

INDIVIDUAL INCOME TAX

(CONSENSUS FORECASTING GROUP)

THOMAS JONES, PH.D.

DECEMBER 4, 2020

Office of State Budget Director

IIT Receipts History

(\$ millions)

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	IIT	% chg
FY18	4,603.6	4.8
FY19	4,544.7	-1.3
FY20	4,765.2	4.9
FY21Q1	1,184.7	4.5

Methodology

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Withholding = $f(\text{KY Wages and Salaries})$

Declarations = 3-yr moving average

minor adjustments to 2 quarters

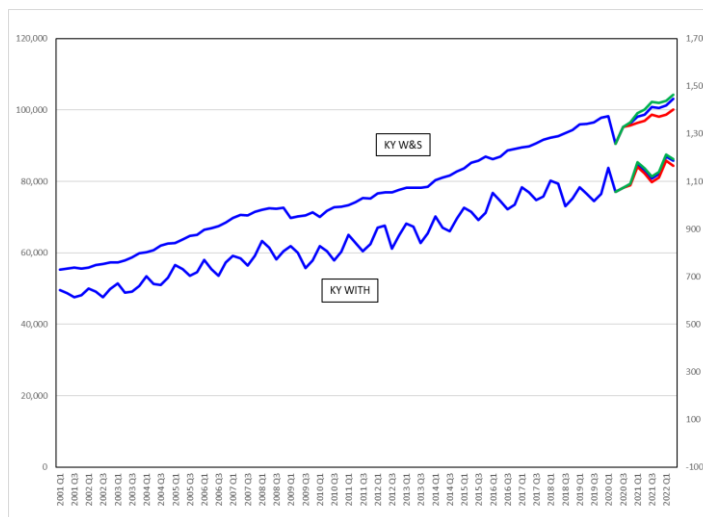
NetReturns = 3-yr moving average

Fiduciary = 3-yr moving average

Withholding Forecast

(\$ millions)

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IIT Control

(\$ millions)

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CON	FY20	% chg	FY21	% chg	FY22	% chg
IIT	4,765.2	4.9	4,818.0	1.1	5,034.1	4.5
WITH	4,276.0	3.2	4,478.9	4.7	4,634.5	3.5
DECL	523.7	-3.0	498.6	-4.8	511.1	2.5
NETR	-35.6	-75.1	-161.5	353.2	-113.4	-29.8
FID	1.1	-61.7	2.0	80.6	1.9	-9.2

IIT Pessimistic

(\$ millions)

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PES	FY20	% chg	FY21	% chg	FY22	% chg
IIT	4,765.2	4.9	4,790.3	0.5	4,964.0	3.6
WITH	4,276.0	3.2	4,451.2	4.1	4,564.4	2.5
DECL	523.7	-3.0	498.6	-4.8	511.1	2.5
NETR	-35.6	-75.1	-161.5	353.2	-113.4	-29.8
FID	1.1	-61.7	2.0	80.6	1.9	-9.2

IIT Optimistic

(\$ millions)

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OPT	FY20	% chg	FY21	% chg	FY22	% chg
IIT	4,765.2	4.9	4,837.0	1.5	5,068.7	4.8
WITH	4,276.0	3.2	4,497.9	5.2	4,669.1	3.8
DECL	523.7	-3.0	498.6	-4.8	511.1	2.5
NETR	-35.6	-75.1	-161.5	353.2	-113.4	-29.8
FID	1.1	-61.7	2.0	80.6	1.9	-9.2

IIT Needs Summary

(\$ millions)

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	FY21	Est. Growth over prior year (%)	Oct-20	Oct-19	Current YTD	Prior YTD	Actual Growth over prior year (%)	Amount Needed during rest of year	Growth Needed rest of year (%)
IIT - Off. Est.	4,770.9	0.1	385.6	368.5	1,570.3	1,502.4	4.5	3,200.6	-1.9
IIT - CON	4,818.0	1.1	385.6	368.5	1,570.3	1,502.4	4.5	3,247.7	-0.5
IIT - PES	4,790.3	0.5	385.6	368.5	1,570.3	1,502.4	4.5	3,220.0	-1.3
IIT - OPT	4,837.0	1.5	385.6	368.5	1,570.3	1,502.4	4.5	3,266.7	0.1

COAL SEVERANCE TAX

(CONSENSUS FORECASTING GROUP)

THOMAS JONES, PH.D.

DECEMBER 4, 2020

Office of State Budget Director

Coal Receipts History

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	\$ millions	% chg
FY18	89.6	-10.8
FY19	92.9	3.6
FY20	58.8	-36.7
FY21Q1	12.1	-31.1
Oct 2020	4.6	-9.9

Current Issues

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- IHS Markit assumptions: coal prices rising, natural gas prices falling, oil prices rising
- Severed tons still declining
- Previous coal specification forecast:
 - FY21: \$9.7 million (-83.6%)
 - FY22: \$5.9 million (-38.6%)
- EIA coal production data contain insufficient history to run in a timeseries model

Methodology

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- Coal receipts = $f(\text{PPI} - \text{Coal}, \text{WTI Price of Oil}, \text{real GDP})$
- Seasonally-adjusted variables
- Autocorrelation corrected
- White noise residuals

Coal Forecast

(\$ millions)

13

	FY20	% chg	FY21	% chg	FY22	% chg
CON	58.8	-36.7	35.9	-39.0	26.0	-27.6
PES	58.8	-36.7	35.2	-40.1	22.6	-35.9
OPT	58.8	-36.7	36.7	-37.6	30.2	-17.7

Coal Needs Summary

(\$ millions)

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		Est. Growth over prior year (%)	Oct-20	Oct-19	Current YTD	Prior YTD	Actual Growth over prior year (%)	Amount Needed during rest of year	Growth Needed rest of year (%)
Coal - Off. Est.	44.6	-24.2	4.6	5.1	16.7	22.7	-26.3	27.8	-23.0
Coal - CON	35.9	-39.0	4.6	5.1	16.7	22.7	-26.3	19.2	-46.8
Coal - PES	35.2	-40.1	4.6	5.1	16.7	22.7	-26.3	18.5	-48.7
Coal - OPT	36.7	-37.6	4.6	5.1	16.7	22.7	-26.3	20.0	-44.6

SALES TAX

CONSENSUS FORECASTING GROUP

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DECEMBER 4, 2020

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Current Trends in the Sales Tax

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- FY20 growth was 3.4%
 - ▣ Qtr1 through Qtr 3 grew at 6.7%
 - ▣ Qtr 4 fell by 5.9%
- The rebound in sales tax growth in FY21 has been robust
 - ▣ FY21 July-October growth is 6.8%
 - ▣ 12.3% growth in July 2020 may have been stimulus-related
 - ▣ Since July, growth has been 3.9% in August, 4.5% in September, and 6.3% in October
 - ▣ Growth has remained positive despite the expiration of many federal stimulus initiatives
- Growing sectors outweigh the declining sectors

Sales Tax Advancing Sectors

(September Actuals, Source: DOR)

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	Percent Growth	Nominal Growth (\$ Millions)
Online Sales	158.0%	\$ 18.4
Motor vehicle & parts	29.0%	\$ 0.1
Building material, hardware, garden center	17.0%	\$ 3.8
General Merchandise (Big box)	14.5%	\$ 3.2
Sporting Goods, Hobby, Book Stores	14.5%	\$ 0.8
Grocery and Beverage	5.0%	\$ 0.8
Specialty Trade Contractors	4.0%	\$ 0.2
Electronics & Appliances	1.0%	\$ 0.1

Sales Tax Declining Sectors

(September Actuals, Source: DOR)

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	Percent Growth	Nominal Growth (\$ Millions)
Movies/Theatres	-91.0%	\$ (0.5)
Personal & Laundry Services	-72.0%	\$ (5.3)
Performing Arts/Spectator Sports	-60.0%	\$ (0.4)
Hotels & Other Accommodations	-48.0%	\$ (3.7)
Machinery Manufacturing	-20.9%	\$ (0.4)
Amusement, Gambling & Recreation	-11.7%	\$ (0.3)
Restaurants & Bars	-7.0%	\$ (2.8)
Clothing & Clothing Accessories	-7.0%	\$ (0.7)
Utilities	-7.0%	\$ (1.1)
Repair & Maintenance	-3.9%	\$ (0.2)
Miscellaneous Store Retailers	-2.0%	\$ (0.9)

Quarterly Sales Tax History

(Quarterly growth rates, quarter over same quarter prior year)

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Updating the Sales Tax Estimate

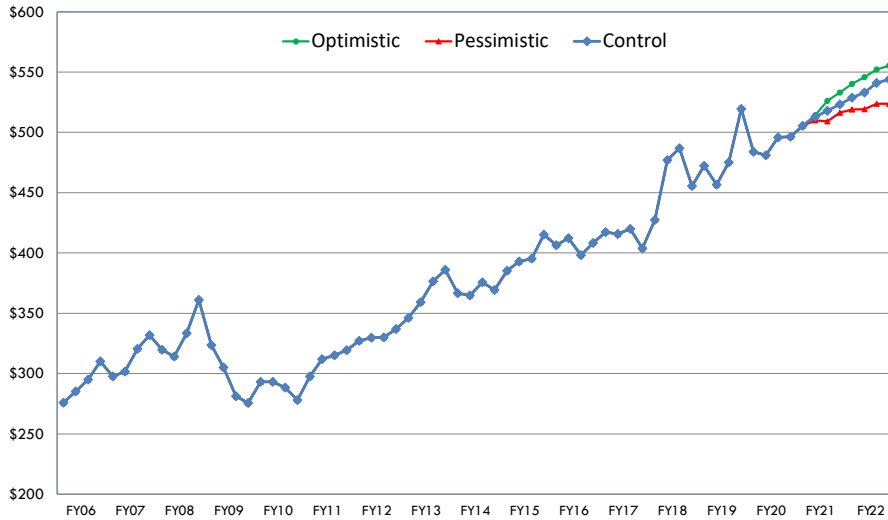
20

- Turning points are difficult!
- YTD in FY21 growth is 6.8% through October
- Re-ran the quarterly structural models and VAR model
 - ▣ Rather than using a policy neutral sales tax dependent variable, tried to implement dummy variables for tax reform and COVID19
 - ▣ US State and Local Personal Taxes, Consumer spending – Durables, Non-durables, U.S. Retail sales, Kentucky wages and salaries, Kentucky personal income
 - ▣ VAR has seasonally adjusted sales tax and KY personal income as dependent variables, US State and Local Personal Taxes as exogenous variable
 - ▣ All structural models used differenced data due to nonstationarity

State & Local Government – Personal Tax Receipts

(Billions of Dollars, Annual Rate, BEA)

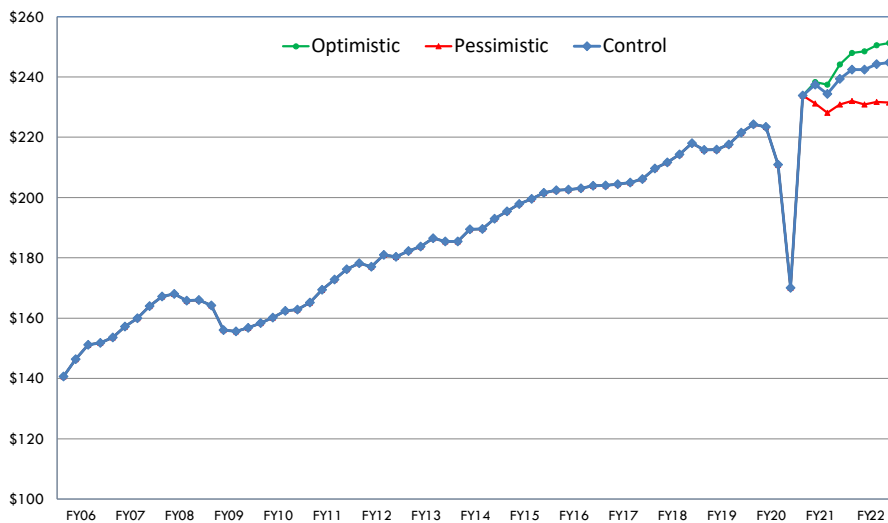
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Consumer Spending – Other Durable Goods

(Billions of Dollars, Annual Rate, BEA)

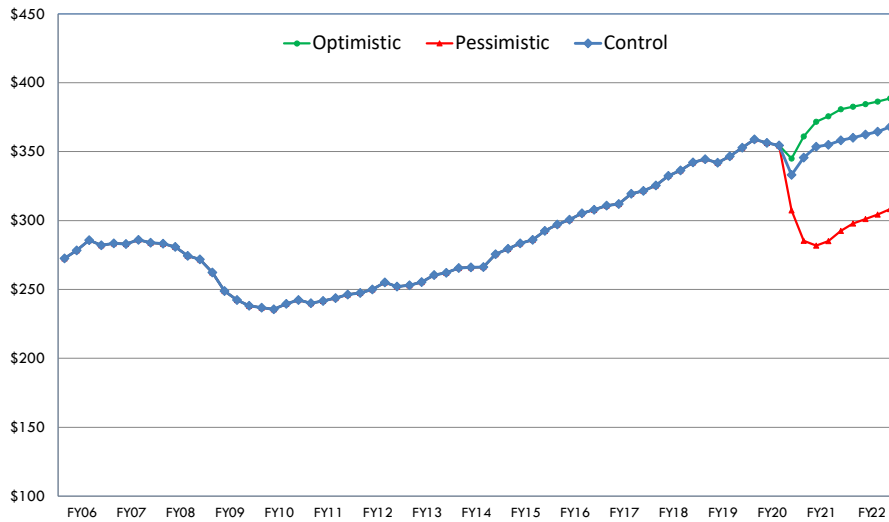
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Consumer Spending – Furnishings and Durable Household Equipment

(Billions of Dollars, Annual Rate, BEA)

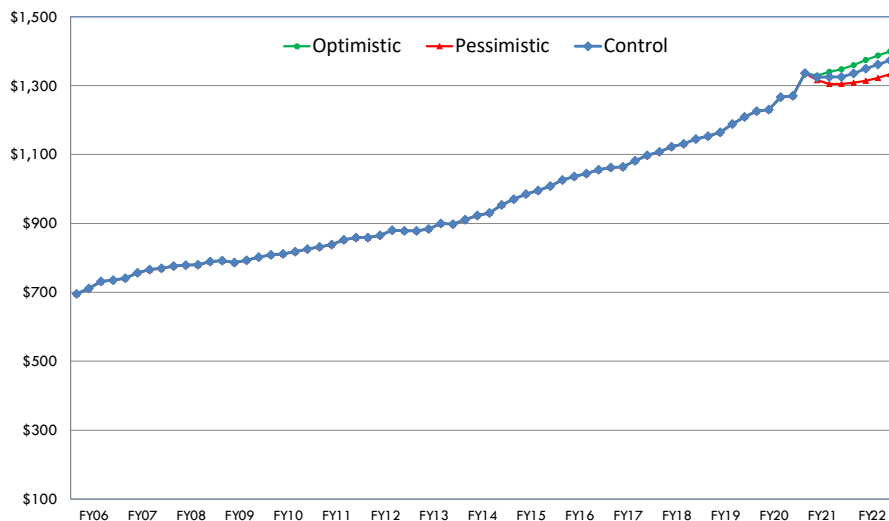
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Consumer Spending – Other Nondurable Goods

(Billions of Dollars, Annual Rate, IHS Markit Economics)

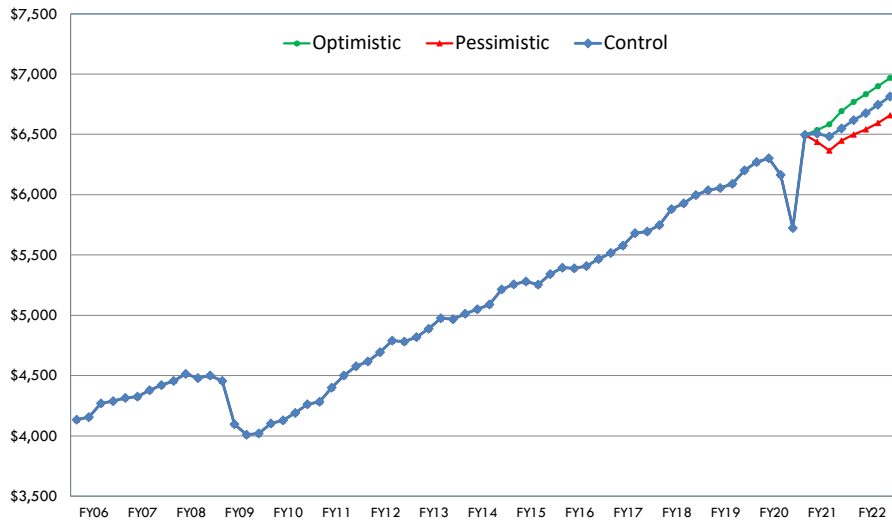
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Retail Sales – Including Food Service

(Billions of Dollars, Annual Rate, Census)

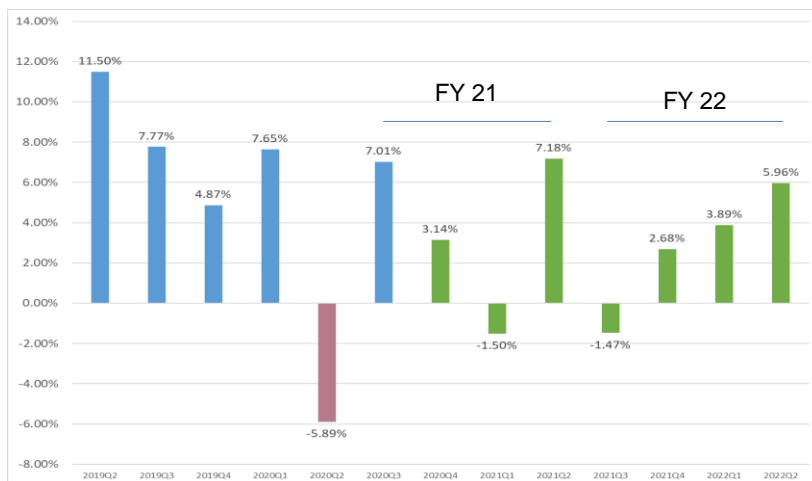
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Sales Tax Control Forecast

(Quarterly growth rates, quarter over same quarter prior year)

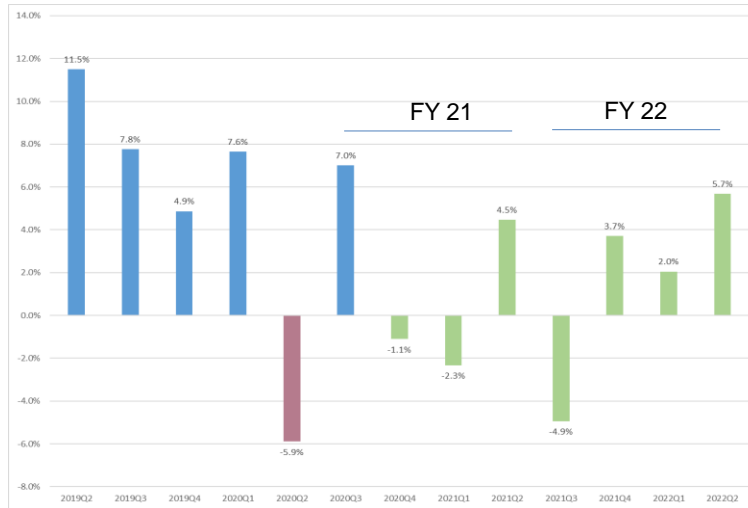
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Sales Tax Pessimistic Forecast

(Quarterly growth rates, quarter over same quarter prior year)

27



Sales Tax Projections

(\$ Millions)

28

	FY 2020	FY 2021	FY 2022
Control	\$4,070.9 (3.4% growth)	\$4,232.8 (4.0% growth)	\$4,346.0 (2.7% growth)
Optimistic	\$4,070.9 (3.4% growth)	\$4,280.6 (5.2% growth)	\$4,411.3 (3.1% growth)
Pessimistic	\$4,070.9 (3.4% growth)	\$4,153.0 (2.0% growth)	\$4,214.8 (1.5% growth)

Sales Tax Projections

(Amounts Needed from Q2-Q4, \$ Millions)

29

	FY 2021 Qtr2-Qtr4	FY 2022 Annual
Control	\$3,105.7 (2.8% growth)	\$4,346.0 (2.7% growth)
Optimistic	\$3,153.5 (4.3% growth)	\$4,411.3 (3.1% growth)
Pessimistic	\$3,025.9 (0.3% growth)	\$4,214.8 (1.5% growth)

CORPORATION INCOME AND LLET FORECASTS

(CONSENSUS FORECASTING GROUP)

GENE ZAPARANICK-BROWN

DECEMBER 4, 2020

Office of State Budget Director

Corporate & LLET Tax Receipts, Percent Change FY20 – FY21

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	FY20			FY21
	Q1-Q3	Q4	Total	July - Oct
Corp & LLET	-15.9	-16.5	-16.2	-1.1

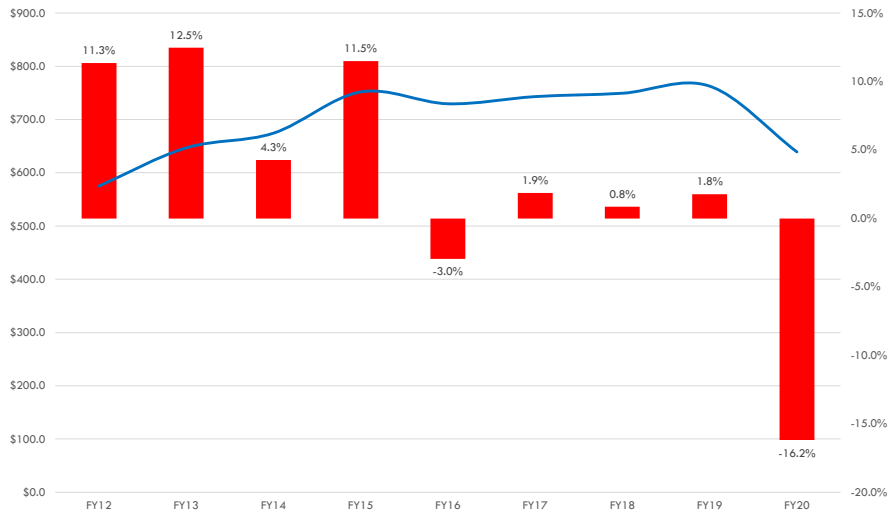
Corporate & LLET Tax Forecasts, Percent Change FY20 – FY22

32

	FY20	FY21	FY22
Control	-16.2	-11.2	3.9
Optimistic	-16.2	-10.1	8.1
Pessimistic	-16.2	-14.2	1.1

Corporate & LLET Receipts Compared to Previous Years

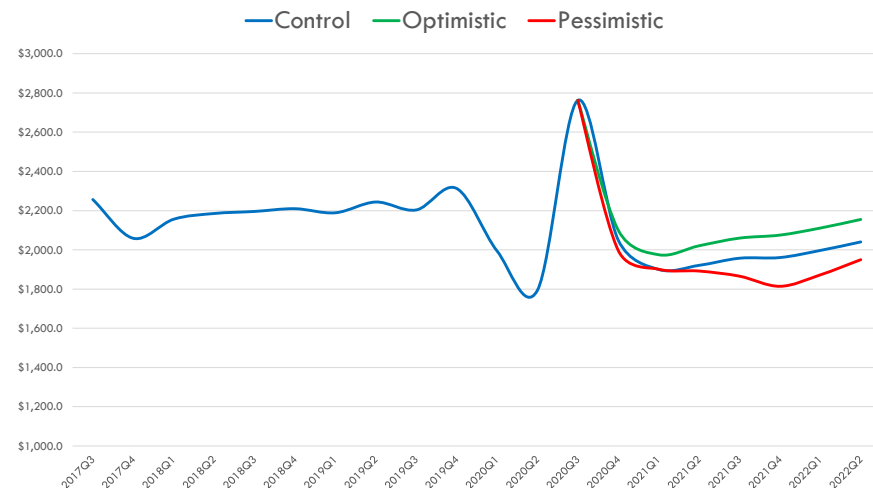
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US Corporate Profits, Before Tax

Billions \$

34



Corporate Income Forecast

Millions \$

35

	FY20		FY21		FY22	
	Actual	%Chg	Estimate	%Chg	Estimate	%Chg
Control	639.2	-16.2	567.5	-11.2	589.6	3.9
Optimistic	639.2	-16.2	574.6	-10.1	621.3	8.1
Pessimistic	639.2	-16.2	548.6	-14.2	554.7	1.1

Corporate Income Forecast Needs

Millions \$

36

	Estimate	July - Oct	\$ Needs	% Needs
Control	\$567.5	\$206.1	\$361.4	-16.1%
Optimistic	574.6	206.1	368.5	-14.4
Pessimistic	548.6	206.1	342.5	-20.5

PROPERTY TAX FORECAST

(CONSENSUS FORECASTING GROUP)

GENE ZAPARANICK-BROWN

DECEMBER 4, 2020

Office of State Budget Director

Property Tax Receipts, Percent Change

FY20 – FY21

38

	FY20			FY21
	Q1-Q3	Q4	Total	July - Oct
Real	3.6	-0.7	3.5	-0.9
Tangible	5.4	-5.2	3.6	632.6
Motor Vehicle	3.8	-27.8	-6.9	17.0
Omitted & Delinquent	-27.2	NA	-39.4	26.6
Public Service	9.4	-59.0	0.6	14.8
Total	3.5	-33.5	-0.6	35.8

Total Property Tax Forecasts

FY20 – FY22

39

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$643.0	-0.6	\$663.7	3.2	\$681.7	2.7
Optimistic	643.0	-0.6	672.9	4.7	693.6	3.1
Pessimistic	643.0	-0.6	651.4	1.3	664.3	2.0

Real Property Tax Forecasts

FY21 – FY22

40

- ❑ Residential, commercial and farm property assessed by PVAs
- ❑ Tax rate for 2020 unchanged at 12.2 cents per \$100 of assessed value
- ❑ Assessments growth gradually increasing over the past 10 years but lower this year
- ❑ New property lower than in 2019
- ❑ Increased delinquencies

Real Property Tax Forecasts

FY21 – FY22

41

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$304.0	3.5	\$313.4	3.1	\$323.8	3.3
Optimistic	304.0	3.5	314.6	3.5	326.6	3.8
Pessimistic	304.0	3.5	312.2	2.7	318.7	2.1

Tangible Property Tax Forecasts

FY21 – FY22

42

- ❑ Self-assessed property with rates ranging from 0.1 to 45 cents per \$100 of assessed value
- ❑ Business & telecom property, apportioned vehicles and commercial watercraft
- ❑ DOR seeing lower reported assessed values due to COVID
- ❑ If new assessments denied, omitted collections will increase

Tangible Property Tax Forecasts

FY21 – FY22

43

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$113.2	3.6	\$110.5	-2.4	\$111.5	0.9
Optimistic	113.2	3.6	112.3	-0.8	114.1	1.6
Pessimistic	113.2	3.6	105.7	-6.6	107.6	1.8

Motor Vehicle Property Tax Forecasts

FY21 – FY22

44

- ❑ Collections fell in FY20 due to COVID restrictions as many County Clerk's offices closed
- ❑ Taxpayers were given extensions to pay but could pay in alternative ways; online, mail, dropoff
- ❑ Receipts from FY20 have been received in FY21. Collections are up 17% through October
- ❑ Surge in motor vehicle sales

Motor Vehicle Property Tax Forecasts FY21 – FY22

45

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$134.3	-6.8	\$152.2	13.3	\$159.0	4.5
Optimistic	134.3	-6.8	155.8	16.0	163.4	4.9
Pessimistic	134.3	-6.8	150.7	12.2	155.2	3.0

Omitted & Delinquent Property Tax Forecasts FY21 – FY22

46

- Collections were down in FY20 because of compliance efforts in prior years as well as COVID
 - ▣ Work flow and compliance initiatives

Omitted & Delinquent Property Tax Forecasts

FY21 – FY22

47

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$12.2	-39.4	\$12.0	-1.6	\$13.0	8.3
Optimistic	12.2	-39.4	13.5	10.7	13.5	0.0
Pessimistic	12.2	-39.4	10.0	-18.0	10.0	0.0

Public Service Property Tax Forecasts

FY21 – FY22

48

- ❑ Gas, water and electric utilities, railroads, airlines, electric co-ops, etc.
- ❑ Reduction due largely to airlines which have been hard hit by the pandemic
- ❑ Lower valuation for airlines

Public Service Property Tax Forecasts

FY21 – FY22

49

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	71.4	0.6	68.5	-4.1	68.5	0.0
Optimistic	71.4	0.6	69.5	-2.7	70.0	0.7
Pessimistic	71.4	0.6	67.2	-5.9	67.2	0.0

Other Property Tax Forecasts

FY21 – FY22

50

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$2.2	7.8	\$2.1	-4.5	\$2.1	0.0
Optimistic	2.2	7.8	2.2	0.0	2.2	0.0
Pessimistic	2.2	7.8	1.8	-18.2	1.8	0.0

Total Property Tax Forecasts

FY20 – FY22

51

	FY20		FY21		FY22	
	Actual	% Chg	Estimate	% Chg	Estimate	% Chg
Control	\$643.0	-0.6	\$663.7	3.2	\$681.7	2.7
Optimistic	643.0	-0.6	672.9	4.7	693.6	3.1
Pessimistic	643.0	-0.6	651.4	1.3	664.3	2.0

CIGARETTE TAX CONSENSUS FORECASTING GROUP

GREG HARKENRIDER
DECEMBER 4, 2020

Office of State Budget Director

Cigarette Trends

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- FY20 cigarette tax was 0.4% higher than FY19 on a tax rate-neutral basis
- Year-to-date (through October) cigarette tax in FY21: -3.2%
- Discounting is beginning to abate, counter prices rising
- Seeing some movement down the product line
- Kentucky is beginning to see consumption declines, but not as great of declines as the U.S. average
- COVID cuts both ways for cigarettes:
 - ▣ Lower disposable income, fewer exports due to lower travel
 - ▣ COVID lockdown stress drives up sticks per day

Cigarette Tax Projections

(\$ Millions)

54

	FY 2020	FY 2021	FY 2022
Control	\$355.0 (0.4% growth)	\$345.2 (-2.8% growth)	\$335.7 (-2.8% growth)
Optimistic	\$355.0 (0.4% growth)	\$349.5 (-1.5% growth)	\$343.1 (-1.8% growth)
Pessimistic	\$355.0 (0.4% growth)	\$342.5 (-3.5% growth)	\$332.3 (-3.0% growth)

KENTUCKY LOTTERY

CONSENSUS FORECASTING GROUP

GREG HARKENRIDER

DECEMBER 4, 2020

Office of State Budget Director

Lottery Dividends FY20

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□ FY21 Notes:

- Strong sales in FY2021 through October build on a strong close in FY2020, where KLC ended the year with record total sales of \$1.2 billion, an increase of 6.5% from the previous year.
- Scratch-off tickets are the largest individual game category. Through the first four months of the year the Kentucky Lottery is \$37.9M or 14.8% ahead of budgeted sales targets.
- The iLottery channel sales increased significantly in response to COVID-19 during the fourth quarter of FY20. Growth has continued in FY21 with sales exceeding expectations.
- Draw game sales are also trending ahead of expectations, despite a lack of large Powerball and Mega Millions jackpots.

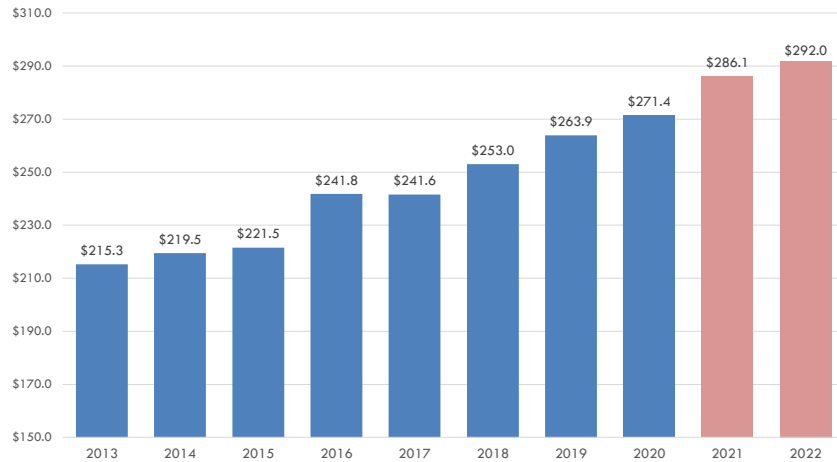
□ FY 22 Notes:

- Additional growth is expected in FY2022 as result of a full year of additional lottery vending machines, which largely supports the scratch-off products.
- Planned game and platform enhancements should lead to additional iLottery channel sales growth.

Kentucky Lottery Forecast

(Fiscal Years, Millions \$)

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MISCELLANEOUS “OTHER” TAXES

(CONSENSUS FORECASTING GROUP)

GREG HARKENRIDER

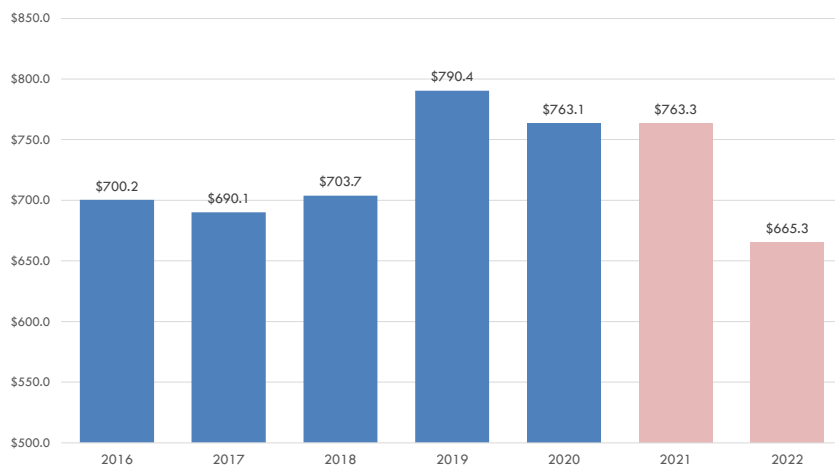
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“Other” Receipts, Control Forecast

(Millions \$)

59



GF Control Estimates for the Largest “Other Taxes”

(Million of Dollars)

60

	FY20	FY21	FY22
	Actual	Estimate	Estimate
Insurance premium taxes	168.8	170.9	172.3
Bank franchise taxes	123.1	124.0	0.25
Abandoned Property	43.8	32.5	35.0
Alcohol Taxes	158.8	165.7	171.4
Telecommunication taxes	68.1	75.6	77.8
Inheritance taxes	46.3	48.5	49.0
Other Tobacco Products	21.3	30.0	36.0

Some Downward Revisions

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- Natural Gas Severance
- Oil Production Tax
- Court Costs
- TVA – In Lieu of Taxes - State Portion
- Abandoned Property
- License Taxes

“Other” Tax Projections

(\$ Millions)

62

	FY 2020	FY 2021	FY 2022
Control	\$763.1 (-3.5% growth)	\$763.3 (0.1% growth)	\$665.3 (-12.8% growth)
Optimistic	\$763.1 (-3.5% growth)	\$772.4 (1.2% growth)	\$678.1 (-12.2% growth)
Pessimistic	\$763.1 (-3.5% growth)	\$754.8 (-1.1% growth)	\$650.8 (-13.8% growth)