal income, nonfarm employment, resident population, and unemployment rates. In this scenario, nominal (current-dollar) GSP growth averages 5.2 percent annually from fiscal 2018 through 2027. The price of oil rises from under $54.00 to just near $79, while the price of natural gas increases from $3.28 to $5.13.

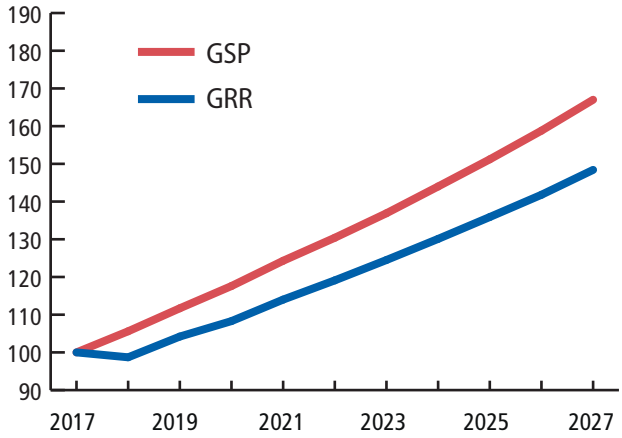
Exhibit 2 compares growth in General Revenue-Related Funds and All Funds, Excluding Trust Funds with Texas nominal GSP under the baseline scenario.

Exhibit 2

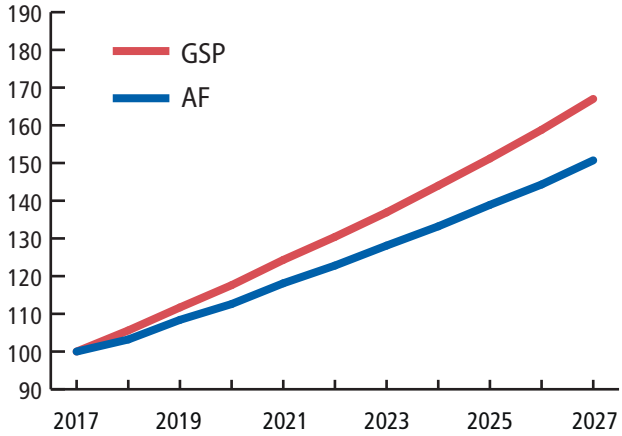
Indexed Values for Total Net Revenues and Texas Nominal Gross State Product

Baseline Scenario, Fiscal Years 2017 to 2027
(Indexed Values, 2017=100)

General Revenue-Related (GRR)



All Funds, Excluding Trust (AF)



Note: Amounts are not adjusted for inflation.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

As shown in **Table A.21** in the Appendix, the optimistic (high-growth) scenario assumes a significant increase in oil and natural gas prices (relative to the baseline scenario) combined with accelerating growth in the broader U.S. economy. In this scenario, the NYMEX oil price climbs from less than $60 per barrel in 2018 to just below $93 in 2027, while natural gas prices increase from $5.04 per mmBTU to $7.35. Compared to the baseline scenario, U.S. real GDP growth is 1.1 percentage points higher in 2018, 1.2 percentage points higher in 2019 and an average of 0.4 percentage points higher in each year thereafter. Nominal GSP growth exceeds 7 percent annually in 2018 and 2019 and averages more than 6 percent for the remainder of the forecast period.

Exhibit 3 compares growth in General Revenue-Related Funds and All Funds, Excluding Trust Funds with Texas GSP under the optimistic scenario.

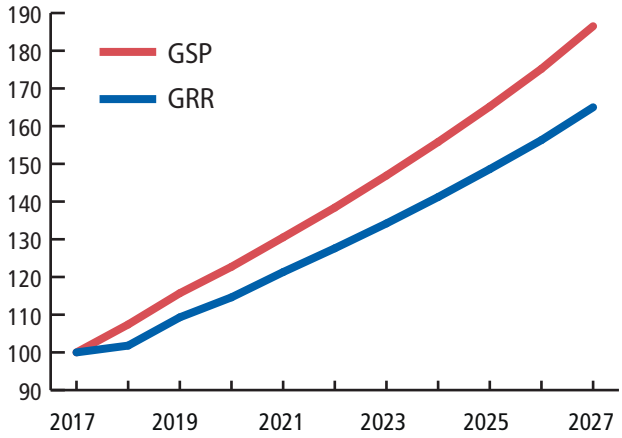
These scenarios and associated revenue estimates are illustrative; none should be construed as a formal forecast. The baseline case is not an extrapolation from current conditions and the associated revenue estimates for 2018 and 2019 should not be construed as preliminary indications of the estimates forthcoming in the Biennial Revenue Estimate for 2018 and 2019, to be released in January 2017.

Exhibit 3

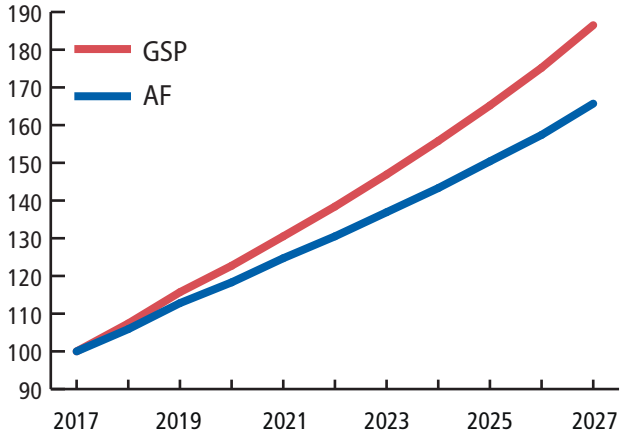
Indexed Values for Total Net Revenues and Texas Nominal Gross State Product

Optimistic Scenario, Fiscal Years 2017 to 2027
(Indexed Values, 2017=100)

General Revenue-Related (GRR)



All Funds, Excluding Trust (AF)



Note: Amounts are not adjusted for inflation.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Future state revenue estimates are presented for 2018 through 2027. In addition to individual estimates by revenue source and aggregated estimates on an All Funds basis, we provide in the Appendix estimates for General Revenue-Related funds, the State Highway Fund, the Property Tax Relief Fund (PTRF) and the Economic Stabilization Fund (ESF). These estimates under the pessimistic scenario can be found in **Tables A.4** through **A.11** in the Appendix. Estimates under the baseline scenario can be found in **Tables A.13** through **A.20**, and estimates under the optimistic scenario can be found in **Tables A.22** through **A.29** in the Appendix.

The implications for revenue growth vary significantly by fund. Growth in General Revenue-Related funds slows notably in 2018 due to the start of the $2.5 billion annual allocation of limited sales and use tax revenue to the State Highway Fund, and to a lesser degree in 2020 by the beginning of annual allocations of motor vehicle sales and use tax revenue to the State Highway Fund.

The tables represent annual revenues by fund only; fund balances are not estimated as this report does not include estimates of future expenditures.

Under all three scenarios, revenues grow more slowly than the state economy over time. For example, in the baseline case, estimated All Funds revenues rise from $73.2 billion in 2018 to $106.8 billion in 2027, an increase of 46 percent, while nominal GSP rises by 58 percent as shown in **Tables A.14** and **A.12**, respectively, in the Appendix. This is due in part to the fact that the state's excise taxes — motor fuel taxes, some of the alcohol taxes and the cigarette tax — are based on volume rather than price. These taxes correlate better with population than with nominal GSP or personal income. But even taxes that correlate well with these measures, such as the sales and use tax, tend to rise more slowly than the economy. Reasons for this are discussed in the individual tax profiles of this report.

The language of H.B. 32 contemplates repeal of the franchise tax and indicates that this report should identify revenue growth "allocation options," evidently to replace franchise tax revenue allocated to the PTRF under current law. For the purposes of this report, "allocation options" is interpreted to mean allocation of revenues from sources under current law, not from potential sources. Accordingly, we do not include descriptions or estimates of alternative taxes or increases to rates for existing taxes that might be enacted to replace franchise tax revenue if the tax were repealed.

School district entitlements to state aid, including for the cost of property tax rate compression, are determined by the provisions of the Education Code and the General Appropriation Act, and do not vary with amounts available in the PTRF. In the General Appropriations Act, the PTRF is identified as one method of finance for the Foundation School Program (FSP). But since the cost of the FSP does not vary with the amounts available in the PTRF, any variation in such amounts is offset with appropriations from the General Revenue Fund.

Despite its lack of functional budgetary consequence, the PTRF may be of symbolic importance, showing taxpayers that some part of their state taxes are intended to replace local property tax levies. Inasmuch as the language of H.B. 32 speaks to the promotion of efficiency and sustainability in revenue allocation, specifically with respect to the PTRF in the event of franchise tax repeal, the optimum allocation for that purpose would be from unrestricted general revenue.

Dedication of a particular tax to the PTRF would lend its characteristic variability to the fund. While the taxes currently deposited to the General Revenue Fund are correlated to the economy, they are far from perfectly correlated, conferring a degree of "portfolio diversification" to general revenue. The excise taxes grow much more slowly than the portion of franchise tax revenue allocable to the PTRF, and thus may not be reliable to meet growing educational demands. Allocation of revenues other than unrestricted general revenue to the

PTRF, moreover, would require the repeal or curtailment of revenue dedications to other purposes.

Repeal of the franchise tax would result in reduced revenues for both the General Revenue Fund and the PTRF. If, for example, the franchise tax were repealed effective fiscal 2020, under the baseline scenario, estimated general revenue available for general revenue-related appropriations would be reduced by $3.07 billion and PTRF revenue by $767 million. (Note: Current Legislative Budget Board and Comptroller accounting conventions exclude PTRF from the definition of General Revenue-Related funds.) Further, if General Revenue were then allocated to the PTRF to make up for the PTRF's loss of franchise tax revenue, this would mean a total loss of $3.83 billion or 6.8 percent of general revenue available for general purpose spending.

Revenue Volatility

The revenue projections in the baseline and optimistic scenarios are based on long term average relationships between the revenue sources and the pertinent economic variables. This is also the case for the pessimistic scenario revenue projections, subject to some adjustment to better represent the effects of a recession. The projected average growth trajectories that result appear smoother, or less erratic, than actual historical series. This is because the revenue sources and economic variables are subject to more year-to-year random variation than can be usefully modeled. Additionally, the revenue sources, other than the excise taxes, are subject to greater random variability than the economy.

Exhibit 4 presents relative index measures of the annual variability of each major revenue source and nominal GSP. The indexed values are based on the standard deviation from the time trend for each revenue source. A higher index value indicates greater relative variability (along with greater difficulty to forecast accurately).

Exhibit 4

Index of Relative Annual Variability

Oil Production and Regulation Taxes	45.9
Natural Gas Production Tax	40.1
Motor Vehicle Sales and Rental Taxes	12.0
Utility Taxes	11.8
Hotel Occupancy Tax	10.1
Insurance Taxes	7.7
Sales Taxes	6.8
Franchise Tax	6.1
Alcoholic Beverage Taxes	5.7
Texas Nominal Gross State Product	4.6
Cigarette and Tobacco Taxes	2.9
Motor Fuel Taxes	2.5

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Tax Revenue Profiles

1. Sales Taxes

Texas' sales taxes category includes the limited sales and use tax and the boat and boat motor sales and use tax.

The sales and use tax is the state's largest source of tax revenue, and is imposed at a rate of 6.25 percent of the price of a broad range of items purchased within or brought into the state. The tax is paid both by businesses and consumers and applies to purchases of goods not specifically exempted by law as well as selected services. Cities, metropolitan transit authorities, counties and other local taxing jurisdictions may levy additional local sales taxes at a combined rate of up to 2 percent.

In fiscal 2015, state sales and use taxes generated $28.9 billion in all-funds revenue excluding trusts, as well as nearly $33 million for three special event trust funds.

Nearly all sales and use tax collections are deposited to General Revenue Fund 0001. Revenue derived from a 1.5 percent surcharge on diesel equipment is deposited to the Texas Emissions Reduction Plan account. Revenue from sales tax on motor lubricants is deposited into the State Highway Fund 0006. Also, an amount sufficient to compensate for the 2016 repeal of the fireworks tax is allocated to the Rural Volunteer Fire Department Insurance account.

Ninety-five percent of the revenue from the boat and boat-motor sales and use tax is deposited to the General Revenue Fund, with the remaining 5 percent deposited to the Game, Fish and Water Safety account.

In November 2015, Texas voters approved a constitutional amendment to require up to $2.5 billion of net sales tax collections above $28 billion to be transferred to the State Highway Fund. The first transfer is expected in fiscal 2018.

Historical Collection Trends

Sales tax revenue growth largely tracks growth in the Texas economy, whether measured by nominal Gross State Product (GSP) or personal income. But the rate of growth has been slower than that of the economy.

The compound average annual growth rate for sales tax revenue from fiscal 1996 through 2015 was 5.3 percent, compared with 5.8 percent for nominal GSP. This somewhat slower tax revenue growth is attributable principally to slower growth in retail spending than in the rate of growth of aggregate household income.

From 2002 through 2015, the amount of sales subject to sales tax reported by retailers declined from 15.7 percent of personal income to 13.7 percent, a relative drop in the portion of income devoted to taxable retail spending of about 13.2 percent. The relative decline in taxable spending at general merchandise stores, the largest retail category, has been particularly notable, with its share of personal income falling by 19.2 percent.

Spending in sectors dominated by household spending — retail trade, accommodation and food service (mainly restaurants), information services (mainly telecommunications and cable service), and arts, entertainment and recreation — declined from 65.0 percent of all sales-taxable activity in 2002 to 59.2 percent in 2015. The share for sectors dominated by business spending, by contrast, rose from 35.0 percent to 40.8 percent over the same period, with the most notable increases occurring in oil and natural gas-related sectors.

Factors inhibiting growth in sales tax revenues include relative growth in spending on non-taxable items such as health care; the expansion of electronic

commerce, which offers increased opportunities for avoiding the tax through purchases with out-of-state vendors who may not collect and remit Texas tax; and expanded exemptions provided by the Legislature.

Tax collections declined in response to two recessions — modestly in fiscal 2002 and 2003, during the comparatively shallow recession in 2001— and more dramatically during 2009 and 2010, in response to the Great Recession. Revenue growth accelerated during the recovery periods after each, particularly as a result of the shale oil and natural gas production boom (**Exhibits 1.1**, **1.2**, and **1.3**).

Comparatively minor changes to sales tax law are enacted by virtually every Legislature. In the last 20 years, the tax rate hasn't changed, but the tax base has seen numerous changes.

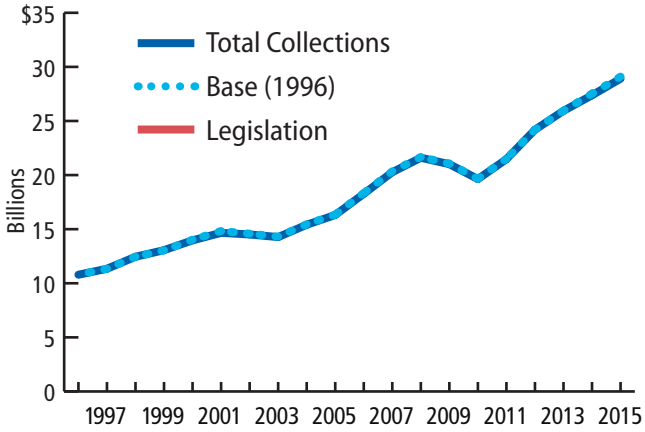
The most significant changes to tax exemption policy were passed by the Legislature in 1999, and implemented during 1999, 2000, and 2001. These included the creation of the original back-to-school sales tax holiday for certain clothing and footwear; exemption of up to the first $25 of monthly charges for Internet access; exemption of 20 percent of the value of data processing and information services; exemption for over-the-counter drug purchases; and exemption of certain items used in timber production.

As of fiscal 2002, the Legislature also provided for a sales tax surcharge on certain off-road, heavy-duty diesel equipment, to support the Texas Emissions Reduction Plan.

As of fiscal 2014, the Legislature created an exemption for depreciable tangible personal property used in qualified research; an annual refund of up to $50 million of sales taxes paid by providers of cable TV, Internet access and telecommunications services; and an exemption for most items of tangible personal property purchased for use by certain qualified data centers.

Exhibit 1.1

Net Sales Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 1.2

Impact of Legislation on Net Sales Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$10,791,472	-	$10,791,472
1997	11,340,074	-	11,340,074
1998	12,455,846	$3,536	12,459,382
1999	13,046,467	22,664	13,069,131
2000	14,038,978	-62,321	13,976,657
2001	14,830,204	-167,136	14,663,068
2002	14,583,715	-67,373	14,516,342
2003	14,314,973	-37,687	14,277,286
2004	15,456,374	-39,218	15,417,156
2005	16,354,049	-41,238	16,312,811
2006	18,343,910	-68,700	18,275,210
2007	20,352,694	-82,218	20,270,476
2008	21,670,199	-66,109	21,604,090
2009	21,063,249	-49,184	21,014,065
2010	19,668,917	-38,611	19,630,306
2011	21,510,271	-31,288	21,478,983
2012	24,208,807	-17,566	24,191,241
2013	25,955,837	-12,029	25,943,807
2014	27,537,758	-152,049	27,385,709
2015	29,102,039	-191,182	28,910,857

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 1.3

Annual and Biennial Sales Taxes Collections Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	5.1%	5.1%			
1998	9.8	9.9	1998-99	15.2%	15.3%
1999	4.7	4.9			
2000	7.6	6.9	2000-01	13.2	12.2
2001	5.6	4.9			
2002	-1.7	-1.0	2002-03	0.1	0.5
2003	-1.8	-1.6			
2004	8.0	8.0	2004-05	10.1	10.2
2005	5.8	5.8			
2006	12.2	12.0	2006-07	21.6	21.5
2007	11.0	10.9			
2008	6.5	6.6	2008-09	10.4	10.6
2009	-2.8	-2.7			
2010	-6.6	-6.6	2010-11	-3.6	-3.5
2011	9.4	9.4			
2012	12.5	12.6	2012-13	21.8	22.0
2013	7.2	7.2			
2014	6.1	5.6	2014-15	12.9	12.3
2015	5.7	5.6			
Average	**5.4%**	**5.3%**		**11.0%**	**10.9%**
Maximum	**12.5%**	**12.6%**		**21.8%**	**22.0%**
Minimum	**-6.6%**	**-6.6%**		**-3.6%**	**-3.5%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

The sales tax is highly correlated with nominal GSP and personal income, the most important measures of the Texas economy, and can reasonably be modeled in relation to either for forecasting purposes. Sales tax collections from the oil and natural gas-related sectors — mining, non-building construction, manufacturing and wholesale trade —correlate well with energy prices and drilling activity.

During the past 20 years, sales tax collections have grown at about 90 percent of the rate of growth for GSP and personal income. This lower rate of growth reflects a long-term decline in retail spending relative to income (**Exhibits 1.4** and **1.5**).

It should be emphasized, however, that the relationship between sales tax revenue growth and measures of economic growth is best considered as a long-term average. Sales tax revenue is significantly more volatile than personal income or nominal GSP, in part because some sales-taxable personal consumption expenditures are discretionary, with purchases being delayed during recessions and accelerated during recoveries. More significantly, business spending on taxable items is cyclical, and, for businesses in the oil and natural gas-related sectors, highly responsive to volatile energy prices.

Thus, in any given fiscal year or biennium, the rate of change in sales tax collections may deviate substantially from that for personal income or nominal GSP. Sales tax revenue tends to fall faster than measures of the economy during recessions and to grow faster than the economy as the state comes out of recession.

Exhibit 1.4

Actual and Indexed Values for Sales Taxes Collections, Sales Taxes Base and Texas Nominal Gross State Product

(Amounts in Thousands; Indexed Values, 1996=100)

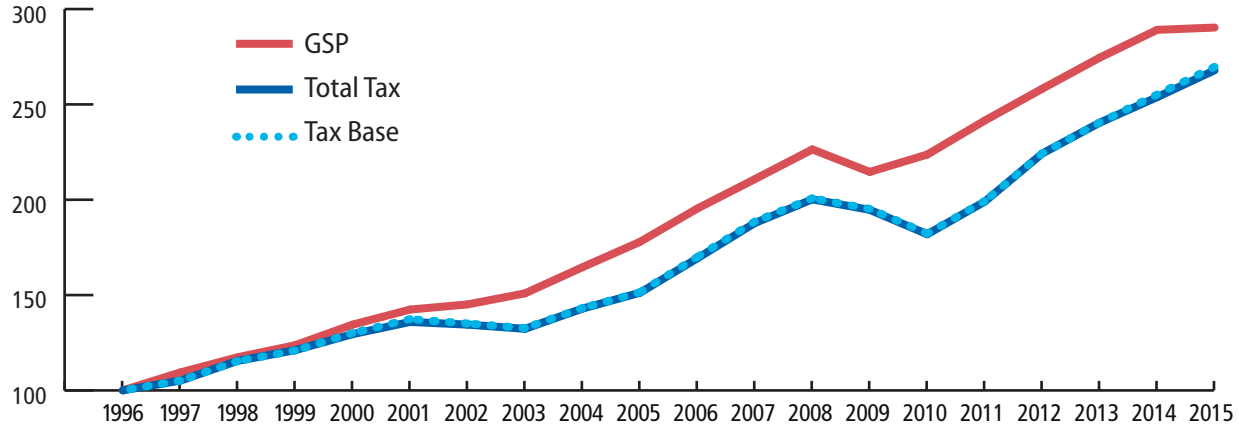
Fiscal Year	Total Sales Taxes Collections	Texas Gross State Product	Indexed Total Sales Taxes Collections	Indexed Sales Taxes Base	Indexed Texas Gross State Product
1996	$10,791,472	$549,132,000	100.0	100.0	100.0
1997	11,340,074	600,768,000	105.1	105.1	109.4
1998	12,459,382	644,461,000	115.5	115.4	117.4
1999	13,069,131	679,268,000	121.1	120.9	123.7
2000	13,976,657	738,660,000	129.5	130.1	134.5
2001	14,663,068	782,124,000	135.9	137.4	142.4
2002	14,516,342	796,589,000	134.5	135.1	145.1
2003	14,277,286	828,683,000	132.3	132.7	150.9
2004	15,417,156	904,086,000	142.9	143.2	164.6
2005	16,312,811	976,654,000	151.2	151.5	177.9
2006	18,275,210	1,073,225,000	169.3	170.0	195.4
2007	20,270,476	1,157,805,000	187.8	188.6	210.8
2008	21,604,090	1,243,129,000	200.2	200.8	226.4
2009	21,014,065	1,178,409,000	194.7	195.2	214.6
2010	19,630,306	1,228,599,000	181.9	182.3	223.7
2011	21,478,983	1,326,041,000	199.0	199.3	241.5
2012	24,191,241	1,417,784,000	224.2	224.3	258.2
2013	25,943,807	1,507,328,000	240.4	240.5	274.5
2014	27,385,709	1,587,433,000	253.8	255.2	289.1
2015	28,910,857	1,594,402,000	267.9	269.7	290.3

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 1.5

Indexed Values for Sales Taxes Collections, Sales Taxes Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 1.6 and **1.7** illustrate the pessimistic, baseline and optimistic scenarios for collections from sales taxes from fiscal 2017 through 2027. The forecast assumptions for each scenario for these taxes are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $2.9 billion in tax collections. By 2027, the difference would increase to $12.8 billion. Assuming no legislative changes to Texas' sales and use taxes, the compound average annual growth rate would be 2.9 percent in the pessimistic scenario, 4.7 percent in the baseline scenario, and 5.8 percent in the optimistic scenario.

In all scenarios, the rate of growth slows slightly in 2020 due to the federal Internet Tax Freedom Act prohibition of state sales taxation on charges for Internet access.

Exhibit 1.6

Possible Future Sales Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

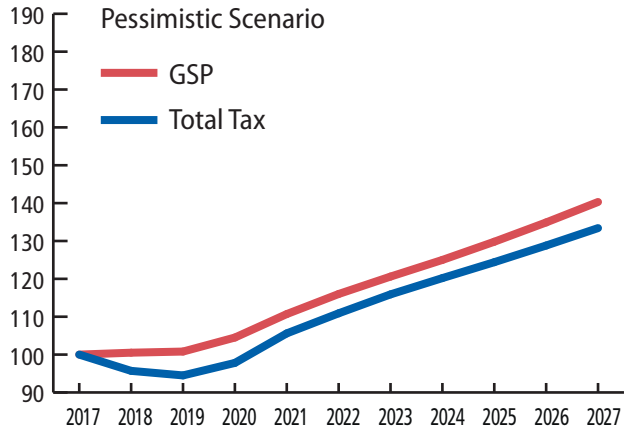
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$30,663,502	-	$30,663,502	-	$30,663,502	-
2018	29,354,300	-4.3%	31,745,800	3.5%	32,301,500	5.3%
2019	28,964,700	-1.3	33,467,700	5.4	34,606,500	7.1
2020	30,002,300	3.6	34,855,600	4.1	36,397,700	5.2
2021	32,390,700	8.0	36,711,900	5.3	38,568,600	6.0
2022	33,991,800	4.9	38,463,700	4.8	40,738,000	5.6
2023	35,540,700	4.6	40,286,700	4.7	42,979,400	5.5
2024	36,870,400	3.7	42,254,000	4.9	45,428,100	5.7
2025	38,134,100	3.4	44,279,400	4.8	47,967,700	5.6
2026	39,486,600	3.5	46,387,600	4.8	50,692,800	5.7
2027	40,902,500	3.6	48,651,200	4.9	53,684,000	5.9
Average		**2.9%**		**4.7%**		**5.8%**

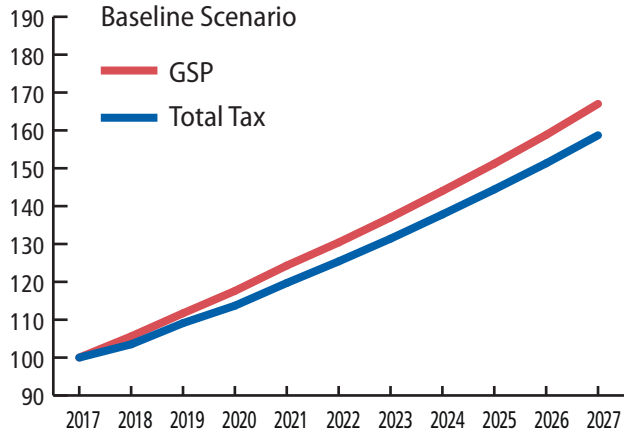
*2017 estimates are from the October 2015 Certification Revenue Estimate
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

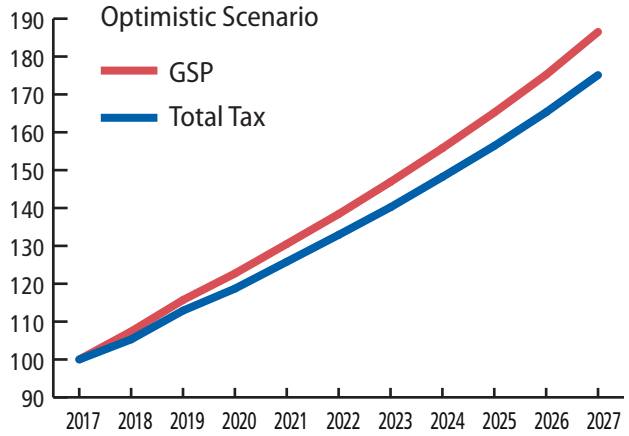
Exhibit 1.7

Indexed Values for Possible Future Sales Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)







*2017 estimates are from the October 2015 Certification Revenue Estimate
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

2. Franchise Tax

Due to the unique history of Texas' franchise tax, this report section examines the current margin-based version of the tax as well as the previous earned surplus-based version.

Prior to legislative reforms approved in 2006 (H.B. 3, 79th Legislature, Third Called Session), the franchise tax was assessed against a business' net assets and its net taxable "earned surplus," defined as its net taxable income plus compensation paid to officers and directors. The tax was assessed on corporations and limited liability companies; partnerships and sole proprietors were not subject to it.

After 2007, the revised tax was based instead on a business' apportioned "margin." State law defines margin as a business' total revenue minus one of four possible deductions:

- 30 percent of total revenue;
- cost of goods sold (costs related to acquisition and production of tangible personal property and real property);
- compensation paid to eligible employees; or,
- $1 million.

In addition to corporations and limited liability companies, the tax now applies to certain types of partnerships, business associations, joint ventures and other legal entities. Sole proprietors remain untaxed. In addition, while the prior franchise tax treated each legal entity as a separate taxpayer, the margin tax requires related entities that meet a common ownership test and are unitary to file combined reports.

The current tax rate varies by industry and business size. Entities primarily engaged in retail or wholesale trade are taxed at 0.375 percent, while all other entities are taxed at 0.75 percent. Businesses with total revenue of less than $20 million may qualify as "EZ" filers subject to a lower tax rate of 0.331 percent of their apportioned revenue with no deductions.

In 2015, the margin tax raised nearly $4.7 billion in all-funds collections.[1] Revenues in excess of what the original franchise tax would have generated are transferred to the Property Tax Relief Fund 0304 (PTRF). In fiscal 2015, roughly $1.8 billion was transferred to the PTRF, while the remaining $2.9 billion remained in General Revenue Fund 0001.

Historical Collection Trends

1996 to 2007

From 1996 to 2007, the franchise tax as it existed at that time was significantly affected by three factors: the U.S. economy, tax reduction strategies, and legislative changes.

The economic recession of the early 2000s had a significant negative impact on corporate profits, the most important part of the franchise tax base. Tax collections declined in each year from 2000 to 2003, but the recovery that began in 2002 boosted corporate profits to record highs in 2006. Franchise tax collections grew very strongly as well, rising by 83 percent between 2003 and 2007 (**Exhibit 2.1**).

The most significant tax reduction strategy involved the formation of a limited partnership organized outside of Texas, most commonly in Delaware, as partnerships were not subject to the franchise tax as it then existed. The strategy came to be known as the "Delaware Sub," and by the late 1990s, many large corporations had adopted it. By 2003, the state's estimated loss was $200 million annually, rising to more than $330 million in 2006. Eliminating this strategy was one of the Legislature's motivations for its 2006 changes to the franchise tax.

Legislative changes to the franchise tax during this period were dominated by S.B. 441, approved by the Legislature in 1999. S.B. 441 added a franchise tax exemption for small businesses, defined as those with no more than $150,000 in gross receipts, as well as tax credits for activities such as research and development,

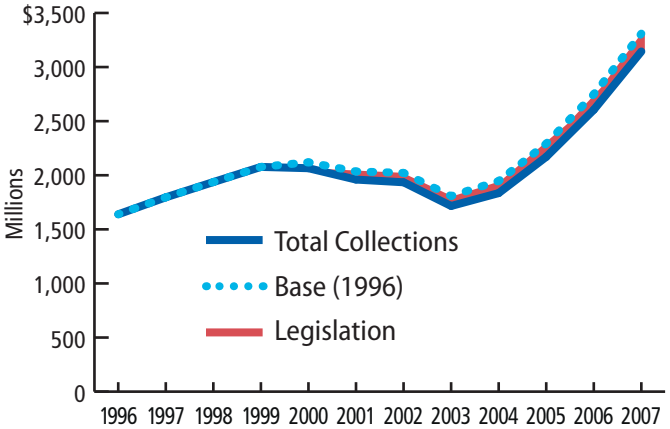
1 Fiscal year 2015 was the last year of a temporary rate reduction that was the result of the passage of H.B. 500, 83rd Legislature.

job creation and capital investment. S.B. 441's fiscal impact was estimated at a loss of $56 million in fiscal 2000, reflecting only the small business exemption. This impact rose to $165 million in 2007 as use of the tax credits increased (**Exhibit 2.2**). The most significant tax credits included carryforward provisions that allowed unused credits to be applied against future liabilities.

In all, total Texas franchise tax collections rose by an average of 6.1 percent annually between fiscal 1996 and 2007, or an average of 10.8 percent per biennium (**Exhibit 2.3**).

Exhibit 2.1

Net Franchise Tax Collections, Fiscal 1996 to 2007



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 2.2

Impact of Legislation on Net Franchise Tax Collections, Fiscal 1996 to 2007

(Amounts in thousands)

Fiscal Year	Base	Legislation	Total
1996	$1,639,015	-	$1,639,015
1997	1,796,605	-	1,796,605
1998	1,937,752	-	1,937,752
1999	2,077,633	-	2,077,633
2000	2,120,776	-$55,500	2,065,276
2001	2,035,365	-75,000	1,960,365
2002	2,022,709	-87,000	1,935,709
2003	1,808,600	-92,000	1,716,600
2004	1,947,014	-112,000	1,835,014
2005	2,292,081	-122,000	2,170,081
2006	2,749,447	-144,000	2,605,447
2007	3,309,059	-165,000	3,144,059

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 2.3

Annual and Biennial Franchise Tax Collections Growth, Fiscal 1996 to 2007

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	9.6%	9.6%			
1998	7.9	7.9	1998-99	16.9%	16.9%
1999	7.2	7.2			
2000	2.1	-0.6	2000-01	3.5	0.3
2001	-4.0	-5.1			
2002	-0.6	-1.3	2002-03	-7.8	-9.3
2003	-10.6	-11.3			
2004	7.7	6.9	2004-05	10.6	9.7
2005	17.7	18.3			
2006	20.0	20.1	2006-07	42.9	43.6
2007	20.4	20.7			
Average	**6.6%**	**6.1%**		**12.0%**	**10.8%**
Maximum	**20.4%**	**20.7%**		**42.9%**	**43.6%**
Minimum	**-10.6%**	**-11.3%**		**-7.8%**	**-9.3%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

2008 to 2015

The margin-based version of the franchise tax also was affected by trends in the national economy. Franchise tax collections, which are based on business activity in the previous year, fell to their lowest level in fiscal 2010 due to the recent Great Recession.

After the recession, franchise tax collections recovered, rising by 20.2 percent during the 2012-13 biennium. Part of this increase was due to the fracking-driven renaissance in Texas energy production. Other, broader measures of business growth highlight economic expansion after the Great Recession; U.S. corporate profits were 46 percent higher in 2011 than in 2008, for example.

Even so, legislative changes were another major reason for trends in franchise tax collections between fiscal 2008 and 2015.

H.B. 3928, passed in 2007, made significant changes to the tax, including tax discounts offered to taxpayers with total revenue of less than $900,000. Because it also corrected a drafting error in previous legislation affecting the tax, however, the new law had no net effect on revenues. Another 2007 bill, H.B. 3694, provided a margin tax credit for capital investments in enterprise zones with a potential estimated loss of $9.6 million during the 2008-09 biennium, but no use was made of this provision.

The 81st Legislature, however, approved H.B. 4765 in 2009, which increased the total revenue threshold for franchise tax liability from $300,000 to $1 million for reports due in 2010 and 2011. This new law resulted in an estimated tax revenue loss of more than $80 million annually.

In 2011, the Legislature repealed a tax refund for economic development in a reinvestment zone, increasing state revenue by about $2.5 million annually beginning in 2013. But the Legislature also passed legislation continuing provisions that reduce tax collections. These included continuing the $1 million revenue threshold for tax liability for two additional years and extending the time allowed for the use of unexpired tax credits from the end of 2012 until the end of 2016. In addition, certain businesses were allowed to exclude some types of payments from total revenue. Finally, the definition of retail trade was amended to include apparel rental, effectively reducing the tax rate for affected businesses from 1.0 percent to 0.5 percent.

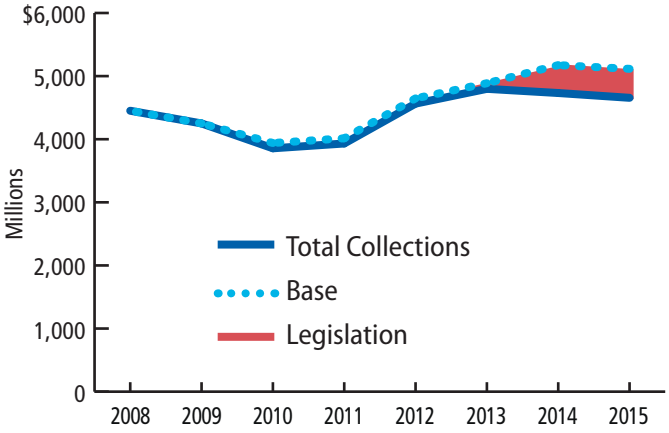
In 2013, the Legislature's H.B. 500 addressed some of the perceived inequities in the tax. This new law permanently set the revenue threshold for tax liability at $1 million; further extended the 0.5 percent tax rate to auto repair shops and certain rental activities; provided a new tax credit for the rehabilitation of historical structures; and introduced a new method for calculating taxable margin to help small and medium-sized businesses. The bill also contained temporary tax rate reductions for 2014 and 2015. Another 2013 bill, H.B. 800, created a new tax credit for research and development activities as well as sales tax exemptions for purchasing research and development equipment.

The fiscal impact of these changes, as well as previously discussed changes from prior legislative sessions, is reflected in **Exhibits 2.4** and **2.5**.

In all, total Texas franchise tax collections rose by an average of just 0.6 percent annually between fiscal 2008 and 2015, or an average of 2.6 percent per biennium (**Exhibit 2.6**).

Exhibit 2.4

Net Franchise Tax Collections, Fiscal 2008 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 2.5

Impact of Legislation on Net Franchise Tax Collections, Fiscal 2008 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
2008	$4,451,326	-	$4,451,326
2009	4,250,332	-	4,250,332
2010	3,940,303	-$83,437	3,856,866
2011	4,014,864	-82,750	3,932,114
2012	4,647,931	-83,200	4,564,731
2013	4,887,199	-88,500	4,798,699
2014	5,174,506	-442,244	4,732,262
2015	5,115,286	-459,000	4,656,286

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 2.6

Annual and Biennial Franchise Tax Growth, Fiscal 2008 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
2008	-	-	2008-09	-	-
2009	-4.5%	-4.5%			
2010	-7.3	-9.3	2010-11	-8.6%	-10.5%
2011	1.9	2.0			
2012	15.8	16.1	2012-13	19.9	20.2
2013	5.1	5.1			
2014	5.9	-1.4	2014-15	7.9	0.3
2015	-1.1	-1.6			
Average	**2.0%**	**0.6%**		**5.7%**	**2.6%**
Maximum	**15.8%**	**16.1%**		**19.9%**	**20.2%**
Minimum	**-7.3%**	**-9.3%**		**-8.6%**	**-10.5%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

The Texas franchise tax, both as levied on earned surplus and on margin, historically has correlated reasonably well with Texas' nominal Gross State Product (GSP).

1996 to 2007

Major divergences between franchise tax collections and Texas GSP occur in periods of relative economic weakness, such as the 2001 recession (**Exhibits 2.7** and **2.8**). The earned surplus-based tax closely tracked Texas GSP from fiscal 1996 to 1999, but underperformed substantially relative to GSP in the subsequent four years. This occurred because measures of business success, such as profits, are more sensitive to economic disruption than is total production. Upside volatility was also evident in the very strong recovery in collections relative to GSP growth between 2003 and 2007, the final year of the earned surplus basis.

Exhibit 2.7

Actual and Indexed Values for Franchise Tax Collections, Franchise Tax Base, and Texas Nominal Gross State Product, Fiscal 1996 to 2007

(Amounts in Thousands; Indexed Values, 1996 = 100)

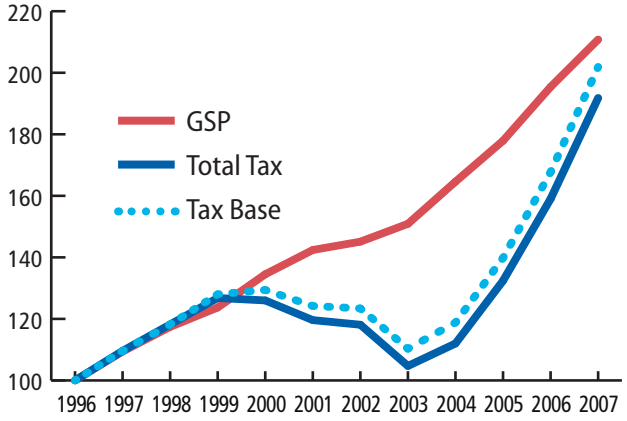
Fiscal Year	Total Franchise Tax Collections	Texas Gross State Product	Indexed Total Franchise Tax Collections	Indexed Franchise Tax Base	Indexed Texas Gross State Product
1996	$1,639,015	$549,132,000	100.0	100.0	100.0
1997	1,796,605	600,768,000	109.6	109.6	109.4
1998	1,937,752	644,461,000	118.2	118.2	117.4
1999	2,077,633	679,268,000	126.8	126.8	123.7
2000	2,065,276	738,660,000	126.0	129.4	134.5
2001	1,960,365	782,124,000	119.6	124.2	142.4
2002	1,935,709	796,589,000	118.1	123.4	145.1
2003	1,716,600	828,683,000	104.7	110.3	150.9
2004	1,835,014	904,086,000	112.0	118.8	164.6
2005	2,170,081	976,654,000	132.4	139.8	177.9
2006	2,605,447	1,073,225,000	159.0	167.7	195.4
2007	3,144,059	1,157,805,000	191.8	201.9	210.8

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 2.8

Indexed Values for Franchise Tax Collections, Franchise Tax Base, and Texas Nominal Gross State Product, Fiscal 1996 to 2007

(Indexed values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 2.9

Actual and Indexed Values for Franchise Tax Collections, Franchise Tax Base, and Texas Nominal Gross State Product, Fiscal 2008 to 2015

(Amounts in Thousands; Indexed Values, 2008=100)

Fiscal Year	Total Franchise Tax Collections	Texas Gross State Product	Indexed Total Franchise Tax Collections	Indexed Franchise Tax Base	Indexed Texas Gross State Product
2008	$4,451,326	$1,243,129,000	100.0	100.0	100.0
2009	4,250,332	1,178,409,000	95.5	95.5	94.8
2010	3,856,866	1,228,599,000	86.6	88.5	98.8
2011	3,932,114	1,326,041,000	88.3	90.2	106.7
2012	4,564,731	1,417,784,000	102.5	104.4	114.0
2013	4,798,699	1,507,328,000	107.8	109.8	121.3
2014	4,732,262	1,587,433,000	106.3	116.2	127.7
2015	4,656,286	1,594,402,000	104.6	114.9	128.3

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

2008 to 2015

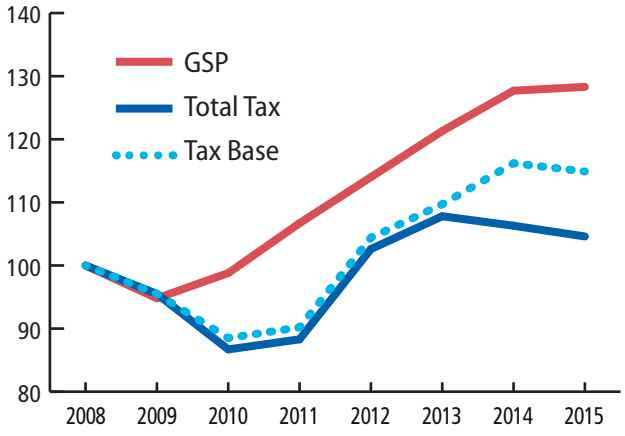
The first years of the margin-based franchise tax coincided with the Great Recession. As with the earned surplus-based tax, the margins tax underperformed GSP during an economic contraction, and began to narrow the gap thereafter.

Due to the 2013 tax relief legislation, however, as well as a noticeable slowdown in the state economy in 2015, the gap between the margins tax and GSP has widened again (**Exhibits 2.9** and **2.10**).

Exhibit 2.10

Indexed Values for Franchise Tax Collections, Franchise Tax Base, and Texas Nominal Gross State Product, Fiscal 2008 to 2015

(Indexed values, 2008=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

In 2015, the Texas Legislature provided rate reductions for all franchise taxpayers, broadened availability of the EZ calculation method and substantially reduced the EZ tax rate. These changes are expected to save taxpayers more than $2.5 billion during the 2016-17 biennium.

Exhibits 2.11 and **2.12** illustrate the pessimistic, baseline and optimistic scenarios for franchise tax collections from fiscal 2017 through 2027. In the baseline and optimistic scenarios, the franchise tax is expected to grow at half the projected rate of growth in nominal GSP, with a one-year lag. The pessimistic projections include modest recessional declines in projected revenues for fiscal 2019 and 2020. The assumed relationship between GSP growth and that of margin tax collections is approximately the same as that between GSP and the margin-based tax base (see **Exhibit 2.10**).

In 2018, there is no difference in tax collections for the three growth scenarios. By 2027, the difference would be $631 million between the pessimistic and optimistic scenarios. Assuming no legislative changes to Texas' franchise tax, the compound average annual growth rate would be 1.7 percent in the pessimistic scenario, 2.6 percent in the baseline scenario, and 3.1 percent in the optimistic scenario.

Exhibit 2.11

Possible Future Franchise Tax Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

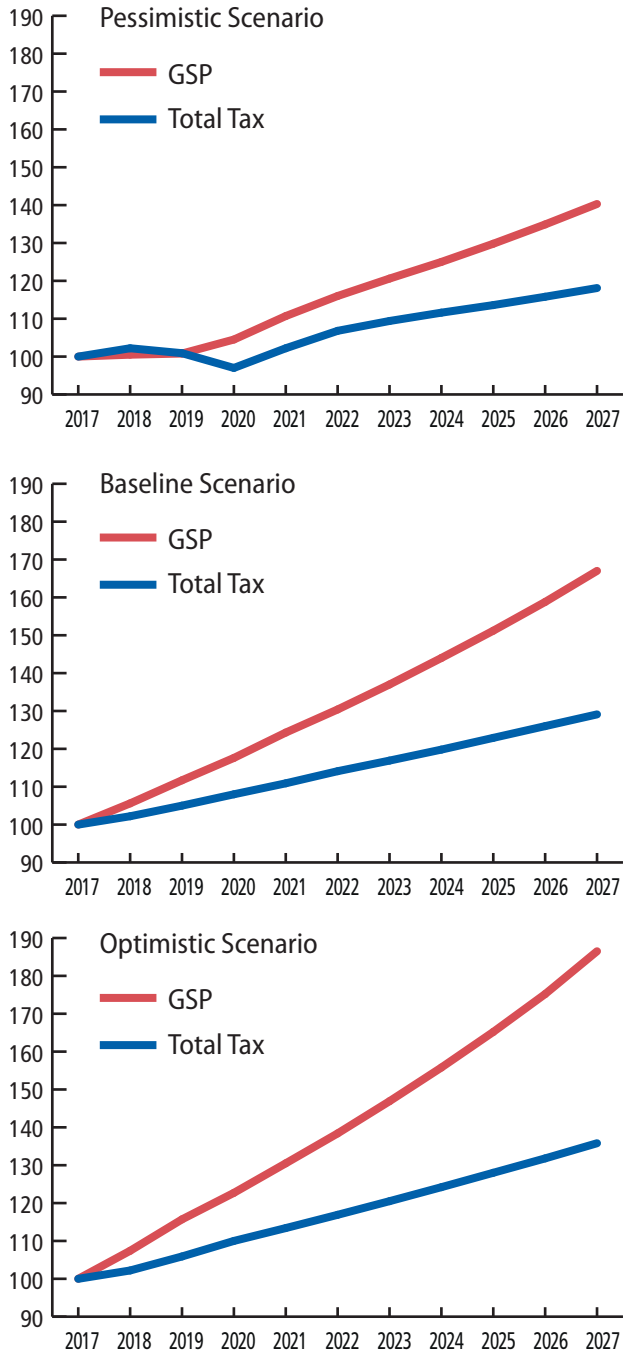
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$3,547,819	-	$3,547,819	-	$3,547,819	-
2018	3,624,500	2.2%	3,624,500	2.2%	3,624,500	2.2%
2019	3,578,800	-1.3	3,726,200	2.8	3,758,100	3.7
2020	3,440,800	-3.9	3,832,800	2.9	3,903,300	3.9
2021	3,627,000	5.4	3,935,100	2.7	4,022,400	3.1
2022	3,790,800	4.5	4,046,400	2.8	4,149,100	3.1
2023	3,881,100	2.4	4,145,900	2.5	4,275,600	3.0
2024	3,957,900	2.0	4,250,400	2.5	4,406,000	3.0
2025	4,030,400	1.8	4,359,200	2.6	4,540,400	3.1
2026	4,107,100	1.9	4,468,600	2.5	4,676,600	3.0
2027	4,188,300	2.0	4,581,700	2.5	4,819,200	3.0
Average		**1.7%**		**2.6%**		**3.1%**

*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 2.12

Indexed Values for Possible Future Franchise Tax Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.

Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

3. Motor Vehicle Sales and Rental Taxes

Texas' motor vehicle sales and rental taxes category includes a motor vehicle sales and use tax, a tax on motor vehicle rentals, and a tax on the sale or use of a manufactured home.

The motor vehicle sales and use tax is levied at 6.25 percent of the retail sales price (less trade-in allowance) of motor vehicles sold in Texas.

The motor vehicle rental tax is imposed on the gross receipts from motor vehicle rentals. The length of the rental contract determines the tax rate: 10 percent on rentals of 30 days or less and 6.25 percent on rentals of 31 to 180 days.

The manufactured housing sales and use tax has an effective rate of 3.25 percent on the sales price of a manufactured home.

In fiscal 2015, net revenue collections from the motor vehicle sales and rental taxes category totaled $4.5 billion, with more than 90 percent representing the motor vehicle sales and use tax. Ninety-five percent of collections from motor vehicle sales and use taxes are allocated to General Revenue Fund 0001, with county governments receiving the remaining 5 percent.

Revenue derived from motor vehicle sales and use taxes based on a vehicle's presumptive value is deposited to the Property Tax Relief Fund 0304. Standard presumptive value applies to motor vehicles purchased in private-party sales that do not involve a licensed dealer.

All revenue collected from the motor vehicle rental tax and the manufactured housing tax is deposited to Fund 0001.

In November 2015, Texas voters approved a constitutional amendment to increase funding for state highway projects. Beginning in fiscal 2020, 35 percent of the combined annual net collections from the motor vehicle sales and use tax, the seller-financed motor vehicle sales tax and the motor vehicle rental tax in excess of $5 billion will be deposited to the State Highway Fund 0006

Historical Collection Trends

The growth in motor vehicle sales and rental taxes has been driven primarily by economic conditions rather than legislation. Collections rose in times of economic growth, particularly during periods of robust oil and natural gas exploration activity, and slowed or even contracted during economic downturns (**Exhibits 3.1** and **3.2**).

Motor vehicle sales and use taxes collections have risen by an annual average of 4.5 percent since fiscal 1996. This period, however, saw drastic variations in economic conditions. For example, tax collections fell by 24 percent in 2009 due to the Great Recession; job losses and economic uncertainty caused Texans to forego or delay vehicle purchases. The subsequent recovery saw double-digit collection gains in 2011 and 2012 (13 and 20 percent, respectively) as drivers began making vehicle purchases they had delayed. In fiscal 2015, tax collections rose by more than 7 percent (**Exhibit 3.3**).

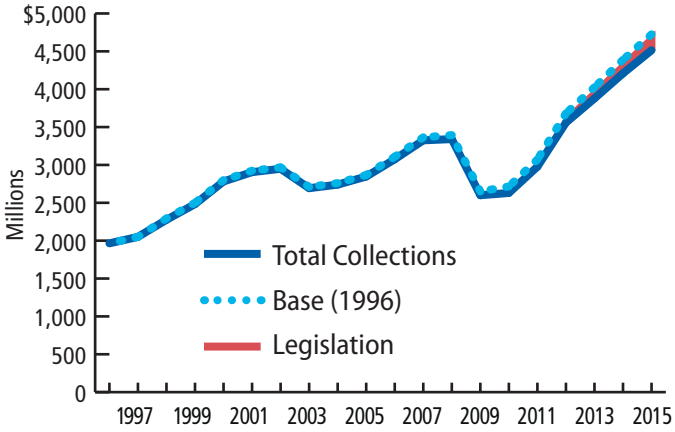
Motor vehicle rental tax collections have risen steadily since the Great Recession. Collections increased by more than 10 percent in 2011 and 12 percent in 2012. From 2013 through 2015, growth varied between 7 and 9 percent. Economic growth is the major factor behind these robust increases, as business travelers are the primary users of rental vehicles.

Personal income historically has been the best predictor of future motor vehicle sales tax collections. Following both the post-September 11th recession and the Great Recession, the correlation weakened significantly, but returned with the subsequent economic recovery. As for the rental tax, GSP has been the most accurate predictor of future collections.

The most significant legislative change to motor vehicle taxes occurred in 2003, with H.B. 3588, which allows counties to keep a share of the state tax revenue they collect. This plan was phased in, rising from a 0.5 percent share in fiscal 2006 to the maximum of 5 percent in 2015 and beyond.

Exhibit 3.1

Net Motor Vehicle Sales and Rental Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 3.2

Impact of Legislation on Net Motor Vehicle Sales and Rental Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$1,965,269		$1,965,269
1997	2,050,103		2,050,103
1998	2,293,231	-$16,509	2,276,722
1999	2,500,607	-17,367	2,483,240
2000	2,800,287	-18,270	2,782,017
2001	2,924,758	-19,220	2,905,538
2002	2,968,239	-18,699	2,949,540
2003	2,710,308	-16,865	2,693,443
2004	2,760,100	-19,812	2,740,288
2005	2,867,517	-19,864	2,847,653
2006	3,109,452	-34,298	3,075,154
2007	3,365,987	-40,390	3,325,597
2008	3,394,481	-52,892	3,341,589
2009	2,650,537	-49,598	2,600,939
2010	2,716,018	-85,881	2,630,137
2011	3,072,881	-95,217	2,977,664
2012	3,682,017	-122,786	3,559,231
2013	4,026,622	-148,242	3,878,380
2014	4,388,904	-178,951	4,209,953
2015	4,725,366	-211,180	4,514,186

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 3.3

Annual and Biennial Motor Vehicle Sales and Rental Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	4.3%	4.3%			
1998	11.9	11.1	1998-99	19.4%	18.5%
1999	9.0	9.1			
2000	12.0	12.0	2000-01	19.4	19.5
2001	4.4	4.4			
2002	1.5	1.5	2002-03	-0.8	-0.8
2003	-8.7	-8.7			
2004	1.8	1.7	2004-05	-0.9	-1.0
2005	3.9	3.9			
2006	8.4	8.0	2006-07	15.1	14.5
2007	8.3	8.1			
2008	0.8	0.5	2008-09	-6.6	-7.2
2009	-21.9	-22.2			
2010	2.5	1.1	2010-11	-4.2	-5.6
2011	13.1	13.2			
2012	19.8	19.5	2012-13	33.2	32.6
2013	9.4	9.0			
2014	9.0	8.5	2014-15	18.2	17.3
2015	7.7	7.2			
Average	**4.7%**	**4.5%**		**9.5%**	**9.0%**
Maximum	**19.8%**	**19.5%**		**33.2%**	**32.6%**
Minimum	**-21.9%**	**-22.2%**		**-6.6%**	**-7.2%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Before the September 11th recession, motor vehicle sales and use tax collections generally correlated well with personal income. Following that recession, however, the correlation weakened as Texans delayed vehicle purchases. Tax collections declined in 2003 while PI grew moderately, and through 2011 tax collection growth trailed PI growth in all but one year. Despite some periods of accelerated post-recessionary growth, collections did not reach the level of correlation with PI seen before 2002 (**Exhibits 3.4** and **3.5**).

Motor vehicle rental tax collections historically correlated very well with nominal GSP. That correlation decreased following the recessions in 2002 and 2009, as the economy weakened and businesses cut back on travel. Collections rose relative to GSP from fiscal 2014 to 2015, but again do not correlate as well with GSP as they did before 2002 (**Exhibits 3.6** and **3.7**).

Exhibit 3.4

Actual and Indexed Values for Motor Vehicle Sales and Use Tax Collections, Motor Vehicle Sales and Use Tax Base and Texas Personal Income, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total Motor Vehicle Sales and Use Tax Collections	Texas Personal Income	Indexed Total Motor Vehicle Sales and Use Tax Collections	Indexed Motor Vehicle Sales and Use Tax Base	Indexed Texas Personal Income
1996	$1,765,966	$423,593,395	100.0	100.0	100.0
1997	1,839,267	459,957,192	104.2	104.1	108.6
1998	2,054,890	503,853,014	116.4	116.4	118.9
1999	2,236,979	535,368,239	126.7	126.7	126.4
2000	2,526,449	582,382,770	143.1	143.1	137.5
2001	2,627,761	626,163,109	148.8	148.8	147.8
2002	2,696,454	633,990,388	152.7	152.6	149.7
2003	2,452,064	653,814,336	138.9	138.5	154.3
2004	2,493,614	685,270,251	141.2	140.7	161.8
2005	2,582,389	741,440,360	146.2	145.5	175.0
2006	2,776,573	815,503,748	157.2	157.2	192.5
2007	3,008,867	866,420,926	170.4	170.7	204.5
2008	3,012,846	956,255,329	170.6	171.7	225.7
2009	2,292,557	929,278,854	129.8	130.6	219.4
2010	2,329,566	947,674,951	131.9	134.7	223.7
2011	2,646,638	1,037,393,545	149.9	153.0	244.9
2012	3,189,319	1,111,437,632	180.6	185.2	262.4
2013	3,487,064	1,159,802,823	197.5	203.4	273.8
2014	3,794,693	1,210,729,707	214.9	222.5	285.8
2015	4,070,110	1,274,016,947	230.5	239.8	300.8

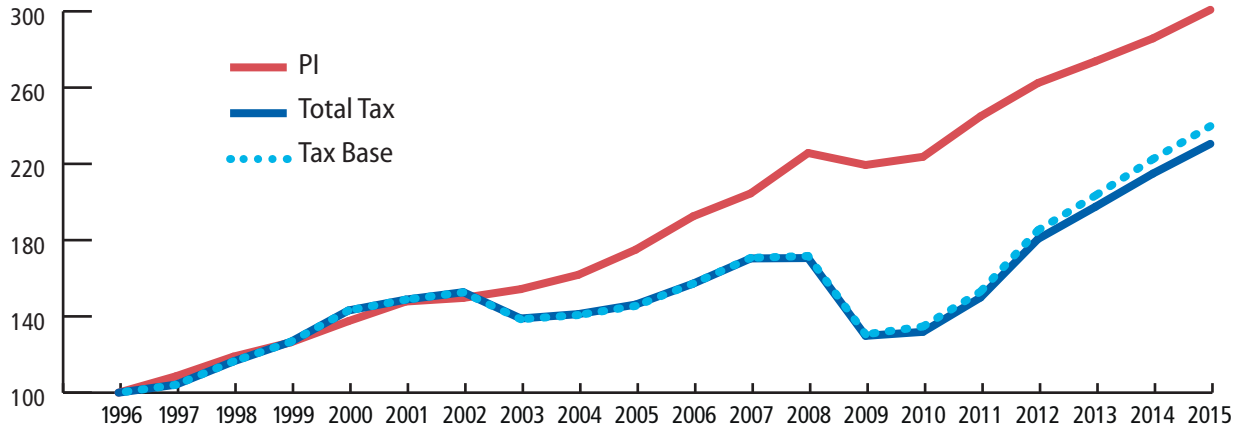
Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust and do not include revenue collected from motor carriers, seller-financed sales, or manufactured housing sales.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 3.5

Indexed Values for Motor Vehicle Sales and Use Tax Collections, Motor Vehicle Sales and Use Tax Base and Texas Personal Income, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust and do not include revenue collected from motor carriers, seller-financed sales, or manufactured housing sales.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 3.6

Actual and Indexed Values for Motor Vehicle Rental Tax Collections, Motor Vehicle Rental Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total Motor Vehicle Rental Tax Collections	Texas Gross State Product	Indexed Total Motor Vehicle Rental Tax Collections	Indexed Motor Vehicle Rental Tax Base	Indexed Texas Gross State Product
1996	$119,168	$549,132,000	100.0	100.0	100.0
1997	126,958	600,768,000	106.5	106.5	109.4
1998	141,471	644,461,000	118.7	118.7	117.4
1999	155,630	679,268,000	130.6	130.6	123.7
2000	166,090	738,660,000	139.4	139.4	134.5
2001	176,526	782,124,000	148.1	148.1	142.4
2002	159,622	796,589,000	133.9	133.9	145.1
2003	149,118	828,683,000	125.1	125.1	150.9
2004	151,466	904,086,000	127.1	127.1	164.6
2005	171,142	976,654,000	143.6	143.6	177.9
2006	195,771	1,073,225,000	164.3	164.3	195.4
2007	205,172	1,157,805,000	172.2	172.2	210.8
2008	208,969	1,243,129,000	175.4	175.4	226.4
2009	193,677	1,178,409,000	162.5	162.5	214.6
2010	178,760	1,228,599,000	150.0	150.0	223.7
2011	196,889	1,326,041,000	165.2	165.2	241.5
2012	220,229	1,417,784,000	184.8	184.8	258.2
2013	235,868	1,507,328,000	197.9	197.9	274.5
2014	256,625	1,587,433,000	215.3	215.3	289.1
2015	278,623	1,594,402,000	233.8	233.8	290.3

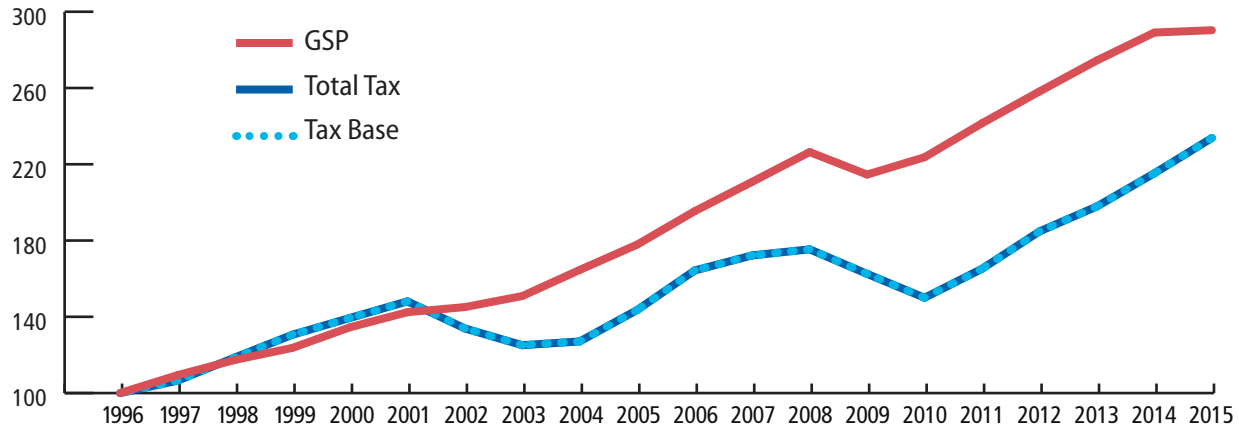
Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 3.7

Indexed Values for Motor Vehicle Rental Tax Collections, Motor Vehicle Rental Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 3.8 and **3.9** illustrate the pessimistic, baseline and optimistic scenarios for collections from motor vehicle sales and rental taxes from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $253 million in tax collections. By 2027, the difference would increase to $2.4 billion. Assuming no legislative changes to Texas' the motor vehicle sales and rental taxes, the compound average annual growth rate would be 3.0 percent in the pessimistic scenario, 5.4 percent in the baseline scenario, and 6.4 percent in the optimistic scenario.

Exhibit 3.8

Possible Future Motor Vehicle Sales and Rental Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

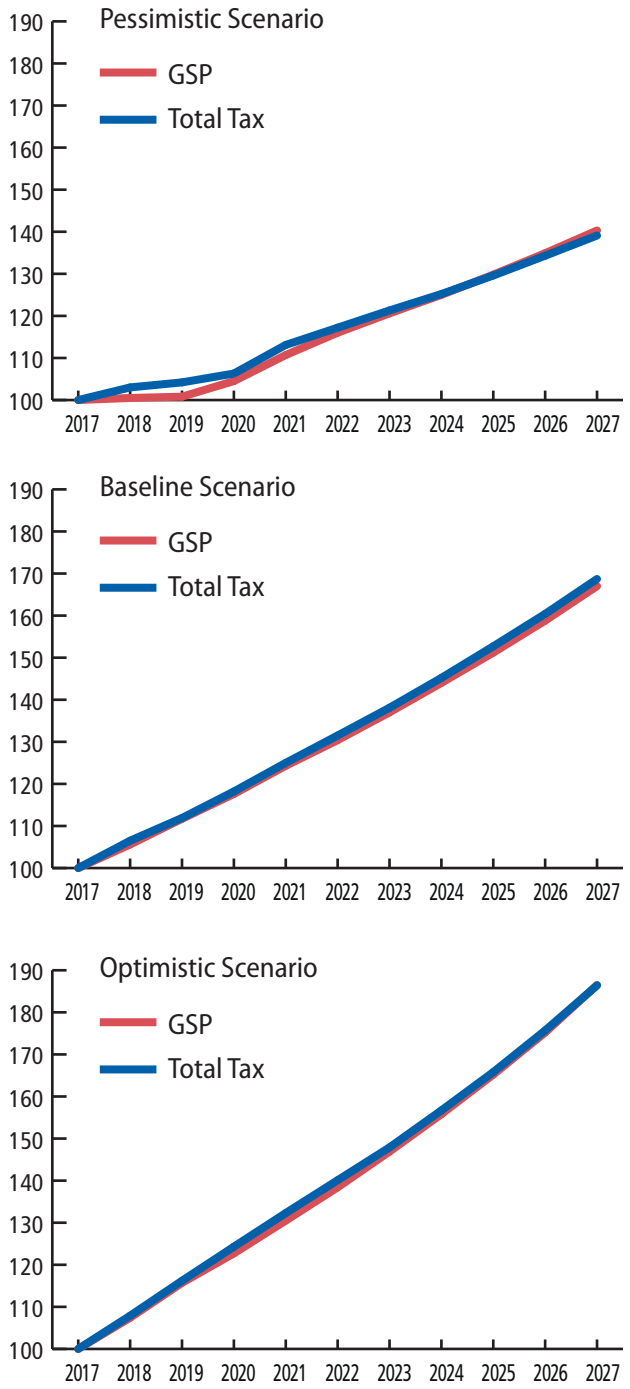
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$5,078,806	-	$5,078,806	-	$5,078,806	-
2018	5,229,200	3.0%	5,369,400	5.7%	5,482,400	7.9%
2019	5,291,100	1.2	5,690,200	6.0	5,903,800	7.7
2020	5,397,300	2.0	6,009,700	5.6	6,315,400	7.0
2021	5,745,000	6.4	6,353,100	5.7	6,720,900	6.4
2022	5,954,700	23.0	6,683,900	5.2	7,114,700	5.9
2023	6,163,100	-15.7	7,018,100	5.0	7,511,200	5.6
2024	6,360,200	3.5	7,383,500	5.2	7,958,200	6.0
2025	6,582,800	3.2	7,761,900	5.1	8,422,800	5.8
2026	6,820,100	3.5	8,151,800	5.0	8,921,800	5.9
2027	7,065,500	3.6	8,575,500	5.2	9,466,400	6.1
Average		**3.0%**		**5.4%**		**6.4%**

*2017 estimates are from the October 2015 *Certification Revenue Estimate*
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 3.9

Indexed Values for Possible Future Motor Vehicle Sales and Rental Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*

Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

4. Motor Fuel Taxes

The Texas motor fuel taxes category includes the state's consumption taxes on gasoline, diesel fuel, and liquefied and compressed natural gas.

In fiscal 2015, the gasoline tax, levied at 20 cents per gallon, accounted for nearly 75 percent of all motor fuel tax collections, netting $2.6 billion. The diesel tax, also levied at 20 cents per gallon, generated $861 million. The tax on liquefied and compressed natural gas, at 15 cents per gallon, generated $4 million.

After deductions for refunds and enforcement, 25 percent of motor fuel taxes collections are allocated to the Available School Fund 0002. The remaining 75 percent is allocated to the State Highway Fund 0006, except that the first $7.3 million is credited to the County and Road District Highway Fund 0057.

Historical Collection Trends

Throughout the 1996 to 2015 study period, motor fuel taxes collections were affected by population gains, variations in the state's economy and an increase in commercial truck traffic between Mexico and the U.S. after the North American Free Trade Agreement (NAFTA) went into effect in 1994 (**Exhibits 4.1** and **4.2**). Within 10 years of NAFTA implementation, virtually all U.S.-Mexico tariffs were eliminated.

Significant legislation enacted during the study period includes S.B. 1547 effective September 1, 2000 and H.B. 2458 effective January 1, 2004. S.B. 1547 automated the motor fuel tracking system, reduced border fraud opportunities, and coordinated systems among the states. H.B. 2458 moved the point of taxation on gasoline and diesel fuel from the sale transaction between a wholesaler and a retailer (a gas station), to the point where the fuel leaves the pipeline/bulk transfer system, commonly known as the terminal rack. It also eliminated the tax exemption for the off-road use of clear diesel fuel.

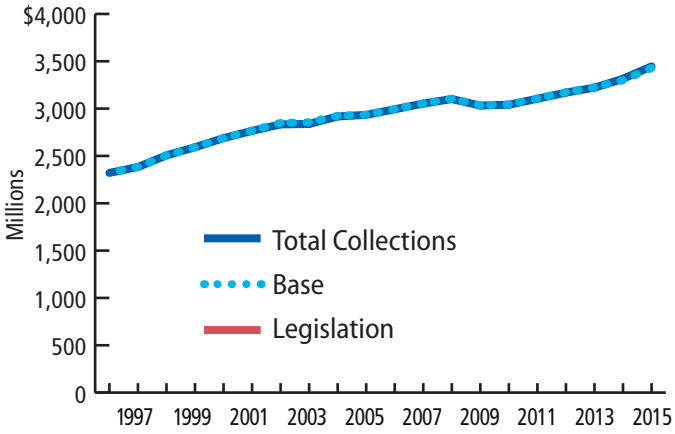
The 2013 Legislature's H.B. 2148 changed the point of taxation on liquefied and compressed natural gas from the purchase of an annual decal to its delivery into the fuel supply tank of a motor vehicle.

The liquefied gas tax was a component of motor fuel taxes until repealed by the Legislature as of September 1, 2015; that tax yielded $812,719 in fiscal 2015, its final year.

In all, Texas motor fuel taxes collections rose by an average of 2.1 percent annually between fiscal 1996 and 2015, or an average of 4.1 percent per biennium (**Exhibit 4.3**).

Exhibit 4.1

Net Motor Fuel Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 4.2

Impact of Legislation on Net Motor Fuel Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$2,321,014	-	$2,321,014
1997	2,383,041	-	2,383,041
1998	2,506,071	-	2,506,071
1999	2,592,571	-	2,592,571
2000	2,688,892	-$734	2,688,158
2001	2,767,129	-1,618	2,765,511
2002	2,849,979	-16,372	2,833,607
2003	2,855,006	-16,229	2,838,777
2004	2,924,718	-7,011	2,917,707
2005	2,935,134	-553	2,934,581
2006	2,995,248	-1,678	2,993,570
2007	3,055,440	-1,628	3,053,812
2008	3,106,314	-4,787	3,101,527
2009	3,035,355	-2,585	3,032,770
2010	3,044,786	-2,813	3,041,973
2011	3,107,614	-3,414	3,104,200
2012	3,173,385	-4,145	3,169,240
2013	3,225,996	-4,494	3,221,502
2014	3,300,025	15,927	3,315,952
2015	3,429,358	16,799	3,446,157

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 4.3

Annual and Biennial Motor Fuel Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	2.7%	2.7%			
1998	5.2	5.2	1998-99	8.4%	8.4%
1999	3.5	3.5			
2000	3.7	3.7	2000-01	7.0	7.0
2001	2.9	2.9			
2002	3.0	2.5	2002-03	4.6	4.0
2003	0.2	0.2			
2004	2.4	2.8	2004-05	2.7	3.2
2005	0.4	0.6			
2006	2.0	2.0	2006-07	3.3	3.3
2007	2.0	2.0			
2008	1.7	1.6	2008-09	1.5	1.4
2009	-2.3	-2.2			
2010	0.3	0.3	2010-11	0.2	0.2
2011	2.1	2.0			
2012	2.1	2.1	2012-13	4.0	4.0
2013	1.7	1.6			
2014	2.3	2.9	2014-15	5.2	5.8
2015	3.9	3.9			
Average	**2.1%**	**2.1%**		**4.1%**	**4.1%**
Maximum	**5.2%**	**5.2%**		**8.4%**	**8.4%**
Minimum	**-2.3%**	**-2.2%**		**0.2%**	**0.2%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlation for Gasoline Tax

Gasoline tax collections correlate fairly closely with population. Between fiscal 1996 and 2015, the Texas population grew at a compound average annual rate of 1.9 percent, while gasoline tax revenues rose by 1.6 percent.

From fiscal 1996 to 2005, gasoline tax collections rose faster than population. This relationship reversed in 2005 (**Exhibits 4.4** and **4.5**). Plausible explanations for the change include gradual improvements in the average fuel efficiency of on-road motor vehicles; gasoline prices increasing sharply from 2005 through 2014; and the retirement of baby boomers.

Exhibit 4.4

Actual and Indexed Values for Gasoline Tax Collections, Gasoline Tax Base and Texas Population, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

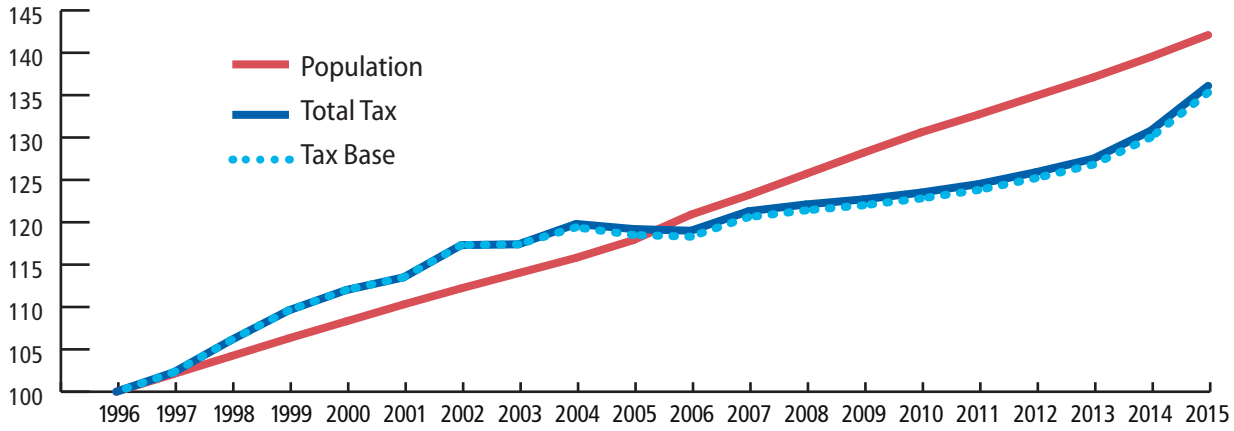
Fiscal Year	Total Gasoline Tax Collections	Texas Population	Indexed Total Gasoline Tax Collections	Indexed Gasoline Tax Base	Indexed Texas Population
1996	$1,896,146	19,294	100.0	100.0	100.0
1997	1,939,426	19,691	102.3	102.3	102.1
1998	2,011,653	20,104	106.1	106.1	104.2
1999	2,077,536	20,507	109.6	109.6	106.3
2000	2,124,462	20,897	112.0	112.0	108.3
2001	2,152,303	21,272	113.5	113.5	110.3
2002	2,224,961	21,642	117.3	117.3	112.2
2003	2,226,649	21,990	117.4	117.4	114.0
2004	2,272,227	22,350	119.8	119.4	115.8
2005	2,259,626	22,745	119.2	118.5	117.9
2006	2,257,053	23,328	119.0	118.3	120.9
2007	2,300,924	23,773	121.3	120.6	123.2
2008	2,315,486	24,250	122.1	121.4	125.7
2009	2,326,135	24,738	122.7	122.0	128.2
2010	2,341,609	25,192	123.5	122.8	130.6
2011	2,361,141	25,605	124.5	123.8	132.7
2012	2,387,692	26,034	125.9	125.2	134.9
2013	2,418,088	26,454	127.5	126.8	137.1
2014	2,480,229	26,920	130.8	130.0	139.5
2015	2,580,164	27,408	136.1	135.3	142.1

Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 4.5

Indexed Values for Gasoline Tax Collections, Gasoline Tax Base and Texas Population, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Economic Correlation for Diesel Fuel Tax

Changes in diesel fuel tax collections generally reflect variations in Texas real Gross State Product (GSP), a measure of the total output of the state's economy. From fiscal 1996 to 1999, real GSP rose by a compound average annual rate of 6.6 percent while diesel fuel tax collections rose by 6.7 percent. From fiscal 2000 through 2009, however, diesel fuel tax collections rose faster than real GSP (**Exhibits 4.6** and **4.7**). Probable causes for the surge in tax collections during this period include the boom in domestic oil and natural gas exploration and production; rebuilding after Hurricanes Katrina and Rita; and H.B. 2458, which eliminated tax exemptions for various off-road uses of diesel fuel.

Exhibit 4.6

Actual and Indexed Values for Diesel Fuel Tax Collections, Diesel Fuel Tax Base and Texas Real Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

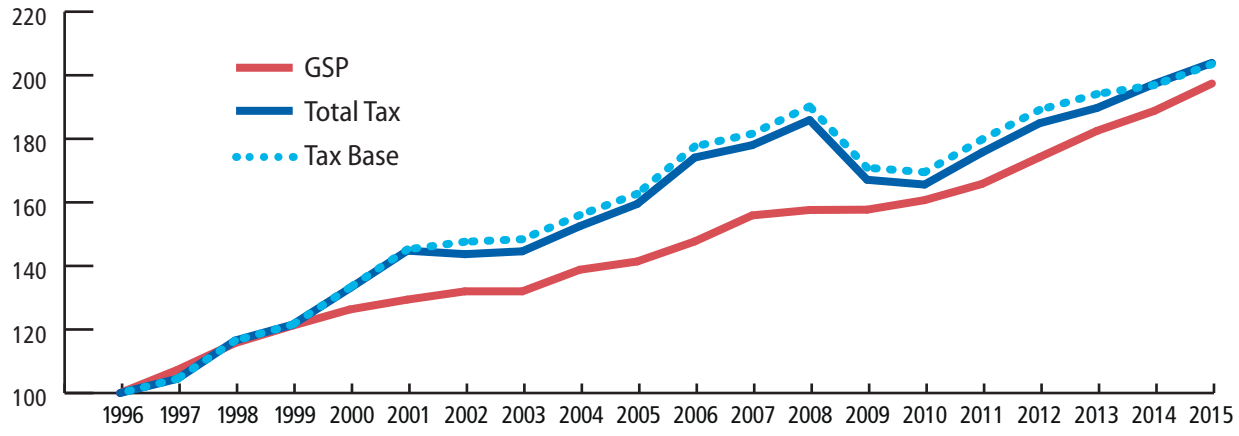
Fiscal Year	Total Diesel Fuel Tax Collections	Texas Gross State Product	Indexed Total Diesel Fuel Tax Collections	Indexed Diesel Fuel Tax Base	Indexed Texas Gross State Product
1996	$422,225	$744,149,000	100.0	100.0	100.0
1997	441,089	798,668,000	104.5	104.5	107.3
1998	491,995	860,911,000	116.5	116.5	115.7
1999	512,804	901,969,000	121.5	121.5	121.2
2000	561,560	939,695,000	133.0	133.2	126.3
2001	611,355	963,158,000	144.8	145.2	129.4
2002	606,788	982,605,000	143.7	147.6	132.0
2003	610,556	982,001,000	144.6	148.4	132.0
2004	643,894	1,032,522,000	152.5	156.0	138.8
2005	673,431	1,051,900,000	159.5	162.7	141.4
2006	735,018	1,098,911,000	174.1	177.6	147.7
2007	751,644	1,160,011,000	178.0	181.6	155.9
2008	784,927	1,173,082,000	185.9	190.2	157.6
2009	705,541	1,173,375,000	167.1	170.9	157.7
2010	699,331	1,195,999,000	165.6	169.5	160.7
2011	742,027	1,234,098,000	175.7	179.8	165.8
2012	780,517	1,296,270,000	184.9	189.1	174.2
2013	801,102	1,358,434,000	189.7	194.1	182.5
2014	832,978	1,405,053,000	197.3	196.9	188.8
2015	860,887	1,468,963,000	203.9	203.5	197.4

Note: Tax collection figures are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 4.7

Indexed Values for Diesel Fuel Tax Collections, Diesel Fuel Tax Base and Texas Real Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Tax collection figures are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 4.8 and **4.9** illustrate the pessimistic, baseline and optimistic scenarios for motor fuel taxes collections from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $51 million in tax collections. By 2027, the difference would increase to $294 million. Assuming no legislative changes to Texas' motor fuel taxes, the compound average annual growth rate would be 1.3 percent in the pessimistic scenario, 1.8 percent in the baseline scenario, and 2.0 percent in the optimistic scenario.

Exhibit 4.8

Possible Future Motor Fuel Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline, and Optimistic Scenarios
(Amounts in Thousands)

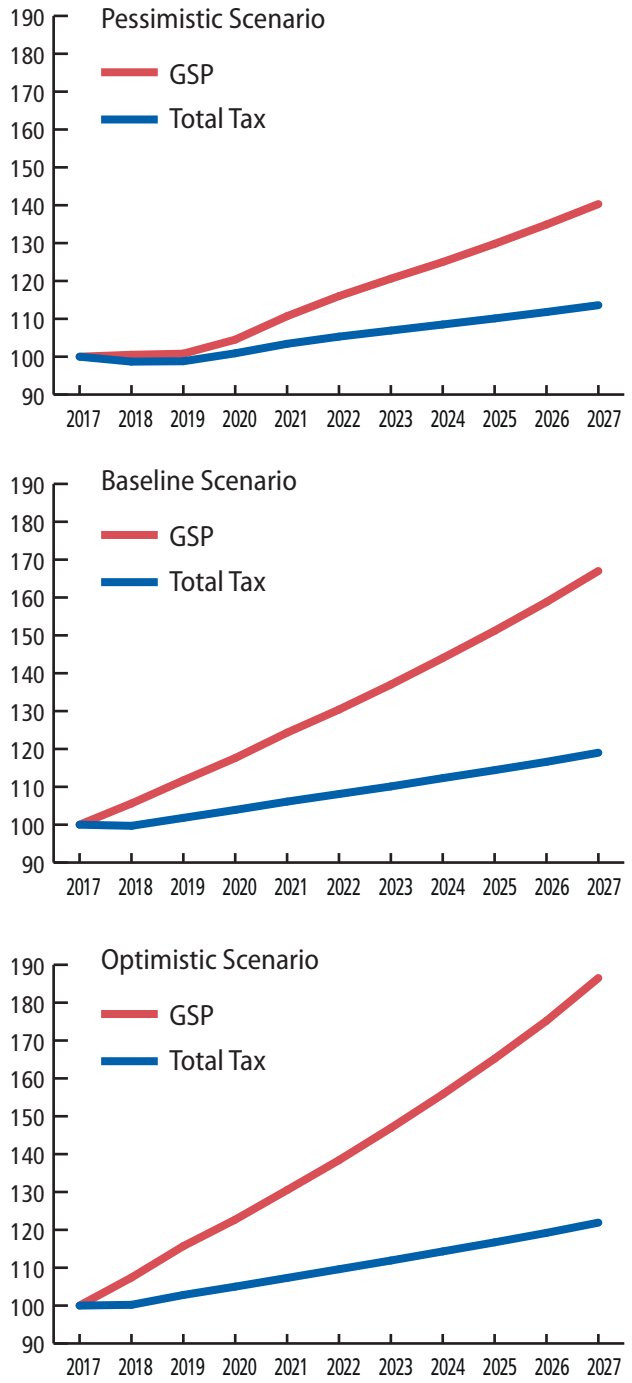
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$3,556,862	-	$3,556,862	-	$3,556,862	-
2018	3,511,600	-1.3%	3,545,000	-0.3%	3,562,400	0.2%
2019	3,514,500	0.1	3,621,100	2.1	3,655,000	2.6
2020	3,587,500	2.1	3,695,000	2.0	3,734,100	2.2
2021	3,677,500	2.5	3,773,400	2.1	3,817,100	2.2
2022	3,743,800	1.8	3,844,700	1.9	3,899,200	2.2
2023	3,801,300	1.5	3,917,400	1.9	3,981,600	2.1
2024	3,857,800	1.5	3,992,700	1.9	4,065,400	2.1
2025	3,917,000	1.5	4,069,300	1.9	4,151,100	2.1
2026	3,978,000	1.6	4,148,900	2.0	4,240,700	2.2
2027	4,041,600	1.6	4,232,200	2.0	4,335,900	2.2
Average		**1.3%**		**1.8%**		**2.0%**

*2017 estimates are from the October 2015 Certification Revenue Estimate
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 4.9

Indexed Values for Projected Future Motor Fuel Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 Certification Revenue Estimate
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

5. Oil Production and Regulation Taxes

The state's oil production tax is a tax on the removal of oil from beneath Texas land. The current tax rate of 4.6 percent of market value has remained unchanged since 1951, longer than any other major state tax. In fiscal 2015, collections totaled $2.9 billion.

The significantly smaller oil regulation tax, with a rate of 3/16 of a cent per barrel of oil produced in Texas, was repealed by the Legislature as of September 1, 2015; that tax yielded $2 million in 2015.

Texas constitutionally dedicates 25 percent of oil production tax collections to public education, transferring it to the Foundation School Fund (GR Account 0193). The remainder is deposited to the General Revenue Fund 0001.

In each fiscal year, 75 percent of the previous year's collections in excess of the amount collected in fiscal 1987 ($532 million) is divided between the Economic Stabilization Fund 0599 (ESF) — the state's "Rainy Day Fund" – and the State Highway Fund 0006. Since fiscal 2010, the oil production tax has been the ESF's largest source of revenue.

Historical Collection Trends

State oil production tax collections are determined by the taxable value of oil produced and sold at market prices. Between fiscal 1996 and 2010, when production volume declined modestly at a relatively stable rate, tax collections varied with fluctuations in oil market prices.

Oil tax collections reached their lowest point in the 1996-2015 study period in 1999, due to market prices that fell into the low teens at the end of 1998. Rebounding prices in 1999 marked the beginning of a bull market for oil exploration, due largely to exceptional economic growth in China and other Asian countries.

After nearly eight years of increases, market prices hit an all-time high of $145 per barrel in July 2008, a spike driven by a declining dollar and fears of inadequate world production capacity. In 2008, oil tax collections exceeded the previous record set in 1982. As the 2008 recession deepened, however, prices began a rapid decline to near $30, ending a decade-long bull market. By 2011, recovering market prices passed the $80 level, enough to stimulate the development of shale oil and liquids-rich natural gas.

The success of natural gas exploration and production in North Texas' Barnett Shale, which began in 2000, set the stage for the development of the Eagle Ford Shale in South Texas by 2008, and in turn revitalized Permian Basin production by 2011. Between 2010 and 2015, Texas oil production tripled and market prices increased through 2014, resulting in record tax collections in fiscal 2014 of $3.9 billion. Although production grew in 2015, the annual average market price fell by more than one-third from 2014, reducing tax collections to $2.9 billion.

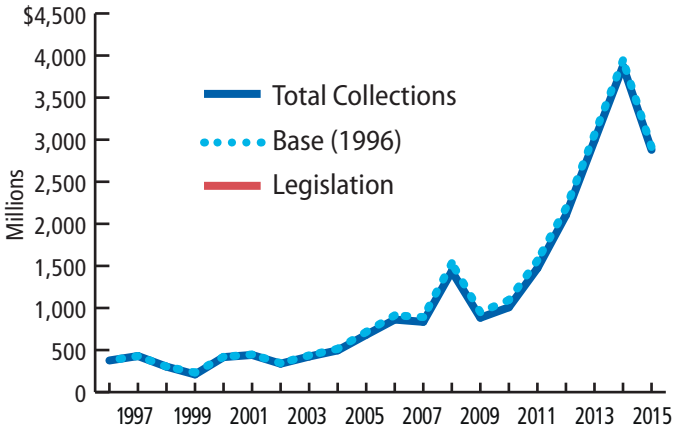
Significant legislation during the study period included tax exemptions for new production from wells previously inactive for two years (1997) and for "orphan" wells (2005); credits for low-producing wells at certain price triggers (2005); credits for marginal wells with enhanced efficiency equipment (2005); exemptions for enhanced oil recovery (EOR) projects using anthropogenic CO_2 to enhance production (2007); and a rate reduction for oil produced in association with the production of geothermal energy (2009). The two-year inactive well provision represents more than 96 percent of the total state fiscal impact of oil tax exemptions and credits granted since fiscal 1997.

Legislation enacted prior to the first study year of 1996, along with any subsequent extensions, are not included in the fiscal impacts estimated in **Exhibits 5.1** and **5.2**.

In all, total Texas oil production tax collections rose by an average of 11.3 percent annually between fiscal 1996 and 2015, or an average of 26.6 percent per biennium (**Exhibit 5.3**).

Exhibit 5.1

Net Oil Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 5.2

Impact of Legislation on Net Oil Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$376,975	-	$376,975
1997	429,149	-	429,149
1998	304,062	-$267	303,795
1999	233,275	-22,462	210,813
2000	420,899	-4,279	416,620
2001	448,977	-6,397	442,580
2002	345,640	-6,979	338,661
2003	437,422	-13,835	423,587
2004	515,358	-19,247	496,111
2005	716,521	-34,630	681,891
2006	913,639	-51,278	862,361
2007	892,501	-57,476	835,025
2008	1,533,137	-96,258	1,436,879
2009	950,664	-66,153	884,511
2010	1,095,522	-86,858	1,008,664
2011	1,565,199	-92,352	1,472,847
2012	2,187,678	-84,410	2,103,268
2013	3,063,572	-72,682	2,990,890
2014	3,944,537	-70,466	3,874,071
2015	2,913,433	-34,378	2,879,055

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 5.3

Annual and Biennial Oil Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	13.8%	13.8%			
1998	-29.1	-29.2	1998-99	-33.3%	-36.2%
1999	-23.3	-30.6			
2000	80.4	97.6	2000-01	61.9	67.0
2001	6.7	6.2			
2002	-23.0	-23.5	2002-03	-10.0	-11.3
2003	26.6	25.1			
2004	17.8	17.1	2004-05	57.3	54.5
2005	39.0	37.4			
2006	27.5	26.5	2006-07	46.6	44.1
2007	-2.3	-3.2			
2008	71.8	72.1	2008-09	37.5	36.8
2009	-38.0	-38.4			
2010	15.2	14.0	2010-11	7.1	6.9
2011	42.9	46.0			
2012	39.8	42.8	2012-13	97.4	105.3
2013	40.0	42.2			
2014	28.8	29.5	2014-15	30.6	32.6
2015	-26.1	-25.7			
Average	**11.4%**	**11.3%**		**26.9%**	**26.6%**
Maximum	**80.4%**	**97.6%**		**97.4%**	**105.3%**
Minimum	**-38.0%**	**-38.4%**		**-33.3%**	**-36.2%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

There is no meaningful correlation between oil production tax revenue and Texas nominal Gross State Product (GSP) (except to the extent that the value of oil production is a component of GSP) or other indicators of economic growth. That is, aggregate state economic growth does not drive oil tax revenue. **Exhibits 5.4** and **5.5** clearly demonstrate that point.

Instead, the tax depends on the price of crude oil – determined in a world market – and production – with production determined both by current and past prices and the state of extraction technology. Oil and natural gas production is exceptionally capital intensive, requiring long lead times for research and development activities that lead to technological improvements in extraction.

As such, rising prices generally did not significantly affect oil production until new extraction technologies were developed and commercialized. In Texas' case, the impact of rising prices beginning in fiscal 2000 was not evident until fiscal 2011, when production began to grow rapidly due to the application of horizontal drilling and hydraulic fracturing.

Exhibit 5.4

Actual and Indexed Values for Oil Taxes Collections, Oil Taxes Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

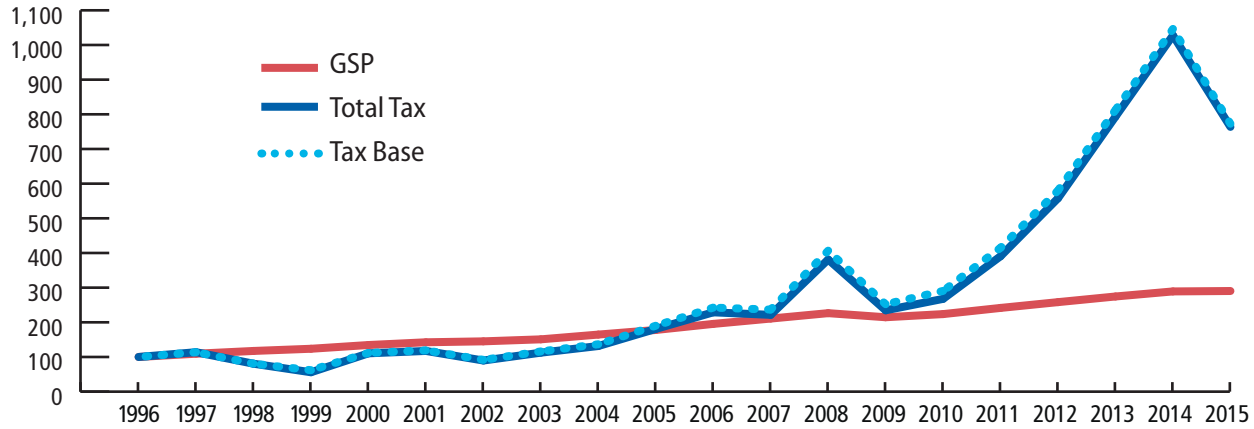
Fiscal Year	Total Oil Taxes Collections	Texas Gross State Product	Indexed Total Oil Taxes Collections	Indexed Oil Taxes Base	Indexed Texas Gross State Product
1996	$376,975	$549,132,000	100.0	100.0	100.0
1997	429,149	600,768,000	113.8	113.8	109.4
1998	303,795	644,461,000	80.6	80.7	117.4
1999	210,813	679,268,000	55.9	61.9	123.7
2000	416,620	738,660,000	110.5	111.7	134.5
2001	442,580	782,124,000	117.4	119.1	142.4
2002	338,661	796,589,000	89.8	91.7	145.1
2003	423,587	828,683,000	112.4	116.0	150.9
2004	496,111	904,086,000	131.6	136.7	164.6
2005	681,891	976,654,000	180.9	190.1	177.9
2006	862,361	1,073,225,000	228.8	242.4	195.4
2007	835,025	1,157,805,000	221.5	236.8	210.8
2008	1,436,879	1,243,129,000	381.2	406.7	226.4
2009	884,511	1,178,409,000	234.6	252.2	214.6
2010	1,008,664	1,228,599,000	267.6	290.6	223.7
2011	1,472,847	1,326,041,000	390.7	415.2	241.5
2012	2,103,268	1,417,784,000	557.9	580.3	258.2
2013	2,990,890	1,507,328,000	793.4	812.7	274.5
2014	3,874,071	1,587,433,000	1027.7	1046.4	289.1
2015	2,879,055	1,594,402,000	763.7	772.8	290.3

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 5.5

Indexed Values for Oil Taxes Collections, Oil Taxes Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 5.6 and **5.7** illustrate the pessimistic, baseline and optimistic scenarios for oil production tax collections from fiscal 2017 through 2027. Each scenario assumes no future legislative changes to this tax.

The pessimistic scenario calls for oil market prices per barrel to drop initially below $40 in fiscal 2018, rebound to the $40s, and remain there through 2027. After a sharp 32 percent decline in 2018, tax collections would rise slowly, to $1.69 billion in 2027, for an average annual growth rate of 2.0 percent over the nine-year period. Texas production would fall further during the next three years and decline gradually thereafter. Global demand would remain subdued with slower growth from China and emerging markets.

Most Texas oil and natural gas producers would face severe debt overhang that would limit their ability to fund normal drilling programs during the next three years; drilling efficiency gains and cost cutting would help them stay competitive and maintain production levels thereafter. Increased production from low-cost producers such as Kuwait, Iran, Iraq and Saudi Arabia would continue to put downward pressure on prices. U.S. demand growth would remain tepid while European Union growth is assumed to be stagnant.

The baseline scenario assumes oil prices remain in the $50s during the next three years and move to the $70s by the end of 2027. Tax collections would grow along with rising prices, to $3.02 billion in fiscal 2027, for a 3.9 percent average annual increase. Texas production activity would slowly return to normal levels, aided by drilling efficiency gains and cost cutting. Better cash flow would help many producers with their drilling programs.

Producers would focus their attention less on high initial rates of well production and more on sustainable production that extends well life, increases reserves and improves overall well economics. In addition, enhanced oil recovery techniques would be widely adopted to improve well productivity with less investment. In this scenario, global supply and demand is reasonably balanced going forward, with moderate demand growth from China and emerging markets. Production increases from low-cost producers would not be significant enough to keep prices from rising.

The optimistic scenario anticipates stronger global demand that brings prices to the $90s by 2027. Collec-

tions would reach $3.89 billion in 2027, for an average growth of 6.5 percent annually. India's demand would grow faster than China's to lead the world, while supply growth from key members of OPEC would be limited, given the geopolitical hurdles these producing countries must overcome. Texas producers would increase production during the first three years and maintain that level thereafter.

In 2018, the high- and low-growth scenarios differ by $906 million in tax collections. By 2027, the difference would be $2.2 billion.

Exhibit 5.6

Possible Future Oil Tax Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

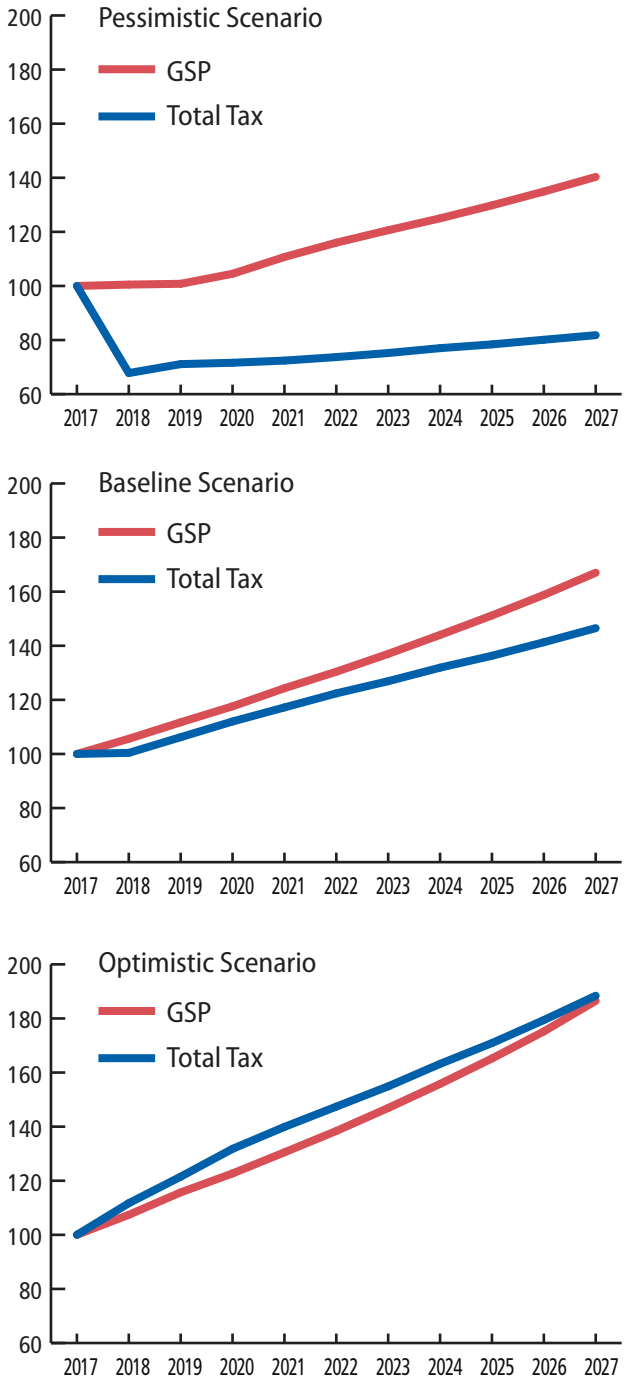
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$2,062,105	-	$2,062,105	-	$2,062,105	-
2018	1,397,800	-32.2%	2,069,800	0.4%	2,304,200	11.7%
2019	1,465,200	4.8	2,190,700	5.8	2,506,100	8.8
2020	1,477,000	0.8	2,308,700	5.4	2,717,800	8.4
2021	1,493,100	1.1	2,416,400	4.7	2,884,800	6.1
2022	1,520,100	1.8	2,523,600	4.4	3,039,400	5.4
2023	1,550,700	2.0	2,616,400	3.7	3,194,800	5.1
2024	1,587,800	2.4	2,719,600	3.9	3,365,000	5.3
2025	1,617,200	1.9	2,811,500	3.4	3,523,500	4.7
2026	1,651,600	2.1	2,914,400	3.7	3,699,900	5.0
2027	1,686,400	2.1	3,021,100	3.7	3,885,100	5.0
Average		-2.0%		3.9%		6.5%

*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 5.7

Indexed Values for Possible Future Oil Tax Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

6. Natural Gas Production Tax

Texas' natural gas production tax is imposed on the market value of natural gas produced in the state, with a current tax rate of 7.5 percent on natural gas and casinghead gas (natural gas produced along with oil from oil wells). Certain high cost gas is taxed at a lower rate. Condensates (hydrocarbon liquids often produced with natural gas) are taxed at the oil production rate of 4.6 percent of market value. In fiscal 2015, Texas collected $1.3 billion from the natural gas production tax.

Texas constitutionally dedicates 25 percent of natural gas production tax collections to public education, transferring it to the Foundation School Fund (GR Account 0193). The remainder is deposited to the General Revenue Fund 0001.

In each fiscal year, 75 percent of the previous year's collections in excess of the amount collected in 1987 ($600 million) is divided between the Economic Stabilization Fund (ESF) and the State Highway Fund 0006.

Historical Collection Trends

During the 1996 to 2015 study period, natural gas production tax collections were affected by changes in economic conditions and minor legislative changes (**Exhibits 6.1** and **6.2**).

The late 1990s represented a relatively stable period for natural gas prices and production. Market prices annually averaged about $2 per million BTUs (mmBTU) and overall natural gas production remained below 6 trillion cubic feet (TCF). The 1997 Legislature enacted tax exemptions for new production from wells previously inactive for two years and for flared gas.

In fiscal 1999, natural gas market prices averaged $2.05 per mmBTU. By 2001, due to constraints on supply and surging demand, prices more than doubled to an average of $5.41. In the same period, natural gas tax collections rose from $489 million to nearly $1.6 billion, an increase of 227 percent. In 2002, during a brief recession, the average price dropped to $2.84 and tax collections fell to $628 million.

From 2003 to 2008, natural gas prices, exploration, production and state tax revenue all moved in a positive direction. New technological developments in horizontal drilling and well fracturing sparked the period now known as the "shale boom." Drilling permits in the Texas Barnett Shale more than quadrupled, from 973 to a peak of 4,065. The average number of drilling rigs operating in Texas rose from 343 to 898. Annual market prices increased from $4.80 per mmBTU to $8.47, in part due to weather-related supply shortages. Natural gas production rose from 5.74 TCF to 7.39 TCF, largely due to activity in the Barnett Shale. Tax collections more than doubled, from $1.07 billion in 2003 to $2.68 billion in 2008.

The 2005 Legislature provided a natural gas tax exemption for low-producing gas wells that took effect in fiscal 2006; no wells qualified for the exemption, however, until prices fell below the exemption's trigger price in fiscal 2009.

During the Great Recession, credit markets tightened and the Texas drilling rig count fell from an average of 868 in fiscal 2008 to 499 in 2010. Market prices dropped to an average of $4.43 in 2010. With production growth essentially halted due to lower market prices, tax collections fell to $726 million in 2010.

Energy industry attention shifted to the Eagle Ford Shale after the end of the Great Recession. The number of drilling permits there rose from 94 in calendar 2009 to 5,613 in 2014. In the Permian Basin, the permit count increased from 3,517 to 10,966. This was a second phase of the shale boom, which focused primarily on crude oil, natural gas liquids and condensate. While drilling activity for natural gas was less robust, increased oil drilling caused total gas production to remain stable due to the recovery of significant amounts of associated casinghead gas.

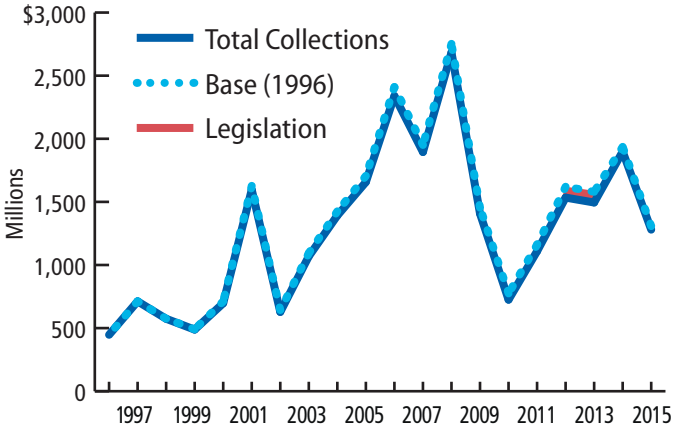
Natural gas demand and production remained strong in fiscal 2014, with market prices averaging $4.18 and tax collections totaling $1.90 billion. Prices fell once

again during the record warm winter of 2014-2015. In 2015, prices for natural gas averaged $3.34 and tax collections were $1.28 billion.

In all, total Texas natural gas tax collections rose by an average of 5.7 percent annually between fiscal 1996 and 2015, or an average of 11.9 percent per biennium (**Exhibit 6.3**).

Exhibit 6.1

Net Natural Gas Production Tax Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 6.2

Impact of Legislation on Net Natural Gas Production Tax Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$447,102	-	$447,102
1997	712,223	-	712,223
1998	575,779	-$1,194	574,584
1999	491,405	-2,822	488,583
2000	712,498	-14,833	697,666
2001	1,627,787	-30,901	1,596,886
2002	643,119	-14,622	628,497
2003	1,094,156	-24,292	1,069,864
2004	1,425,654	-33,218	1,392,436
2005	1,706,098	-49,012	1,657,086
2006	2,410,447	-71,299	2,339,147
2007	1,951,410	-55,922	1,895,488
2008	2,752,547	-67,899	2,684,648
2009	1,454,607	-46,868	1,407,739
2010	775,137	-49,598	725,538
2011	1,161,746	-52,028	1,109,718
2012	1,620,389	-85,758	1,534,630
2013	1,580,151	-84,948	1,495,203
2014	1,936,284	-36,703	1,899,582
2015	1,308,837	-28,427	1,280,410

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 6.3

Annual and Biennial Natural Gas Production Tax Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	59.3%	59.3%			
1998	-19.2	-19.3	1998-99	-7.9%	-8.3%
1999	-14.7	-15.0			
2000	45.0	42.8	2000-01	119.3	115.8
2001	128.5	128.9			
2002	-60.5	-60.6	2002-03	-25.8	-26.0
2003	70.1	70.2			
2004	30.3	30.2	2004-05	80.3	79.6
2005	19.7	19.0			
2006	41.3	41.2	2006-07	39.3	38.9
2007	-19.0	-19.0			
2008	41.1	41.6	2008-09	-3.5	-3.4
2009	-47.2	-47.6			
2010	-46.7	-48.5	2010-11	-54.0	-55.2
2011	49.9	53.0			
2012	39.5	38.3	2012-13	65.2	65.1
2013	-2.5	-2.6			
2014	22.5	27.0	2014-15	1.4	5.0
2015	-32.4	-32.6			
Average	**5.8%**	**5.7%**		**12.1%**	**11.9%**
Maximum	**128.5%**	**128.9%**		**119.3%**	**115.8%**
Minimum	**-60.5%**	**-60.6%**		**-54.0%**	**-55.2%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

As with oil production tax revenue, there is no meaningful correlation between natural gas production tax revenue and Texas nominal Gross State Product (GSP), except to the extent that the value of natural gas production is a component of GSP, or other indicators of economic growth. That is, aggregate state economic growth does not drive natural gas tax revenue (**Exhibits 6.4** and **6.5**). The indexed growth of natural gas tax revenue and nominal GSP were nearly the same in fiscal 2015, but **Exhibit 6.5** shows that this has not been the case historically.

Instead, the tax depends on the price of natural gas, as determined in the North American market, and production, as determined by current and past prices and the state of extraction technology.

Oil and natural gas production is exceptionally capital intensive, requiring long lead times for research and development to produce technological improvements in extraction. As such, rising prices did not have a near-term impact on natural gas production until new technologies were developed and commercialized, as demonstrated through the development of the Barnett Shale in the mid-2000s.

Exhibit 6.4

Actual and Indexed Values for Natural Gas Production Tax Collections, Natural Gas Production Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total Natural Gas Production Tax Collections	Texas Gross State Product	Indexed Total Natural Gas Production Tax Collections	Indexed Natural Gas Production Tax Base	Indexed Texas Gross State Product
1996	$447,102	$549,132,000	100.0	100.0	100.0
1997	712,223	600,768,000	159.3	159.3	109.4
1998	574,584	644,461,000	128.5	128.8	117.4
1999	488,583	679,268,000	109.3	109.9	123.7
2000	697,666	738,660,000	156.0	159.4	134.5
2001	1,596,886	782,124,000	357.2	364.1	142.4
2002	628,497	796,589,000	140.6	143.8	145.1
2003	1,069,864	828,683,000	239.3	244.7	150.9
2004	1,392,436	904,086,000	311.4	318.9	164.6
2005	1,657,086	976,654,000	370.6	381.6	177.9
2006	2,339,147	1,073,225,000	523.2	539.1	195.4
2007	1,895,488	1,157,805,000	423.9	436.5	210.8
2008	2,684,648	1,243,129,000	600.5	615.6	226.4
2009	1,407,739	1,178,409,000	314.9	325.3	214.6
2010	725,538	1,228,599,000	162.3	173.4	223.7
2011	1,109,718	1,326,041,000	248.2	259.8	241.5
2012	1,534,630	1,417,784,000	343.2	362.4	258.2
2013	1,495,203	1,507,328,000	334.4	353.4	274.5
2014	1,899,582	1,587,433,000	424.9	433.1	289.1
2015	1,280,410	1,594,402,000	286.4	292.7	290.3

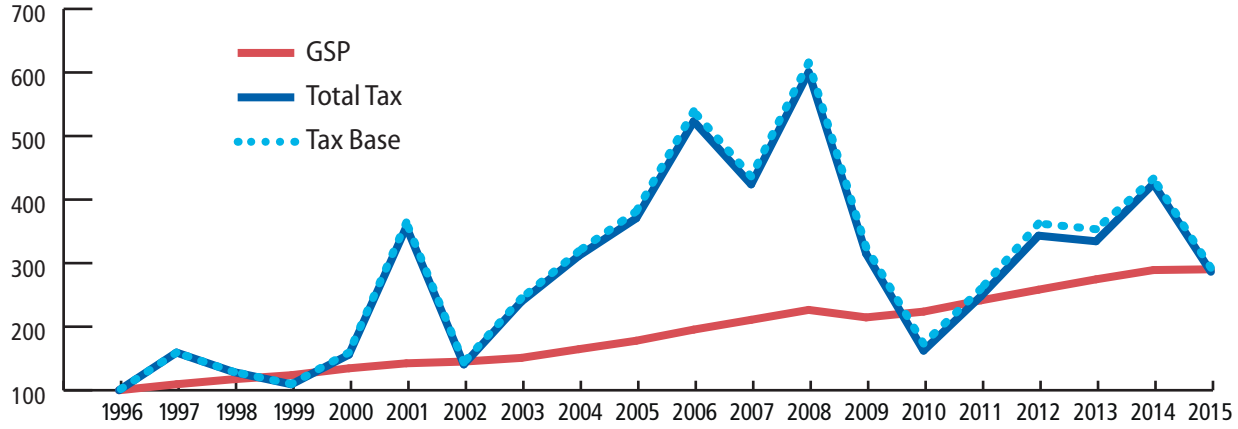
Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 6.5

Indexed Values for Natural Gas Production Tax Collections, Natural Gas Production Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 6.6 and **6.7** illustrate the pessimistic, baseline and optimistic scenarios for natural gas production tax collections from fiscal 2017 through 2027. Each scenario assumes no future legislative changes to this tax.

Tax collections under a pessimistic scenario would initially fall by 31 percent in 2018 before growing at a compound average annual rate of 7.8 percent through 2027. The initial decline from 2017 to 2018 is directly related to falling market prices for natural gas, which would dip from $3.05 to $2.46 per mmBTU in the pessimistic scenario. Condensate and natural gas liquids production would continue to command a price premium over dry natural gas and would make major contributions to natural gas tax collections; these products, however, are highly dependent on oil prices, and would be negatively affected by expected lower oil prices.

The baseline scenario assumes that natural gas prices experience steady growth over current levels after rising to $3.28 in 2018. Tax collections would jump by 8.6 percent in 2018, and then grow by average of 7.4 percent annually through 2027. Natural gas market demand and the supply are balanced in this scenario, which assumes stable growth in prices to slightly above $5.

The optimistic scenario calls for prices to increase sharply, from $3.05 in 2017 to $5.04 in 2018. This would drive 2018 tax collections up by 68 percent, with average annual growth of 6.1 percent through 2027. Market demand would be relatively high to sustain this price level and would be driven primarily by increased consumption by power plants and increased usage as an input material for the petrochemical industry.

In 2018, the high- and low-growth scenarios differ by $1.0 billion in tax collections. By 2027, the difference would be $1.6 billion.

Exhibit 6.6

Possible Future Natural Gas Production Tax Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

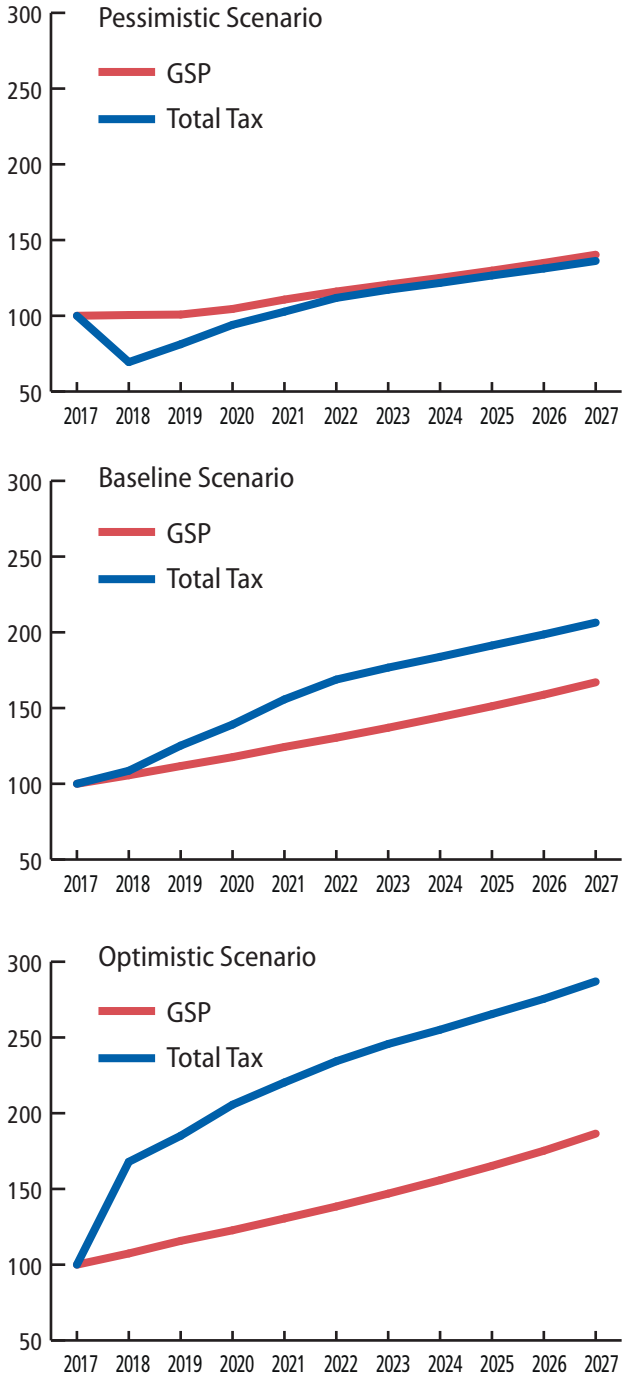
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$1,044,002	-	$1,044,002	-	$1,044,002	-
2018	$724,900	-30.6%	$1,133,500	8.6%	$1,752,700	67.9%
2019	$847,600	16.9	$1,307,400	15.3	$1,932,700	10.3
2020	$981,800	15.8	$1,451,800	11.0	$2,146,300	11.1
2021	$1,072,000	9.2	$1,626,000	12.0	$2,300,400	7.2
2022	$1,167,200	8.9	$1,762,200	8.4	$2,446,200	6.3
2023	$1,223,100	4.8	$1,845,200	4.7	$2,565,500	4.9
2024	$1,270,400	3.9	$1,918,500	4.0	$2,662,800	3.8
2025	$1,321,600	4.0	$1,996,900	4.1	$2,770,300	4.0
2026	$1,369,900	3.7	$2,073,100	3.8	$2,876,300	3.8
2027	$1,422,200	3.8	$2,154,700	3.9	$2,996,700	4.2
Average		3.1%		7.5%		11.1%

*2017 estimates are from the October 2015 Certification Revenue Estimate.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 6.7

Indexed Values for Possible Future Natural Gas Production Tax Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.

Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

7. Insurance Taxes

Texas' insurance taxes category includes premium taxes and more than a dozen maintenance taxes collected on behalf of the Texas Department of Insurance (TDI). Premium taxes are levied on gross premiums written in Texas, with tax rates ranging from 0.5 percent to 4.85 percent depending on the type of insurance and type of insurer. Maintenance taxes and fees generally apply to insurance covering risks located in Texas. TDI sets maintenance tax rates each year in amounts sufficient to fund its operations.

For fiscal 2015, the state's net insurance tax collections totaled $2.0 billion, of which 93 percent represented the insurance premium tax. Twenty-five percent of insurance premium tax revenues are constitutionally dedicated to public education funding and are transferred to the Foundation School Fund (GR Account 0193), with the remainder allocated to General Revenue Fund 0001.

All maintenance tax collections are allocated to a general revenue account supporting TDI operations (GR Account 36).

Historical Collection Trends

From fiscal 1996 through 2008, Texas insurance tax collections rose by an average of 6.4 percent annually, with only one instance of a decline (a 1.9 percent drop in 2000). Following September 11th, premium tax revenue jumped by 27.5 percent in 2002 and another 11.8 percent in 2003, mostly from increases in property and casualty insurance premiums. From 2004 through 2008, premium tax collections rose at a more modest average of 5.2 percent per year.

Beginning in 2009, premium tax revenues were reduced by two temporary factors: Texas Windstorm Insurance Association (TWIA) assessment credits and Certified Capital Company (CAPCO) premium tax credits.

After claims related to Hurricanes Dolly and Ike in 2008 exceeded available reserves, TWIA imposed assessments of $460 million on insurers, $230 million of which were available as premium tax credits. Insurers could take a maximum of 20 percent of these assessment credits ($46 million in all) in any fiscal year. CAPCO investment tax credits also were first offered in 2009. These credits, available at a rate of $50 million annually, will continue through 2017.

The TWIA and CAPCO credits, combined with the effects of the Great Recession, resulted in a 13.3 percent decline in insurance tax collections in 2009. Since then, tax revenues have risen every year, at an average annual rate of 9.1 percent.

In 2003, H.B. 2292 made premiums received for insurance under the Medicaid and Children's Health Insurance Program subject to insurance premium and maintenance taxes. In 2012, the Texas Health and Human Services Commission began moving the majority of its fee-for-service Medicaid caseload, which is not subject to insurance premium and maintenance taxes, to Medicaid managed care, which is subject to tax. Large increases in insurance tax collections in recent years are due in part to this change (**Exhibits 7.1** and **7.2**).

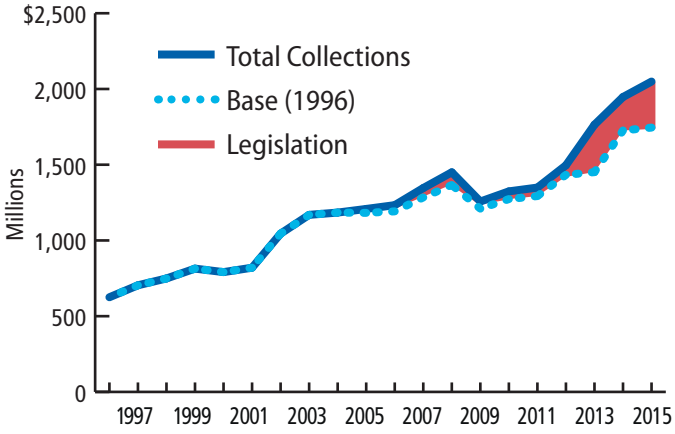
The federal Dodd-Frank Wall Street Reform and Consumer Protection Act (H.R. 4173) of 2010 resulted in change in the manner in which taxes are levied on surplus lines insurance, a form of risk coverage that may be sold by unlicensed or nonadmitted insurance companies when companies in the licensed market are not able or willing to offer insurance coverage for a particular risk. Previously, the premium tax was due only on policies covering risks in Texas. Under the terms of H.R. 4173, the state's premium tax for surplus lines and independently procured insurance is due on insurance provided to insured individuals or entities whose home state is Texas.

Texas statutes were amended in 2011 to conform to the federal provisions that preempted state statutes regarding the regulation and taxation of nonadmitted insurance business on multi-state policies. The changes resulted in increased premium tax revenue.

In all, total Texas insurance taxes collections rose by an average of 6.4 percent annually between fiscal 1996 and 2015, or an average of 13.0 percent per biennium (**Exhibit 7.3**).

Exhibit 7.1

Net Insurance Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 7.2

Impact of Legislation on Net Insurance Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$626,644	-	$626,644
1997	705,834	-	705,834
1998	747,196	-	747,196
1999	811,708	-	811,708
2000	796,567	-	796,567
2001	820,046	-	820,046
2002	1,045,754	-	1,045,754
2003	1,169,062	-	1,169,062
2004	1,184,922	-	1,184,922
2005	1,182,698	$26,168	1,208,866
2006	1,192,086	41,408	1,233,494
2007	1,284,314	62,263	1,346,577
2008	1,366,930	83,254	1,450,184
2009	1,210,411	46,903	1,257,314
2010	1,273,701	51,002	1,324,703
2011	1,293,671	55,971	1,349,642
2012	1,433,397	62,854	1,496,251
2013	1,451,749	312,404	1,764,153
2014	1,726,498	221,410	1,947,908
2015	1,745,052	304,365	2,049,417

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 7.3

Annual and Biennial Insurance Taxes Collections Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	12.6%	12.6%			
1998	5.9	5.9	1998-99	17.0%	17.0%
1999	8.6	8.6			
2000	-1.9	-1.9	2000-01	3.7	3.7
2001	2.9	2.9			
2002	27.5	27.5	2002-03	37.0	37.0
2003	11.8	11.8			
2004	1.4	1.4	2004-05	6.9	8.1
2005	-0.2	2.0			
2006	0.8	2.0	2006-07	4.6	7.8
2007	7.7	9.2			
2008	6.4	7.7	2008-09	4.1	4.9
2009	-11.5	-13.3			
2010	5.2	5.4	2010-11	-0.4	-1.2
2011	1.6	1.9			
2012	10.8	10.9	2012-13	12.4	21.9
2013	1.3	17.9			
2014	18.9	10.4	2014-15	20.3	22.6
2015	1.1	5.2			
Average	**5.5%**	**6.4%**		**11.2%**	**13.0%**
Maximum	**27.5%**	**27.5%**		**37.0%**	**37.0%**
Minimum	**-11.5%**	**-13.3%**		**-0.4%**	**-1.2%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Historically, insurance premium tax revenue has correlated well with Texas' nominal Gross State Product (GSP). This correlation was weaker in the period immediately following the September 11th attacks due to large increases in property and casualty insurance premium rates. By 2004, however, insurance premium tax growth once again began to closely track that of nominal GSP.

This relationship lasted through the Great Recession (after adjusting for temporary reductions in tax collections due to TWIA and CAPCO premium tax credits), but began to break down again in 2013. As in the period after September 11th, premium tax collections began to increase at a much faster rate than nominal GSP, due largely to the transition of Medicaid services from a fee-for-service basis to managed care. As this transition is completed, premium tax collection growth should slow and, once again, closely track nominal GSP.

The Texas Department of Insurance sets maintenance tax rates each year in amounts sufficient to fund its operations. Maintenance tax collections, therefore, are not closely correlated with nominal GSP or Texas personal income, but instead with the costs of regulating the Texas insurance industry. Estimation of maintenance tax revenue is further complicated by the fact that TDI's rates themselves depend on the agency's operating account (GR Account 0036) cash balance at the time it sets the rates. For this reason, the maintenance tax growth rate often "seesaws"; if it's positive in one year, it's likely to be negative in the next.

Over the long run, however, and particularly in recent years, growth rates for most maintenance taxes correlate reasonably well with growth in real GSP. For those used to fund the operations of TDI's Division of Workers Compensation, however, growth is strongly correlated with population growth.

Exhibits 7.4 and **7.5** show the relationship between total insurance taxes collections and GSP.

Exhibit 7.4

Actual and Indexed Values for Insurance Taxes Collections, Insurance Taxes Base, and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

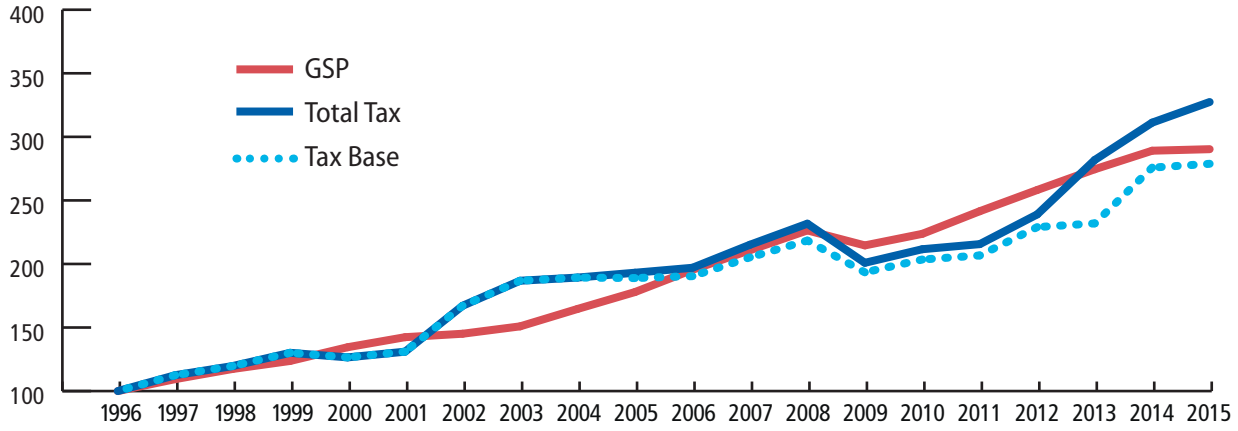
Fiscal Year	Total Insurance Taxes Collections	Texas Gross State Product	Indexed Total Insurance Taxes Collections	Indexed Insurance Taxes Base	Indexed Texas Gross State Product
1996	$626,644	$549,132,000	100.0	100.0	100.0
1997	705,834	600,768,000	112.6	112.6	109.4
1998	747,196	644,461,000	119.2	119.2	117.4
1999	811,708	679,268,000	129.5	129.5	123.7
2000	796,567	738,660,000	127.1	127.1	134.5
2001	820,046	782,124,000	130.9	130.9	142.4
2002	1,045,754	796,589,000	166.9	166.9	145.1
2003	1,169,062	828,683,000	186.6	186.6	150.9
2004	1,184,922	904,086,000	189.1	189.1	164.6
2005	1,208,866	976,654,000	192.9	188.7	177.9
2006	1,233,494	1,073,225,000	196.8	190.2	195.4
2007	1,346,577	1,157,805,000	214.9	205.0	210.8
2008	1,450,184	1,243,129,000	231.4	218.1	226.4
2009	1,257,314	1,178,409,000	200.6	193.2	214.6
2010	1,324,703	1,228,599,000	211.4	203.3	223.7
2011	1,349,642	1,326,041,000	215.4	206.4	241.5
2012	1,496,251	1,417,784,000	238.8	228.7	258.2
2013	1,764,153	1,507,328,000	281.5	231.7	274.5
2014	1,947,908	1,587,433,000	310.8	275.5	289.1
2015	2,049,417	1,594,402,000	327.0	278.5	290.3

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 7.5

Indexed Values for Insurance Taxes Collections, Insurance Taxes Base, and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 7.6 and **7.7** illustrate the pessimistic, baseline and optimistic scenarios for collections from insurance taxes from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $148 million in tax collections. By 2027, the difference would increase to $987 million. Assuming no legislative changes to Texas' insurance taxes, the compound average annual growth rate would be 3.3 percent in the pessimistic scenario, 5.1 percent in the baseline scenario, and 6.2 percent in the optimistic scenario.

Exhibit 7.6

Possible Future Insurance Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

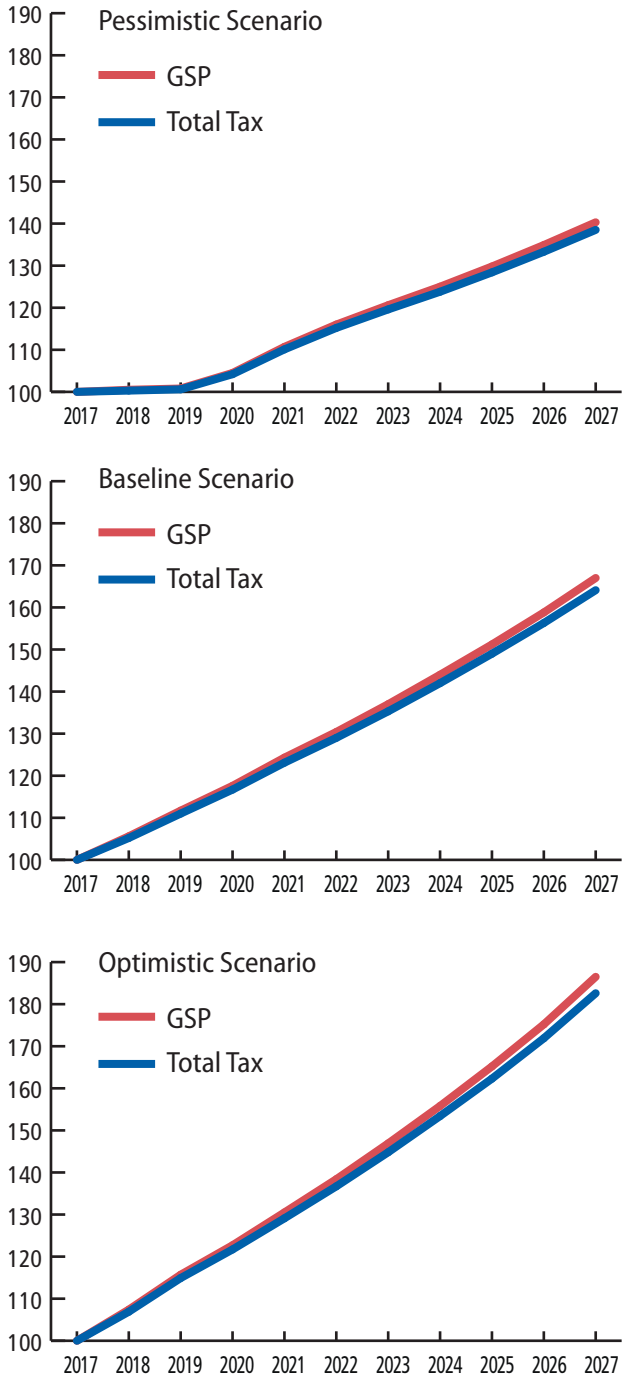
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$2,238,300	-	$2,238,300	-	$2,238,300	-
2018	2,245,100	0.3%	2,354,400	5.2%	2,392,600	6.9%
2019	2,251,200	0.3	2,484,700	5.5	2,571,600	7.5
2020	2,331,400	3.6	2,613,100	5.2	2,723,000	5.9
2021	2,465,200	5.7	2,756,300	5.5	2,889,200	6.1
2022	2,578,800	4.6	2,887,600	4.8	3,059,800	5.9
2023	2,677,100	3.8	3,028,600	4.9	3,240,900	5.9
2024	2,771,800	3.5	3,179,200	5.0	3,432,600	5.9
2025	2,873,700	3.7	3,334,200	4.9	3,632,700	5.8
2026	2,983,500	3.8	3,498,300	4.9	3,848,100	5.9
2027	3,100,400	3.9	3,673,400	5.0	4,087,800	6.2
Average		3.3%		5.1%		6.2%

*2017 estimates are from the October 2015 *Certification Revenue Estimate.*
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 7.7

Indexed Values for Possible Future Insurance Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.

Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

8. Cigarette and Tobacco Taxes

The Texas cigarette and tobacco taxes category includes separate levies on cigarettes, cigars and other tobacco products (OTPs), including snuff, chewing tobacco, pipe tobacco and roll-your-own tobacco.

Cigarettes are taxed at $70.50 per 1,000 cigarettes ($1.41 per pack of 20). Cigars are taxed at four separate rates based on weight, price and content, ranging from 1 cent per 10 cigars weighing less than three pounds per 1,000 to $15 per 1,000 for cigars weighing more than three pounds per 1,000 and containing a substantial amount of non-tobacco ingredients. Other tobacco products are taxed at $1.22 per ounce.

In fiscal 2015, the state collected $1.5 billion from these taxes, with cigarettes accounting for more than 85 percent of the total (**Exhibits 8.1** and **8.2**).

Revenue generated from the first 41 cents of the tax on cigarettes is dedicated to General Revenue Fund 0001, with the remainder transferred to the Property Tax Relief Fund 0304 (PTRF). Collections from the taxes on cigars and other tobacco products are allocated to Fund 0001, PTRF and the Physician Education Loan Repayment Program Account (GR Account 5144).

Historical Collection Trends

In January 2007, the state cigarette tax rate rose by $1, from 41 cents to $1.41 per pack of 20, while the OTP tax rate increased from 35.213 percent to 40 percent of the manufacturer's list price (H.B. 5, 79th Legislature, Third Called Session).

In 2009, the federal cigarette tax rate rose from 39 cents to $1.0066 per pack; rates for cigars and OTPs increased as well. In the same year, the Legislature revised the state OTP tax structure, changing its basis from list price to weight (H.B. 2154, 81st Legislature, Regular Session). The new weight-based tax, effective September 1, 2009, was levied at $1.10 per ounce. This rate rose by three cents every September 1st thereafter until it reached the current rate of $1.22 per ounce in 2013.

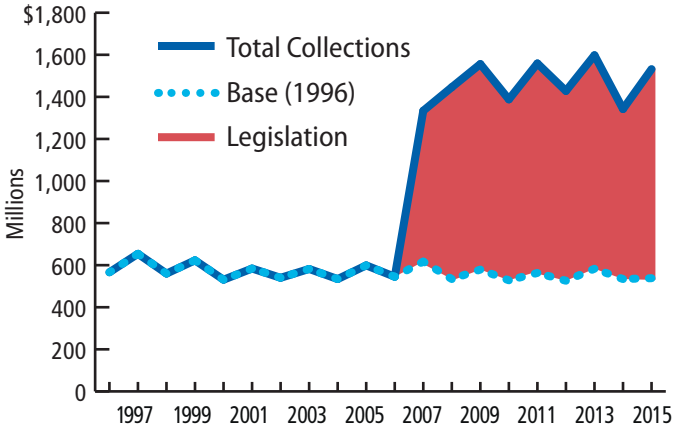
Cigarette consumption has declined most notably due to major tax increases, although health concerns, public smoking bans and the rise of alternatives such as e-cigarettes and exotic powdered tobacco products have played a role.

In fiscal 2009, Texas collected $1.4 billion in cigarette taxes, the highest total in the 1996 to 2015 study period. Since then, collections have declined by an average of 1.7 percent annually, to $1.3 billion in 2015. Cigar and OTP tax collections have risen from $164 million in 2010 (the first year of the weight-based tax) to $226 million in 2015, an average of 6.7 percent annually.

In all, total cigarette and tobacco tax collections rose by an average of 5.4 percent annually, or an average of 10 percent per biennium (**Exhibits 8.3**).

Exhibit 8.1

Net Cigarette and Tobacco Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Jagged pattern shown in annual totals is due to a statutory "speed-up" provision requiring that, in the last month of each biennium (odd-numbered years), some cigarette tax payments that would have been made in the next biennium must be paid in the current biennium.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 8.2

Impact of Legislation on Net Cigarette and Tobacco Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$566,692	-	$566,692
1997	654,769	-	654,769
1998	560,923	-	560,923
1999	623,569	-	623,569
2000	531,853	-	531,853
2001	584,586	-	584,586
2002	540,038	-	540,038
2003	582,712	-	582,712
2004	534,577	-	534,577
2005	599,368	-	599,368
2006	545,904	-	545,904
2007	617,993	$716,046	1,334,039
2008	534,091	912,804	1,446,895
2009	579,820	976,973	1,556,793
2010	528,698	860,067	1,388,765
2011	563,010	996,496	1,559,506
2012	526,971	901,132	1,428,103
2013	583,994	1,014,095	1,598,089
2014	534,563	807,892	1,342,455
2015	538,187	994,227	1,532,414

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 8.3

Annual and Biennial Cigarette and Tobacco Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	15.5%	15.5%			
1998	-14.3	-14.3	1998-99	-3.0%	-3.0%
1999	11.2	11.2			
2000	-14.7	-14.7	2000-01	-5.7	-5.7
2001	9.9	9.9			
2002	-7.6	-7.6	2002-03	0.6	0.6
2003	7.9	7.9			
2004	-8.3	-8.3	2004-05	1.0	1.0
2005	12.1	12.1			
2006	-8.9	-8.9	2006-07	2.6	65.8
2007	13.2	144.4			
2008	-13.6	8.5	2008-09	-4.3	59.8
2009	8.6	7.6			
2010	-8.8	-10.8	2010-11	-2.0	-1.8
2011	6.5	12.3			
2012	-6.4	-8.4	2012-13	1.8	2.6
2013	10.8	11.9			
2014	-8.5	-16.0	2014-15	-3.4	-5.0
2015	0.7	14.2			
Average	**-0.3%**	**5.4%**		**-1.4%**	**10.0%**
Maximum	**15.5%**	**144.4%**		**2.6%**	**65.8%**
Minimum	**-14.7%**	**-16.0%**		**-5.7%**	**-5.7%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Computed average is the compound average annual growth rate.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Exclusive of rate changes, cigarette tax collections correlate well with the state's population. The tax is an excise tax based on volume, not price; therefore, inflation is not a factor in tax collection changes.

Because of statutory provisions that accelerate taxpayer remittances at the end of each biennium (a "speed-up"), fiscal trends and economic relationships are better shown by the number of packs taxed in a given period rather than the tax revenue collected. The number of cigarette packs taxed per Texas resident since fiscal 2010, the year after the federal tax rose by 62 cents per pack, has declined by 2.6 percent annually. **Exhibits 8.4** and **8.5** begin with 1999 due to data limitations.

Collections from the cigar and tobacco products taxes also should correlate well with population, but reliable correlations cannot be determined due to recent changes in the tax base and rate for non-cigar tobacco products (**Exhibits 8.6** and **8.7**).

Exhibit 8.4

Actual and Indexed Values for Total Cigarette Tax Collections, Total Cigarette Packs Taxed and Texas Population, Fiscal 1999 to 2015

(Amounts in Thousands; Indexed Values, 1999=100)

Fiscal Year	Total Cigarette Tax Collections	Cigarette Packs Taxed	Texas Population	Indexed Total Cigarette Tax Collections	Indexed Cigarette Packs Taxed	Indexed Texas Population
1999	$558,949	1,385,075	20,507	100.0	100.0	100.0
2000	493,518	1,324,681	20,897	88.3	95.6	101.9
2001	543,733	1,304,821	21,272	97.3	94.2	103.7
2002	472,750	1,287,021	21,642	84.6	92.9	105.5
2003	524,878	1,242,922	21,990	93.9	89.7	107.2
2004	449,637	1,222,801	22,350	80.4	88.3	109.0
2005	521,164	1,241,461	22,745	93.2	89.6	110.9
2006	465,366	1,250,098	23,328	83.3	90.3	113.8
2007	1,248,481	1,125,269	23,773	223.4	81.2	115.9
2008	1,360,719	1,049,056	24,250	243.4	75.7	118.3
2009	1,447,919	997,923	24,738	259.0	72.0	120.6
2010	1,225,066	948,361	25,192	219.2	68.5	122.8
2011	1,388,206	961,776	25,605	248.4	69.4	124.9
2012	1,229,811	956,607	26,034	220.0	69.1	127.0
2013	1,394,278	954,130	26,454	249.4	68.9	129.0
2014	1,129,081	871,386	26,920	202.0	62.9	131.3
2015	1,306,566	901,850	27,408	233.8	65.1	133.7

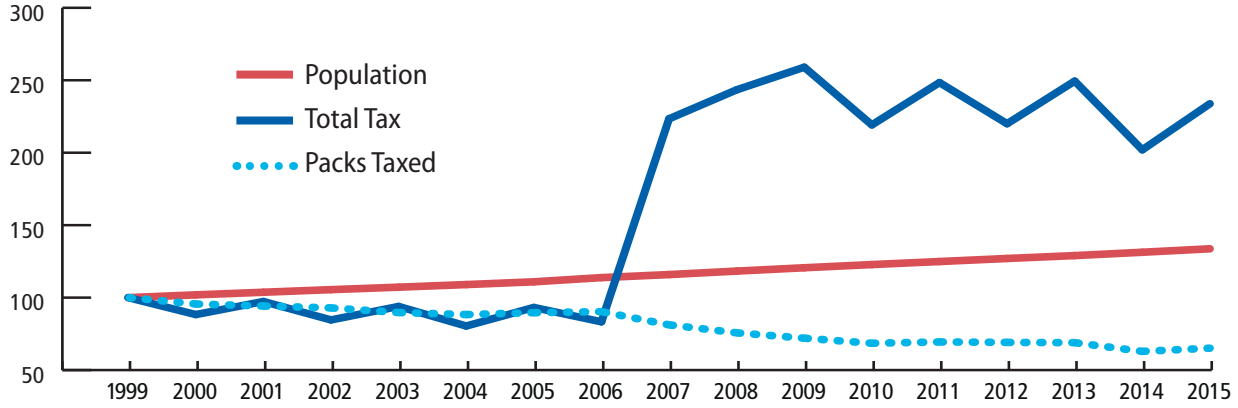
Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 8.5

Indexed Values for Cigarette Tax Collections, Cigarette Packs Taxed and Texas Population, Fiscal 1999 to 2015

(Indexed Values, 1999=100)



Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust. Jagged pattern in total tax values is due to the biennial speed-up effect on tax collections.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 8.6

Actual and Indexed Values for Total Cigar and Other Tobacco Products Taxes Collections, Cigar and Other Tobacco Products Taxes Base and Texas Population, Fiscal 1996-2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total Cigar and Tobacco Products Taxes Collections	Texas Population	Indexed Total Cigar and Tobacco Products Taxes Collections	Indexed Cigar and Tobacco Products Taxes Base	Indexed Texas Population
1996	$61,247	19,294	100.0	100.0	100.0
1997	61,649	19,691	100.7	100.7	102.1
1998	62,853	20,104	102.6	102.6	104.2
1999	64,620	20,507	105.5	105.5	106.3
2000	38,336	20,897	62.6	62.6	108.3
2001	40,854	21,272	66.7	66.7	110.3
2002	67,288	21,642	109.9	109.9	112.2
2003	57,834	21,990	94.4	94.4	114.0
2004	84,940	22,350	138.7	138.7	115.8
2005	78,204	22,745	127.7	127.7	117.9
2006	80,538	23,328	131.5	131.5	120.9
2007	85,558	23,773	139.7	124.4	123.2
2008	86,176	24,250	140.7	132.5	125.7
2009	108,874	24,738	177.8	114.9	128.2
2010	163,698	25,192	267.3	162.5	130.6
2011	171,299	25,605	279.7	164.7	132.7
2012	198,291	26,034	323.8	174.3	134.9
2013	203,811	26,454	332.8	199.3	137.1
2014	213,374	26,920	348.4	208.1	139.5
2015	225,848	27,408	368.7	227.7	142.1

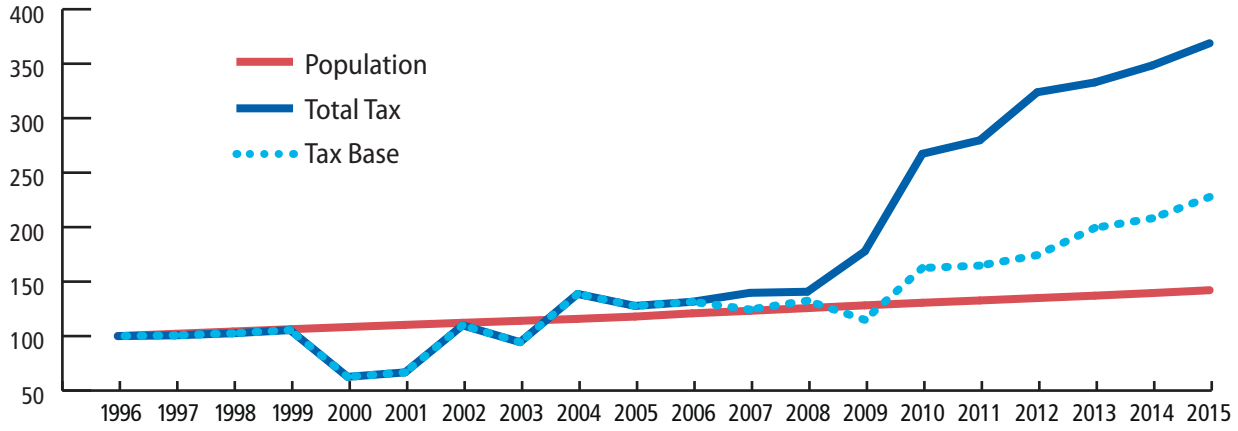
Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust. Between fiscal 2000 and 2011, substantial refunds were made to non-cigar tobacco products taxpayers.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 8.7

Indexed Values for Cigar and Other Tobacco Products Taxes Collections, Cigar and Other Tobacco Products Taxes Base and Texas Population, Fiscal 1996-2015

(Indexed Values, 1996=100)



Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust. Between fiscal 2000 and 2011, substantial refunds were made to non-cigar tobacco product taxpayers.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 8.8 and **8.9** illustrate the pessimistic, baseline and optimistic scenarios for collections from cigarette and tobacco taxes from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $3 million in tax collections. By 2027, the difference would increase to $16 million. Assuming no legislative changes to Texas' cigarette and tobacco taxes, the compound average annual growth rate would be -0.1 percent in the pessimistic and baseline scenarios, and 0.0 percent in the optimistic scenario.

Exhibit 8.8

Possible Future Cigarette and Tobacco Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$1,470,832	-	$1,470,832	-	$1,470,832	-
2018	1,278,300	-13.1%	1,279,000	-13.0%	1,280,800	-12.9%
2019	1,468,500	14.9	1,470,000	14.9	1,473,000	15.0
2020	1,277,300	-13.0	1,279,200	-13.0	1,282,300	-12.9
2021	1,466,100	14.8	1,468,900	14.8	1,473,300	14.9
2022	1,275,900	-13.0	1,279,000	-12.9	1,283,400	-12.9
2023	1,461,500	14.5	1,465,900	14.6	1,471,600	14.7
2024	1,272,300	-12.9	1,276,700	-12.9	1,282,300	-12.9
2025	1,456,500	14.5	1,462,200	14.5	1,469,600	14.6
2026	1,269,800	-12.8	1,275,400	-12.8	1,282,400	-12.7
2027	1,452,300	14.4	1,459,500	14.4	1,468,200	14.5
Average		-0.1%		-0.1%		0.0%

*2017 estimates are from the October 2015 *Certification Revenue Estimate*

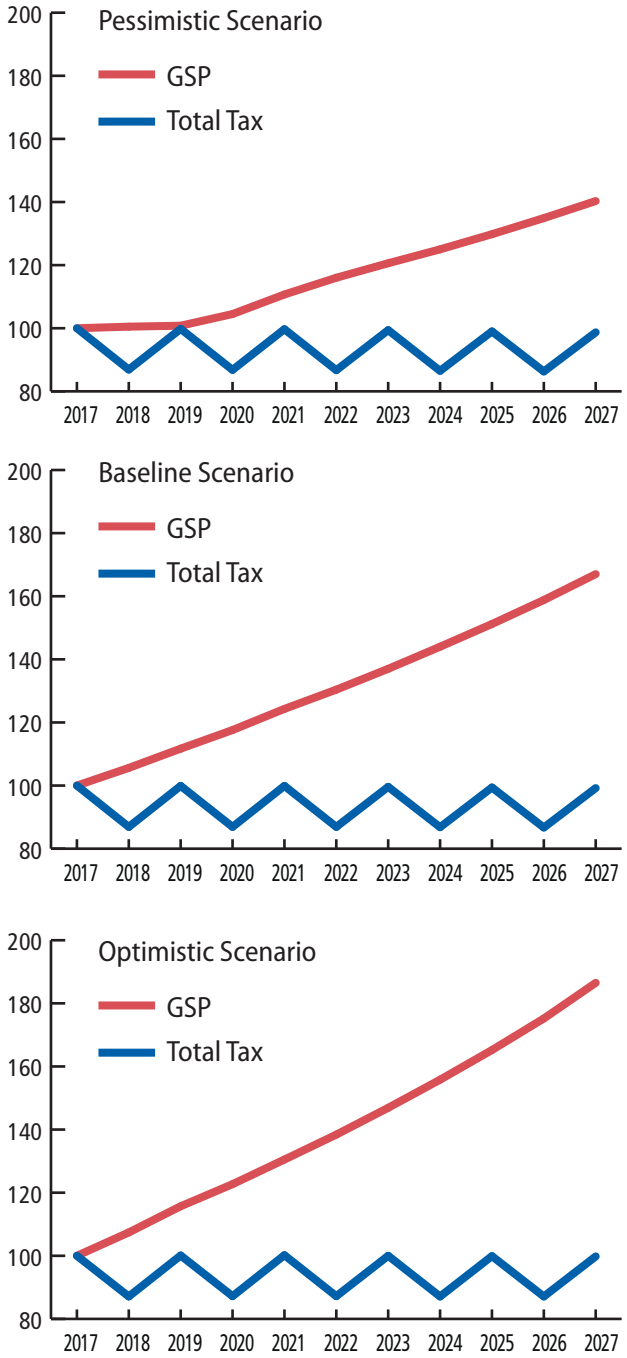
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 8.9

Indexed Values for Possible Future Cigarette and Tobacco Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*

Note: Jagged pattern in total tax values is due to the biennial speed-up effect on cigarette tax collections. Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

9. Alcoholic Beverages Taxes

In fiscal 2015, the alcoholic beverages taxes category included seven taxes. Four are excise taxes imposed on wholesale distributors of liquor, beer, wine and malt liquor, assessed at the following rates:

- beer: $6.00 per 31-gallon barrel
- liquor: $2.40 per gallon
- wine:
  - alcohol volume less than or equal to 14 percent – 20.4¢ per gallon
  - alcohol volume greater than 14 percent – 40.8¢ per gallon
  - sparkling wine – 51.6¢ per gallon
- malt liquor (ale): 19.8¢ per gallon

Two other taxes are levied on mixed beverages sold by holders of a mixed beverage permit. The mixed beverage gross receipts tax is imposed on permit holders at the rate of 6.7 percent of the amount received from the sale, preparation or service of a mixed beverage. The mixed beverage sales tax is imposed on consumers at 8.25 percent of the sales price.

The seventh tax, the airline and passenger train beverage tax, was a five-cent tax on each individual serving of an alcoholic beverage served by the holder of an airline or passenger train beverage permit. The 2015 Legislature repealed this tax as of September 1, 2015. The tax produced $328,080 in fiscal 2015, its final year.

In fiscal 2015, Texas' alcoholic beverages taxes yielded $1.1 billion, excluding small amounts deposited into various event trust funds. Those collections were deposited to General Revenue Fund 0001 (**Exhibits 9.1** and **9.2**). In all, total alcoholic beverages tax collections rose by an average 5.4 percent annually between fiscal 1996 and 2015, or an average of 11.1 percent per biennium (**Exhibit 9.3**).

In each calendar quarter, the Comptroller's office allocates a portion of all mixed beverage tax collections to the county and, where applicable, the city in which permit holders are located. At present, about 20.5 percent of these revenues are allocated to localities.

Historical Collection Trends

Growth in Texas' alcoholic beverage excise tax collections correlates most closely with population growth. Over the 1996 to 2015 study period, annual tax collections grew from $146 million to $216 million, an average annual growth rate of 2.1 percent, while the population of Texans of legal drinking age (21 and older) rose by 2.2 percent (**Exhibit 9.5**).

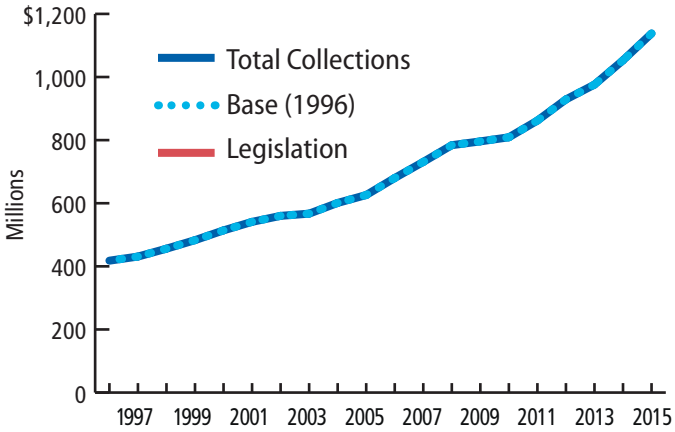
In the early- to mid-2000s, consumer preference began shifting away from traditional beer consumption and toward ales and craft beers, wine and liquor. During this period, tax collections for these products rose by average annual growth rates of 5.5 percent, 5.3 percent and 3.7 percent, respectively, compared to just 0.6 percent annually for the beer tax.

Changes in mixed beverage tax collections, by contrast, largely follow Texas personal income. Collections rose from $273 million in fiscal 1996 to $922 million in 2015, an average annual growth rate of 6.6 percent, while personal income rose by 6.0 percent (**Exhibit 9.4**).

From 1996 through 2011, tax collections and personal income rose at the same rate. Since 2011, collections have grown faster than personal income. This appears to be due to several factors: the recent transition of some counties from "dry" to "wet" status; slightly higher per capita alcohol consumption; and higher total spending on mixed beverages after the tax was restructured in 2014 from a gross receipts tax to a combination of gross receipts and sales tax, which effectively raised the price of drinks to consumers (**Exhibits 9.6** and **9.7**).

Exhibit 9.1

Net Alcoholic Beverages Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 9.2

Impact of Legislation on Net Alcoholic Beverages Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$418,698	-	$418,698
1997	431,651	-	431,651
1998	456,037	-	456,037
1999	483,172	-	483,172
2000	514,804	-	514,804
2001	541,306	-	541,306
2002	560,197	-	560,197
2003	567,796	-	567,796
2004	601,840	-	601,840
2005	626,278	-	626,278
2006	680,748	-	680,748
2007	731,677	-	731,677
2008	784,069	-	784,069
2009	796,948	-	796,948
2010	809,234	-	809,234
2011	862,032	-	862,032
2012	929,700	-	929,700
2013	976,894	-	976,894
2014	1,053,231	-	1,053,231
2015	1,138,776	-	1,138,776

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 9.3

Annual and Biennial Alcoholic Beverages Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	3.1%	3.1%			
1998	5.6	5.6	1998-99	10.4%	10.4%
1999	6.0	6.0			
2000	6.5	6.5	2000-01	12.4	12.4
2001	5.1	5.1			
2002	3.5	3.5	2002-03	6.8	6.8
2003	1.4	1.4			
2004	6.0	6.0	2004-05	8.9	8.9
2005	4.1	4.1			
2006	8.7	8.7	2006-07	15.0	15.0
2007	7.5	7.5			
2008	7.2	7.2	2008-09	11.9	11.9
2009	1.6	1.6			
2010	1.5	1.5	2010-11	5.7	5.7
2011	6.5	6.5			
2012	7.8	7.8	2012-13	14.1	14.1
2013	5.1	5.1			
2014	7.8	7.8	2014-15	15.0	15.0
2015	8.1	8.1			
Average	**5.4%**	**5.4%**		**11.1%**	**11.1%**
Maximum	**8.7%**	**8.7%**		**15.0%**	**15.0%**
Minimum	**1.4%**	**1.4%**		**5.7%**	**5.7%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Computed average is the compound average annual growth rate.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Changes in mixed beverage tax collections correlate most closely with changes in Texas personal income, as both income and the price of mixed beverages are affected by inflation. As Texans' income grows, consumers generally maintain the share of their income spent on alcoholic beverages subject to this tax. During the 20-year study period, growth in mixed beverage tax revenue slightly lagged growth in personal income through 2008, after which tax revenue has grown faster than income. This may be largely attributable to local-option elections allowing mixed beverage sales in various jurisdictions for the first time.

Alcohol excise tax collections differ from mixed beverages taxes because they are based on the volumes sold and are not significantly influenced by price inflation. Collections from these taxes tend to correlate best with population changes. Texas' population rose faster than excise tax collections until 2006. The subsequent shift also is likely the result of local-option elections expanding the number of jurisdictions in which alcohol can be sold.

Exhibit 9.4

Actual and Indexed Values for Mixed Beverage Taxes Collections, Mixed Beverage Taxes Base and Texas Personal Income, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total Mixed Beverage Taxes Collections	Texas Personal Income	Indexed Total Mixed Beverage Taxes Collections	Indexed Mixed Beverage Taxes Base	Indexed Texas Personal Income
1996	$272,728	$423,593,395	100.0	100.0	100.0
1997	285,050	459,957,192	104.5	104.5	108.6
1998	306,026	503,853,014	112.2	112.2	118.9
1999	328,998	535,368,239	120.6	120.6	126.4
2000	354,542	582,382,770	130.0	130.0	137.5
2001	380,586	626,163,109	139.5	139.5	147.8
2002	396,753	633,990,388	145.5	145.5	149.7
2003	403,284	653,814,336	147.9	147.9	154.3
2004	433,840	685,270,251	159.1	159.1	161.8
2005	457,262	741,440,360	167.7	167.7	175.0
2006	503,407	815,503,748	184.6	184.6	192.5
2007	550,827	866,420,926	202.0	202.0	204.5
2008	594,018	956,255,329	217.8	217.8	225.7
2009	603,386	929,278,854	221.2	221.2	219.4
2010	618,675	947,674,951	226.8	226.8	223.7
2011	665,056	1,037,393,545	243.9	243.9	244.9
2012	727,275	1,111,437,632	266.7	266.7	262.4
2013	771,312	1,159,802,823	282.8	282.8	273.8
2014	843,224	1,210,729,707	309.2	309.2	285.8
2015	922,121	1,274,016,947	338.1	337.7	300.8

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 9.5

Actual and Indexed Values for Alcohol Excise Tax Collections, Alcohol Excise Tax Base and Texas Population, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

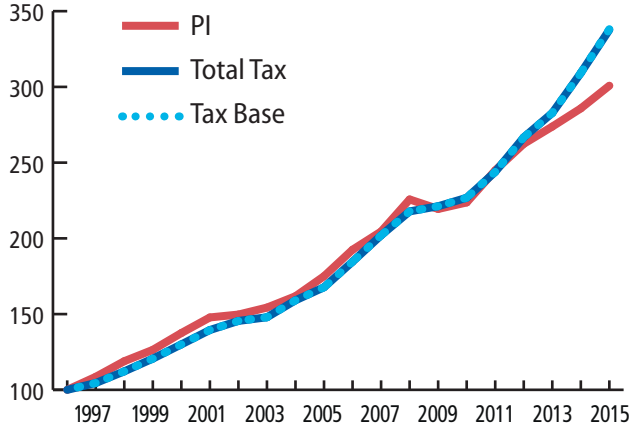
Fiscal Year	Total Alcohol Excise Tax Collections	Texas Population	Indexed Total Alcohol Excise Tax Collections	Indexed Alcohol Excise Tax Base	Indexed Texas Population
1996	$145,490	19,294	100.0	100.0	100.0
1997	146,128	19,691	100.4	100.4	102.1
1998	149,512	20,104	102.8	102.8	104.2
1999	153,676	20,507	105.6	105.6	106.3
2000	159,672	20,897	109.7	109.7	108.3
2001	160,110	21,272	110.0	110.0	110.3
2002	163,001	21,642	112.0	112.0	112.2
2003	164,094	21,990	112.8	112.8	114.0
2004	167,656	22,350	115.2	115.2	115.8
2005	168,717	22,745	116.0	116.0	117.9
2006	177,044	23,328	121.7	121.7	120.9
2007	180,525	23,773	124.1	124.1	123.2
2008	189,721	24,250	130.4	130.4	125.7
2009	193,249	24,738	132.8	132.8	128.2
2010	190,493	25,192	130.9	130.9	130.6
2011	196,696	25,605	135.2	135.2	132.7
2012	202,106	26,034	138.9	138.9	134.9
2013	205,262	26,454	141.1	141.1	137.1
2014	209,702	26,920	144.1	144.1	139.5
2015	216,327	27,408	148.7	148.7	142.1

Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 9.6

Indexed Values for Mixed Beverage Taxes Collections, Mixed Beverage Taxes Base and Texas Personal Income, Fiscal 1996 to 2015

(Indexed values, 1996=100)

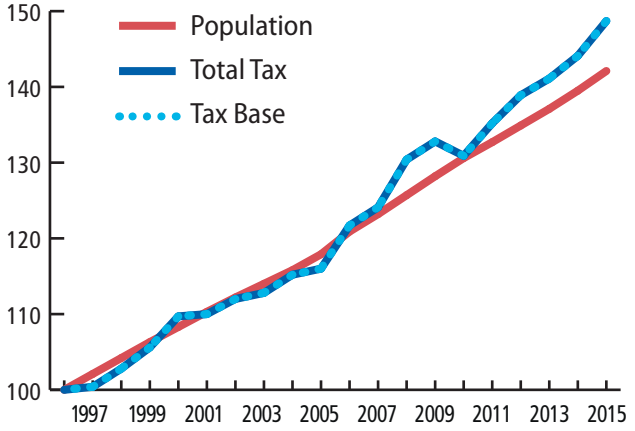


Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 9.7

Indexed Values for Alcohol Excise Tax Collections, Alcohol Excise Tax Base and Texas Population, Fiscal 1996 to 2015

(Indexed values, 1996=100)



Note: Tax collection amounts are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 9.8 and **9.9** illustrate the pessimistic, baseline and optimistic scenarios for collections from alcoholic beverages taxes from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $43 million in tax collections. By 2027, the difference would increase to $471 million. Assuming no legislative changes to Texas' alcoholic beverages taxes, the compound average annual growth rate would be 3.0 percent in the pessimistic scenario, 4.7 percent in the baseline scenario, and 5.6 percent in the optimistic scenario.

Exhibit 9.8

Possible Future Alcoholic Beverages Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

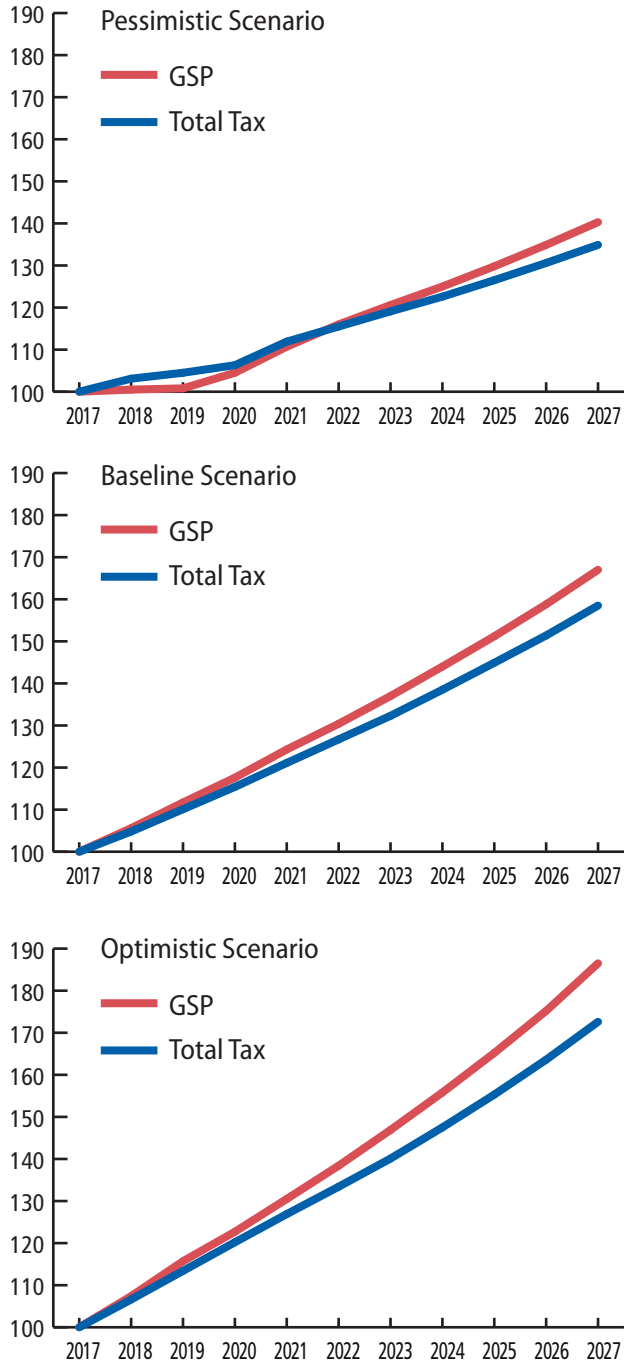
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$1,249,382	-	$1,249,382	-	$1,249,382	-
2018	1,288,200	3.1%	$1,309,400	4.8%	1,331,400	6.6%
2019	1,305,700	1.4	$1,375,400	5.0	1,416,800	6.4
2020	1,327,700	1.7	$1,441,600	4.8	1,501,000	5.9
2021	1,398,400	5.3	$1,513,000	5.0	1,584,600	5.6
2022	1,442,700	3.2	$1,582,500	4.6	1,666,500	5.2
2023	1,488,300	3.2	$1,653,200	4.5	1,749,500	5.0
2024	1,531,700	2.9	$1,730,100	4.7	1,842,600	5.3
2025	1,580,300	3.2	$1,809,700	4.6	1,939,400	5.3
2026	1,631,900	3.3	$1,891,700	4.5	2,043,100	5.3
2027	1,685,200	3.3	$1,980,500	4.7	2,155,900	5.5
Average		**3.0%**		**4.7%**		**5.6%**

*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 9.9

Indexed Values for Possible Future Alcoholic Beverages Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

10. Hotel Occupancy Tax

The state hotel occupancy tax is imposed on the rental of a room or space that costs a minimum of $15 per day and is rented out for a period not exceeding 30 days. The current state rate of 6 percent of the rental cost was set in 1987. Cities, certain counties and special-purpose districts may impose additional local hotel occupancy taxes at rates ranging from 2 to 9 percent.

In fiscal 2015, the state hotel occupancy tax yielded $526 million in net revenue. State law allocates 91.67 percent of these collections to General Revenue Fund 0001 and to certain event trust funds, while the remaining 8.33 percent is dedicated for tourism promotion by the Texas Department of Commerce.

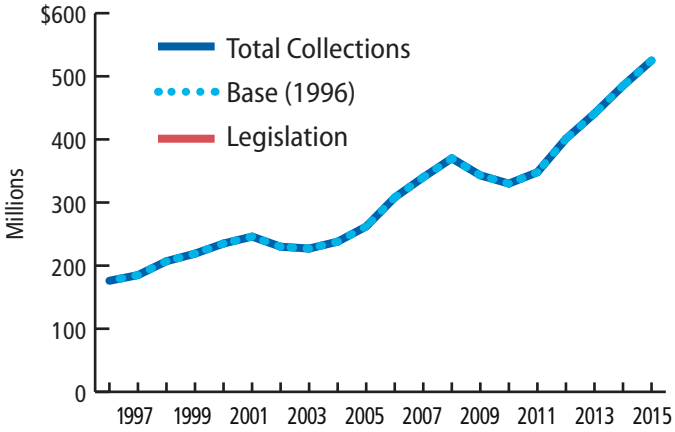
Historical Collection Trends

From fiscal 1996 to 2015, hotel occupancy tax collections were affected primarily by population growth and economic factors, such as recessions and general inflation, rather than legislative changes. One law, however, H.B. 1014 in the 1999 legislative session, expanded the hotel occupancy tax base by repealing an exemption for employees of out-of-state institutions of higher education, creating a minor source of revenue growth that cannot be estimated.

As shown in **Exhibit 10.3**, hotel occupancy tax collections rose by an average of 6.9 percent annually from 1996 to 2001, followed by declines averaging 3.9 percent annually from 2001 to 2003 due to a national recession. Economic recovery began in 2004, creating a period of growth until the 2008 recession. After recession-induced declines of 7.4 percent in 2009 and 3.7 percent in 2010, collections rebounded with the improving state economy. Hotel occupancy tax collections rose by 5.4 percent in 2011 and 15.1 percent in 2012. Growth continued at an annual average of 9.4 percent from fiscal 2012 through fiscal 2015, reaching a total of $526 million (**Exhibits 10.1** and **10.2**).

Exhibit 10.1

Net Hotel Occupancy Tax Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 10.2

Impact of Legislation on Net Hotel Occupancy Tax Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$176,456	-	$176,456
1997	185,606	-	185,606
1998	207,179	-	207,179
1999	219,917	-	219,917
2000	235,804	-	235,804
2001	246,813	-	246,813
2002	230,909	-	230,909
2003	227,899	-	227,899
2004	238,862	-	238,862
2005	262,092	-	262,092
2006	308,019	-	308,019
2007	340,634	-	340,634
2008	370,980	-	370,980
2009	343,544	-	343,544
2010	330,809	-	330,809
2011	348,796	-	348,796
2012	401,411	-	401,411
2013	441,132	-	441,132
2014	485,385	-	485,385
2015	525,819	-	525,819

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 10.3

Annual and Biennial Hotel Occupancy Tax Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	5.2%	5.2%			
1998	11.6	11.6	1998-99	18.0%	18.0%
1999	6.1	6.1			
2000	7.2	7.2	2000-01	13.0	13.0
2001	4.7	4.7			
2002	-6.4	-6.4	2002-03	-4.9	-4.9
2003	-1.3	-1.3			
2004	4.8	4.8	2004-05	9.2	9.2
2005	9.7	9.7			
2006	17.5	17.5	2006-07	29.5	29.5
2007	10.6	10.6			
2008	8.9	8.9	2008-09	10.2	10.2
2009	-7.4	-7.4			
2010	-3.7	-3.7	2010-11	-4.9	-4.9
2011	5.4	5.4			
2012	15.1	15.1	2012-13	24.0	24.0
2013	9.9	9.9			
2014	10.0	10.0	2014-15	20.0	20.0
2015	8.3	8.3			
Average	**5.9%**	**5.9%**		**12.1%**	**12.1%**
Maximum	**17.5%**	**17.5%**		**29.5%**	**29.5%**
Minimum	**-7.4%**	**-7.4%**		**-4.9%**	**-4.9%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Changes in hotel occupancy tax collections historically correlate with variation in Texas personal income and nominal gross state product. Growth in income and GSP fosters growth in both leisure and business travel, resulting in higher hotel tax revenue. The economic correlations may be different for the two types of travel, but the available tax return data is not sufficient to distinguish the two.

Beginning in fiscal 2002, due to recession and the response to the September 11th attack, hotel tax revenue fell relative to income as many individuals delayed or avoided travel. Growth in tax collections slowly improved until the Great Recession, resulting in reduced collections for two years. From 2011 through 2015, personal income rebounded and then grew moderately. The rebound for hotel occupancy tax collections has been even more robust (**Exhibits 10.4** and **10.5**).

Exhibit 10.4

Actual and Indexed Values for Hotel Occupancy Tax Collections, Hotel Occupancy Tax Base and Texas Personal Income, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

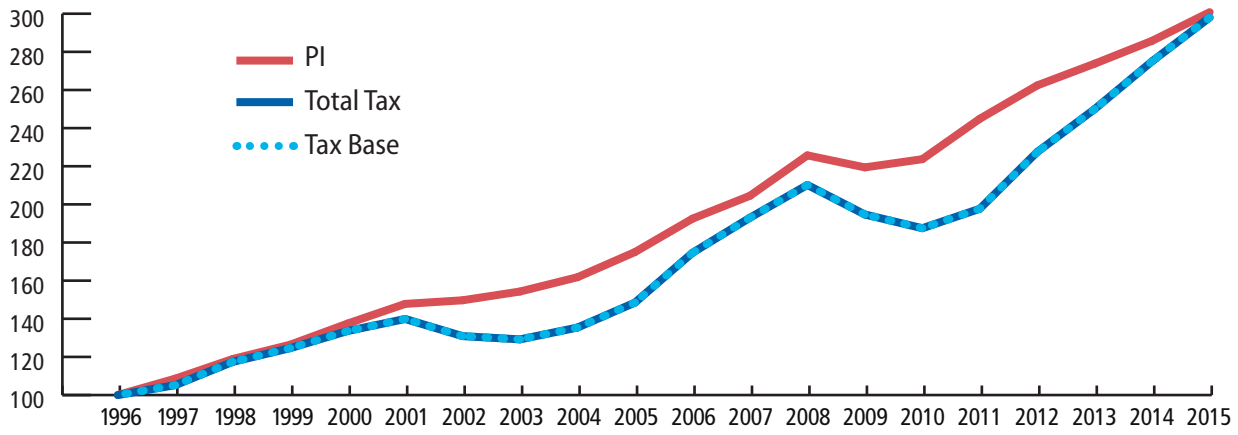
Fiscal Year	Total Hotel Occupancy Tax Collections	Texas Personal Income	Indexed Total Hotel Occupancy Tax Collections	Indexed Hotel Occupancy Tax Base	Indexed Texas Personal Income
1996	$176,456	$423,593,395	100.0	100.0	100.0
1997	185,606	459,957,192	105.2	105.2	108.6
1998	207,179	503,853,014	117.4	117.4	118.9
1999	219,917	535,368,239	124.6	124.6	126.4
2000	235,804	582,382,770	133.6	133.6	137.5
2001	246,813	626,163,109	139.9	139.9	147.8
2002	230,909	633,990,388	130.9	130.9	149.7
2003	227,899	653,814,336	129.2	129.2	154.3
2004	238,862	685,270,251	135.4	135.4	161.8
2005	262,092	741,440,360	148.5	148.5	175.0
2006	308,019	815,503,748	174.6	174.6	192.5
2007	340,634	866,420,926	193.0	193.0	204.5
2008	370,980	956,255,329	210.2	210.2	225.7
2009	343,544	929,278,854	194.7	194.7	219.4
2010	330,809	947,674,951	187.5	187.5	223.7
2011	348,796	1,037,393,545	197.7	197.7	244.9
2012	401,411	1,111,437,632	227.5	227.5	262.4
2013	441,132	1,159,802,823	250.0	250.0	273.8
2014	485,385	1,210,729,707	275.1	275.1	285.8
2015	525,819	1,274,016,947	298.0	298.0	300.8

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 10.5

Indexed Values for Hotel Occupancy Tax Collections, Hotel Occupancy Tax Base and Texas Personal Income, Fiscal 1996 to 2007

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 10.6 and **10.7** illustrate the pessimistic, baseline and optimistic scenarios for hotel occupancy tax collections from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $73 million in tax collections. By 2027, the difference would increase to $279 million. Assuming no legislative changes to Texas' hotel occupancy tax, the compound average annual growth rate would be 3.2 percent in the pessimistic scenario, 5.3 percent in the baseline scenario, and 6.3 percent in the optimistic scenario.

Exhibit 10.6

Projected Hotel Occupancy Tax Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

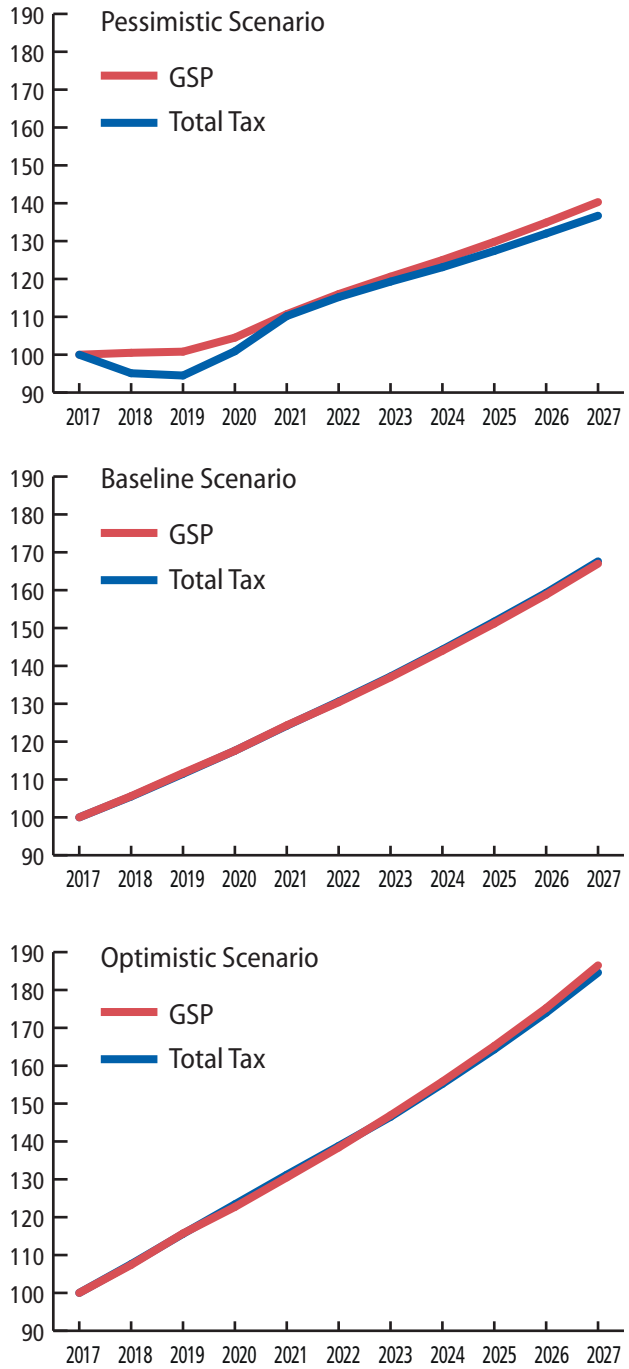
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$582,700	-	$582,700	-	$582,700	-
2018	554,400	-4.9%	614,600	5.5%	627,000	7.6%
2019	550,400	-0.7	650,000	5.8	673,400	7.4
2020	587,700	6.8	685,500	5.5	719,000	6.8
2021	642,400	9.3	723,900	5.6	764,300	6.3
2022	671,500	4.5	761,200	5.2	808,600	5.8
2023	695,000	3.5	799,200	5.0	853,600	5.6
2024	717,200	3.2	840,800	5.2	904,400	6.0
2025	742,300	3.5	883,900	5.1	957,200	5.8
2026	769,000	3.6	928,300	5.0	1,013,900	5.9
2027	796,700	3.6	976,500	5.2	1,075,700	6.1
Average		**3.2%**		**5.3%**		**6.3%**

*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 10.7

Indexed Values for Projected Future Hotel Occupancy Tax Collection Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

11. Utility Taxes

The Texas utility taxes category includes three separate levies: the gas, electric and water utility tax, the public utility gross receipts assessment, and the gas utility pipeline tax.

The gas, electric and water (GEW) utility tax is levied on the gross receipts of investor-owned electric utilities, gas utilities and water utilities at rates ranging from 0.581 percent to 1.997 percent, depending on the population of the city served. The tax does not apply to receipts from sales of utility services in unincorporated areas; sales in municipalities with populations of no more than 1,000; sales by municipally owned utilities; or sales by electric cooperatives. Of the total revenue from this tax, 86 percent is collected from electric utilities, 14 percent from gas utilities and less than 1 percent from water utilities.

Public utility gross receipts assessments (PUA) are paid by utility companies, including telecommunications utilities, at the rate of one-sixth of 1 percent of gross receipts. The gas utility pipeline tax (GUP) is levied at the rate of 0.5 percent of the gross receipts of natural gas utilities.

In fiscal 2015, the state's net collections from all utility taxes totaled $481 million, with 84 percent coming from the GEW tax. Twenty-five percent of GEW tax revenues are constitutionally dedicated to the Foundation School Fund (GR Account 0193). The remaining GEW collections as well as all collections from the other two utility taxes are deposited to General Revenue Fund 0001.

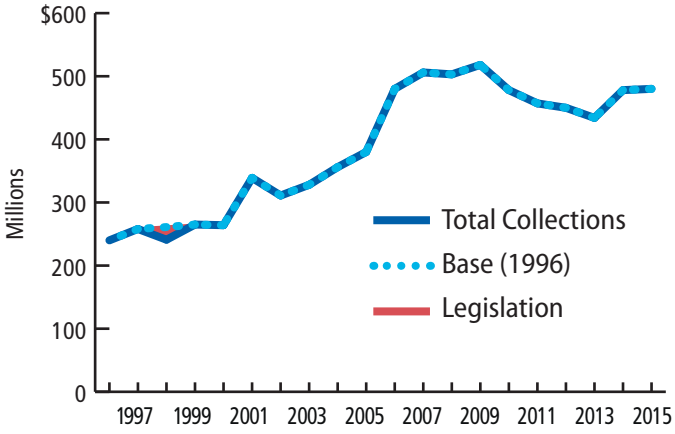
Historical Collection Trends

Throughout the 1996-2015 study period, utility taxes collections were affected by legislative actions and changes in economic conditions (**Exhibits 11.1** and **11.2**).

From fiscal 1996 to 2001, utility taxes collections rose at an average annual rate of 7.1 percent. Collections fell slightly in 1998 due to the expiration of a "speed-up" provision enacted by the 1993 Legislature.

Exhibit 11.1

Net Utility Taxes Collections, Fiscal 1996 to 2015



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Amount attributed to legislative changes in 1998 is due to expiration of a speed-up provision related to the public utility gross receipts assessment.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 11.2

Impact of Legislation on Net Utility Taxes Collections, Fiscal 1996 to 2015

(Amounts in Thousands)

Fiscal Year	Base	Legislation	Total
1996	$240,975	-	$240,975
1997	258,020	-	258,020
1998	261,540	-$19,800	241,740
1999	265,798	-	265,798
2000	264,425	-	264,425
2001	339,404	-	339,404
2002	311,051	-	311,051
2003	328,905	-	328,905
2004	356,245	-	356,245
2005	380,006	-	380,006
2006	480,793	-	480,793
2007	506,069	-	506,069
2008	503,879	-	503,879
2009	518,884	-	518,884
2010	478,743	-	478,743
2011	457,722	-	457,722
2012	450,907	-	450,907
2013	434,871	-	434,871
2014	478,189	-	478,189
2015	480,766	-	480,766

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Amount attributed to legislative changes in 1998 due to expiration of a speed-up provision related to the public utility gross receipts assessment.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

From 2001 through 2009, collections rose at an average annual rate of 5.4 percent, in line with natural gas and electricity price increases. Collections rose significantly in 2001 due to extreme winter temperatures that greatly increased demand for utilities.

Collections were lower in 2002 and then grew steadily through 2009. Particularly strong growth in 2006 was due in large part to an expanding state economy (as measured by gross state product), population gains and higher market prices for natural gas and electricity.

Utility taxes collections reached their peak at $519 million in 2009. Despite a growing population and stable prices for electricity and natural gas, collections declined for the next four years, in part due to increased energy efficiency standards and improved building codes.

Collections rose substantially in fiscal 2014 due to extreme winter weather, followed by a small increase in 2015.

In all, total Texas utility taxes collections rose by an average of 3.7 percent annually between fiscal 1996 and 2015, or an average of 7.5 percent per biennium (**Exhibit 11.3**).

Exhibit 11.3

Annual and Biennial Utility Taxes Growth Rates, Fiscal 1996 to 2015

Fiscal Year	Base	Total Collections	Biennium	Base	Total Collections
1996	-	-	1996-97	-	-
1997	7.1%	7.1%			
1998	1.4	-6.3	1998-99	5.7%	1.7%
1999	1.6	10.0			
2000	-0.5	-0.5	2000-01	14.5	19.0
2001	28.4	28.4			
2002	-8.4	-8.4	2002-03	6.0	6.0
2003	5.7	5.7			
2004	8.3	8.3	2004-05	15.0	15.0
2005	6.7	6.7			
2006	26.5	26.5	2006-07	34.0	34.0
2007	5.3	5.3			
2008	-0.4	-0.4	2008-09	3.6	3.6
2009	3.0	3.0			
2010	-7.7	-7.7	2010-11	-8.4	-8.4
2011	-4.4	-4.4			
2012	-1.5	-1.5	2012-13	-5.4	-5.4
2013	-3.6	-3.6			
2014	10.0	10.0	2014-15	8.3	8.3
2015	0.5	0.5			
Average	**3.7%**	**3.7%**		**7.5%**	**7.5%**
Maximum	**28.4%**	**28.4%**		**34.0%**	**34.0%**
Minimum	**-8.4%**	**-8.4%**		**-8.4%**	**-8.4%**

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Averages represent compound average annual growth rates. Amount attributed to legislative changes in 1998 due to expiration of a speed-up provision related to the public utility gross receipts assessment.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Collections from Texas' three utility taxes generally are affected by changes in Texas Gross State Product (GSP) and NYMEX natural gas market prices (**Exhibits 11.4** through **11.9**). While the GEW tax generally correlates better with Texas real GSP, the PUA and GUP correlate better with nominal GSP.

GEW tax collections appeared to be positively correlated with real GSP through fiscal 2009, but a negative trend occurred thereafter, probably in response to the collapse of natural gas prices after 2008.

PUA collections exhibited positive correlation with nominal GSP through fiscal 2009, but as with the GEW tax, a negative trend occurred after 2009, again due to sharply lower natural gas prices.

GUP collections are positively correlated with nominal GSP but negatively correlated with the price of natural gas.

Exhibit 11.4

Actual and Indexed Values for Gas, Electric and Water (GEW) Utility Tax Collections, GEW Tax Base and Texas Real Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

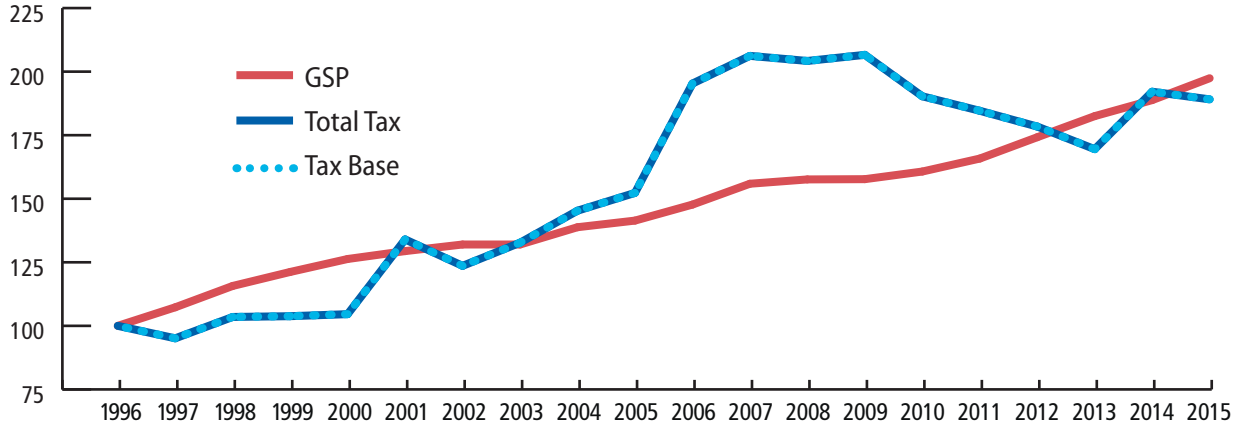
Fiscal Year	Total GEW Tax Collections	Texas Real Gross State Product	Indexed Total GEW Tax Collections	Indexed GEW Tax Base	Indexed Texas Real Gross State Product
1996	$212,409	$744,149,000	100.0	100.0	100.0
1997	202,037	798,668,000	95.1	95.1	107.3
1998	219,806	860,911,000	103.5	103.5	115.7
1999	220,389	901,969,000	103.8	103.8	121.2
2000	222,284	939,695,000	104.6	104.6	126.3
2001	284,613	963,158,000	134.0	134.0	129.4
2002	262,474	982,605,000	123.6	123.6	132.0
2003	281,761	982,001,000	132.7	132.7	132.0
2004	308,667	1,032,522,000	145.3	145.3	138.8
2005	323,566	1,051,900,000	152.3	152.3	141.4
2006	414,806	1,098,911,000	195.3	195.3	147.7
2007	438,027	1,160,011,000	206.2	206.2	155.9
2008	433,733	1,173,082,000	204.2	204.2	157.6
2009	438,916	1,173,375,000	206.6	206.6	157.7
2010	404,175	1,195,999,000	190.3	190.3	160.7
2011	392,009	1,234,098,000	184.6	184.6	165.8
2012	378,926	1,296,270,000	178.4	178.4	174.2
2013	360,040	1,358,434,000	169.5	169.5	182.5
2014	408,040	1,405,053,000	192.1	192.1	188.8
2015	401,734	1,468,963,000	189.1	189.1	197.4

Note: Tax collection figures are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 11.5

Indexed Values for Gas, Electric and Water (GEW) Utility Tax Collections, GEW Tax Base and Texas Real Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Tax collection figures are not adjusted for inflation, and represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 11.6

Actual and Indexed Values for Public Utility Gross Receipts Assessment (PUA) Collections, PUA Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

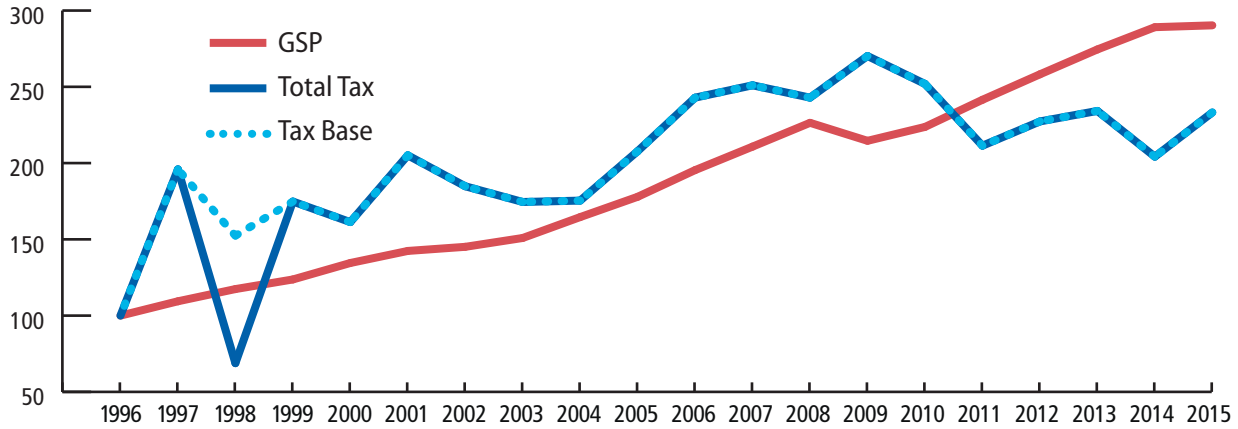
Fiscal Year	Total PUA Collections	Texas Nominal Gross State Product	Indexed Total PUA Collections	Indexed PUA Base	Indexed Texas Nominal Gross State Product
1996	$23,697	$549,132,000	100.0	100.0	100.0
1997	46,422	600,768,000	195.9	195.9	109.4
1998	16,311	644,461,000	68.8	152.4	117.4
1999	41,423	679,268,000	174.8	174.8	123.7
2000	38,234	738,660,000	161.3	161.3	134.5
2001	48,597	782,124,000	205.1	205.1	142.4
2002	43,791	796,589,000	184.8	184.8	145.1
2003	41,346	828,683,000	174.5	174.5	150.9
2004	41,557	904,086,000	175.4	175.4	164.6
2005	49,231	976,654,000	207.8	207.8	177.9
2006	57,566	1,073,225,000	242.9	242.9	195.4
2007	59,490	1,157,805,000	251.0	251.0	210.8
2008	57,560	1,243,129,000	242.9	242.9	226.4
2009	64,025	1,178,409,000	270.2	270.2	214.6
2010	59,682	1,228,599,000	251.9	251.9	223.7
2011	50,107	1,326,041,000	211.4	211.4	241.5
2012	53,868	1,417,784,000	227.3	227.3	258.2
2013	55,498	1,507,328,000	234.2	234.2	274.5
2014	48,385	1,587,433,000	204.2	204.2	289.1
2015	55,254	1,594,402,000	233.2	233.2	290.3

Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Amount attributed to legislative changes in 1998 due to expiration of a speed-up provision related to the public gross receipts assessment.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 11.7

Indexed Values for Public Utility Gross Receipts Assessment (PUA) Collections, PUA Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust. Amount attributed to legislative changes in 1998 due to expiration of a speed-up provision related to the public utility gross receipts assessment.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 11.8

Actual and Indexed Values for Gas Utility Pipeline (GUP) Tax Collections, GUP Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Amounts in Thousands; Indexed Values, 1996=100)

Fiscal Year	Total GUP Tax Collections	Texas Nominal Gross State Product	Indexed Total GUP Tax Collections	Indexed GUP Tax Base	Indexed Nominal Texas Gross State Product
1996	$4,869	$549,132,000	100.0	100.0	100.0
1997	9,562	600,768,000	196.4	196.4	109.4
1998	5,623	644,461,000	115.5	115.5	117.4
1999	3,986	679,268,000	81.9	81.9	123.7
2000	3,907	738,660,000	80.2	80.2	134.5
2001	6,193	782,124,000	127.2	127.2	142.4
2002	4,787	796,589,000	98.3	98.3	145.1
2003	5,799	828,683,000	119.1	119.1	150.9
2004	6,021	904,086,000	123.7	123.6	164.6
2005	7,210	976,654,000	148.1	148.1	177.9
2006	8,421	1,073,225,000	173.0	172.9	195.4
2007	8,553	1,157,805,000	175.7	175.7	210.8
2008	12,586	1,243,129,000	258.5	258.5	226.4
2009	15,943	1,178,409,000	327.4	327.4	214.6
2010	14,886	1,228,599,000	305.7	305.7	223.7
2011	15,606	1,326,041,000	320.5	320.5	241.5
2012	18,112	1,417,784,000	372.0	372.0	258.2
2013	19,333	1,507,328,000	397.1	397.1	274.5
2014	21,764	1,587,433,000	447.0	447.0	289.1
2015	23,777	1,594,402,000	488.3	488.3	290.3

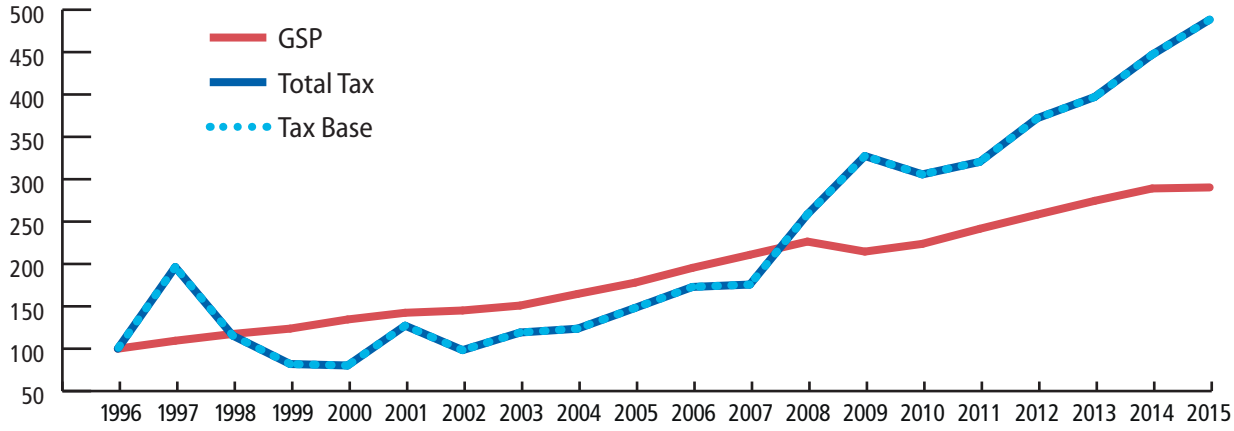
Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.

Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 11.9

Indexed Values for Gas Utility Pipeline Tax Collections (GUP), GUP Tax Base and Texas Nominal Gross State Product, Fiscal 1996 to 2015

(Indexed Values, 1996=100)



Note: Amounts are not adjusted for inflation. Tax collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Future Revenue Scenarios

Exhibits 11.10 and **11.11** illustrate the pessimistic, baseline and optimistic scenarios for collections from utility taxes from fiscal 2017 through 2027. The economic forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In 2018, the high- and low-growth scenarios differ by $35 million in tax collections. By 2027, the difference would increase to $273 million. Assuming no legislative changes to Texas utility taxes, the compound average annual growth rate would be 2.3 percent in the pessimistic scenario, 4.4 percent in the baseline scenario, and 6.1 percent in the optimistic scenario.

Exhibit 11.10

Possible Future Utility Taxes Collections, Fiscal 2017 to 2027

Pessimistic, Baseline and Optimistic Scenarios
(Amounts in Thousands)

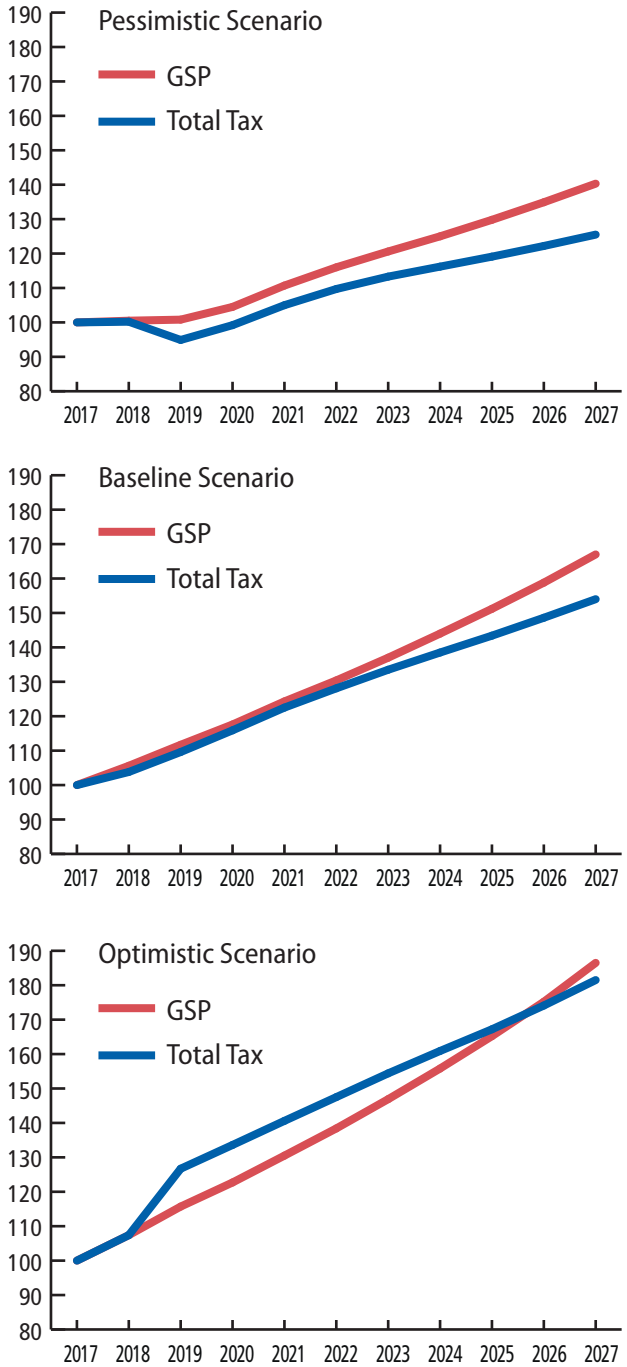
Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2017*	$486,900	-	$486,900	-	$486,900	-
2018	488,100	0.2%	505,400	3.8%	522,700	7.4%
2019	462,300	-5.3	533,400	5.5	617,100	18.1
2020	482,800	4.4	564,300	5.8	650,400	5.4
2021	511,300	5.9	596,300	5.7	684,800	5.3
2022	534,200	4.5	623,600	4.6	718,000	4.8
2023	551,700	3.3	650,000	4.2	751,600	4.7
2024	565,800	2.6	674,500	3.8	783,400	4.2
2025	579,900	2.5	698,100	3.5	814,200	3.9
2026	595,100	2.6	723,300	3.6	847,500	4.1
2027	610,900	2.7	750,000	3.7	883,900	4.3
Average		**2.3%**		**4.4%**		**6.1%**

*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust. Averages represent compound average annual growth rates.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 11.11

Indexed Values for Possible Future Utility Taxes Collections Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed Values, 2017=100)



*2017 estimates are from the October 2015 *Certification Revenue Estimate*.
Note: Amounts are not adjusted for inflation. Projected collection figures represent all funds excluding trust.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

12. Local School District Property Values

Local property taxes represent the largest revenue source for many types of local governments, including counties, cities, and school districts. Because the state's K-12 public school system is funded by a mix of state and local funds, the property tax levied by school districts has a direct and sizable effect on the state budget, even though the state itself is constitutionally prohibited from levying property taxes.

Local school districts have two property tax levies: the maintenance and operations (M&O) rate, intended to support operating expenditures such as salaries; and the interest and sinking (I&S) rate, which generally supports bond debt incurred for facility construction.

County appraisal districts (CADs), each led by a board representing taxing entities in the county, determine the property value against which taxes are levied. The Texas Constitution requires that all property be taxed equally and uniformly, and appraised at no more than its fair market value.

Texas state law recognizes three common methods to value property:

1. **Market Data Comparison Approach:** Most appropriate for single-family residential properties, this approach compares a home's characteristics with those of similar recently sold homes.
2. **Income Approach:** Most appropriate for commercial properties, this approach relies on an estimate of what an investor would pay for the property in anticipation of the future income it may generate.
3. **Cost Approach:** Often used for types of property not frequently sold or under construction. If CADs cannot obtain sufficient data on sales and income, this approach relies on an estimate of the cost required to replace the property, as is, with one of equal utility.

Exemptions, limitations and special appraisals can reduce the appraised value of property and, consequently, the overall tax bill. These include special appraisals for agricultural and timber land, a $25,000 residence homestead exemption, a limitation on the yearly increase of residential property value appraisals to 10 percent, and a limit on the property tax liability for residential homesteads owned by disabled homeowners or those age 65 or older, among others.

Historical Collection Trends

Exhibits 12.1 and **12.2** show how total assessed value, deductions and taxable value have changed from the 1994 tax year through the 2015 tax year.[2]

As shown in **Exhibit 12.3**, the compound average annual growth rate for total assessed property values from tax years 1994 through 2015 was 6.2 percent, compared with 5.8 percent for Texas nominal Gross State Product (GSP) and 6.0 percent for Texas personal income.[3] This somewhat faster growth in total assessed value is largely the result of steadily rising residential property values in many areas of the state.

The two largest categories of assessed property value – residential and business property – declined in 2010 as the Great Recession rippled through Texas. However, both categories have rebounded, posting their highest annual growth rates (since the Great Recession) of 11.1 percent and 8.1 percent, respectively, in tax year 2015.

Legislative changes have increased deductions from tax years 1994 through 2015, and dampened growth in taxable property value. The first major change in property value deductions occurred in 1997, when voters approved several constitutional amendments. These included an increase to the school property tax homestead exemption from $5,000 to $10,000, capping the annual growth rate of residential property values at 10 percent, and a provision that allowed disabled homeowners or those age 65 or older to apply their property tax liability limitation to a new residence should they decide to move.

The next major piece of legislation that affected school districts' taxable property values was the passage

2 Total assessed values, deductions, and total taxable value are defined in the Comptroller's annual P*roperty Value Study*.

3 Growth rates were calculated using calendar-year figures.

of the Texas Economic Development Act—Chapter 313 of the Tax Code—in 2001. This program allows school districts to provide a temporary property value limitation to eligible businesses that agree to create jobs and make improvements to their property.

In 2009, the Legislature passed a property tax deduction which fully exempted residential property value owned by veterans determined by the federal government to be 100 percent disabled.

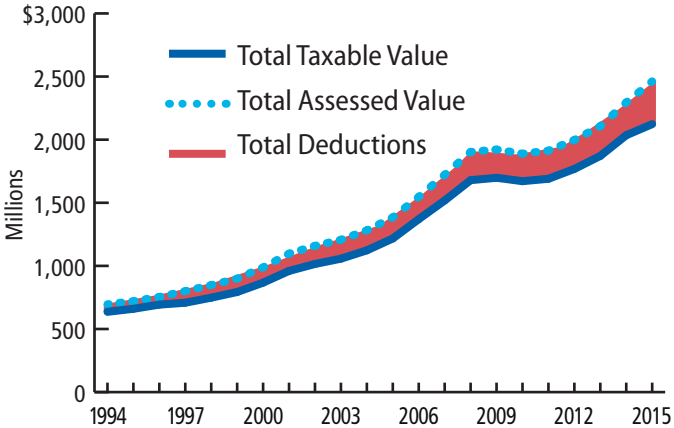
Voters approved another constitutional amendment to increase the school property tax homestead exemption by $10,000 in 2015, raising it to the current level of $25,000.

It is important to note that this analysis focuses only on legislation that has affected Texas school districts' taxable property value, and not taxable property value for other types of local governments such as cities, counties or special purpose districts.

Also, because of the way the school finance system is structured, there is a delay in the impact local property values have on the state budget. For example, an increase in total appraised value for a school district in the 2016 tax year would affect its funding during the 2017-2018 school year, and would have full budget repercussions for state government beginning in fiscal year 2018.

Exhibit 12.1

Total Assessed and Taxable School District Property Tax Values, Tax Year 1994 to 2015



Note: Amounts not adjusted for inflation.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 12.2

Total Assessed and Taxable School District Property Tax Values, Tax Year 1994 to 2015

(Amounts in Thousands)

Tax Year	Total Assessed Value	Total Deductions	Total Taxable Value
1994	$696,934,103	-$60,281,937	$636,652,165
1995	720,112,124	-59,616,093	660,496,031
1996	754,530,065	-61,393,777	693,136,289
1997	800,771,964	-91,850,404	708,921,560
1998	848,023,547	-99,085,535	748,938,012
1999	899,524,063	-106,456,026	793,068,037
2000	988,164,992	-120,755,185	867,409,807
2001	1,097,786,471	-137,391,355	960,395,116
2002	1,159,981,172	-144,976,390	1,015,004,782
2003	1,207,731,531	-149,764,366	1,057,967,165
2004	1,282,098,542	-158,465,746	1,123,632,796
2005	1,385,234,853	-168,070,638	1,217,164,215
2006	1,547,471,276	-177,119,792	1,370,351,484
2007	1,722,656,584	-203,832,333	1,518,824,250
2008	1,903,970,715	-224,503,286	1,679,467,429
2009	1,922,638,592	-223,673,868	1,698,964,724
2010	1,889,112,990	-217,996,538	1,671,116,451
2011	1,913,690,371	-223,200,945	1,690,489,426
2012	1,998,158,071	-229,764,371	1,768,393,700
2013	2,107,793,349	-236,247,585	1,871,545,763
2014	2,295,872,538	-260,205,250	2,035,667,288
2015	2,462,591,534	-339,020,476	2,123,571,058

Note: Amounts not adjusted for inflation and exclude any revenue deposited into trust funds.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Exhibit 12.3

Annual Total Assessed Value and Taxable Value Growth Rates, Tax Year 1994 to 2015

Tax Year	Total Assessed Value	Total Taxable Value
1994	-	-
1995	3.3%	3.7%
1996	4.8	4.9
1997	6.1	2.3
1998	5.9	5.6
1999	6.1	5.9
2000	9.9	9.4
2001	11.1	10.7
2002	5.7	5.7
2003	4.1	4.2
2004	6.2	6.2
2005	8.0	8.3
2006	11.7	12.6
2007	11.3	10.8
2008	10.5	10.6
2009	1.0	1.2
2010	-1.7	-1.6
2011	1.3	1.2
2012	4.4	4.6
2013	5.5	5.8
2014	8.9	8.8
2015	7.3	4.3
Average	**6.2%**	**5.9%**
Maximum	**11.7%**	**12.6%**
Minimum	**-1.7%**	**-1.6%**

Note: Amounts not adjusted for inflation. Averages represent compound average annual growth rates.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Economic Correlations

Total residential property value, including both single-family and multi-family housing, is correlated with Texas personal income, but its rate of change often varies from that of personal income. From 2000 through 2008, and again from 2013 through 2015, residential property value grew faster than income; from 2008 through 2013, residential value growth was slower than income. Growth in total residential property value faster than personal income reflects both generally favorable credit conditions and a trend toward larger single-family houses (**Exhibits 12.4** and **12.5**).

Business property value is highly correlated with Texas nominal GSP, but grew somewhat slower than GSP over the study period. Although oil, natural gas, and other mineral property value appears to roughly correlate with GSP, it is primarily based on the present value of projected net revenues from economically recoverable oil, natural gas and mineral volumes, and is highly correlated with oil, natural gas and mineral prices (**Exhibits 12.6** through **12.9**).

Exhibit 12.4

Actual and Indexed Values for Assessed Residential Property Value, and Lagged Texas Personal Income, Tax Year 1994 to 2015

(Amounts in Thousands; Indexed Values, 1994=100)

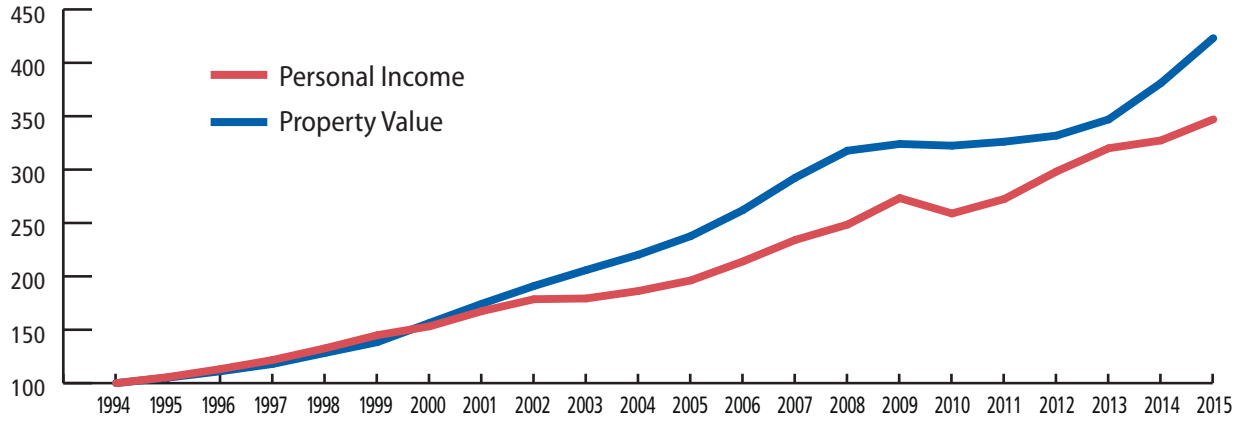
Tax Year	Total Assessed Residential Property Value	Lagged Texas Personal Income	Indexed Assessed Residential Property Value	Indexed Texas Personal Income
1994	$317,795,116	$354,794,103	100.0	100.0
1995	334,227,718	375,106,640	105.2	105.7
1996	353,002,910	401,483,332	111.1	113.2
1997	374,908,144	431,653,384	118.0	121.7
1998	407,752,723	470,314,809	128.3	132.6
1999	439,923,073	514,023,760	138.4	144.9
2000	496,970,961	543,695,367	156.4	153.2
2001	553,903,129	594,097,365	174.3	167.4
2002	607,081,962	633,552,727	191.0	178.6
2003	654,380,399	636,107,528	205.9	179.3
2004	700,175,755	661,144,021	220.3	186.3
2005	755,318,594	695,946,540	237.7	196.2
2006	832,914,603	759,204,486	262.1	214.0
2007	929,382,153	830,522,563	292.4	234.1
2008	1,009,598,214	881,582,784	317.7	248.5
2009	1,029,617,760	969,740,300	324.0	273.3
2010	1,024,645,660	918,587,462	322.4	258.9
2011	1,036,344,843	966,447,597	326.1	272.4
2012	1,054,516,353	1,057,983,140	331.8	298.2
2013	1,102,894,826	1,135,225,582	347.0	320.0
2014	1,210,897,676	1,161,133,804	381.0	327.3
2015	1,344,707,179	1,231,084,591	423.1	347.0

Note: Amounts are not adjusted for inflation. Personal income figures are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.5

Indexed Values for Assessed Residential Property Value and Lagged Texas Personal Income, Tax Year 1994 to 2015

(Indexed Values, 1994=100)



Note: Amounts are not adjusted for inflation. Personal income figures are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.6

Actual and Indexed Values for Assessed Business Property Value, and Lagged Texas Nominal Gross State Product, Tax Year 1994 to 2015

(Amounts in Thousands; Indexed Values, 1994=100)

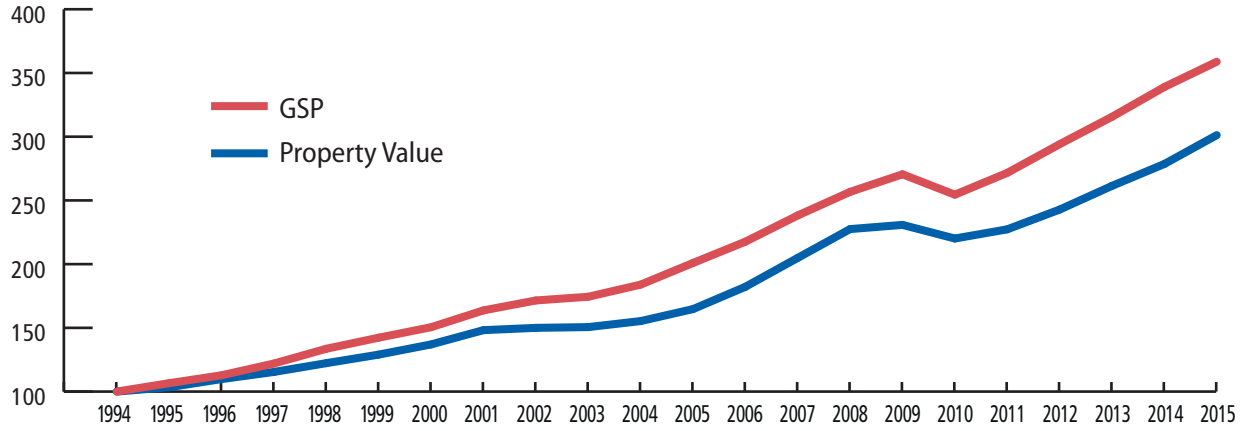
Tax Year	Total Assessed Business Property Value	Lagged Texas Gross State Product	Indexed Assessed Business Property Value	Indexed Texas Gross State Product
1994	$283,235,711	$459,290	100.0	100.0
1995	292,791,626	489,567	103.4	106.6
1996	310,898,710	517,910	109.8	112.8
1997	326,717,105	560,458	115.4	122.0
1998	346,277,387	613,465	122.3	133.6
1999	365,250,316	653,513	129.0	142.3
2000	388,146,496	691,406	137.0	150.5
2001	419,768,681	752,008	148.2	163.7
2002	424,929,661	787,652	150.0	171.5
2003	426,509,177	801,156	150.6	174.4
2004	439,804,296	844,435	155.3	183.9
2005	466,621,927	922,770	164.7	200.9
2006	516,124,464	999,641	182.2	217.6
2007	580,462,401	1,094,064	204.9	238.2
2008	644,254,502	1,179,066	227.5	256.7
2009	653,679,857	1,242,324	230.8	270.5
2010	623,377,028	1,168,881	220.1	254.5
2011	643,764,523	1,247,571	227.3	271.6
2012	687,812,866	1,350,778	242.8	294.1
2013	740,428,382	1,449,365	261.4	315.6
2014	789,059,602	1,557,176	278.6	339.0
2015	853,155,194	1,648,027	301.2	358.8

Note: Amounts are not adjusted for inflation. Gross state product figures are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.7

Indexed Values for Assessed Business Property Value and Lagged Texas Nominal Gross State Product, Tax Year 1994 to 2015

(Indexed Values, 1994=100)



Note: Amounts are not adjusted for inflation. Gross state product figures are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.8

Actual and Indexed Values for Assessed Oil, Natural Gas and Other Minerals Property Value, and Lagged Texas Nominal Gross State Product, Tax Year 1994 to 2015

(Amounts in Thousands; Indexed Values, 1994=100)

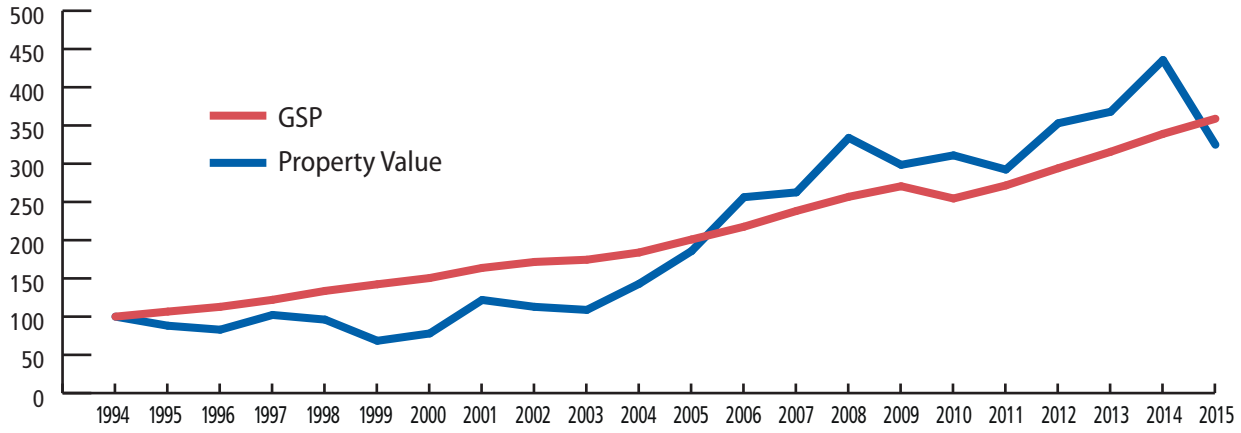
Tax Year	Total Assessed Oil, Gas and Other Minerals Property Value	Lagged Texas Gross State Product	Indexed Assessed Oil, Gas and Other Minerals Property Value	Indexed Texas Gross State Product
1994	$36,279,970	$459,290	100.0	100.0
1995	31,971,032	489,567	88.1	106.6
1996	30,059,498	517,910	82.9	112.8
1997	37,090,568	560,458	102.2	122.0
1998	34,877,973	613,465	96.1	133.6
1999	24,817,052	653,513	68.4	142.3
2000	28,284,200	691,406	78.0	150.5
2001	44,198,529	752,008	121.8	163.7
2002	40,907,052	787,652	112.8	171.5
2003	39,475,375	801,156	108.8	174.4
2004	51,889,540	844,435	143.0	183.9
2005	67,412,630	922,770	185.8	200.9
2006	92,956,772	999,641	256.2	217.6
2007	95,227,383	1,094,064	262.5	238.2
2008	121,117,948	1,179,066	333.8	256.7
2009	108,285,899	1,242,324	298.5	270.5
2010	112,804,067	1,168,881	310.9	254.5
2011	106,030,003	1,247,571	292.3	271.6
2012	128,026,744	1,350,778	352.9	294.1
2013	133,469,263	1,449,365	367.9	315.6
2014	158,021,122	1,557,176	435.6	339.0
2015	117,842,423	1,648,027	324.8	358.8

Note: Amounts are not adjusted for inflation. Gross state product figures are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.9

Indexed Values for Assessed Oil, Natural Gas and Other Minerals Property Value and Lagged Texas Nominal Gross State Product, Tax Year 1994 to 2015

(Indexed Values, 1994=100)



Note: Amounts are not adjusted for inflation. Gross state product figures in this table are lagged one year and reported on a calendar-year basis.
Source: Glenn Hegar, Texas Comptroller of Public Accounts; and IHS Markit

Exhibit 12.10

Possible Future School District Taxable Property Values, Fiscal 2017 to 2027

Pessimistic, Baseline, and Optimistic Scenarios
(Amounts in Thousands)

Tax Year	Fiscal Year	Pessimistic	Change	Baseline	Change	Optimistic	Change
2015*	2017	$2,123,571,058	-	$2,123,571,058	-	$2,123,571,058	-
2016**	2018	2,263,800,000	6.6%	2,263,800,000	6.6%	2,263,800,000	6.6%
2017	2019	2,357,100,000	4.1%	2,396,300,000	5.9%	2,446,300,000	8.1%
2018	2020	2,423,000,000	2.8%	2,513,400,000	4.9%	2,582,000,000	5.5%
2019	2021	2,400,800,000	-0.9%	2,639,900,000	5.0%	2,736,800,000	6.0%
2020	2022	2,417,300,000	0.7%	2,781,600,000	5.4%	2,920,800,000	6.7%
2021	2023	2,469,800,000	2.2%	2,924,900,000	5.2%	3,098,600,000	6.1%
2022	2024	2,601,500,000	5.3%	3,087,500,000	5.6%	3,290,900,000	6.2%
2023	2025	2,704,700,000	4.0%	3,241,700,000	5.0%	3,482,900,000	5.8%
2024	2026	2,810,600,000	3.9%	3,402,000,000	4.9%	3,681,600,000	5.7%
2025	2027	2,904,900,000	3.4%	3,575,500,000	5.1%	3,899,700,000	5.9%
Average			**3.2%**		**5.3%**		**6.3%**

*Tax year 2015/Fiscal year 2017 figures are from the 2015 Property Value Study.
**Tax year 2016/Fiscal year 2018 figures are based on the results of the CAD Value Change Survey.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Future Revenue Scenarios

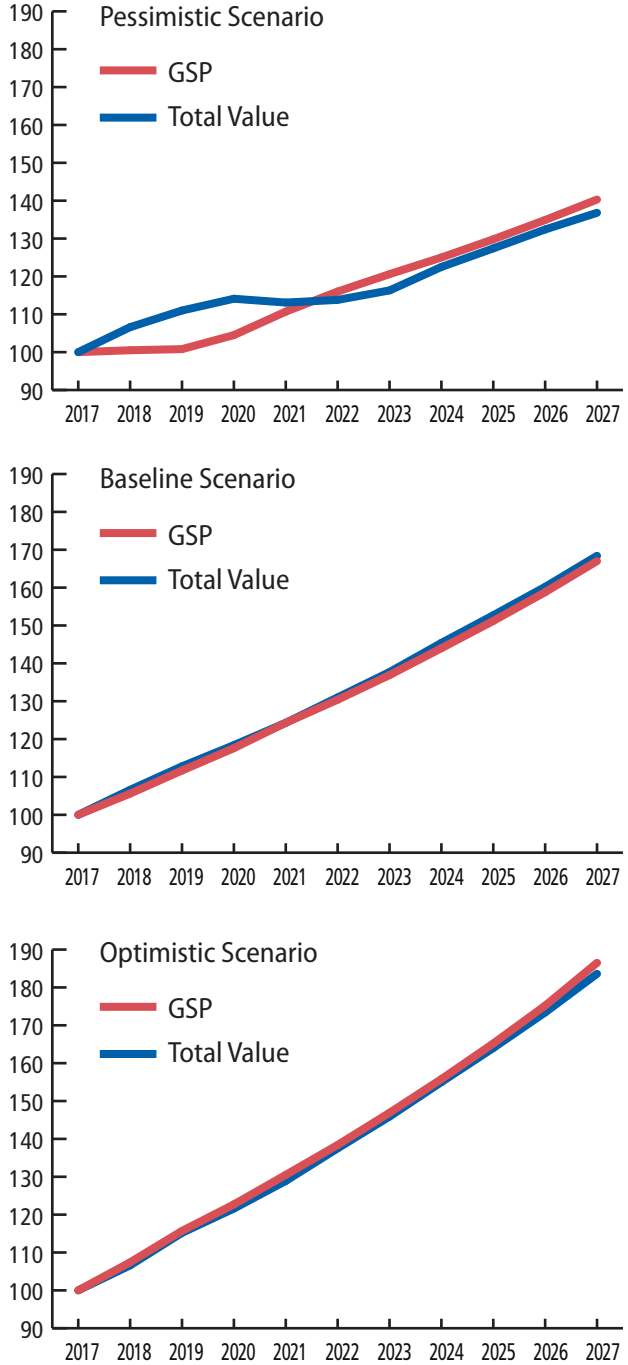
Exhibit 12.10 illustrates the pessimistic, baseline and optimistic scenarios for assessed property values through the 2025 tax year. The forecast assumptions for each scenario are discussed in the Future Revenue Trends section.

In the 2017 tax year, the high- and low-growth scenarios differ by $89.2 billion in taxable property value. By the 2025 tax year, the difference would increase to $994.8 billion. Assuming no legislative changes to taxable property value, the compound average annual growth rate would be 3.2 percent in the pessimistic scenario, 5.3 percent in the baseline scenario, and 6.3 percent in the optimistic scenario.

Exhibit 12.11

Indexed Values for Possible Total Taxable Property Value Scenarios and Texas Nominal Gross State Product, Fiscal 2017 to 2027

(Indexed values, 2017=100)



Source: Glenn Hegar, Texas Comptroller of Public Accounts

Appendix

Table A.1

State Net Revenue, By Source and Fiscal Year

General Revenue-Related (Amounts in Thousands)

Tax Collections	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Sales Taxes	$10,766,260	$11,314,513	$12,429,670	$13,040,524	$13,946,458	$14,632,395	$14,476,328	$14,233,066	$15,360,111	$16,247,455
Motor Vehicle Sales and Rental Taxes	1,965,269	2,050,098	2,276,722	2,483,240	2,782,017	2,905,538	2,946,199	2,686,855	2,731,782	2,835,405
Motor Fuel Taxes	627,961	646,028	668,580	1,036,422	388,212	743,683	755,493	751,770	787,665	786,256
Franchise Tax	1,642,134	1,796,605	1,938,265	2,077,633	2,065,276	1,960,365	1,935,709	1,716,600	1,835,014	2,170,081
Insurance Taxes	625,204	703,526	747,162	811,676	796,540	820,017	1,045,710	1,169,000	1,184,924	1,208,866
Natural Gas Production Tax	447,102	712,223	574,584	488,583	697,666	1,596,886	628,497	1,069,864	1,392,436	1,657,086
Cigarette and Tobacco Taxes	566,692	654,769	560,923	623,569	531,853	584,586	540,038	582,712	534,577	599,368
Alcoholic Beverages Taxes	418,698	431,651	456,037	483,172	514,804	541,306	560,197	567,796	601,839	626,278
Oil Production and Regulation Taxes	376,975	429,149	303,795	210,813	416,620	442,580	338,661	423,587	496,111	681,891
Inheritance Tax	160,143	207,589	326,820	256,277	278,486	322,355	334,191	186,844	151,131	101,674
Utility Taxes	240,975	258,020	241,740	265,798	264,425	339,404	311,051	328,905	356,245	380,006
Hotel Occupancy Tax	176,455	185,605	207,178	219,916	235,803	246,812	230,909	227,900	238,861	262,092
Other Taxes	32,054	33,005	35,941	31,946	35,565	41,676	43,816	43,898	46,712	55,889
Total Tax Collections	**$18,045,922**	**$19,422,783**	**$20,767,417**	**$22,029,568**	**$22,953,723**	**$25,177,604**	**$24,146,800**	**$23,988,798**	**$25,717,411**	**$27,612,349**

Tax Collections	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sales Taxes	$18,200,845	$20,183,344	$21,516,075	$20,935,394	$19,560,056	$21,400,520	$24,100,152	$25,842,158	$27,274,123	$28,787,391
Motor Vehicle Sales and Rental Taxes	3,060,542	3,300,759	3,316,539	2,569,216	2,620,530	2,954,206	3,529,032	3,843,891	4,173,050	4,474,651
Motor Fuel Taxes	799,389	815,610	825,590	806,175	814,980	828,856	858,326	855,430	894,230	924,222
Franchise Tax	2,605,447	3,144,059	2,874,564	2,777,811	2,648,909	2,677,267	2,707,761	2,793,648	2,825,240	2,874,391
Insurance Taxes	1,232,409	1,345,534	1,448,874	1,256,631	1,322,696	1,348,073	1,495,155	1,763,205	1,947,065	2,048,631
Natural Gas Production Tax	2,339,147	1,895,488	2,684,648	1,407,739	725,538	1,109,718	1,534,630	1,495,203	1,899,582	1,280,410
Cigarette and Tobacco Taxes	545,904	617,993	534,091	579,820	573,719	605,956	564,812	619,539	569,699	573,274
Alcoholic Beverages Taxes	680,748	731,677	784,069	796,948	809,234	862,032	929,700	976,894	1,053,231	1,138,776
Oil Production and Regulation Taxes	862,361	835,025	1,436,879	884,511	1,008,664	1,472,847	2,103,268	2,990,890	3,874,071	2,879,055
Inheritance Tax	13,360	5,291	5,580	2,004	81	1,807	(484)	(10,293)	12	(3,817)
Utility Taxes	480,793	506,069	503,879	518,884	478,743	457,722	450,907	434,871	478,189	480,766
Hotel Occupancy Tax	308,019	340,634	370,980	343,544	330,809	348,796	401,411	441,132	485,385	525,819
Other Taxes	68,148	79,918	85,967	69,472	60,088	114,103	157,851	150,175	168,127	167,570
Total Tax Collections	**$31,197,113**	**$33,801,402**	**$36,387,735**	**$32,948,150**	**$30,954,048**	**$34,181,902**	**$38,832,523**	**$42,196,744**	**$45,642,003**	**$46,151,137**

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.1 (Cont.)

State Net Revenue, By Source and Fiscal Year

General Revenue-Related (Amounts in Thousands)

Revenue By Source	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Tax Collections	$18,045,922	$19,422,783	$20,767,417	$22,029,568	$22,953,723	$25,177,604	$24,146,800	$23,988,798	$25,717,411	$27,612,349
Federal Funds	-	-	-	-	-	-	-	354,535	354,535	-
Licenses, Fees, Fines, and Penalties	758,200	741,256	755,109	795,451	893,964	961,281	877,258	869,447	975,031	1,024,669
Interest and Investment Income	833,028	714,358	756,440	795,757	798,722	1,002,183	810,968	729,907	840,300	860,312
Lottery Proceeds	1,158,346	1,189,404	1,156,695	969,332	889,998	835,875	869,701	888,193	1,003,336	1,016,210
Sales of Good & Services	21,988	28,166	55,829	87,296	104,286	88,184	87,138	90,366	92,852	98,667
Settlements of Claims	5,143	3,463	7,282	1,106,280	310,317	389,568	504,063	553,575	506,376	548,363
Land Income	9,894	15,983	13,293	10,857	12,307	25,237	7,357	11,887	41,285	14,384
Contributions to Employee Benefits	94,926	89,464	92,864	100,434	116,545	127,260	142,020	160,063	178,178	197,311
Other Revenue	541,061	720,354	721,479	788,191	851,597	756,000	954,488	1,123,658	1,118,306	1,282,725
Total Net Revenue	**$21,468,508**	**$22,925,230**	**$24,326,408**	**$26,683,167**	**$26,931,459**	**$29,363,192**	**$28,399,794**	**$28,770,430**	**$30,827,611**	**$32,654,990**

Revenue By Source	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Tax Collections	$31,197,113	$33,801,402	$36,387,735	$32,948,150	$30,954,048	$34,181,902	$38,832,523	$42,196,744	$45,642,003	$46,151,137
Federal Funds	-	-	-	-						
Licenses, Fees, Fines, and Penalties	1,372,165	1,273,099	1,515,324	1,180,269	1,177,468	1,182,052	1,217,355	1,153,556	1,494,270	1,609,301
Interest and Investment Income	918,944	1,070,974	888,375	718,225	27,776	1,113,118	984,953	1,308,358	857,787	872,919
Lottery Proceeds	1,029,613	1,031,867	983,144	1,000,405	1,000,434	963,173	1,096,490	1,032,635	1,150,028	1,152,814
Sales of Good & Services	94,446	98,568	106,043	108,737	109,076	108,894	115,204	111,524	118,757	124,688
Settlements of Claims	530,695	539,919	545,096	556,833	549,249	579,454	549,647	590,890	557,619	519,480
Land Income	9,078	10,350	8,662	12,092	8,152	10,691	25,548	41,710	44,514	36,853
Contributions to Employee Benefits	220,900	237,887	15,020	271	169	158	125	87	87	56
Other Revenue	1,301,787	1,198,579	1,220,049	1,452,711	1,544,071	1,627,802	2,057,659	2,070,388	1,775,164	2,176,629
Total Net Revenue	**$36,674,740**	**$39,262,646**	**$41,669,447**	**$37,977,694**	**$35,370,445**	**$39,767,244**	**$44,879,503**	**$48,505,892**	**$51,640,229**	**$52,643,877**

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.2

State Net Revenue, By Source and Fiscal Year

All Funds, Excluding Trust (Amounts in Thousands)

Tax Collections	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Sales Taxes	$10,791,472	$11,340,069	$12,459,387	$13,069,131	$13,976,657	$14,663,068	$14,516,341	$14,277,286	$15,417,156	$16,312,811
Motor Vehicle Sales and Rental Taxes	1,965,269	2,050,103	2,276,722	2,483,240	2,782,017	2,905,538	2,949,540	2,693,443	2,740,288	2,847,653
Motor Fuel Taxes	2,321,014	2,383,041	2,506,071	2,592,571	2,688,158	2,765,511	2,833,607	2,838,777	2,917,707	2,934,581
Franchise Tax	1,639,015	1,796,605	1,937,752	2,077,633	2,065,276	1,960,365	1,935,709	1,716,600	1,835,014	2,170,081
Insurance Taxes	626,644	705,833	747,196	811,708	796,567	820,046	1,045,754	1,169,062	1,184,922	1,208,866
Natural Gas Production Tax	447,102	712,223	574,584	488,583	697,666	1,596,886	628,497	1,069,864	1,392,436	1,657,086
Cigarette and Tobacco Taxes	566,692	654,769	560,923	623,569	531,853	584,586	540,038	582,712	534,577	599,368
Alcoholic Beverages Taxes	418,698	431,651	456,037	483,172	514,804	541,306	560,197	567,796	601,840	626,278
Oil Production and Regulation Taxes	376,975	429,149	303,795	210,813	416,620	442,580	338,661	423,587	496,111	681,891
Inheritance Tax	160,143	207,589	326,820	256,277	278,486	322,355	334,191	186,844	151,131	101,674
Utility Taxes	240,975	258,020	241,740	265,798	264,425	339,404	311,051	328,905	356,245	380,006
Hotel Occupancy Tax	176,456	185,606	207,179	219,917	235,804	246,813	230,909	227,899	238,862	262,092
Other Taxes	32,049	33,209	35,814	32,200	35,438	41,755	54,650	43,898	46,712	55,889
Total Tax Collections	**$19,762,504**	**$21,187,868**	**$22,634,020**	**$23,614,611**	**$25,283,769**	**$27,230,212**	**$26,279,146**	**$26,126,675**	**$27,913,002**	**$29,838,278**

Tax Collections	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sales Taxes	$18,275,210	$20,270,476	$21,604,090	$21,014,065	$19,630,306	$21,478,983	$24,191,241	$25,943,807	$27,385,709	$28,910,857
Motor Vehicle Sales and Rental Taxes	3,075,154	3,325,597	3,341,589	2,600,939	2,630,137	2,977,664	3,559,231	3,878,380	4,209,953	4,514,186
Motor Fuel Taxes	2,993,570	3,053,812	3,101,527	3,032,770	3,041,973	3,104,200	3,169,240	3,221,502	3,315,952	3,446,157
Franchise Tax	2,605,447	3,144,059	4,451,326	4,250,332	3,856,866	3,932,114	4,564,731	4,798,699	4,732,262	4,656,286
Insurance Taxes	1,233,494	1,346,577	1,450,184	1,257,314	1,324,703	1,349,642	1,496,251	1,764,153	1,947,908	2,049,417
Natural Gas Production Tax	2,339,147	1,895,488	2,684,648	1,407,739	725,538	1,109,718	1,534,630	1,495,203	1,899,582	1,280,410
Cigarette and Tobacco Taxes	545,904	1,334,039	1,446,895	1,556,793	1,388,765	1,559,506	1,428,103	1,598,089	1,342,455	1,532,414
Alcoholic Beverages Taxes	680,748	731,677	784,069	796,948	809,234	862,032	929,700	976,894	1,053,231	1,138,776
Oil Production and Regulation Taxes	862,361	835,025	1,436,879	884,511	1,008,664	1,472,847	2,103,268	2,990,890	3,874,071	2,879,055
Inheritance Tax	13,360	5,291	5,580	2,004	81	1,807	(484)	(10,293)	12	(3,817)
Utility Taxes	480,793	506,069	503,879	518,884	478,743	457,722	450,907	434,871	478,189	480,766
Hotel Occupancy Tax	308,019	340,634	370,980	343,544	330,809	348,796	401,411	441,132	485,385	525,819
Other Taxes	131,291	166,885	176,285	156,608	143,081	201,145	250,889	247,719	267,854	272,734
Total Tax Collections	**$33,544,498**	**$36,955,630**	**$41,357,929**	**$37,822,453**	**$35,368,901**	**$38,856,176**	**$44,079,119**	**$47,781,046**	**$50,992,562**	**$51,683,060**

Note: Excludes local funds and deposits by semi-independent agencies. Includes certain state revenue deposited in the State Treasury but not appropriated.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.2 (Cont.)

State Net Revenue, By Source and Fiscal Year

All Funds, Excluding Trust (Amounts in Thousands)

Revenue By Source	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Tax Collections	$19,762,504	$21,187,868	$22,634,020	$23,614,611	$25,283,769	$27,230,212	$26,279,146	$26,126,675	$27,913,002	$29,838,278
Federal Funds	11,657,682	12,127,877	12,631,821	13,926,001	14,798,704	16,017,765	18,170,946	20,975,687	21,937,678	22,809,751
Licenses, Fees, Fines, and Penalties	3,841,356	3,865,509	4,113,099	4,182,473	4,244,900	4,264,906	4,366,144	4,785,123	5,545,631	6,155,019
Interest and Investment Income	2,075,830	1,860,214	1,565,104	1,576,053	1,883,256	2,059,643	1,696,544	1,574,674	1,406,009	1,529,435
Lottery Proceeds	1,718,319	1,857,290	1,649,668	1,421,261	1,304,198	1,393,347	1,391,938	1,405,554	1,596,764	1,584,493
Sales of Good & Services	197,720	236,581	255,514	329,002	359,364	407,141	547,459	346,891	329,234	344,136
Settlements of Claims	14,718	6,483	9,850	1,117,104	317,971	392,406	504,459	554,196	510,062	551,879
Land Income	222,970	293,532	339,843	225,886	269,969	423,209	325,171	389,883	498,182	654,169
Contributions to Employee Benefits	94,926	89,453	92,864	100,434	116,545	127,260	142,020	160,064	178,178	197,311
Other Revenue	902,371	1,123,864	1,205,466	1,477,220	1,267,154	1,507,814	1,797,718	1,991,210	2,158,333	2,145,697
Total Net Revenue	**$40,488,397**	**$42,648,671**	**$44,497,247**	**$47,970,045**	**$49,845,830**	**$53,823,702**	**$55,221,546**	**$58,309,957**	**$62,073,073**	**$65,810,167**

Revenue By Source	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Tax Collections	$33,544,498	$36,955,630	$41,357,929	$37,822,453	$35,368,901	$38,856,176	$44,079,119	$47,781,046	$50,992,562	$51,683,060
Federal Funds	24,726,454	24,376,053	26,238,328	30,859,931	36,856,627	38,430,476	32,922,040	32,530,326	34,266,043	36,700,990
Licenses, Fees, Fines, and Penalties	5,999,064	6,914,296	10,227,892	7,198,062	6,862,919	7,876,583	7,595,067	7,919,649	8,497,084	9,649,624
Interest and Investment Income	1,949,503	2,372,705	2,309,014	1,346,545	1,058,575	1,034,610	1,098,905	1,182,874	1,463,131	1,393,601
Lottery Proceeds	1,585,181	1,551,976	1,597,487	1,581,962	1,633,923	1,675,476	1,830,916	1,893,285	1,878,112	1,893,534
Sales of Good & Services	492,439	538,835	495,942	427,644	408,053	283,091	362,749	225,926	262,341	428,665
Settlements of Claims	545,574	537,942	548,522	564,753	557,255	587,983	559,832	609,961	575,202	541,071
Land Income	860,755	751,358	1,050,030	788,046	760,614	1,461,788	1,372,264	1,325,665	1,863,364	1,547,831
Contributions to Employee Benefits	220,924	237,887	15,020	271	169	158	126	87	87	56
Other Revenue	2,496,559	2,952,608	3,142,862	3,695,797	3,850,123	4,064,549	4,820,035	5,567,563	5,144,365	5,589,826
Total Net Revenue	**$72,420,949**	**$77,189,291**	**$86,983,025**	**$84,285,463**	**$87,357,158**	**$94,270,890**	**$94,641,053**	**$99,036,382**	**$104,942,290**	**$109,428,258**

Note: Excludes local funds and deposits by semi-independent agencies. Includes certain state revenue deposited in the State Treasury but not appropriated.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.3

Economic Forecast, By Fiscal Year

Pessimistic Scenario

TEXAS ECONOMY	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Real Gross State Product (Billion 2009$)	1,577.0	1,558.7	1,585.1	1,646.9	1,691.3	1,722.6	1,751.7	1,783.2	1,816.5	1,853.4
Annual % Change	1.0	-1.2	1.7	3.9	2.7	1.9	1.7	1.8	1.9	2.0
Nominal Gross State Product (Billion Current $)	1,777.0	1,782.3	1,848.1	1,957.9	2,051.2	2,132.4	2,210.5	2,294.6	2,385.3	2,481.9
Annual % Change	0.5	0.3	3.7	5.9	4.8	4.0	3.7	3.8	4.0	4.0
Personal Income (Billion Current $)	1,449.2	1,468.0	1,493.0	1,584.5	1,639.9	1,697.3	1,751.6	1,813.0	1,878.2	1,945.8
Annual % Change	3.4	1.3	1.7	6.1	3.5	3.5	3.2	3.5	3.6	3.6
Nonfarm Employment (Thousands)	12,299.9	12,176.9	12,140.3	12,387.8	12,573.6	12,762.2	12,921.4	13,110.9	13,317.2	13,526.8
Annual % Change	0.9	-1.0	-0.3	2.0	1.5	1.5	1.2	1.5	1.6	1.6
Resident Population (Thousands)	28,754.6	29,224.4	29,703.0	30,186.3	30,665.1	31,130.2	31,598.8	32,084.4	32,578.8	33,078.9
Annual % Change	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Unemployment Rate (%)	5.3	7.0	6.4	6.1	6.0	6.0	6.0	5.8	5.8	5.8
NYMEX Oil Price ($ per Barrel)	36.81	40.00	41.00	42.00	43.00	44.00	45.00	46.00	47.00	48.00
NYMEX Natural Gas Price ($ per Million BTUs)	2.46	2.72	2.96	3.18	3.36	3.47	3.56	3.66	3.75	3.85
U. S. ECONOMY										
Gross Domestic Product (Billion 2009$)	17,262.7	17,436.2	17,751.5	18,112.9	18,511.0	18,804.1	19,086.9	19,387.3	19,712.3	20,090.3
Annual % Change	0.7	1.0	1.8	2.0	2.2	1.6	1.5	1.6	1.7	1.9
Consumer Price Index (1982-4=100)	251.1	256.8	261.6	266.8	273.0	279.7	286.4	292.8	299.0	305.1
Annual % Change	2.4	2.3	1.9	2.0	2.3	2.4	2.4	2.2	2.1	2.0
Prime Interest Rate (%)	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.4

State Net Revenue, By Source and Fiscal Year

Pessimistic Scenario

General Revenue-Related (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$28,056,000	$28,054,900	$28,059,200	$29,811,900	$31,412,000	$32,960,000	$34,288,400	$35,551,200	$36,902,600	$38,317,300
Motor Vehicle Sales and Rental Taxes	5,187,600	5,249,000	5,237,400	5,462,000	5,597,400	5,732,000	5,859,200	6,002,900	6,156,000	6,314,500
Motor Fuel Taxes	960,900	954,400	974,700	1,017,500	1,031,400	1,046,700	1,078,500	1,090,300	1,106,700	1,128,400
Franchise Tax	2,899,600	2,863,000	2,752,600	2,901,600	3,032,600	3,104,900	3,166,300	3,224,300	3,285,700	3,350,600
Insurance Taxes	2,244,300	2,250,400	2,330,500	2,464,300	2,577,800	2,676,100	2,770,800	2,872,600	2,982,300	3,099,200
Natural Gas Production Tax	724,900	847,600	981,800	1,072,000	1,167,200	1,223,100	1,270,400	1,321,600	1,369,900	1,422,200
Cigarette and Tobacco Taxes	350,200	409,000	347,300	406,000	345,000	402,800	342,100	399,400	339,500	396,200
Alcoholic Beverages Taxes	1,288,200	1,305,700	1,327,700	1,398,400	1,442,700	1,488,300	1,531,700	1,580,300	1,631,900	1,685,200
Oil Production Tax	1,397,800	1,465,200	1,477,000	1,493,100	1,520,100	1,550,700	1,587,800	1,617,200	1,651,600	1,686,400
Utility Taxes	488,100	462,300	482,800	511,300	534,200	551,700	565,800	579,900	595,100	610,900
Hotel Occupancy Tax	554,400	550,400	587,700	642,400	671,500	695,000	717,200	742,300	769,000	796,700
Other Taxes	59,000	61,000	62,000	63,000	65,000	66,000	68,000	70,000	71,000	73,000
Total Tax Collections	**$44,211,000**	**$44,472,900**	**$44,620,700**	**$47,243,500**	**$49,396,900**	**$51,497,300**	**$53,246,200**	**$55,052,000**	**$56,861,300**	**$58,880,600**
Revenue By Source										
Tax Collections	$44,211,000	$44,472,900	$44,620,700	$47,243,500	$49,396,900	$51,497,300	$53,246,200	$55,052,000	$56,861,300	$58,880,600
Non-Tax Revenue	6,443,100	6,498,900	6,572,600	6,841,100	7,000,700	7,164,100	7,316,900	7,487,600	7,667,300	7,851,300
Total Net Revenue	**$50,654,100**	**$50,971,800**	**$51,193,300**	**$54,084,600**	**$56,397,600**	**$58,661,400**	**$60,563,100**	**$62,539,600**	**$64,528,600**	**$66,731,900**

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.5

State Net Revenue, By Source and Fiscal Year

Pessimistic Scenario

All Funds, Excluding Trust (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$29,354,300	$28,964,700	$30,002,300	$32,390,700	$33,991,800	$35,540,700	$36,870,400	$38,134,100	$39,486,600	$40,902,500
Motor Vehicle Sales and Rental Taxes	5,229,200	5,291,100	5,397,300	5,745,000	5,954,700	6,163,100	6,360,200	6,582,800	6,820,100	7,065,500
Motor Fuel Taxes	3,511,600	3,514,500	3,587,500	3,677,500	3,743,800	3,801,300	3,857,800	3,917,000	3,978,000	4,041,600
Franchise Tax	3,624,500	3,578,800	3,440,800	3,627,000	3,790,800	3,881,100	3,957,900	4,030,400	4,107,100	4,188,300
Insurance Taxes	2,245,100	2,251,200	2,331,400	2,465,200	2,578,800	2,677,100	2,771,800	2,873,700	2,983,500	3,100,400
Natural Gas Production Tax	724,900	847,600	981,800	1,072,000	1,167,200	1,223,100	1,270,400	1,321,600	1,369,900	1,422,200
Cigarette and Tobacco Taxes	1,278,300	1,468,500	1,277,300	1,466,100	1,275,900	1,461,500	1,272,300	1,456,500	1,269,800	1,452,300
Alcoholic Beverages Taxes	1,288,200	1,305,700	1,327,700	1,398,400	1,442,700	1,488,300	1,531,700	1,580,300	1,631,900	1,685,200
Oil Production Tax	1,397,800	1,465,200	1,477,000	1,493,100	1,520,100	1,550,700	1,587,800	1,617,200	1,651,600	1,686,400
Utility Taxes	488,100	462,300	482,800	511,300	534,200	551,700	565,800	579,900	595,100	610,900
Hotel Occupancy Tax	554,400	550,400	587,700	642,400	671,500	695,000	717,200	742,300	769,000	796,700
Other Taxes	161,000	162,000	163,000	166,000	169,000	172,000	175,000	179,000	182,000	185,000
Total Tax Collections	**$49,857,400**	**$49,862,000**	**$51,056,600**	**$54,654,700**	**$56,840,500**	**$59,205,600**	**$60,938,300**	**$63,014,800**	**$64,844,600**	**$67,137,000**
Revenue By Source										
Tax Collections	$49,857,400	$49,862,000	$51,056,600	$54,654,700	$56,840,500	$59,205,600	$60,938,300	$63,014,800	$64,844,600	$67,137,000
Non-Tax Revenue	19,161,300	19,327,400	19,546,400	20,344,900	20,819,600	21,305,400	21,759,900	22,267,600	22,802,000	23,349,200
Total Net Revenue	**$69,018,700**	**$69,189,400**	**$70,603,000**	**$74,999,600**	**$77,660,100**	**$80,511,000**	**$82,698,200**	**$85,282,400**	**$87,646,600**	**$90,486,200**

Note: Excludes local funds and deposits by semi-independent agencies. Includes certain state revenue deposited in the State Treasury but not appropriated.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.6

Funding for the Property Tax Relief Fund, By Source and Fiscal Year

Pessimistic Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3004	Motor Vehicle Sales and Use Tax	$25,400	$25,700	$26,200	$27,800	$28,800	$29,800	$30,700	$31,800	$33,000	$34,100
3130	Franchise/ Business Margins Tax	724,900	715,760	688,160	725,400	758,160	776,220	791,580	806,080	821,420	837,660
3275	Cigarette Tax	722,192	849,802	716,490	843,030	710,402	834,890	703,015	826,409	696,107	818,338
3278	Cigar and Tobacco Products Tax	16,532	16,415	16,293	16,562	16,825	17,080	17,335	17,604	17,874	18,143
3851	Interest on State Deposits/ Investments, General Non-Program	1,241	1,340	1,447	1,613	1,767	1,934	1,928	2,102	1,961	2,135
	Total Net Revenue	**$1,490,265**	**$1,609,016**	**$1,448,590**	**$1,614,405**	**$1,515,954**	**$1,659,925**	**$1,544,559**	**$1,683,996**	**$1,570,361**	**$1,710,376**

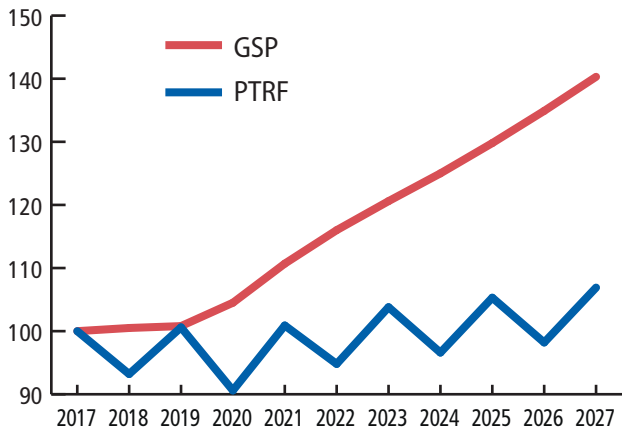
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.7

Indexed Values for the Property Tax Relief Fund and Texas Nominal Gross State Product

Pessimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	PTRF	GSP
2017	100.0	100.0
2018	93.2	100.5
2019	100.6	100.8
2020	90.6	104.5
2021	100.9	110.7
2022	94.8	116.0
2023	103.8	120.6
2024	96.6	125.0
2025	105.3	129.8
2026	98.2	134.9
2027	106.9	140.3



Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.8

Funding for the State Highway Fund, By Source and Fiscal Year

Pessimistic Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3014	Motor Vehicle Registration Fees	$1,479,719	$1,503,892	$1,528,523	$1,553,391	$1,578,033	$1,601,968	$1,626,078	$1,651,067	$1,676,511	$1,702,245
3901	Motor Fuel Taxes Allocations	2,550,714	2,560,067	2,612,830	2,659,994	2,712,411	2,754,639	2,779,316	2,826,737	2,871,261	2,913,179
3925	Sales Tax Allocations	1,222,950	832,450	1,865,150	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
3928	Motor Vehicle Sales and Rental Taxes Allocations	0	0	126,140	247,170	320,145	392,735	461,405	538,930	621,530	707,035
3969	Severance Taxes Allocations	740,422	371,645	442,932	497,682	537,545	583,370	615,807	647,457	0	0
	Other Revenue	534,590	539,223	545,334	567,611	580,855	594,409	607,089	621,255	636,165	651,433
	Total State Net Revenue	**$6,528,395**	**$5,807,277**	**$7,120,910**	**$8,025,848**	**$8,228,989**	**$8,427,120**	**$8,589,695**	**$8,785,446**	**$8,305,466**	**$8,473,892**

Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

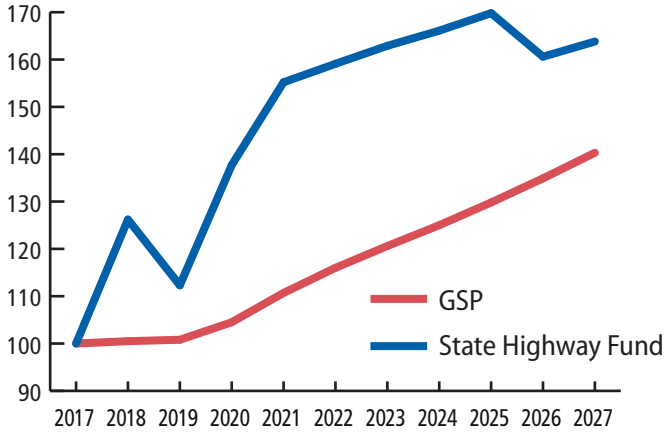
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.9

Indexed Values for the State Highway Fund and Texas Nominal Gross State Product

Pessimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	State Highway Fund	GSP
2017	100.0	100.0
2018	126.2	100.5
2019	112.3	100.8
2020	137.7	104.5
2021	155.2	110.7
2022	159.1	116.0
2023	162.9	120.6
2024	166.1	125.0
2025	169.8	129.8
2026	160.6	134.9
2027	163.8	140.3



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.10

Funding for the Economic Stabilization Fund, By Source and Fiscal Year

Pessimistic Scenario (Amounts in Thousands)

Revenue Source	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Oil Production Tax Transfer	$573,838	$324,723	$349,998	$354,423	$360,461	$370,586	$382,061	$395,973	$813,996	$839,796
Natural Gas Production Tax Transfer	166,585	46,921	92,934	143,259	177,084	212,784	233,746	251,484	541,368	577,593
Total Transfer	**$740,422**	**$371,645**	**$442,932**	**$497,682**	**$537,545**	**$583,370**	**$615,807**	**$647,457**	**$1,355,364**	**$1,417,389**

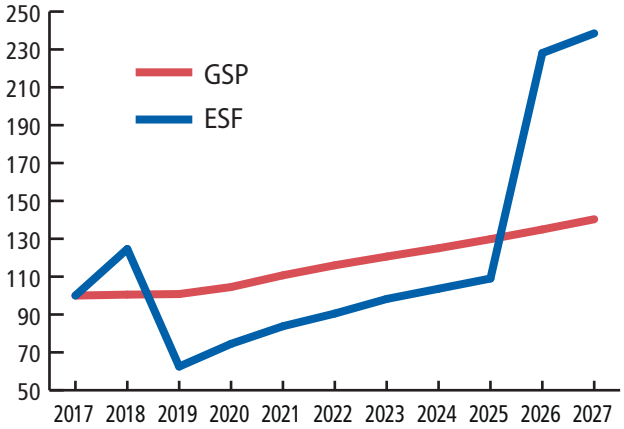
Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.11

Indexed Values for the Economic Stabilization Fund and Texas Nominal Gross State Product

Pessimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	ESF	GSP
2017	100.0	100.0
2018	124.6	100.5
2019	62.5	100.8
2020	74.5	104.5
2021	83.8	110.7
2022	90.5	116.0
2023	98.2	120.6
2024	103.6	125.0
2025	109.0	129.8
2026	228.1	134.9
2027	238.5	140.3



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.12

Economic Forecast, By Fiscal Year

Baseline Scenario

TEXAS ECONOMY	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Real Gross State Product (Billion 2009$)	1,617.6	1,677.9	1,733.1	1,795.3	1,845.9	1,900.8	1,960.0	2,018.7	2,081.6	2,149.9
Annual % Change	3.6	3.7	3.3	3.6	2.8	3.0	3.1	3.0	3.1	3.3
Nominal Gross State Product (Billion Current $)	1,867.6	1,974.5	2,079.9	2,197.5	2,305.6	2,421.8	2,545.8	2,673.6	2,808.9	2,953.3
Annual % Change	5.6	5.7	5.3	5.7	4.9	5.0	5.1	5.0	5.1	5.1
Personal Income (Billion Current $)	1,478.1	1,563.2	1,648.5	1,740.9	1,830.7	1,922.2	2,022.2	2,125.8	2,232.5	2,348.4
Annual % Change	5.5	5.8	5.5	5.6	5.2	5.0	5.2	5.1	5.0	5.2
Nonfarm Employment (Thousands)	12,421.8	12,674.0	12,927.9	13,164.9	13,357.2	13,573.9	13,805.7	14,031.1	14,263.5	14,509.3
Annual % Change	1.9	2.0	2.0	1.8	1.5	1.6	1.7	1.6	1.7	1.7
Resident Population (Thousands)	28,768.8	29,253.1	29,746.9	30,245.7	30,740.6	31,222.3	31,707.8	32,210.9	32,723.4	33,242.1
Annual % Change	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6
Unemployment Rate (%)	4.7	4.6	4.6	4.5	4.7	4.7	4.7	4.6	4.6	4.6
NYMEX Oil Price ($ per Barrel)	53.52	56.98	59.98	62.98	65.78	68.20	70.69	73.28	75.96	78.74
NYMEX Natural Gas Price ($ per Million BTUs)	3.28	3.62	3.95	4.24	4.48	4.63	4.75	4.88	5.00	5.13
U. S. ECONOMY										
Gross Domestic Product (Billion 2009$)	17,588.9	18,052.7	18,518.0	18,964.6	19,405.7	19,843.5	20,287.8	20,721.4	21,158.1	21,637.1
Annual % Change	2.6	2.6	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.3
Consumer Price Index (1982-4=100)	251.56	257.79	263.17	268.9	275.73	283.01	290.34	297.4	304.31	311.15
Annual % Change	2.6	2.5	2.1	2.2	2.5	2.6	2.6	2.4	2.3	2.2
Prime Interest Rate (%)	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.13

State Net Revenue, By Source and Fiscal Year

Baseline Scenario

General Revenue-Related (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$29,149,700	$30,868,100	$32,252,800	$34,106,000	$35,854,800	$37,675,200	$39,639,800	$41,662,600	$43,768,100	$46,028,800
Motor Vehicle Sales and Rental Taxes	5,326,900	5,645,300	5,633,200	5,854,900	6,068,400	6,284,200	6,520,100	6,764,400	7,016,100	7,289,600
Motor Fuel Taxes	971,800	989,100	1,009,600	1,048,900	1,064,200	1,084,400	1,122,600	1,139,800	1,162,300	1,190,400
Franchise Tax	2,899,600	2,981,000	3,066,200	3,148,100	3,237,100	3,316,700	3,400,300	3,487,400	3,574,900	3,665,400
Insurance Taxes	2,353,500	2,483,800	2,612,100	2,755,300	2,886,500	3,027,500	3,178,000	3,333,000	3,497,000	3,672,000
Natural Gas Production Tax	1,133,500	1,307,400	1,451,800	1,626,000	1,762,200	1,845,200	1,918,500	1,996,900	2,073,100	2,154,700
Cigarette and Tobacco Taxes	350,300	409,400	347,800	406,800	345,900	404,000	343,300	401,000	341,000	398,200
Alcoholic Beverages Taxes	1,309,400	1,375,400	1,441,600	1,513,000	1,582,500	1,653,200	1,730,100	1,809,700	1,891,700	1,980,500
Oil Production Tax	2,069,800	2,190,700	2,308,700	2,416,400	2,523,600	2,616,400	2,719,600	2,811,500	2,914,400	3,021,100
Utility Taxes	505,400	533,400	564,300	596,300	623,600	650,000	674,500	698,100	723,300	750,000
Hotel Occupancy Tax	614,600	650,000	685,500	723,900	761,200	799,200	840,800	883,900	928,300	976,500
Other Taxes	84,000	89,000	94,000	98,000	102,000	106,000	110,000	113,000	117,000	121,000
Total Tax Collections	**$46,768,500**	**$49,522,600**	**$51,467,600**	**$54,293,600**	**$56,812,000**	**$59,462,000**	**$62,197,600**	**$65,101,300**	**$68,007,200**	**$71,248,200**
Revenue By Source										
Tax Collections	$46,768,500	$49,522,600	$51,467,600	$54,293,600	$56,812,000	$59,462,000	$62,197,600	$65,101,300	$68,007,200	$71,248,200
Non-Tax Revenue	6,529,700	6,780,300	7,027,000	7,289,600	7,540,300	7,791,500	8,061,700	8,337,100	8,616,100	8,914,300
Total Net Revenue	**$53,298,200**	**$56,302,900**	**$58,494,600**	**$61,583,200**	**$64,352,300**	**$67,253,500**	**$70,259,300**	**$73,438,400**	**$76,623,300**	**$80,162,500**

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.14

State Net Revenue, By Source and Fiscal Year

Baseline Scenario

All Funds, Excluding Trust (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$31,745,800	$33,467,700	$34,855,600	$36,711,900	$38,463,700	$40,286,700	$42,254,000	$44,279,400	$46,387,600	$48,651,200
Motor Vehicle Sales and Rental Taxes	5,369,400	5,690,200	6,009,700	6,353,100	6,683,900	7,018,100	7,383,500	7,761,900	8,151,800	8,575,500
Motor Fuel Taxes	3,545,000	3,621,100	3,695,000	3,773,400	3,844,700	3,917,400	3,992,700	4,069,300	4,148,900	4,232,200
Franchise Tax	3,624,500	3,726,200	3,832,800	3,935,100	4,046,400	4,145,900	4,250,400	4,359,200	4,468,600	4,581,700
Insurance Taxes	2,354,400	2,484,700	2,613,100	2,756,300	2,887,600	3,028,600	3,179,200	3,334,200	3,498,300	3,673,400
Natural Gas Production Tax	1,133,500	1,307,400	1,451,800	1,626,000	1,762,200	1,845,200	1,918,500	1,996,900	2,073,100	2,154,700
Cigarette and Tobacco Taxes	1,279,000	1,470,000	1,279,200	1,468,900	1,279,000	1,465,900	1,276,700	1,462,200	1,275,400	1,459,500
Alcoholic Beverages Taxes	1,309,400	1,375,400	1,441,600	1,513,000	1,582,500	1,653,200	1,730,100	1,809,700	1,891,700	1,980,500
Oil Production Tax	2,069,800	2,190,700	2,308,700	2,416,400	2,523,600	2,616,400	2,719,600	2,811,500	2,914,400	3,021,100
Utility Taxes	505,400	533,400	564,300	596,300	623,600	650,000	674,500	698,100	723,300	750,000
Hotel Occupancy Tax	614,600	650,000	685,500	723,900	761,200	799,200	840,800	883,900	928,300	976,500
Other Taxes	187,000	194,000	201,000	207,000	213,000	218,000	224,000	230,000	235,000	241,000
Total Tax Collections	**$53,737,800**	**$56,710,800**	**$58,938,300**	**$62,081,300**	**$64,671,400**	**$67,644,600**	**$70,444,000**	**$73,696,300**	**$76,696,400**	**$80,297,300**
Revenue By Source										
Tax Collections	$53,737,800	$56,710,800	$58,938,300	$62,081,300	$64,671,400	$67,644,600	$70,444,000	$73,696,300	$76,696,400	$80,297,300
Non-Tax Revenue	19,418,900	20,164,200	20,897,700	21,678,600	22,424,100	23,171,300	23,974,900	24,793,700	25,623,300	26,510,100
Total Net Revenue	**$73,156,700**	**$76,875,000**	**$79,836,000**	**$83,759,900**	**$87,095,500**	**$90,815,900**	**$94,418,900**	**$98,490,000**	**$102,319,700**	**$106,807,400**

Note: Excludes local funds and deposits by semi-independent agencies. Includes certain state revenue deposited in the State Treasury but not appropriated.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.15

Funding for the Property Tax Relief Fund, By Source and Fiscal Year

Baseline Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3004	Motor Vehicle Sales and Use Tax	$25,900	$27,400	$29,000	$30,600	$32,200	$33,800	$35,600	$37,400	$39,300	$41,400
3130	Franchise/ Business Margins Tax	724,900	745,240	766,560	787,020	809,280	829,180	850,080	871,840	893,720	916,340
3275	Cigarette Tax	722,547	850,691	717,516	844,672	712,112	837,421	705,478	829,692	699,185	822,373
3278	Cigar and Tobacco Products Tax	16,539	16,429	16,321	16,591	16,867	17,129	17,392	17,668	17,952	18,235
3851	Interest on State Deposits/ Investments, General Non-Program	1,242	1,366	1,529	1,679	1,832	2,004	2,011	2,196	2,063	2,248
	Total Net Revenue	$1,491,128	$1,641,127	$1,530,927	$1,680,561	$1,572,292	$1,719,534	$1,610,560	$1,758,796	$1,652,219	$1,800,597

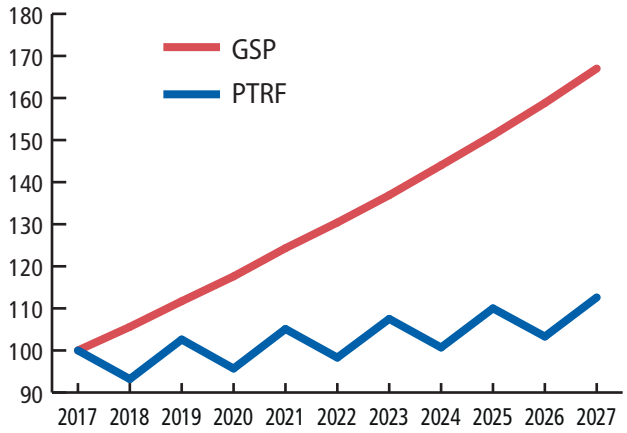
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.16

Indexed Values for the Property Tax Relief Fund and Texas Nominal Gross State Product

Baseline Scenario (Indexed Values, 2017=100)

Fiscal Year	PTRF	GSP
2017	100.0	100.0
2018	93.2	105.6
2019	102.6	111.7
2020	95.7	117.6
2021	105.1	124.3
2022	98.3	130.4
2023	107.5	136.9
2024	100.7	144.0
2025	110.0	151.2
2026	103.3	158.8
2027	112.6	167.0



Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.17

Funding for the State Highway Fund, By Source and Fiscal Year

Baseline Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3014	Motor Vehicle Registration Fees	$1,480,446	$1,505,371	$1,530,780	$1,556,449	$1,581,918	$1,606,702	$1,631,687	$1,657,579	$1,683,951	$1,710,642
3901	Motor Fuel Taxes Allocations	2,573,194	2,632,043	2,685,408	2,724,522	2,780,512	2,832,995	2,870,094	2,929,519	2,986,596	3,041,808
3925	Sales Tax Allocations	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
3928	Motor Vehicle Sales and Rental Taxes Allocations	0	0	339,185	458,710	573,930	690,305	817,495	949,305	1,085,070	1,232,595
3969	Severance Taxes Allocations	740,422	776,870	887,420	985,820	1,091,532	1,182,807	1,248,732	1,314,920	0	0
	Other Revenue	541,776	562,571	583,036	604,823	625,622	646,468	668,889	691,734	714,881	739,623
	Total State Net Revenue	**$7,835,839**	**$7,976,855**	**$8,525,828**	**$8,830,324**	**$9,153,514**	**$9,459,277**	**$9,736,897**	**$10,043,056**	**$8,970,498**	**$9,224,668**

Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

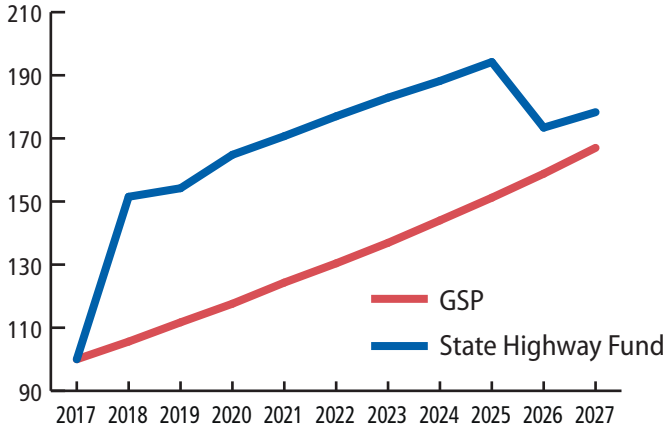
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.18

Indexed Values for the State Highway Fund and Texas Nominal Gross State Product

Baseline Scenario (Indexed Values, 2017=100)

Fiscal Year	State Highway Fund	GSP
2017	100.0	100.0
2018	151.5	105.6
2019	154.2	111.7
2020	164.8	117.6
2021	170.7	124.3
2022	177.0	130.4
2023	182.9	136.9
2024	188.2	144.0
2025	194.2	151.2
2026	173.4	158.8
2027	178.3	167.0



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.19

Funding for the Economic Stabilization Fund, By Source and Fiscal Year

Baseline Scenario (Amounts in Thousands)

Revenue Source	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Oil Production Tax Transfer	$573,838	$576,723	$622,061	$666,311	$706,698	$746,898	$781,698	$820,398	$1,709,721	$1,786,896
Natural Gas Production Tax Transfer	166,585	200,146	265,359	319,509	384,834	435,909	467,034	494,521	1,047,843	1,104,993
Total Transfer	**$740,422**	**$776,870**	**$887,420**	**$985,820**	**$1,091,532**	**$1,182,807**	**$1,248,732**	**$1,314,920**	**$2,757,564**	**$2,891,889**

Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

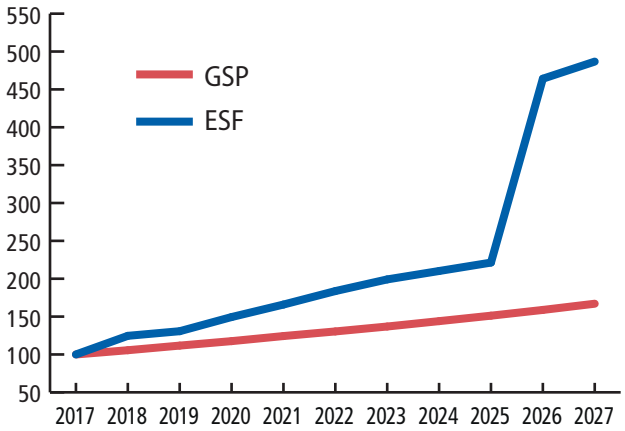
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.20

Indexed Values for the Economic Stabilization Fund and Texas Nominal Gross State Product

Baseline Scenario (Indexed Values, 2017=100)

Fiscal Year	ESF	GSP
2017	100.0	100.0
2018	124.6	105.6
2019	130.7	111.7
2020	149.4	117.6
2021	165.9	124.3
2022	183.7	130.4
2023	199.1	136.9
2024	210.2	144.0
2025	221.3	151.2
2026	464.1	158.8
2027	486.7	167.0



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.21

Economic Forecast, By Fiscal Year

Optimistic Scenario

TEXAS ECONOMY	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Real Gross State Product (Billion 2009$)	1,643.0	1,729.7	1,791.5	1,859.4	1,926.4	1,995.7	2,067.0	2,138.9	2,216.1	2,302.2
Annual % Change	5.2	5.3	3.6	3.8	3.6	3.6	3.6	3.5	3.6	3.9
Nominal Gross State Product (Billion Current $)	1,898.8	2,045.5	2,170.3	2,307.0	2,447.7	2,597.0	2,755.4	2,920.8	3,098.9	3,297.3
Annual % Change	7.4	7.7	6.1	6.3	6.1	6.1	6.1	6.0	6.1	6.4
Personal Income (Billion Current $)	1,507.9	1,619.5	1,729.3	1,838.2	1,944.9	2,053.1	2,175.2	2,302.1	2,438.4	2,587.1
Annual % Change	7.6	7.4	6.8	6.3	5.8	5.6	5.9	5.8	5.9	6.1
Nonfarm Employment (Thousands)	12,531.5	12,859.5	13,155.3	13,418.4	13,673.4	13,905.8	14,150.5	14,393.7	14,645.1	14,919.1
Annual % Change	2.8	2.6	2.3	2.0	1.9	1.7	1.8	1.7	1.7	1.9
Resident Population (Thousands)	28,811.2	29,310.7	29,820.1	30,335.0	30,846.6	31,345.3	31,848.4	32,369.7	32,900.9	33,438.8
Annual % Change	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
Unemployment Rate (%)	4.3	3.8	3.6	3.6	3.7	3.7	3.7	3.7	3.6	3.5
NYMEX Oil Price ($ per Barrel)	58.86	62.65	65.95	69.25	72.71	76.35	80.17	84.17	88.38	92.80
NYMEX Natural Gas Price ($ per Million BTUs)	5.04	5.43	5.79	6.11	6.42	6.64	6.80	6.98	7.15	7.35
U. S. ECONOMY										
Gross Domestic Product (Billion 2009$)	17,773.0	18,442.4	18,967.5	19,492.9	19,960.9	20,468.3	21,029.3	21,585.9	22,155.8	22,794.8
Annual % Change	3.7	3.8	2.8	2.8	2.4	2.5	2.7	2.6	2.6	2.9
Consumer Price Index (1982-4=100)	251.9	258.5	264.3	270.5	277.8	285.5	293.3	300.9	308.3	315.7
Annual % Change	2.8	2.6	2.2	2.3	2.7	2.8	2.7	2.6	2.5	2.4
Prime Interest Rate (%)	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.22

State Net Revenue, By Source and Fiscal Year

Optimistic Scenario

General Revenue-Related (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$29,698,100	$31,997,600	$33,783,200	$35,949,600	$38,115,000	$40,352,400	$42,796,800	$45,332,300	$48,053,200	$51,039,700
Motor Vehicle Sales and Rental Taxes	5,439,100	5,857,100	5,830,500	6,092,400	6,346,600	6,602,600	6,891,200	7,191,100	7,513,300	7,864,800
Motor Fuel Taxes	977,500	1,000,100	1,022,300	1,063,200	1,081,900	1,105,300	1,146,400	1,166,400	1,192,200	1,224,200
Franchise Tax	2,899,600	3,006,500	3,122,600	3,217,900	3,319,300	3,420,500	3,524,800	3,632,300	3,741,300	3,855,400
Insurance Taxes	2,391,700	2,570,600	2,722,000	2,888,100	3,058,700	3,239,700	3,431,300	3,631,300	3,846,700	4,086,300
Natural Gas Production Tax	1,752,700	1,932,700	2,146,300	2,300,400	2,446,200	2,565,500	2,662,800	2,770,300	2,876,300	2,996,700
Cigarette and Tobacco Taxes	350,900	410,300	348,700	408,000	347,000	405,600	344,800	403,000	342,800	400,500
Alcoholic Beverages Taxes	1,331,400	1,416,800	1,501,000	1,584,600	1,666,500	1,749,500	1,842,600	1,939,400	2,043,100	2,155,900
Oil Production Tax	2,304,200	2,506,100	2,717,800	2,884,800	3,039,400	3,194,800	3,365,000	3,523,500	3,699,900	3,885,100
Utility Taxes	522,700	617,100	650,400	684,800	718,000	751,600	783,400	814,200	847,500	883,900
Hotel Occupancy Tax	627,000	673,400	719,000	764,300	808,600	853,600	904,400	957,200	1,013,900	1,075,700
Other Taxes	92,000	100,000	108,000	114,000	119,000	125,000	131,000	137,000	143,000	149,000
Total Tax Collections	**$48,386,900**	**$52,088,300**	**$54,671,800**	**$57,952,100**	**$61,066,200**	**$64,366,100**	**$67,824,500**	**$71,498,000**	**$75,313,200**	**$79,617,200**
Revenue By Source										
Tax Collections	$48,386,900	$52,088,300	$54,671,800	$57,952,100	$61,066,200	$64,366,100	$67,824,500	$71,498,000	$75,313,200	$79,617,200
Non-Tax Revenue	6,619,100	6,945,600	7,259,500	7,564,400	7,856,900	8,148,600	8,471,600	8,801,100	9,148,500	9,520,300
Total Net Revenue	**$55,006,000**	**$59,033,900**	**$61,931,300**	**$65,516,500**	**$68,923,100**	**$72,514,700**	**$76,296,100**	**$80,299,100**	**$84,461,700**	**$89,137,500**

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.23

State Net Revenue, By Source and Fiscal Year

Optimistic Scenario

All Funds, Excluding Trust (Amounts in Thousands)

Tax Collections	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sales Taxes	$32,301,500	$34,606,500	$36,397,700	$38,568,600	$40,738,000	$42,979,400	$45,428,100	$47,967,700	$50,692,800	$53,684,000
Motor Vehicle Sales and Rental Taxes	5,482,400	5,903,800	6,315,400	6,720,900	7,114,700	7,511,200	7,958,200	8,422,800	8,921,800	9,466,400
Motor Fuel Taxes	3,562,400	3,655,000	3,734,100	3,817,100	3,899,200	3,981,600	4,065,400	4,151,100	4,240,700	4,335,900
Franchise Tax	3,624,500	3,758,100	3,903,300	4,022,400	4,149,100	4,275,600	4,406,000	4,540,400	4,676,600	4,819,200
Insurance Taxes	2,392,600	2,571,600	2,723,000	2,889,200	3,059,800	3,240,900	3,432,600	3,632,700	3,848,100	4,087,800
Natural Gas Production Tax	1,752,700	1,932,700	2,146,300	2,300,400	2,446,200	2,565,500	2,662,800	2,770,300	2,876,300	2,996,700
Cigarette and Tobacco Taxes	1,280,800	1,473,000	1,282,300	1,473,300	1,283,400	1,471,600	1,282,300	1,469,600	1,282,400	1,468,200
Alcoholic Beverages Taxes	1,331,400	1,416,800	1,501,000	1,584,600	1,666,500	1,749,500	1,842,600	1,939,400	2,043,100	2,155,900
Oil Production Tax	2,304,200	2,506,100	2,717,800	2,884,800	3,039,400	3,194,800	3,365,000	3,523,500	3,699,900	3,885,100
Utility Taxes	522,700	617,100	650,400	684,800	718,000	751,600	783,400	814,200	847,500	883,900
Hotel Occupancy Tax	627,000	673,400	719,000	764,300	808,600	853,600	904,400	957,200	1,013,900	1,075,700
Other Taxes	196,000	207,000	217,000	225,000	233,000	240,000	248,000	256,000	264,000	272,000
Total Tax Collections	**$55,378,200**	**$59,321,100**	**$62,307,300**	**$65,935,400**	**$69,155,900**	**$72,815,300**	**$76,378,800**	**$80,444,900**	**$84,407,100**	**$89,130,800**
Revenue By Source										
Tax Collections	$55,378,200	$59,321,100	$62,307,300	$65,935,400	$69,155,900	$72,815,300	$76,378,800	$80,444,900	$84,407,100	$89,130,800
Non-Tax Revenue	19,684,700	20,655,800	21,589,200	22,495,900	23,365,700	24,233,000	25,193,800	26,173,600	27,206,600	28,312,500
Total Net Revenue	**$75,062,900**	**$79,976,900**	**$83,896,500**	**$88,431,300**	**$92,521,600**	**$97,048,300**	**$101,572,600**	**$106,618,500**	**$111,613,700**	**$117,443,300**

Note: Excludes local funds and deposits by semi-independent agencies. Includes certain state revenue deposited in the State Treasury but not appropriated.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.24

Funding for the Property Tax Relief Fund, By Source and Fiscal Year

Optimistic Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3004	Motor Vehicle Sales and Use Tax	$26,400	$28,500	$30,500	$32,400	$34,300	$36,200	$38,400	$40,600	$43,000	$45,700
3130	Franchise/ Business Margins Tax	724,900	751,620	780,660	804,480	829,820	855,120	881,200	908,080	935,320	963,840
3275	Cigarette Tax	723,613	852,401	719,294	847,202	714,575	840,704	708,556	833,864	703,015	827,298
3278	Cigar and Tobacco Products Tax	16,561	16,466	16,357	16,640	16,924	17,193	17,470	17,760	18,051	18,342
3851	Interest on State Deposits/ Investments, General Non-Program	1,243	1,374	1,547	1,701	1,862	2,041	2,057	2,250	2,124	2,319
	Total Net Revenue	$1,492,718	$1,650,361	$1,548,358	$1,702,423	$1,597,480	$1,751,258	$1,647,682	$1,802,555	$1,701,511	$1,857,499

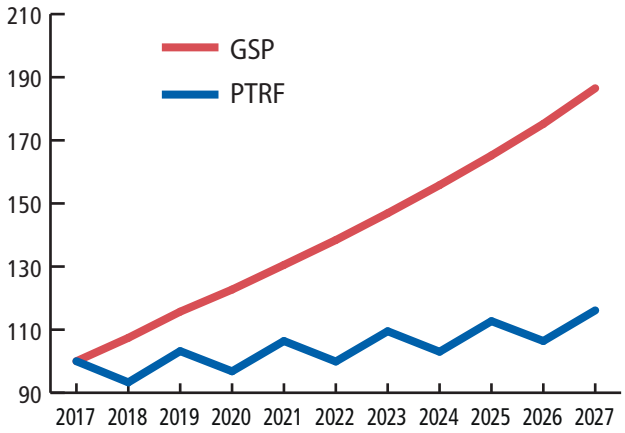
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.25

Indexed Values for the Property Tax Relief Fund and Texas Nominal Gross State Product

Optimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	PTRF	GSP
2017	100.0	100.0
2018	93.3	107.4
2019	103.2	115.7
2020	96.8	122.7
2021	106.4	130.5
2022	99.9	138.4
2023	109.5	146.9
2024	103.0	155.8
2025	112.7	165.2
2026	106.4	175.2
2027	116.1	186.5



Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.26

Funding for the State Highway Fund, By Source and Fiscal Year

Optimistic Scenario (Amounts in Thousands)

Object Code	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3014	Motor Vehicle Registration Fees	$1,482,631	$1,508,334	$1,534,547	$1,561,047	$1,587,371	$1,613,035	$1,638,925	$1,665,750	$1,693,086	$1,720,768
3901	Motor Fuel Taxes Allocations	2,584,898	2,654,910	2,711,776	2,753,912	2,817,263	2,876,287	2,918,996	2,984,676	3,048,493	3,111,733
3925	Sales Tax Allocations	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
3928	Motor Vehicle Sales and Rental Taxes Allocations	0	0	445,585	586,775	723,870	861,910	1,017,555	1,179,325	1,353,100	1,542,730
3969	Severance Taxes Allocations	740,422	1,096,970	1,240,182	1,399,670	1,520,082	1,632,732	1,735,745	1,836,057	0	0
	Other Revenue	549,193	576,286	602,328	627,626	651,894	676,092	702,899	730,234	759,055	789,911
	Total State Net Revenue	**$7,857,144**	**$8,336,499**	**$9,034,418**	**$9,429,029**	**$9,800,480**	**$10,160,056**	**$10,514,119**	**$10,896,042**	**$9,353,734**	**$9,665,142**

Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

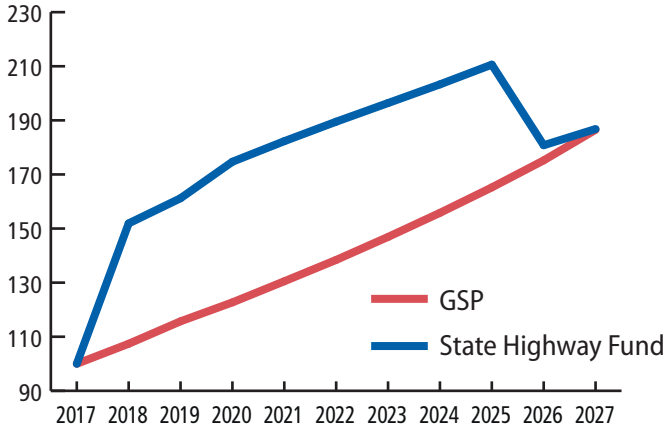
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.27

Indexed Values for the State Highway Fund and Texas Nominal Gross State Product

Optimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	State Highway Fund	GSP
2017	100.0	100.0
2018	151.9	107.4
2019	161.2	115.7
2020	174.7	122.7
2021	182.3	130.5
2022	189.5	138.4
2023	196.4	146.9
2024	203.3	155.8
2025	210.6	165.2
2026	180.8	175.2
2027	186.8	186.5



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.28

Funding for the Economic Stabilization Fund, By Source and Fiscal Year

Optimistic Scenario (Amounts in Thousands)

Revenue Source	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Oil Production Tax Transfer	$573,838	$664,623	$740,336	$819,723	$882,348	$940,323	$998,598	$1,062,423	$2,243,721	$2,376,021
Natural Gas Production Tax Transfer	166,585	432,346	499,846	579,946	637,734	692,409	737,146	773,634	1,627,893	1,707,393
Total Transfer	**$740,422**	**$1,096,970**	**$1,240,182**	**$1,399,670**	**$1,520,082**	**$1,632,732**	**$1,735,745**	**$1,836,057**	**$3,871,614**	**$4,083,414**

Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

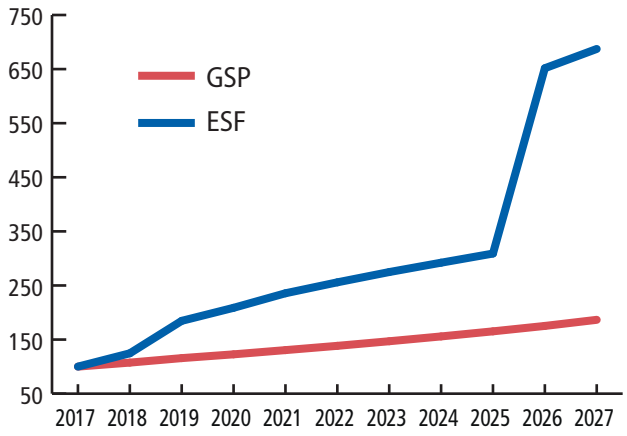
Source: Glenn Hegar, Texas Comptroller of Public Accounts

Table A.29

Indexed Values for the Economic Stabilization Fund and Texas Nominal Gross State Product

Optimistic Scenario (Indexed Values, 2017=100)

Fiscal Year	ESF	GSP
2017	100.0	100.0
2018	124.6	107.4
2019	184.6	115.7
2020	208.7	122.7
2021	235.6	130.5
2022	255.8	138.4
2023	274.8	146.9
2024	292.1	155.8
2025	309.0	165.2
2026	651.6	175.2
2027	687.2	186.5



Note: Transfers of 75 percent of severance collections above amounts collected in 1987 currently are evenly split between the ESF and the State Highway Fund. Under current law, 100 percent of such transfers will be allocated to the ESF starting in fiscal 2026.

Source: Glenn Hegar, Texas Comptroller of Public Accounts