LEGISLATIVE REVENUE ADVISORY COMMITTEE

Section 7 of Senate Bill No. 2001 (2017) would have created a legislative revenue advisory committee to monitor state revenues and to review revenue forecasts; however, the section was vetoed by the Governor. The committee would have consisted of the Majority and Minority Leaders of the House and Senate, the Chairmen of the House and Senate Appropriations Committees, one member appointed by the House Majority Leader, and one member appointed by the Senate Majority Leader. Although the Governor vetoed the section, the Legislative Management appointed a legislative revenue advisory committee and assigned the committee the responsibility to study state revenues and state revenue forecasts.

Committee members were Senators Ray Holmberg (Chairman), Dwight Cook, Joan Heckaman, and Rich Wardner and Representatives Larry Bellew, Al Carlson, Jeff Delzer, and Corey Mock.

The committee submitted this report to the Legislative Management at the biennial meeting of the Legislative Management in November 2018. The Legislative Management accepted the report for submission to the 66th Legislative Assembly.

REVENUE FORECASTING AND ADJUSTMENTS

Revenue Forecasting Process

The committee reviewed the revenue forecasting process, including the responsibilities of the Office of Management and Budget (OMB) and the Legislative Assembly. Historically, OMB has had the primary responsibility to prepare revenue forecasts for consideration in developing the state budget. During each biennium, OMB prepares three revenue forecasts including a July preliminary revenue forecast issued prior to the start of the legislative session, a December executive budget revenue forecast presented during the organizational session, and a February or March revised revenue forecast presented to the Appropriations Committees during the legislative session. The Office of Management and Budget contracts for economic advisory services, currently with Moody's Analytics, to provide economic projections as a basis for developing the revenue forecasts.

The Legislative Assembly is responsible for approving the state budget, including the revenue forecast. The legislative revenue forecast prepared at the end of each legislative session includes the base revenue forecast and any legislative changes. The base revenue forecast may include any of the forecasts prepared by OMB or a modified version of the forecasts. Legislative changes may include tax incentives and exemptions, tax rate changes, or transfers from other state funds.

Recent Revenue Forecast Adjustments

The committee reviewed information regarding recent adjustments to revenue forecasts, including adjustments to the 2015-17 biennium budget and the 2017-19 biennium budget. In January 2015, the Legislative Assembly adjusted the December 2014 executive budget revenue forecast after oil prices and oil activity decreased significantly. The revenue adjustments reduced the 2015-17 biennium estimated general fund beginning balance by $130 million and reduced the estimated 2015-17 biennium general fund revenues by $550 million. In addition, the 2015 Legislative Assembly adopted adjustments to oil price and oil production assumptions resulting in a decrease of approximately $4 billion related to the 2015-17 biennium oil tax revenue forecast.

Due to the decrease in oil activity during the 2015-17 biennium, general fund revenue collections were less than forecasted. In February 2016 OMB released a revised forecast resulting in a decrease of approximately $1 billion in general fund revenues. The oil tax revenue forecast also was revised resulting in a decrease of approximately $970 million. The revisions to the general fund revenue forecast allowed the Governor to access the budget stabilization fund to provide for a transfer of $498 million. The Governor also reduced agency budgets by 4.05 percent resulting in a transfer of $72 million from the foundation aid stabilization fund to the general fund to offset the reduction for state school aid.

In August 2016 the Governor ordered a special legislative session to address additional budget challenges. The Legislative Assembly adopted revenue adjustments during the August 2016 special legislative session decreasing general fund revenues by approximately $400 million compared to the February 2016 revised revenue forecast. The August 2016 legislative revenue forecast also provided for additional transfers from the budget stabilization fund to the general fund, a transfer of $100 million from the Bank of North Dakota profits to the general fund, and recognized 2015-17 biennium unspent general fund appropriation authority of approximately $20 million. However, due to a stabilization in oil activity, the oil tax revenue forecast was increased by approximately $500 million compared to the February 2016 revised revenue forecast.

In January 2017 the Legislative Assembly adopted a legislative forecast, which was lower than the December 2016 executive budget revenue forecast, to reflect current economic conditions. Excluding the adjustments for proposed statutory changes, the January 2017 legislative forecast reduced the 2017-19 biennium general fund executive forecast revenues by $238 million, including $67 million related to the beginning balance and $171 million related to ongoing general fund revenues. The major reductions to ongoing general fund revenues included $146 million related to sales and use tax collections and $20 million related to individual income tax collections for the 2017-19 biennium. The January 2017 legislative forecast also decreased the oil tax revenue collections by approximately $330 million based on a lower oil price for the 2017-19 biennium.

In March 2017 the Appropriations Committees adopted the March 2017 revised revenue forecast prepared by OMB with an additional reduction of $10 million to the 2017-19 biennium beginning balance related to lower 2015-17 biennium sales and use tax collections. The March 2017 legislative revenue forecast reduced the 2017-19 biennium general fund revenue forecast by approximately $160 million compared to the January 2017 legislative forecast.

STATE REVENUES AND STATE REVENUE FORECASTS STUDY

The Legislative Management assigned the committee the responsibility to study state revenues and state revenue forecasts. The committee received information on current economic trends, including a short-term outlook from industry representatives and revenue collections from state agencies. The committee also received information from a consultant regarding state revenue forecasts.

Information from Industry Representatives

The committee received information from the North Dakota Stockmen's Association, the North Dakota Wheat Commission, and the North Dakota Soybean Council regarding the status of the agriculture industry. Drought conditions in the summer of 2017 negatively impacted wheat production and cattle inventories in western North Dakota resulting in financial losses for some farmers and ranchers. Farmers and ranchers anticipate moderate profitability in 2018 as wheat production increases and cattle inventories stabilize. Soybean exports from the United States to Southeast Asia decreased significantly in 2018 related to trade tariffs. The uncertainty related to global trade issues also caused a decrease in soybean prices.

The committee received information from the North Dakota Petroleum Council regarding the status of the oil and gas industry. Oil companies spend approximately $292 million per week on oil well development in the Bakken Formation. Approximately $200,000 of sales tax revenue is collected from each completed oil well, and approximately 80 oil wells are completed per month resulting in $16 million of sales tax revenue per month for the state. Oil and gas development activity is anticipated to be stable through the 2019-21 biennium if West Texas Intermediate oil prices remain approximately at the $70 per barrel level. However, challenges in oil companies' operations include workforce shortages and natural gas capture requirements.

The Automobile Dealers Association of North Dakota, the North Dakota Implement Dealers Association, and the Associated General Contractors of North Dakota provided information to the committee regarding other industry trends. Automobile sales slowed in 2018, but parts and repair services have grown. Farm equipment sales were strong in early 2018, but remain lower overall compared to peak sales in 2013. Rising interest rates may impact automobile dealers' profitability as costs increase to finance inventory and floor models. Profitability in the construction industry has been limited in 2018 because bids for projects have been more competitive. Construction activity in North Dakota grew faster than the United States average from 2008 to 2015. From 2015 to 2018, construction activity in North Dakota decreased while the United States average increased.

Information from State Agencies

The committee received information from the Department of Mineral Resources, the North Dakota Pipeline Authority, and Job Service North Dakota regarding oil and gas development activities. Oil drilling rigs are primarily located in Dunn, McKenzie, Mountrail, and Williams Counties, but some drilling rigs have been moved to other counties in which drilling has become economical with higher oil prices. Oil production in July 2018 surpassed 1.2 million barrels per day, which is similar to the peak production levels during 2014. Oil companies are researching enhanced oil recovery methods. A 1 percent increase in oil recovery is estimated to produce an additional 3 billion barrels of oil. Additional oil production growth in North Dakota may be limited through the 2019-21 biennium because of export infrastructure constraints. Approximately 72 percent of the oil produced in North Dakota is exported from the state by pipeline. North Dakota's oil price discount related to transportation decreased from approximately $8 per barrel to $5 per barrel after the Dakota Access Pipeline began operations resulting in an additional $3 of revenue per barrel of oil when sold by producers. As a result of the higher oil prices received by oil producers, the state collected approximately $130 million more oil and gas tax revenues between June 2017 and June 2018. The increase in oil and gas development activity has led to an increase in the state's gross domestic product, which increased from $28.9 billion in 2007 to $55.5 billion in 2017. Workforce shortages are a challenge for oil and gas development activity.

Although wages have increased, the number of jobs has increased at a faster rate than the number of workers available in the labor force. Approximately one resume was submitted for every two job openings in June 2018. The unemployment rate in the core oil-producing counties was 2.2 percent in June 2018, and the statewide unemployment rate was 2.9 percent.

The Office of Management and Budget and the Tax Department provided information to the committee regarding tax revenue collections. The Office of Management and Budget, in cooperation with the Tax Department, an economic consultant, and an advisory council on revenue forecasting, traditionally develop three forecasts for state revenues each biennium. The Tax Department provides historical tax base statistics to the economic consultant, and the economic consultant uses economic modeling software to generate forecasted tax base statistics. The Tax Department applies effective tax rates and other adjustments to the forecasted tax base statistics to develop the general fund revenue forecast. Adjustments include changes in tax laws, such as the federal Tax Cuts and Jobs Act, the phase-in of the single sales factor corporate income apportionment method, and sales tax collections from online retailers. The committee was informed state income tax collections are estimated to decrease by $28.9 million for the 2019-21 biennium related to federal income tax reform.

The committee received information from the University of North Dakota and North Dakota State University regarding revenue forecasting. Key factors for effective forecasting include the frequency of the forecasts; involvement from legislators, agency staff, industry experts, and the public; awareness of any bias in the forecast; and the time horizon of the forecast. Long-term forecasts, which include projections for 2 or 3 bienniums beyond the next biennium, can provide additional information on trends or patterns. Population factors are important in economic models due to constraints imposed by net migration and workforce availability. Dynamic modeling of economic output can be used to compare alternate scenarios and the effects of economic change. North Dakota State University provided revenue forecasting services to the state during the 1970s and 1980s using high, low, and trend estimates.

State Revenue Forecasts

The committee received a report regarding best practices for revenue forecasting. The report, published by the Center on Budget and Policy Priorities, identifies five best practices for revenue forecasting, which include a consensus estimate, outside expertise, transparent assumptions, opportunities for public input, and a revision process. The report indicates two of the best practices, outside expertise and a revision process, are utilized in North Dakota.

The committee also received information regarding a budget outlook for the 2017-19 and 2019-21 bienniums. The budget outlook provides information on estimated revenues and appropriations of the general fund, including anticipated costs to continue various programs and sources of funding that may be available to address a budgetary shortfall. Based on the outlook, the estimated general fund balance for the end of the 2017-19 biennium is $65 million after a $153 million transfer to the budget stabilization fund. The preliminary estimated general fund shortfall for the end of the 2019-21 biennium is $471 million before any additional spending requests such as state employee salary increases, recommendations by the Governor, and legislative initiatives.

Consultant Services - IHS Markit

The committee issued a request for proposals for economic forecasting data and selected IHS Markit to provide consulting services. IHS Markit provided information regarding an overview of economic trends for the United States. IHS Markit also developed custom models to forecast sales and use tax collections, motor vehicle excise tax collections, individual income tax collections, and corporate income tax collections.

Economic Trends

The committee received information from IHS Markit regarding economic trends, including trends in the national economy, the oil industry, and the agriculture industry. Real gross domestic product in the United States is anticipated to increase by 2.9 percent in 2018, 2.7 percent in 2019, 1.9 percent in 2020, and 1.6 percent in 2021. Federal income tax reforms and federal spending may contribute to economic growth in the short term while rising interest rates and low unemployment may cause a slowdown in economic growth in later years. The tariffs imposed on trade have had a minimal impact on the national economy in 2018, but are a risk for future economic growth. Oil production in the United States is anticipated to increase at approximately the same rate as the increase in global demand, keeping prices stable. Capital investment may shift from the Permian Basin in Texas to the Bakken Formation because infrastructure constraints limit the growth of oil development in the Permian Basin. Argentina, Brazil, and the United States are the primary producers of soybeans, but demand has increased for soybeans from Brazil due to a drought in Argentina and tariffs imposed on imports from the United States. Farm income in the United States may decrease in the short term as a result of slowing exports of soybeans from the United States.

Forecasting Models

The forecasting models are based on data from IHS Markit's existing macroeconomic models for the United States as well as data from industry-specific forecasts for the agriculture and energy industries. The models use data from a variety of economic sectors, but the results primarily are based on two economic drivers for each tax type. The economic drivers have the strongest correlation between the economic activity and the tax collections. The primary economic drivers to forecast the sales and use tax collections are oil well completions and personal consumption expenditures. The motor vehicle excise tax collections are driven primarily by new car registrations and employment in the oil and gas industry. The primary economic drivers to forecast individual income tax collections are wage withholdings and property income. National corporate profits and oil prices are the primary drivers to forecast corporate income tax collections.

Forecasting Results

The committee received information from IHS Markit regarding the results from the forecasting models. The schedule below provides information on the 2017-19 biennium revised general fund revenue forecast based on estimates prepared by OMB and by IHS Markit.

2017-19 Biennium						
			Increase (Decrease)			
	OMB Forecast	IHS - Baseline Forecast	Amount	Percent	IHS - Pessimistic Forecast	IHS - Optimistic Forecast
Sales and use tax	$1,722,635,206	$1,703,892,406	($18,742,800)	(1.1%)	$1,608,006,506	$1,855,320,306
Motor vehicle excise tax	231,144,237	236,073,727	4,929,490	2.1%	223,923,747	237,377,757
Individual income tax	757,683,125	747,698,159	(9,984,966)	(1.3%)	737,823,157	750,061,545
Corporate income tax	164,894,170	186,241,185	21,347,015	12.9%	173,684,417	198,743,202
Total major tax types	$2,876,356,738	$2,873,905,477	($2,451,261)		$2,743,437,827	$3,041,502,810

The schedule below provides information on the 2019-21 biennium preliminary general fund revenue forecast based on estimates prepared by OMB and by IHS Markit.

2019-21 Biennium						
			Increase (Decrease)			
	OMB Forecast	IHS - Baseline Forecast	Amount	Percent	IHS - Pessimistic Forecast	IHS - Optimistic Forecast
Sales and use tax	$1,894,204,000	$1,805,141,200	($89,062,800)	(4.7%)	$1,529,393,900	$1,952,280,500
Motor vehicle excise tax	245,972,000	257,573,740	11,601,740	4.7%	229,512,160	265,103,690
Individual income tax	806,483,000	802,602,207	(3,880,793)	(0.5%)	755,218,255	833,535,301
Corporate income tax	95,486,000	194,056,153	98,570,153	103.2%	149,293,668	239,382,058
Total major tax types	$3,042,145,000	$3,059,373,300	$17,228,300		$2,663,417,983	$3,290,301,549

IHS Markit also provided information to the committee regarding forecasted oil prices and oil production. Based on IHS Markit's forecast, West Texas Intermediate oil prices are estimated to remain at about $70 per barrel through the 2019-21 biennium while oil production in the Bakken Formation is estimated to increase and then stabilize at approximately 1.35 million barrels per day by 2021.

Recommendation

The committee makes no recommendation regarding the study of state revenues and state revenue forecasts. However, IHS Markit will provide additional updates to the Appropriations Committees during the 2019 legislative session regarding economic forecasting data, including general fund revenue estimates, oil price estimates, and oil production estimates for the remainder of the 2017-19 biennium and the entire 2019-21 biennium.