REVENUE FORECASTING METHODOLOGY

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Discussion of the Forecast

After declining by 7.4% in FY 2009 and 5.6% in FY 2010, General Fund revenues increased by 6.8% through the first five months of FY 2011. This revenue forecast predicts that General Fund revenues will increase by 6.3% for all of FY 2011, by 3.5% in FY 2012, and by 4.1% in FY 2013.

The economic forecast underlying this revenue forecast was released by IHS Global Insight on December 7, 2010. After increasing by 0.1% in FY 2010, Indiana personal income is forecasted to increase by 3.2% in FY 2011, by 3.1% in FY 2012, and by 4.2% in FY 2013. Growth in government transfer payments is forecasted to continue providing a boost to personal income before slowing in FY 2012. Excluding those transfer payments, Indiana income is forecasted to increase by 2.8% in FY 2011, by 3.5% in FY 2012, and by 4.6% in FY 2013. The State's unemployment rate is forecasted to remain at elevated levels averaging 10.2% in FY 2011, 9.8% in FY 2012, and 9.2% in FY 2013.

At the national level, nominal GDP is forecasted to increase by 4.0% in FY 2011, by 3.7% in FY 2012, and by 4.8% in FY 2013. In real terms, GDP is forecasted to increase by 2.7% in FY 2011, by 2.6% in FY 2012, and by 3.3% in FY 2013. Corporate profits rebounded strongly in CY 2010, but are forecasted to decline by 0.9% in CY 2011. In CY 2012, corporate profits are forecasted to increase by 2.8%. The stock market, as measured by the S&P 500, is expected to increase by 19.9% in CY 2010, by 6.3% in CY 2011, and by 7.8% in CY 2012. Despite these gains, the S&P 500 is expected to remain below its CY 2006 level.

Discussion of the Equations Used in the Forecast

Sales Tax

As of November 2010, sales tax revenues have been above prior year amounts for the ninth consecutive month. This was preceded by a year over year decline for fifteen straight months from October 2008 to February 2010. Year to date sales tax revenues are 3.6% below prior year. In December 2009, the Committee determined that earned income and transfer payment income drive sales tax differently. Since the recent economic recession, transfer payments as a percentage of Indiana Personal Income have reached a historic high. Transfer payments include unemployment insurance, food stamps, Medicare, Medicaid, retirement and disability insurance benefits. The Committee concluded that transfer payments are largely spent on items which are not subject to sales taxes, and that the large increases in transfer payments cause equations using total Indiana Personal Income to over-forecast sales tax revenues.

The Committee also examined another development of the economic contraction: the high Indiana unemployment rate. The dramatic increase in national and state unemployment rate resulted in historic lows in consumer confidence leading to further decline in personal consumer expenditure. Including unemployment in the model serves as a proxy variable for the low consumer confidence.

The model used by the Committee is replicated as Equation (1) below. Since this is a model that uses sales tax in its log form, it was converted to dollar levels by taking the exponential and multiplying it by an adjustment factor.

Equation (1):   Quarterly Sales Tax Base = (1.0025 * (EXP (-1.2348 + (0.9210 * LN (IPI Net of Transfers)) - (0.0363 * LN (IN Unemployment Rate))) + Adjustments

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Individual Income Tax

 In December 2009, the Committee determined that the income tax forecast should be derived using two separate economic models to account for the fact that estimated payments react differently to business cycles than withholdings and final payments. The selected models use quarterly data instead of fiscal year data to more accurately capture the depth of the current recession.

The Committee retained the estimated payments model, which contains a two quarter lagged value of the S&P index, nominal GDP growth over the same quarter in the previous year, estimated payments lagged four quarters, and a binary variable for the second and fourth quarter. The equation is replicated as Equation (2a), below.

As of November 2010, individual income tax revenues for FY 2011 were 16.4 % higher than the prior year. The Committee determined that the Wages and Salary variable used in forecasting Quarterly individual income tax revenues, net of estimated tax payments, was under forecasting the non withholding tax revenues. The Committee chose a model that uses the level of total Indiana Personal Income and a binary variable for the fourth quarter to account for seasonal increase associated with the April 15 filing date. The equation is described below in Equation (2b).

> Equation (2):   Individual Income Tax = Quarterly Estimated Payments + Quarterly Withholding
> Equation (2a):   Quarterly Estimated Payments = -28.7520 + (0.0767 * (S&P Index $_{t-2}$)) + (531.3303 * (Percent Change in Prior Year Same Quarter Nominal GDP)) + (0.5285 * (Adjusted Estimated Payments $_{t-4}$)) + (47.7816 if Q =2) - (63.0591 if Q = 4) + Adjustments
> Equation (2b):   Quarterly Withholding = 94.7825 + (0.0038* (IN Personal Income)) + (290.0536 when FY Q4) + Adjustments

Corporate Income Tax

The corporate income tax revenues have declined 29.4% in FY 2010 and 5.9 % through the first five months of FY 2011. In prior forecasts, the model employed by the Committee was driven by the National Income and Product Accounts (NIPA) corporate profits. NIPA corporate profits sharply declined in 2008 by 16.4 % followed by a 0.4% decline in 2009. It is estimated to rebound with a robust growth of 28.4% in 2010. The rebound in corporate profits in 2010 has not resulted in the growth of Indiana corporate tax revenue. The Committee determined that the variable was not capturing the impact from net operating loss carry backs caused by the sharp decline in profits in 2008. A binary variable was introduced to account for the impact from the 2008 recession. The equation employed by the Committee is replicated as Equation (3). Revenues from the Utility Receipts Tax, the Utility Services Use Tax, and the Financial Institutions Tax were forecast separately and the results of Equation (3) adjusted accordingly.

> Equation (3):   Corporate Income Tax Base = (1.0059 * (EXP (5.9483 + (0.4244 * LN (CY Corporate Profits)) - (0.5537 if FY = 2010, 2011, 2012, and 2013))) + Adjustments)

Cigarette & Tobacco Products Tax

The Committee adopted two equations to estimate the Cigarette Tax and Tobacco Products Tax. Cigarette Sales, measured in packs of 20, depend upon fiscal year real Indiana Personal Income (RFY_IPI), an estimate of the sum of the four surrounding states' real prices (RALLPRICE), the real Indiana price (RINPRICE), the real cigarette excise tax rate (CIGRATE), and a trend variable equal to the fiscal year forecast minus 1965 (TREND). Tobacco Product sales are estimated based on fiscal year real Indiana Personal Income (RFY_IPI), a price index for tobacco products (PRICE), the excise tax on tobacco products (TOBRATE), and the trend variable (TREND). The sales, income, and price variables are expressed in natural logarithms. The tobacco product excise tax is not in natural logarithm form.

> Equation (4):   Cigarette Sales = -4.781 + 1.046 (RFY_IPI) + 0.203 (ALLPRICE) - 0.858 (RINPRICE) - 0.089 (CIGRATE) – 0.036 (TREND)
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> Equation 4(a): Gross Cigarette Tax = 0.995 (Cigarette Sales)

Equation (5): Tobacco Product Sales = -9.719 +1.073 (RFY_NFIPI) - 0.126 (PRICE)
                      - 0.016 (TOBRATE) + 0.043 (TREND)
Equation (5a): Tobacco Products Tax = 0.24 (Tobacco Products Sales)

Alcoholic Beverage Taxes

The alcoholic beverage tax model includes three equations: one for beer, one for liquor, and one for wine. All three equations include fiscal year real Indiana Personal Income (RFY_IPI), the real beverage price (BPRICE, LPRICE, WPRICE), and the lagged sales of the beverage in gallons (BLAGSALE, LLAGSALE, WLAGSALE). The beer equation has a trend variable (TREND). The liquor equation includes a trend variable (TREND) and the square of the TREND variable (TREND2). The wine equation includes a dummy variable for 1987 (DUM 87) and years after, and that dummy variable multiplied by the log of real Indiana Personal Income (D87_RFY_IPI). For all equations, the income and price variables were adjusted by the Gross Domestic Product price deflator. The sales and income variables are expressed in terms of natural logarithms. The price, trend, and dummy variables are not in natural logarithms.

Equation (6): Beer Sales = -0.408 + 0.903 (LAGSALE) + 0.155 (RFY_IPI)
                      - 0.035 (BPRICE) - 0.004 (TREND)

Equation (6a): Beer Tax = 0.115 (Beer Sales)

Equation (7): Liquor Sales = -1.521 + 0.584 (LAGSALE) + 0.572 (RFY_IPI)
                      - 0.063 (LPRICE) - 0.054 (TREND) – 0.001(TREND2)

Equation (7a): Liquor Tax = 2.68 (Liquor Sales)

Equation (8): Wine Sales = -7.058 + 0.560 (LAGSALE) + 0.986 (RFY_IPI)
                      - 0.114 (WPRICE) – 0.766 (D87_RFY_IPI) + 8.812 (DUM87)

Equation (8a): Wine Tax = 0.47 (Wine Sales)

Gaming Taxes

The Committee adopted separate procedures to estimate the yield from the riverboat wagering tax paid by the state's 11 riverboat casinos and from the slot machine wagering tax paid by the state's two racinos. The Committee adopted an equation to estimate the adjusted gross wagering receipts of

the 11 riverboat casinos, which serves as the tax base for the riverboat wagering tax. The riverboat wagering tax base estimate is then used to compute estimated wagering tax collections from the riverboat casinos. Amounts are subtracted from this result to account for annual distributions to the Indiana Gaming Commission, local revenue sharing, and riverboat communities and other purposes.

The adjusted gross wagering receipts equation uses quarterly adjusted gross wagering receipts (AGR) generated at the riverboat casinos, quarterly nominal Indiana Personal Income (Q_NIPI), and the quarterly turnstile count (Q_TURNSTILE) at the riverboat casinos to account for the impact of market and capacity factors on the wagering tax base. The equation contains a dummy variable (D_FRLICK) to account for the addition of the French Lick Casino and its impact on the riverboat wagering tax base. The equation includes a dummy variable (D_FRWINDS) to account for the competitive impact of the Four Winds Casino on the riverboat wagering tax base. The Four Winds Casino is a tribal casino located in New Buffalo, Michigan, about 20 miles from the Blue Chip Casino in Michigan City, Indiana. The equation includes a dummy variable (D_RACINO) to account for the opening of the slot machine facilities at Hoosier Park and Indiana Downs and their impact on the riverboat wagering tax base. It also includes quarterly dummy variables (D_Q2, D_Q3, and D_Q4) to account for seasonal variation in adjusted gross wagering receipts. The equation chosen is replicated as Equation (9), below.

Equation (9): $Q\_AGR = -6.607 + 0.746(Q\_NIPI) + 0.474(Q\_TURNSTILE)$
$+ 0.030(D\_FRLICK) - 0.056(D\_FRWINDS) - 0.067(D\_RACINO)$
$- 0.023(D\_Q2) - 0.014(D\_Q3) - 0.036(D\_Q4)$

Where Q_TURNSTILE is the actual quarterly turnstile count for the casinos through the 2nd Quarter of 2010 and thereafter is assumed to experience no growth during FY 2011, FY 2012, and FY 2013.

Where D_FRLICK = 0.67 in 4th Quarter 2006 and 1 in calendar quarters thereafter.

Where D_FRWINDS = 0.67 in 3rd Quarter 2007 and 1 in calendar quarters thereafter.

Where D_RACINO = 0.33 in 2nd Quarter 2008 and 1 in calendar quarters thereafter.

Where D_Q2 = 1 during the 2nd calendar quarter of a year.

Where D_Q3 = 1 during the 3rd calendar quarter of a year.

Where D_Q4 = 1 during the 4th calendar quarter of a year.

The Committee also adopted an estimate of the yield from the slot machine wagering tax paid by the state's two racinos. This estimate is based on the adjusted gross wagering receipts generated at the racinos from July 2010 to November 2010, with the five-month total annualized. The annualized

total is assumed for FY 2011. The FY 2012 estimate assumes 2.3% year-over-year growth and the FY 2013 estimate assumes a year-over-year decline of 0.3%. The FY 2013 estimate includes a 7% reduction in the base receipts estimate for Hoosier Park to account for the potential competitive impact from a new casino operation in Toledo, Ohio, beginning in late 2012. The annual adjusted gross wagering receipts estimate for each racino is then used to compute the yield of the slot machine wagering tax.

SPECIFIC METHODOLOGY
(December 15, 2010)

Sales Tax
For Each Fiscal Year to be Forecast:

1. Multiply 0.920973 by the natural logarithm of the quarterly Indiana Personal Income Net of Transfers.

2. Multiply -0.036320 by the logarithm of the quarterly Indiana Unemployment Rate.

3. Add the results of Step 1 and Step 2.

4. Subtract 1.234819 from the result of Step 3.

5. Compute the exponential of the result of Step 4. Multiply the result by 1.002494 to obtain the total quarterly sales tax base.

6. Repeat Steps 1 through 5 to account for each quarter in the Fiscal Year.

7. Multiply the results of Step 6 by the sales tax rate (7%).

8. Add 30.3 in FY 2011, 31.3 in FY 2012, and 32.7 in FY 2013 to the result of Step 7 to account for the impact of tax measures enacted in 2004, 2005, 2006, 2007, 2008, and 2009.

9. Multiply the results of Step 8 by 0.99178 to account for the percentage of sales taxes deposited in the General Fund under HEA 1001- 2008.

Individual Income Tax
For Each Fiscal Year to be Forecast:

1. Multiply 0.07670 times the quarterly S&P Index from two quarters prior.

2. Multiply 531.3303 times the nominal GDP growth over same quarter previous year.

3. Multiply 0.52853 times Quarterly Adjusted Estimated Payments from four quarters prior.

4. Add the results of Steps 1, Step 2, and Step 3.

5. Subtract 28.75203 from the results of Step 4.

6. Add 47.781596 to Step 5 if Fiscal Year Quarter 4.

7. Subtract 63.059103 from Step 6 if Fiscal Year Quarter 2.

8. Multiply 0.003817 times Indiana Personal Income.

9. Add 290.053568 to Step 8 if Fiscal Year Quarter 4.

10. Add 94.782490 to Step 9.

11. Add the results from Step 7 and Step 10.

12. Repeat Steps 1 through 11 to account for each quarter in the Fiscal Year.

13. Subtract 310.6 for FY 2011, 309.1 for FY 2012, and 327.0 for FY 2013 from the results of Step 12 to account for tax measures enacted in 1997, 1999, 2002, 2005, 2006, 2007, 2008, and 2009.

14. Subtract 79.3 for FY 2011, add 43.8 in FY 2012, and add 117.4 in FY 2013 to the results of Step 13 to account for the impacts of local income tax distributions.

Corporate Income Tax

For Each Fiscal Year to be Forecast:

1. For each Fiscal Year multiply 0.424431 by the natural logarithm of the prior Calendar Year Corporate Profit.

2. Subtract 0.553681 from Step 1 for FY 2011, FY 2012, and FY 2013.

3. Add the results of Step 1 and Step 2.

4. Add 5.948288 to the results of Step 3.

5. Compute the exponential of the result of Step 4. Multiply the result by 1.005933 to obtain the total Fiscal Year corporate tax base.

6. Multiply the results of Step 5 by the tax rate (8.5%).

7. Add 215.3 to the result of Step 6 to account for the revenues from the Utility Receipts Tax.

8. Add 12.9 to the result of Step 7 to account for the revenues from the Utility Service Use Tax.

9. Add 10.0 in FY 2011, and 20 in FY 2012 and FY 2013 to the results of Step 8 to account for General Fund impact from the Financial Institutions Tax.

10. Subtract 21.0 for FY 2011, 3.1 for FY 2012 and 1.6 M for FY 2013 to the results of Step 9 to account for tax measures enacted in 2005, 2006, 2007, 2008, 2009 and 2010.

11. Add 11.5 to the results of Step 10 to account for the ongoing impact of *Aztar Indiana Gaming Corporation vs. the Indiana Department of State Revenue*.

Cigarette Tax

For Each Fiscal Year to be Forecast:

1. Multiply 1.046 by the logarithm of fiscal year real Indiana Personal Income.

2. Subtract 4.781 from the result of Step 1.

3. Multiply 0.202 by the logarithm of the sum of the real cigarette prices in the four surrounding states.

4. Add the result of Step 3 to the result of Step 2.

5. Multiply -0.858 by the logarithm of the real cigarette price in Indiana.

6. Add the result of Step 5 to the result of Step 4.

7. Multiply -0.089 by the logarithm of the real cigarette excise tax rate.

8. Add the result of Step 7 to the result of Step 6.

9. Subtract 1965 from the fiscal year of the forecast.

10. Multiply the result of Step 9 by -0.036.

11. Add the result of Step 10 to the result of Step 8.

12. Take the exponential of Step 11 to get sales.

13. Multiply the result of Step 12 by 0.995 to get total revenue.

14. Multiply the result of Step 13 by 0.545 to get General Fund revenue.

Tobacco Products Tax

For Each Fiscal Year to be Forecast:

1. Multiply 1.073 by the logarithm of fiscal year real Indiana Personal Income.

2. Subtract 9.719 from the result of Step 1.

3. Multiply -0.126 by the logarithm of the of the real tobacco product price.

4. Subtract the result of Step 3 from the result of Step 2.

5. Multiply 100 by the tobacco products excise tax rate.

6. Multiply -0.016 by the result of Step 5.

7. Add the result of Step 6 to the result of Step 4.

8. Subtract 1965 from the fiscal year of the forecast.

9. Multiply the result of Step 9 by 0.043.

10. Add the result of Step 9 to the result of Step 7

11. Take the exponential of Step 10 to get sales.

12. Multiply the result of Step 11 by 0.24 to get total revenue.

13. Multiply the result of Step 12 by 0.75.to get General Fund revenue.

Alcoholic Beverage Tax - Beer

For Each Fiscal Year to be Forecast:

1. Multiply 0.903 by the logarithm of beer sales, lagged one year.

2. Subtract 0.408 from the result of Step 1.

3. Multiply 0.155 by the logarithm of fiscal year real Indiana Personal Income.

4. Add the result of Step 3 to the result of Step 2.

5. Multiply -0.035 by the real beer price.

6. Add the result of Step 5 to the result of Step 4.

7. Multiply -0.004 by the trend term.

8. Add the result of Step 7 to the result of Step 6.

9. Take the exponential of the result of Step 8 to get sales.

10. Multiply the result of Step 9 by 0.115 to get total revenue; multiply the result of Step 9 by 0.04 to get General Fund revenue.

Alcoholic Beverage Tax - Liquor

For Each Fiscal Year to be Forecast:

1. Multiply 0.584 by the logarithm of liquor sales, lagged one year.

2. Subtract 1.521 from the result of Step 1.

3. Multiply 0.572 by the logarithm of fiscal year real Indiana Personal Income.

4. Add the result of Step 3 to the result of Step 2.

5. Multiply -0.063 by the real liquor price.

6. Add the result of Step 5 to the result of Step 4.

7. Multiply -0.054 by the trend term.

8. Add the result of Step 7 to the result of Step 6.

9. Multiply 0.001 by the trend term squared.

10. Add the results of Step 9 to the results of Step 8.

11. Take the exponential of the result of Step 10 to get sales.

12. Multiply the result of Step 11 by 2.68 to get total revenue; multiply the result of Step 11 by 1.00 to get General Fund revenue.

Alcoholic Beverage Tax - Wine

For Each Fiscal Year to be Forecast:

1. Multiply 0.560 by the logarithm of wine sales, lagged one year.

2. Subtract 7.058 from the result of Step 1.

3. Multiply 0.986 by the logarithm of fiscal year real Indiana Personal Income.

4. Add the result of Step 3 to the result of Step 2.

5. Multiply -0.114 by the real wine price.

6. Add the result of Step 5 to the result of Step 4.

7. Multiply 8.812 by the dummy for 1987 and after.

8. Add the result of Step 7 to the result of Step 6.

9. Multiply -0.766 by the dummy for 1987 multiplied by the logarithm fiscal year real Indiana Personal Income.

10. Add the result of Step 9 to the result of Step 8.

11. Take the exponential of the result of Step 10 to get sales.

12. Multiply the result of Step 11 by 0.47 to get total revenue; multiply the result of Step 11 by 0.20 to get General Fund revenue.

Riverboat Wagering Tax
For Each Fiscal Year to be Forecast:

1. Multiply 0.746 by the natural logarithm of quarterly nominal Indiana Personal Income.

2. Subtract 6.607 from the result of Step 1.

3. Multiply 0.474 by the natural logarithm of the quarterly casino turnstile count and add the result to the result of Step 2.

4. Add 0.020 to the result of Step 3 for the 4th Quarter of 2006, and add 0.030 to the result of Step 3 for each calendar quarter thereafter.

5. Subtract 0.038 from the result of Step 4 for the 3rd Quarter of 2007, and subtract 0.056 from the result of Step 4 for each calendar quarter thereafter.

6. Subtract 0.022 from the result of Step 5 for the 2nd Quarter of 2008, and subtract 0.067 from the result of Step 5 for each calendar quarter thereafter.

7. Subtract 0.023 from the result of Step 6 if the calendar quarter is the 2nd Quarter; subtract 0.014 from the result of Step 6 if the calendar quarter is the 3rd Quarter; or subtract 0.036 from the result of Step 6 if the calendar quarter is the 4th Quarter.

8. Compute the exponential of the result of Step 7 and multiply this result by 1.00007 to obtain the total quarterly adjusted gross wagering receipts of the riverboat casinos.

9. Sum the quarterly totals from Step 8 for the fiscal year to obtain the total fiscal year adjusted gross wagering receipts of the riverboat casinos.

10. Divide the total fiscal year adjusted gross receipts from Step 9 between the 11 riverboat casinos based on the actual FY 2010 percentage distribution of adjusted gross wagering receipts by riverboat casino.

11. Reduce the estimated adjusted gross wagering receipts for Blue Chip casino by 20% in FY 2011, FY 2012, and FY 2013 to account for potential competitive impacts from new tribal casino operations in southwestern Michigan.

12. Reduce the estimated adjusted gross wagering receipts for Belterra Casino, Grand Victoria Casino, and Hollywood Casino by 19% in FY 2013 to account for potential competitive impacts from new casino operations in Cincinnati, Ohio, and Columbus, Ohio, beginning in late 2012.

13. Use the fiscal year adjusted gross wagering receipts totals by riverboat casino from Step 12 to compute the fiscal year wagering tax for each riverboat casino.

14. Sum the fiscal year wagering tax totals for each riverboat casino from Step 13 to obtain the fiscal year total wagering tax collections from the 11 riverboat casinos.

15. Subtract from the Step 14 result, $1,848,370 each year to account for reimbursement to the Indiana Gaming Commission for administrative expenses; $33,000,000 each year to account for local revenue sharing; $103,889,885 in FY 2011, $104,880,254 in FY 2012, and $104,708,964 in FY 2013 to account for wagering tax distributions to riverboat communities and other purposes.