INDIVIDUAL INCOME TAX

THOMAS JONES, PH.D.

AUGUST 9, 2019

Office of State Budget Director

Individual Income Tax

- KRS 141.010, enacted October 1, 1942
- Flat 5% rate on taxable income
- IIT is the largest tax receipts account in the General Fund
- FY19 receipts were \$4,544.7 million
- IIT is composed of 4 components: Withholding, Declarations, Net Returns, and Fiduciary
- Withholding makes up approximately 94% of total IIT receipts

2018 Tax Law Changes

- RS 2018 HB 487
 - · Changed to flat 5% rate
 - Update to IRC December 31, 2017
 - Pension Exclusion decreased to \$31,110
 - Elimination of Domestic Production Activities Deduction
 - Eliminated numerous itemized deductions
 - Eliminated Personal Credit (\$10) for primary, spouse and dependents

2019 Tax Law Changes

- RS 2019 HB 354
 - Updated to IRC December 31, 2018
 - Heavy equipment inventory credit (effects shared across IIT, Corp & LLET)
 - · Restored investment income and wagering losses deductions
 - Increased the Low-Income Tax Credit
 - Section 179 Expensing
- FY20: -\$132.0 million
- FY21: -\$148.4 million
- FY22: -\$144.3 million
- FY23: -\$144.3 million
- FY24: -\$144.3 million

IIT Actual vs. Official Estimate

\$millions, NSA

	ACTUAL	EST.	\$ DIFF	% DIFF
FY18	4,603.6	4,509.0	-94.6	-2.1
FY19	4,544.7	4,531.2	-13.5	-0.3

Withholding: History

\$millions, NSA

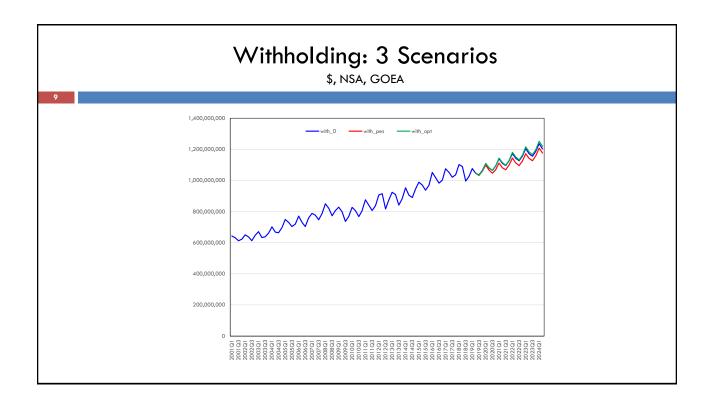
FY	WITH	% chg
FY10	3,138.3	-2.1
FY11	3,289.0	4.8
FY12	3,464.9	5.3
FY13	3,523.6	1.7
FY14	3,582.9	1.7
FY15	3,793.7	5.9
FY16	3,974.7	4.8
FY17	4,113.4	3.5
FY18	4,248.4	3.3
FY19	4,144.7	-2.4

FY	IIT	% chg
FY10	3,154.5	-4.9
FY11	3,417.8	8.3
FY12	3,512.1	2.8
FY13	3,723.0	6.0
FY14	3,749.3	0.7
FY15	4,069.5	8.5
FY16	4,282.1	5.2
FY17	4,393.9	2.6
FY18	4,603.6	4.8
FY19	4,544.7	-1.3

Withholding: Methodology

Withholding receipts = f(Kentucky Wages and Salaries)

- OLS
- Seasonally Adjusted
- · First-differenced to achieve stationarity
- Autocorrelation detected and corrected



Withholding: Forecast

\$millions, NSA, GOEA

	CON	% chg	OPT	% chg	PES	% chg
FY16	3,974.7	4.8	3,974.7	4.8	3,974.7	4.8
FY17	4,113.4	3.5	4,113.4	3.5	4,113.4	3.5
FY18	4,248.4	3.3	4,248.4	3.3	4,248.4	3.3
FY19	4,144.7	-2.4	4,144.7	-2.4	4,144.7	-2.4
FY20	4,286.1	3.4	4,282.3	3.3	4,258.1	2.7
FY21	4,409.9	2.9	4,417.0	3.1	4,311.4	1.3
FY22	4,536.6	2.9	4,557.7	3.2	4,422.8	2.6
FY23	4,659.8	2.7	4,696.1	3.0	4,534.8	2.5
FY24	4,782.1	2.6	4,833.6	2.9	4,667.9	2.9

Declarations: Methodology

11

Declarations receipts = f(Industrial Production Index: all Manufacturing, KY Personal Income, Prime Rate at Commercial Banks, DECLDUMMY)

- OLS
- · Seasonally Adjusted
- · First differenced to achieve stationarity
- · No autocorrelation detected

Declarations: Forecast

\$millions, NSA, GOEA

	DECL	% chg
FY10	363.4	-19.9
FY11	448.6	23.4
FY12	385.5	-14.1
FY13	469.9	21.9
FY14	439.0	-6.6
FY15	506.0	15.2
FY16	557.8	10.2
FY17	542.1	-2.8
FY18	617.1	13.8
FY19	540.1	-12.5
FY20	555.1	2.8
FY21	583.6	5.1
FY22	607.4	4.1
FY23	626.0	3.1
FY24	645.6	3.1

Net Returns & Fiduciary: Forecast

\$millions, NSA, GOEA

	NETR	% chg	FID	% chg
FY16	-258.4	7.0	8.0	-29.2
FY17	-263.4	1.9	1.8	-77.9
FY18	-265.6	8.0	3.7	107.3
FY19	-143.1	-46.1	3.0	-19.1
FY20	-179.0	25.1	2.8	-5.6
FY21	-165.9	-7.3	3.1	12.3
FY22	-147.7	-11.0	3.0	-5.5
FY23	-164.2	11.2	3.0	0.0
FY24	-159.3	-3.0	3.0	1.9

IIT Control

\$millions, NSA, GOEA

П	4	
ч		
-		-

	FY18	% chg	FY19	% chg						
WITH	4,248.4	3.3	4,144.7	-2.4						
DECL	617.1	13.8	540.1	-12.5						
NETR	-265.6	0.8	-143.1	-46.1						
FID	3.7	107.3	3.0	-19.1						
IIT	4,603.6	4.8	4,544.7	-1.3						
	FY20	% chg	FY21	% chg	FY22	% chg	FY23	% chg	FY24	% chg
WITH	4,286.1	3.4	4,409.9	2.9	4,536.6	2.9	4,659.8	2.7	4,782.1	2.6
DECL	555.1	2.8	583.6	5.1	607.4	4.1	626.0	3.1	645.6	3.1
NETR	-179.0	25.1	-165.9	-7.3	-147.7	-11.0	-164.2	11.2	-159.3	-3.0
FID	2.8	-5.6	3.1	12.3	3.0	-5.5	3.0	0.0	3.0	1.9
IIT	4,664.9	2.6	4,830.7	3.6	4,999.3	3.5	5,124.6	2.5	5,271.5	2.9

IIT Pessimistic

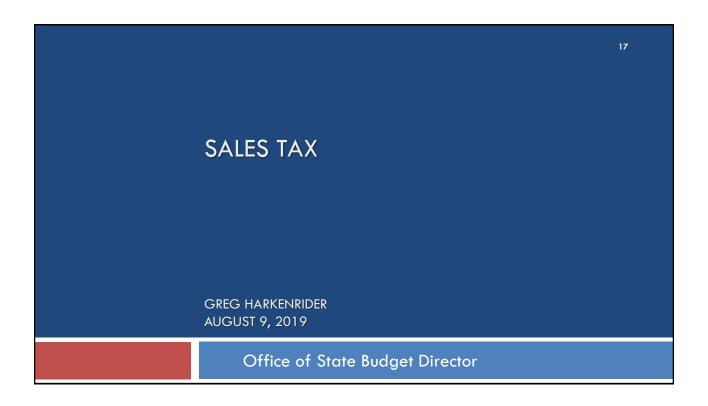
\$millions, NSA, GOEA

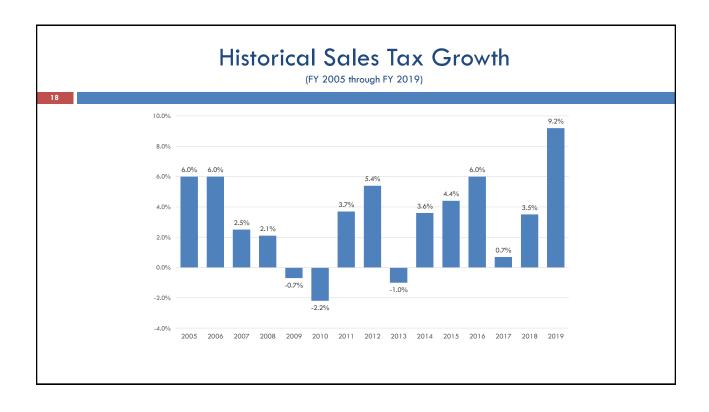
	FY18	% chg	FY19	% chg						
WITH	4,248.4	3.3	4,144.7	-2.4						
DECL	617.1	13.8	540.1	-12.5						
NETR	-265.6	0.8	-143.1	-46.1						
FID	3.7	107.3	3.0	-19.1						
IIT	4,603.6	4.8	4,544.7	-1.3						
	FY20	% chg	FY21	% chg	FY22	% chg	FY23	% chg	FY24	% chg
WITH	4,258.1	2.7	4,311.4	1.3	4,422.8	2.6	4,534.8	2.5	4,667.9	2.9
DECL	555.1	2.8	583.6	5.1	607.4	4.1	626.0	3.1	645.6	3.1
NETR	-179.0	25.1	-165.9	-7.3	-147.7	-11.0	-164.2	11.2	-159.3	-3.0
FID	2.8	-5.6	3.1	12.3	3.0	-5.5	3.0	0.0	3.0	1.9
IIT	4,636.9	2.0	4,732.2	2.1	4,885.5	3.2	4,999.6	2.3	5,157.3	3.2

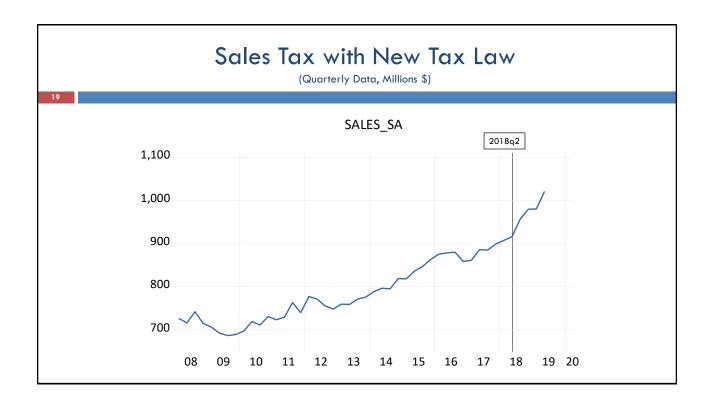
IIT Optimistic

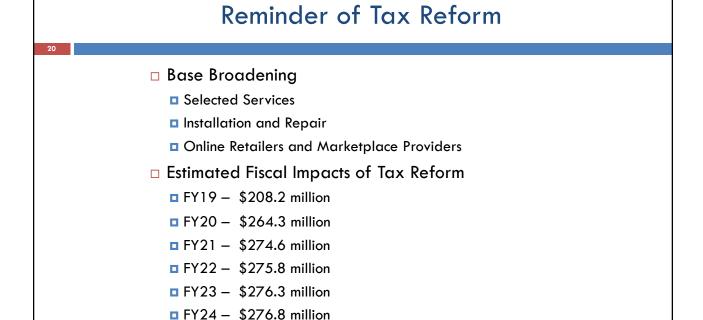
\$millions, NSA, GOEA

	FY18	% chg	FY19	% chg						
WITH	4,248.4	3.3	4,144.7	-2.4						
DECL	617.1	13.8	540.1	-12.5						
NETR	-265.6	0.8	-143.1	-46.1						
FID	3.7	107.3	3.0	-19.1						
IIT	4,603.6	4.8	4,544.7	-1.3						
	FY20	% chg	FY21	% chg	FY22	% chg	FY23	% chg	FY24	% chg
WITH	4,282.3	3.3	4,417.0	3.1	4,557.7	3.2	4,696.1	3.0	4,833.6	2.9
DECL	555.1	2.8	583.6	5.1	607.4	4.1	626.0	3.1	645.6	3.1
NETR	-179.0	25.1	-165.9	-7.3	-147.7	-11.0	-164.2	11.2	-159.3	-3.0
FID	2.8	-5.6	3.1	12.3	3.0	-5.5	3.0	0.0	3.0	1.9
IIT	4,661.1	2.6	4,837.9	3.8	5,020.4	3.8	5,160.9	2.8	5,323.0	3.1









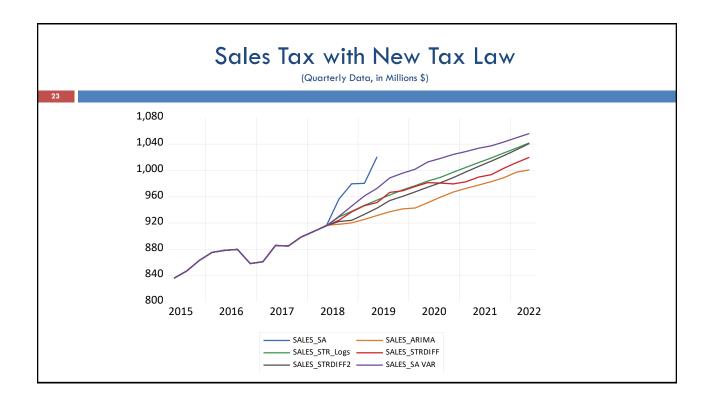
Modeling Strategy

21

- Dependent Variable with non-static policy regimes
- □ Too early for dummy variables
- □ Too early for switching models
- Approach Taken:
 - Create policy-neutral sales tax variable for projections
 - Withhold the four quarters of "corrupt" data
 - Forecast with in-sample estimation (Stop estimation at CY 2018q2)
 - Project the policy-neutral series (2018q3 through 2024q2)
 - Add back the policy impacts (FY19 through FY24)

Justification for Modeling Approach

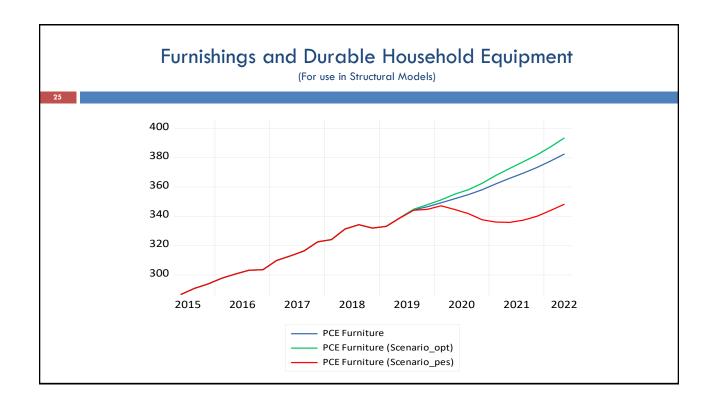
- □ FY18 sales tax estimate was accurate
 - Estimated FY18 -- \$3,611.9
 - Actual FY18 -- \$3,605.7
 - Model is working in a policy-neutral world
- □ FY19 tax fiscal impacts close to estimated
 - Estimated FY19 fiscal impact -- \$208.2 million
 - Engineered fiscal impact --\$214.9 million (5.3% of the 9.2%)
- □ Engineered fiscal impact
 - Actual FY2019 collections, minus
 - Blended control in-sample forecast for FY19



Types of Modeling for the Sales Tax

24

- Quarterly sales tax data have several correctible sources of variation
 - Seasonality Census X12
 - Trend Differencing
- □ Types of final models (2001q1 2018q2)
 - VAR with Cointegration (Sales and Wages & Salaries)
 - ARIMA (Control Only)
 - Structural models
 - Logs
 - Differences → Sales_sa = f(cdfhe,kyws,c)



Control, Optimistic, Pessimistic Forecast

	Control	Optimistic	Pessimistic
FY20	\$4,136.3 (5.0%)	\$4,167.4 (5.8%)	\$4,078.5 (3.6%)
FY21	\$4,239.3	\$4,278.9	\$4,104.1
	(2.5%)	(2.7%)	(0.6%)
FY22	\$4,349.7	\$4,397.0	\$4,172.3
	(2.6%)	(2.8%)	(1.7%)
FY23	\$4,429.6	\$4,500.9	\$4,249.6
	(1.8%)	(2.4%)	(1.9%)
FY24	\$4,532.3	\$4,619.1	\$4,346.9
	(2.3%)	(2.6%)	(2.3%)

Control, Optimistic, Pessimistic Forecast

(Variations from Control Forecast)

27

	Control	Optimistic	Pessimistic
FY20	\$4,136.3	+\$31.1	-\$57.8
FY21	\$4,239.3	+\$39.6	-\$135.2
FY22	\$4,349.7	+\$47.3	-\$177.4
FY23	\$4,429.6	+\$71.3	-\$180.0
FY24	\$4,532.3	+\$86.8	-\$185.4

CORPORATION TAX FORECASTS
(CONSENSUS FORECASTING GROUP)

GENE ZAPARANICK-BROWN

AUGUST 9, 2019

Office of State Budget Director

Overview

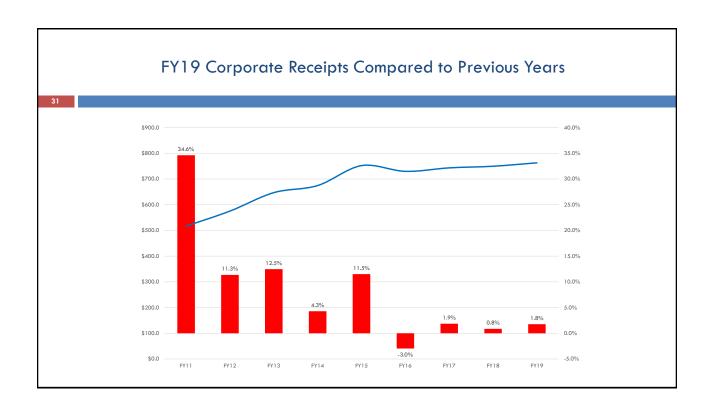
29

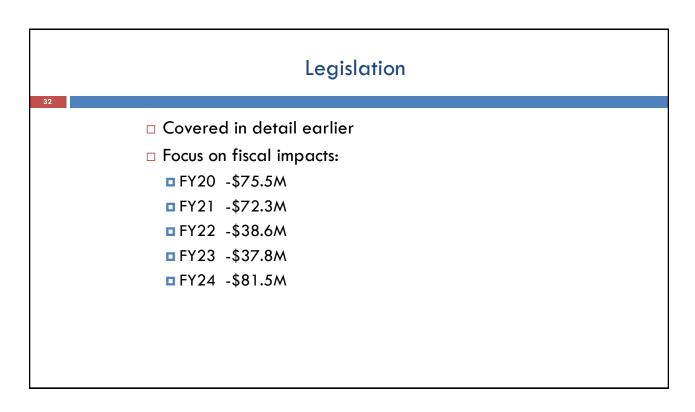
- □ Actual versus estimated corporate tax revenues
 - □ FY18
 - □ FY19
- □ FY19 corporate tax receipts compared to previous years
- Legislation
- □ Five-Year Combined Corporate forecast
 - Control, Optimistic and Pessimistic scenarios

Corporate Taxes— Actual v. Estimate

Millions \$

_		FY:	18		FY19				
	Actual	Estimate	Diff (\$)	Diff (%)	Actual	Estimate	Diff (\$)	Diff (%)	
Corporation Income	511.4	558.6	(47.2)	(9.2)	556.0	573.0	(17.0)	(3.1)	
LLET	238.1	186.2	51.9	21.8	206.7	200.2	6.5	3.1	
Total	749.5	744.8	4.7	0.6	762.7	773.2	(10.5)	(1.4)	





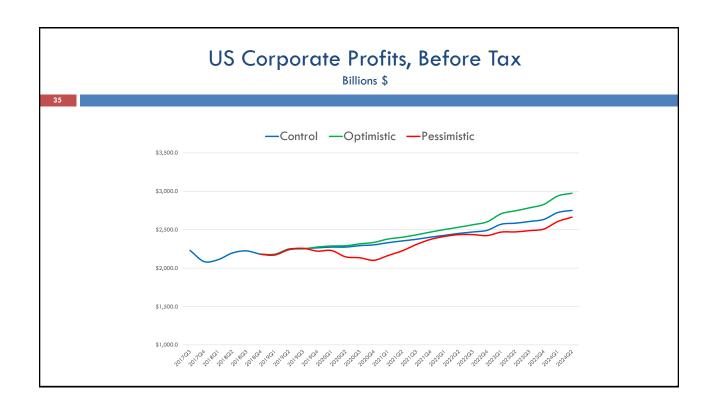
Forecasting Procedure

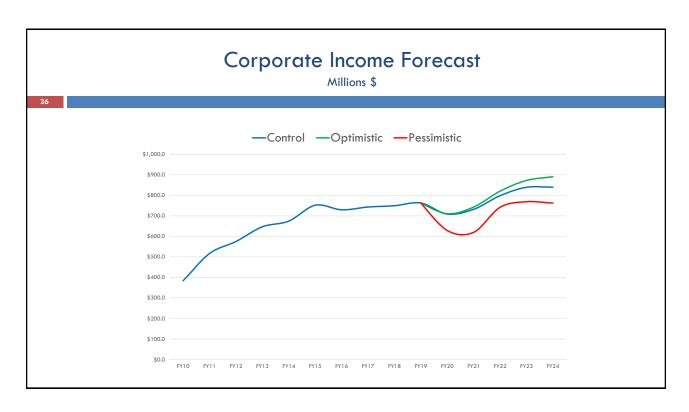
33

- Corporation income tax and LLET are forecasted as a single series
- □ There is an intermingling of receipts between the two accounts
 - Estimated payments submitted on same form
- □ The two data series are becoming less "clean"
- □ DOR no longer journal vouchering
- □ Have had success forecasting the past two years

Modeling

- □ Forecast a combined series of corporation income tax and LLET
- □ Estimate regression with data beginning 2010Q3
- □ LLET collections started in FY07 but took time to ramp up to full implementation
- □ Create a policy-neutral series FY19 tax law
- □ Use US before tax book profits as a regressor





Corporate Income Forecast

Millions \$

	FY20		FY2	.1	FY2	FY22 FY23		FY2	FY24	
	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg
Control	708.8	-7.1	731.8	3.2	798.4	9.1	839.3	5.1	839.8	0.1
Optimistic	710.3	-6.9	742.8	4.6	820.5	10.5	872.7	6.4	890.8	2.1
Pessimistic	628.5	-17.6	619.6	-1.4	741.8	19.7	768.9	3.7	762.4	-0.8

38 PROPERTY TAX FORECAST (CONSENSUS FORECASTING GROUP) GENE ZAPARANICK-BROWN AUGUST 9, 2019 Office of State Budget Director

Overview

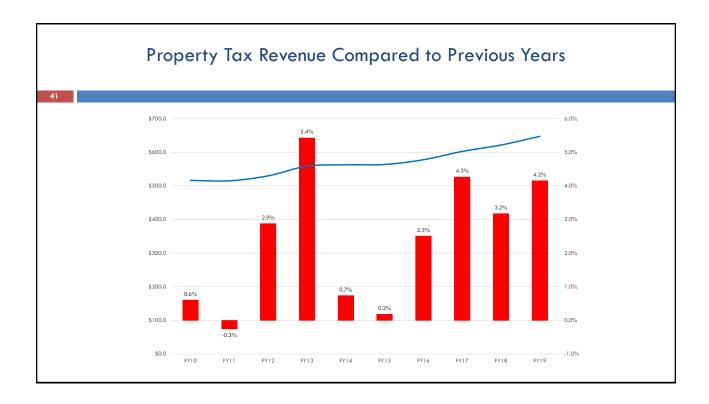
39

- □ Actual versus estimated property tax revenues
 - □ FY18
 - □ FY19
- □ FY19 property tax receipts compared to previous years
- Legislation
- □ Five-Year property tax forecast
 - Control only

Property Tax- Actual v. Estimate

(\$ millions)

		FY:	18			FY:	19	
	Actual	Estimate	Diff (\$)	Diff (%)	Actual	Estimate	Diff (\$)	Diff (%)
REAL	283.4	281.2	2.2	0.8%	293.7	290.2	3.5	1.2%
TANGIBLE	113.5	107.0	6.5	6.1%	109.3	107.3	2.0	1.9%
MOTOR VEHICLE	137	136.1	0.9	0.7%	144.2	138.8	5.4	3.9%
BLDG AND LOAN	2.2	2.4	-0.2	-8.3%	1.7	2.5	-0.8	-32.0%
DELINQUENT	6.3	7.5	-1.2	-16.0%	6.5	7.5	-1.0	-13.3%
OM TANGIBLE	9.9	10.0	-0.1	-1.0%	13.6	10	3.6	36.0%
APP VEHICLE	3.8	4.0	-0.2	-5.0%	5.0	4.1	0.9	22.0%
PUBLIC SERVICE	63.3	58.0	5.3	9.1%	71.0	58.5	12.5	21.4%
OTHER	1.8	1.7	0.1	5.9%	2.0	1.8	0.2	11.1%
TOTAL PROPERTY	621.2	607.9	13.3	2.2%	647.0	620.7	26.3	4.2%





- □ Tax rate for qualified heavy equipment was lowered from 45 cents to 5 cents per \$100 of assessed value.
 - Construction, mining, forestry equipment
 - Effective for property assessed on or after January 1, 2020
 - Revenue reduction of \$1M annually
- Building and Loan Associations tax repealed effective January 1, 2021
 - Were taxed at \$1 per \$1,000 of capital stock
 - Going forward, taxed as corporations

Property Tax Forecast

FY20 - FY24

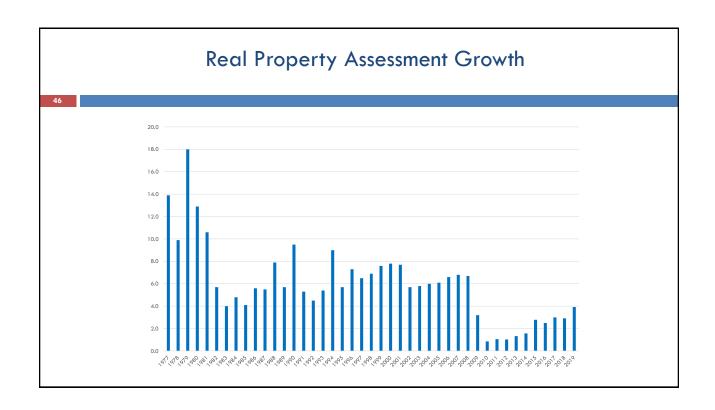
А	•	
	•	

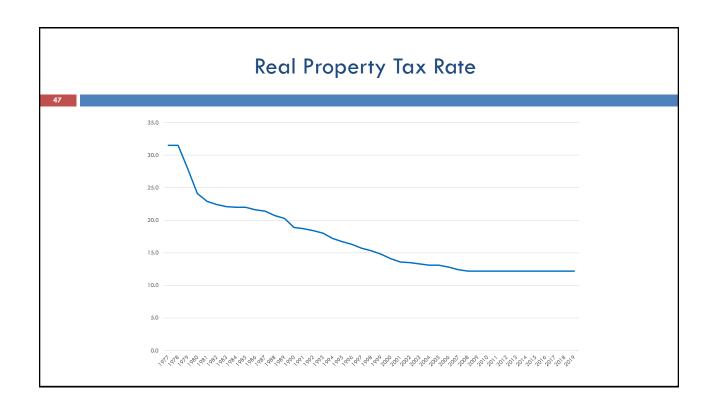
	FY	20	FY	21	FY	22	FY	23	FY	24
	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg
REAL	304.9	3.8	316.5	3.8	328.2	3.7	340.7	3.8	353.3	3.7
TANGIBLE	111.5	2.0	109.8	(1.5)	114.1	3.9	112.6	(1.3)	116.8	3.7
MOTOR VEHICLE	148.6	3.1	152.5	2.6	156.3	2.5	162.6	4.0	166.1	2.2
BLDG AND LOAN	2.0	17.6	0.0	(100.0)	0.0		0.0		0.0	
DELINQUENT	6.6	1.6	6.5	(1.5)	6.7	3.1	6.6	(1.5)	7.0	6.1
OM TANGIBLE	10.0	(26.5)	9.0	(-10.0)	9.5	5.6	10.0	5.3	10.0	0.0
APP VEHICLE	4.5	(10.0)	5.3	17.8	5.0	(5.7)	5.2	4.0	5.0	(3.8)
PUBLIC SERVICE	67.0	(5.6)	70.0	4.5	73.0	4.3	69.0	(5.5)	69.0	0.0
OTHER	2.0	(2.0)	2.1	5.0	2.2	4.8	2.2	0.0	2.3	4.5
TOTAL PROPERTY	657.1	1.6	671.7	2.2	695.0	3.5	708.8	2.0	729.5	2.9

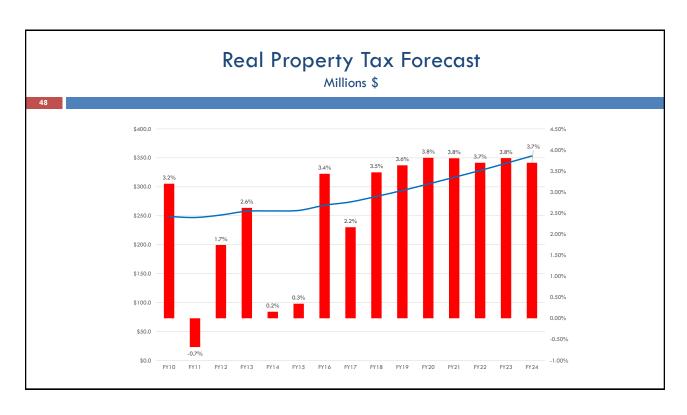
Real Property

- □ Assessed by PVA at 100% of fair cash value as of January 1
 - Residential, Commercial and Farm
 - Homestead exemptions for elderly and disabled adjusted for inflation
 - \$39,300 for Tax Years 2019 and 2020
- □ HB 44 (1979) limits revenue growth to 4 percent annually
 - □ If assessment growth exceeds 4%, state tax rate lowered
 - 31.5 cents per \$100 to 12.2 cents
- Majority of collections received November January

Typical Real Property Collection Schedule October Bill paid with a 2% discount November – December Bill is paid at its face amount January A 5% penalty is added February – April A 21% penalty is added

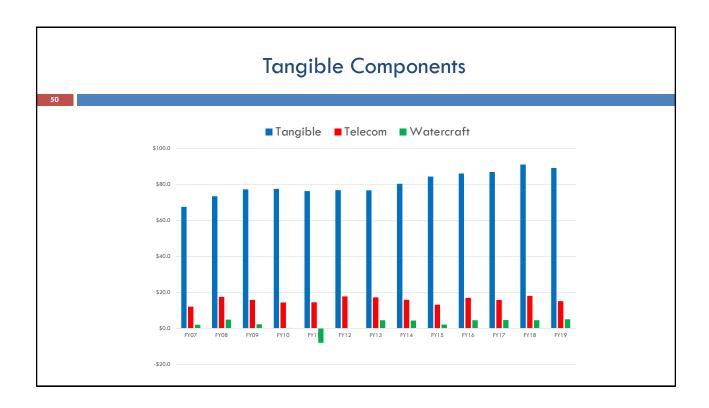


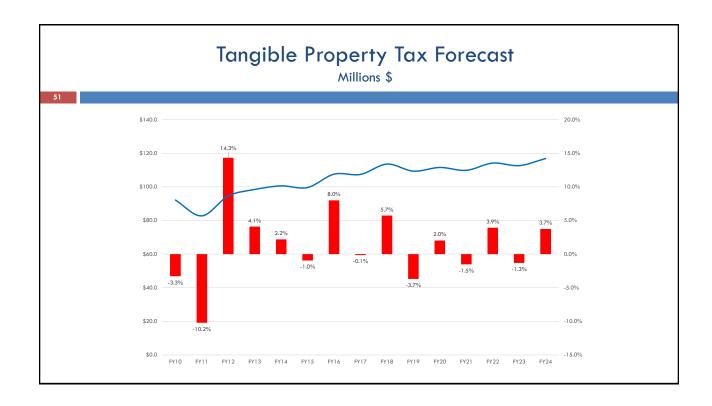




Tangible Property

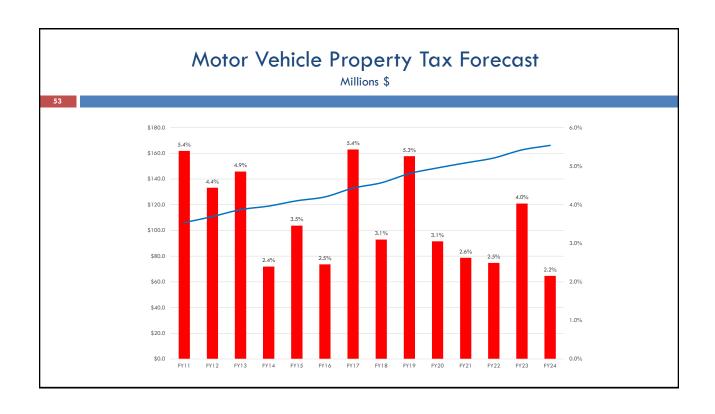
- □ Self assessed
- □ Rates range from 0.1 cents to 45 cents (per \$100 of assessed value)
 - Tangible
 - Business furniture & fixtures, construction equipment, computer equipment, manufacturing machinery, inventory
 - Telecom property
 - Commercial watercraft

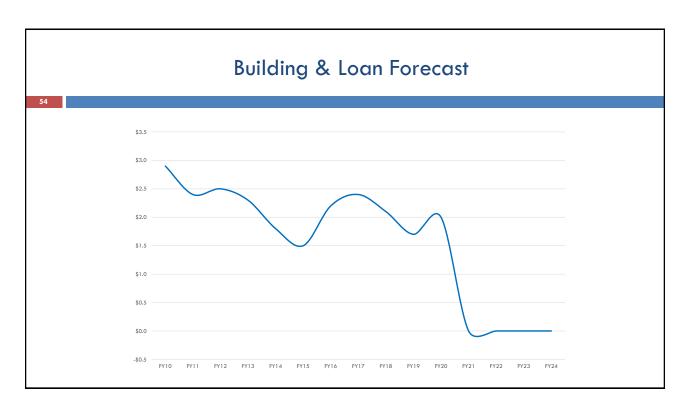


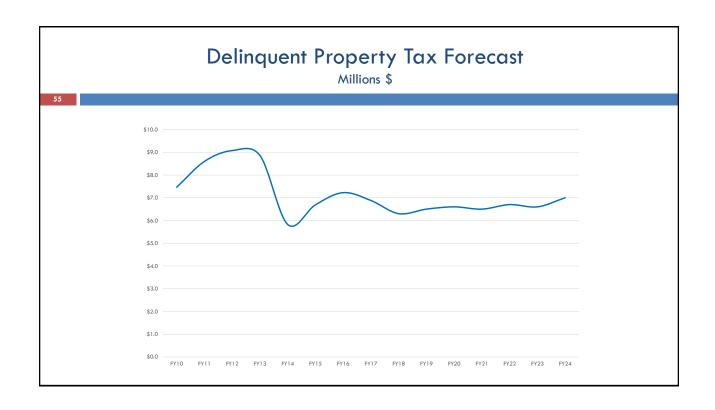


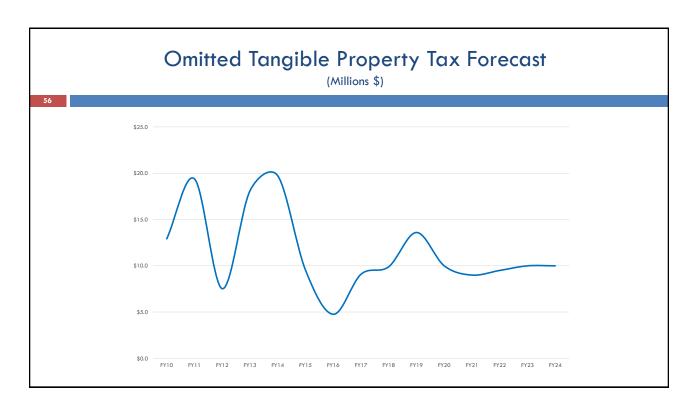
Motor Vehicle Property Tax

- □ Taxed at 45 cents per \$100 of assessed value
- □ Historic vehicles taxed at 25 cents
 - 25-years old but not used for general transportation
- □ Paid in your birth month
 - Regular collection stream with the exception of April
- □ Personal watercraft
 - Personal boats, fishing boats, house boats, jet skis, sail boats



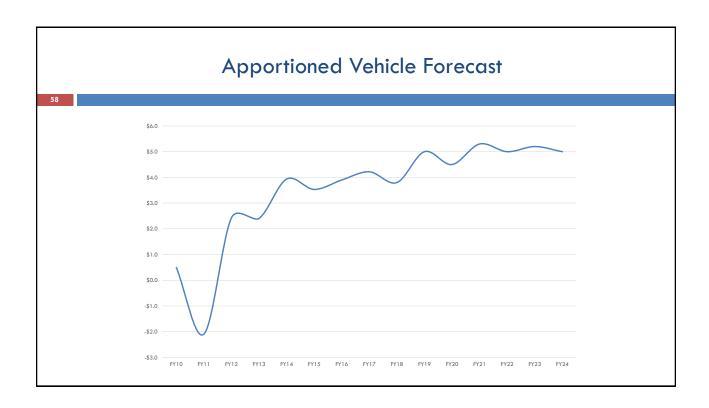






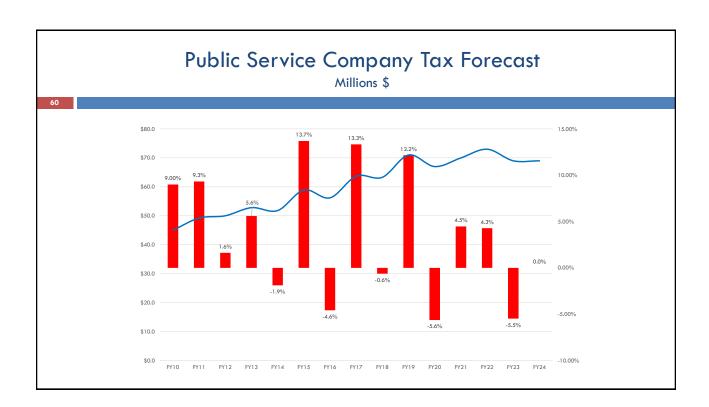
Apportioned Vehicle

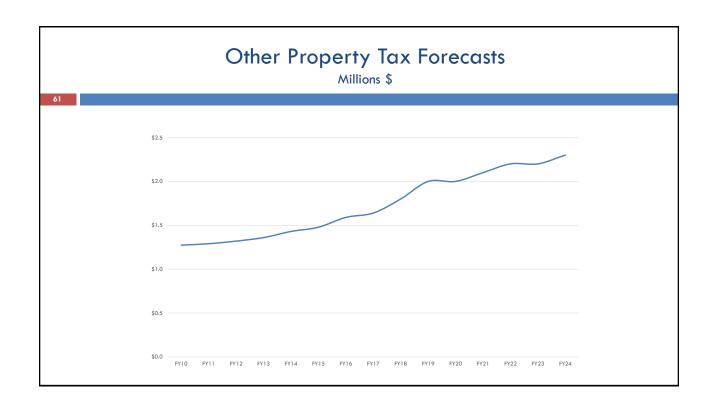
- □ Fee on Kentucky-based interstate motor carriers (trucks and buses) operating partly within and partly outside Kentucky transporting people or property
- □ Based on miles driven in Kentucky relative to total miles driven
- Rate is a weighted average of commercial and industrial tangible personal property tax rate
- □ Current rate is 63.95 cents per \$100 of assessed value

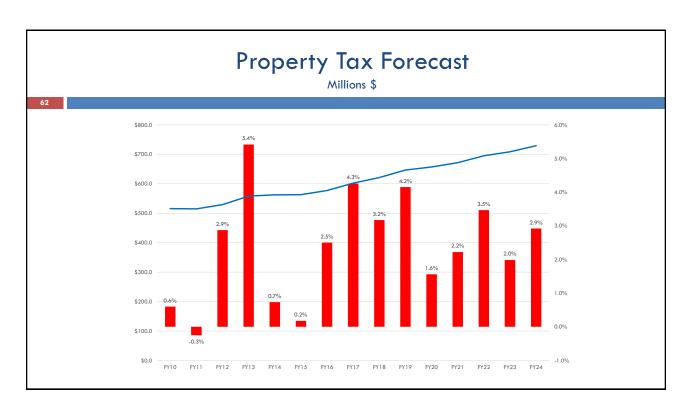


Public Service Company Tax

- Considered to be businesses providing services to the public under regulated conditions imposed by a governmental unit
 - Gas, water and electric utilities, railroads, electric co-ops, etc.
- Unit valuation method
- □ Fair cash value of the operating property (real estate, tangible and franchise) as a unit
- □ Apportion the unit value to Kentucky
- □ Taxed the same as similarly categorized property
 - Franchise value taxed at 45 cents







Property Tax Forecast

	FY	20	FY	21	FY	22	FY	23	FY	24
	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg
REAL	304.9	3.8	316.5		328.2		340.7	3.8	353.3	3.7
TANGIBLE	111.5	2.0	109.8	(1.5)	114.1	3.9	112.6	(1.3)	116.8	3.7
MOTOR VEHICLE	148.6	3.1	152.5	` ,	156.3	2.5	162.6	4.0	166.1	2.2
BLDG AND LOAN	2.0	17.6		(100.0)	0.0		0.0		0.0	
DELINQUENT	6.6	1.6	6.5	, ,	6.7	3.1	6.6	(1.5)	7.0	6.1
OM TANGIBLE	10.0	(26.5)		(-10.0)	9.5	5.6	10.0	5.3	10.0	0.0
APP VEHICLE	4.5	(10.0)	5.3	` '	5.0		5.2	4.0	5.0	(3.8)
PUBLIC SERVICE	67.0	(5.6)	70.0		73.0	, ,	69.0	(5.5)	69.0	0.0
OTHER	2.0	(2.0)	2.1		2.2		2.2	0.0	2.3	4.5
TOTAL PROPERTY	657.1	1.6	671.7		695.0		708.8	2.0	729.5	2.9

64

COAL SEVERANCE TAX

THOMAS JONES, PH.D.

AUGUST 9, 2019

Office of State Budget Director

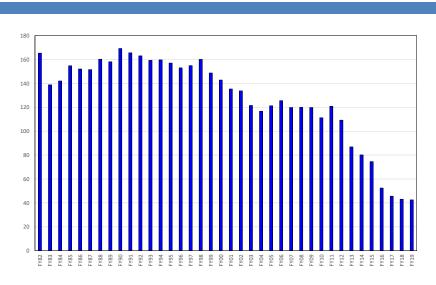
Coal Severance Tax

65

- KRS 143.020, enacted July 1, 1978
- □ 4.5% tax on gross value of severed coal
- □ KY is the fifth largest producer of coal in the US
- □ In FY19, KY severed 42.5 million tons of coal
- □ Eastern KY coal is part of the Central Appalachian coal region
- □ Western KY coal is part of the Illinois Basin coal region
- □ Union County, KY was the largest coal producer in KY last quarter



millions, NSA, KY OPV



Coal Spot Market Prices

\$/ton, NSA, EIA

67

DATE	CAP	NAP	IB	PRB	UB
01-04-19	83.90	65.70	38.95	11.90	40.25
06-28-19	61.05	52.20	39.10	12.25	35.75
07-05-19	61.05	52.20	39.10	12.25	35.75
07-12-19	54.55	48.30	39.10	11.95	35.00
07-19-19	65.55	48.30	39.10	12.10	35.00
07-26-19	65.55	48.30	39.10	12.10	35.00

Coal Severance Tax History

\$million, NSA, GOEA

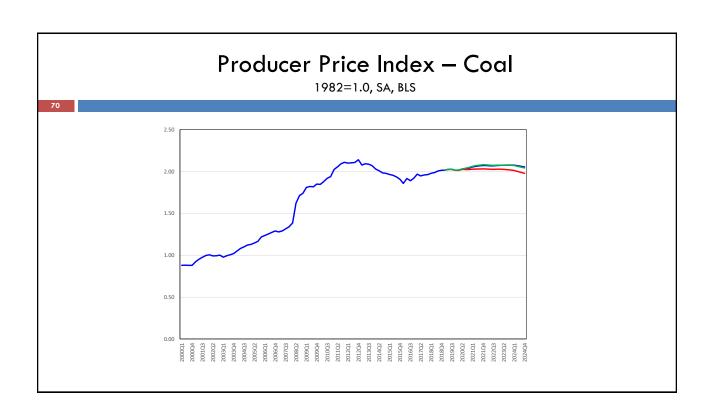
FY	Coal	% chg	F	Y	Coal	% chg
FY00	145.1	-6.0	FY	10	271.9	-7.1
FY01	141.6	-2.5	FY	11	295.8	8.8
FY02	160.2	13.1	FY	12	298.3	0.8
FY03	141.7	-11.5	FY	13	230.5	-22.7
FY04	147.5	4.1	FY	14	197.5	-14.3
FY05	184.4	25.0	FY	15	180.3	-8.7
FY06	224.5	21.7	FY	16	120.6	-33.1
FY07	222.0	-1.1	FY	17	100.5	-16.7
FY08	233.0	5.0	FY	18	89.6	-10.8
FY09	292.6	25.6	FY	19	92.9	3.6

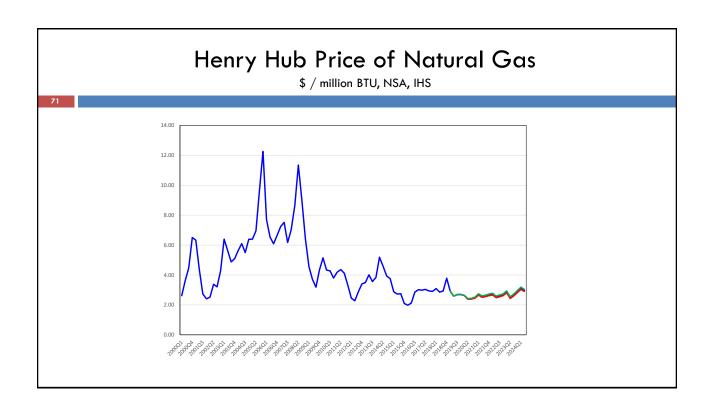
Coal Methodology

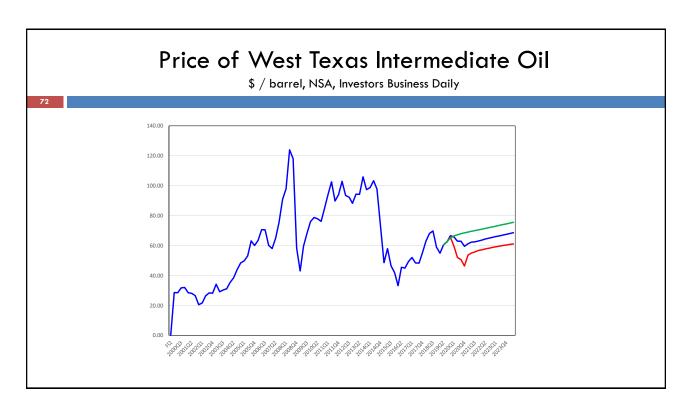
69

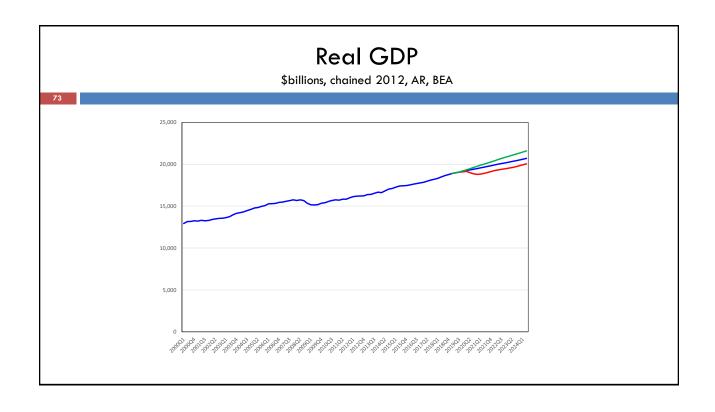
KY Coal Receipts = $f(Producer\ Price\ Index\ -\ Coal,\ Henry\ Hub\ Price\ of\ Natural\ Gas,\ Price\ of\ West\ Texas\ Intermediate\ Oil,\ Real\ GDP)$

- OLS
- □ Seasonally-Adjusted
- □ First-differenced to attain stationarity
- □ No autocorrelation detected in first-differenced model









Coal Forecasts

\$millions, NSA, GOEA

	CON	% chg	PES	% chg	OPT	% chg
FY18	89.6	-10.8	89.6	-10.8	89.6	-10.8
FY19	92.9	3.6	92.9	3.6	92.9	3.6
FY20	99.8	7.4	99.2	6.8	100.2	7.8
FY21	93.4	-6.5	77.9	-21.4	100.9	0.7
FY22	86.3	-7.5	51.6	-33.8	102.4	1.4
FY23	77.6	-10.1	43.9	-14.9	100.1	-2.2
FY24	67.6	-12.9	30.4	-30.8	96.4	-3.7

CIGARETTE TAX

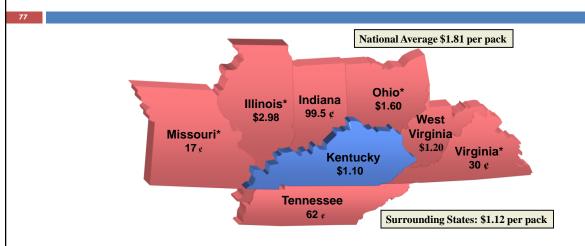
GREG HARKENRIDER
AUGUST 9, 2019

Office of State Budget Director

Cigarette Taxes

- □ Federal Excise Tax (\$1.01per pack)
- □ MSA Obligation (\$0.716 per pack)
- □ State Taxes -- \$353.4 million in FY19
 - Excise Taxes (\$0.03 per pack)
 - \$9.9 million in FY19
 - Surtax (\$1.07 per pack)
 - \$343.5 million in FY19
 - Floor stocks tax when rates change
- $\hfill\Box$ Cigarette tax estimates include State excise and surtax

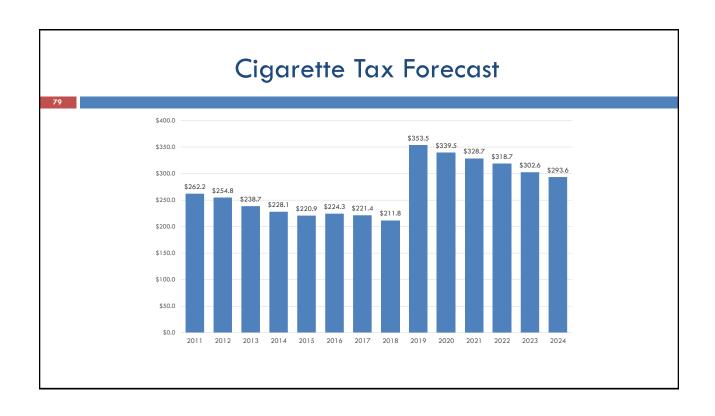


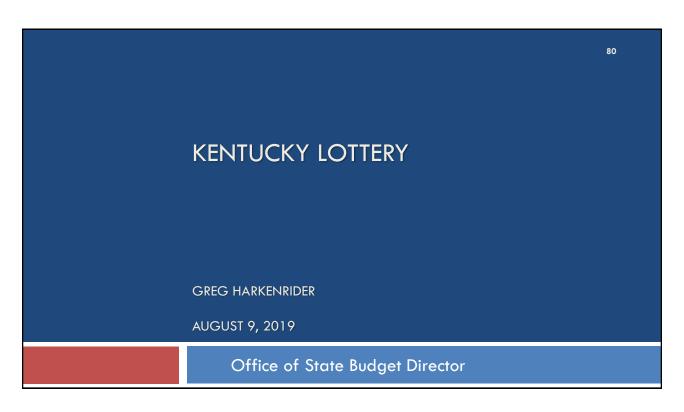


* Does not include sales tax or local excise rates imposed by cities and counties

Cigarette Trends

- □ FY18 total packs 357.1 million
- □ FY19 total packs 321.1 million
- □ Quantity Reduction from FY18 to F19 10.1%
- \square Percentage change in tax -83.3%
- □ Percentage change in pack price 10.0%
- □ U.S. Smoking Trends
 - Cigarettes sold in CY2017 dropped 3.5% when compared to CY2016 (Source: Maxwell Report)
 - In the last 12 months the rate of decline in the U.S. has accelerated to 6.1% (Source: Department of the Treasury Alcohol and Tobacco Tax and Trade Bureau)

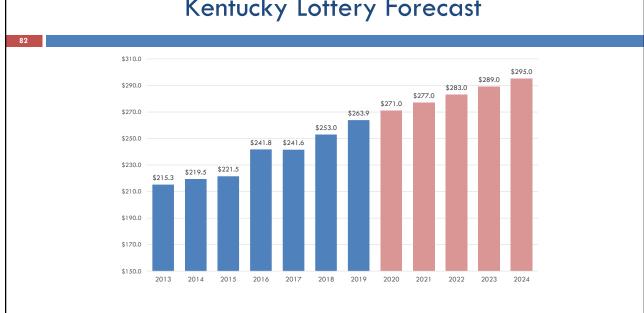


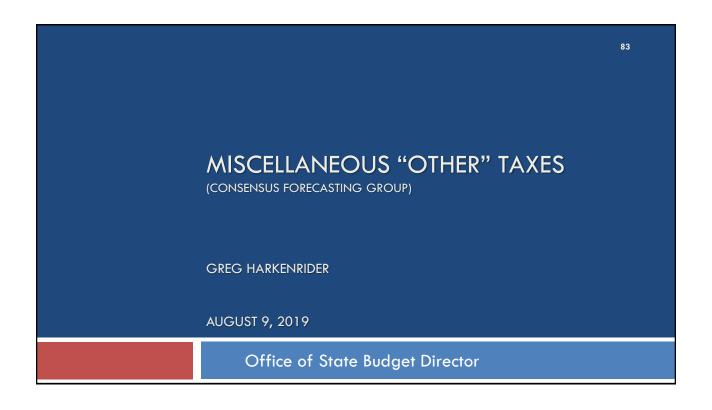


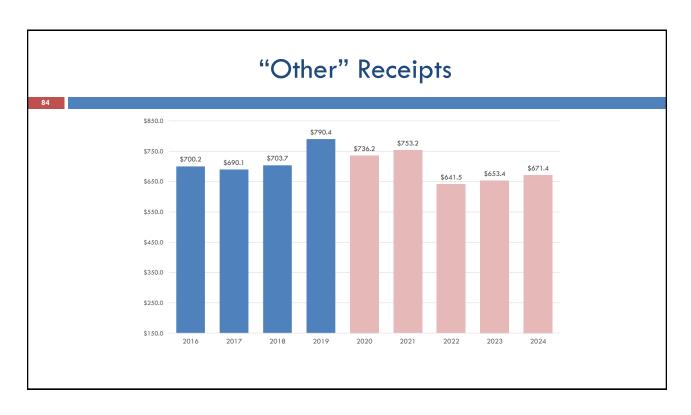
Kentucky Lottery Corporation (KLC) in 2019

- Sales in 2019 represent the ninth consecutive year of record sales for the KLC and the third consecutive year that sales exceeded \$1 billion.
- □ Scratch-off tickets were the largest individual game category -- and grew 9.2% to \$669.2 million. 2019 represents the fifth consecutive year the KLC has achieved record instant ticket sales.
- □ Draw game sales increased 5.7% to a record \$443.1 million.
- □ Mega Millions, which benefited from a \$1.5 billion jackpot run, saw the largest percentage sales increase, rising 58.6% to \$63.1 million.
- Keno generated sales of \$84.3 million and has increased each year since sales began in FY 2014.
- □ iLottery instant play games generated sales of \$17.3 million, exceeding prior year by \$7.0 million or 68.0 percent.

Kentucky Lottery Forecast







2019 Variation in "Other" Taxes

85

- □ Undershot the estimate by \$72.8 million
- Largest Sources of Variation
 - Receipts that Overperformed
 - Abandoned Property \$35.0 million (Sale of Securities)
 - Bank Franchise \$16.5 million
 - Insurance Tax (other than life) \$15.2 million
 - Pari-Mutuel \$7.6 million
 - Cigarette Floor Stocks Tax -- \$4.3 million
 - Receipts that Underperformed
 - Alcohol Taxes (Beer and Wine) Estimates too high across the board
 - Inheritance Tax off \$6.9 million
 - Interest on Investments off \$5.2 million
 - Nonrecurring "Other" taxes from FY19
 - Cigarette floor stocks (\$21.3 million), part of abandoned property (\$30.0 million)

Tax Reform within Other Taxes

- □ Repeal of the Bank Franchise Tax
 - Repeal Date 1-Jan-2021
 - Last year of collections FY21
 - Estimated revenue loss \$120 million
- □ Broadening the base of the Telecommunications tax
 - □ +\$5.5 million in FY20
 - +\$6.0 million going forward
- TVA PILOT State Portion (HB 114, 2018 RS)
 - □ -\$4.0 million in FY20
 - -\$6.0 million FY21 and beyond

GF for the largest "Other Taxes"

(Million of Dollars)

87

Control Scenario	FY19	FY20	FY21	FY22	FY23	FY24
	Actual	Estimate	Estimate	Estimate	Estimate	Estimate
Insurance premium taxes	165.5	1 <i>7</i> 2.1	1 <i>77.</i> 1	182.4	187.8	191 <i>.7</i>
Bank franchise taxes	119.8	120.2	120.6	0	0	0
Beer wholesale taxes	56.2	56.8	57.3	57.9	58.5	59.0
Telecommunication taxes	55.8	60.5	60.2	59.5	58.7	57.9
Inheritance taxes	44.4	45.2	46.8	46.1	46.9	45.9

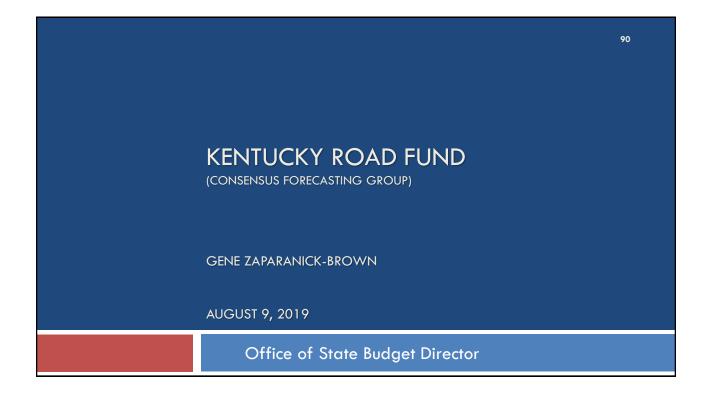
Wholesale alcohol beverage taxes

- The wholesale sales tax rate changes for wine and beer are fully phased in.
- Distilled spirits still at 11.0%

Dates	Tax Rate
Previous July 1, 2015	11.00%
July 1, 2015 to May 31, 2016	10.75%
June 1, 2016 to May 31, 2017	10.50%
June 1, 2017 to May 31, 2018	10.25%
On or after June 1, 2018	10.00%

Other Revenue Projections (\$ millions)

Fiscal Year	(\$ mil)
2020	\$736.2 -6.9%
2021	\$753.2 2.3%
2022	\$641.5 -14.8%
2023	\$653.4 1.9%
2024	\$671.4 2.7%



Overview

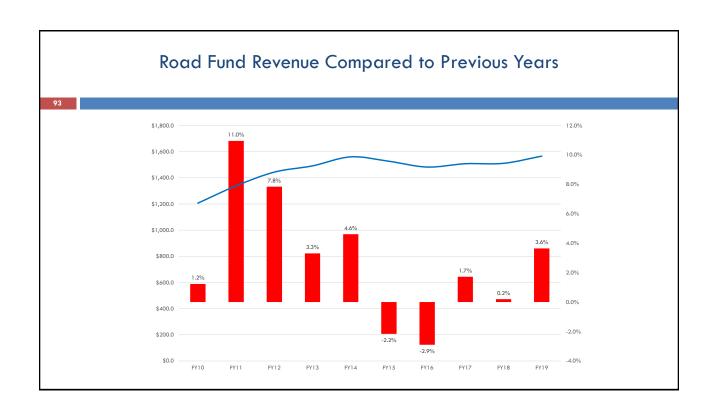
91

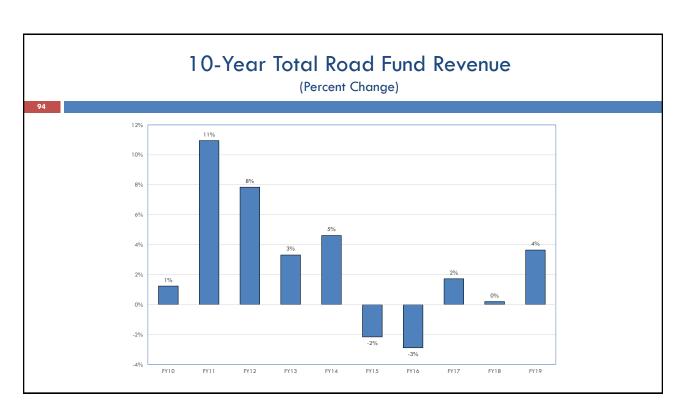
- □ Actual versus estimated Road Fund revenues
 - □ FY18
 - □ FY19
- □ FY19 compared to previous years
- Legislative Changes
- □ Five-Year forecasts
 - Control, Optimistic and Pessimistic scenarios

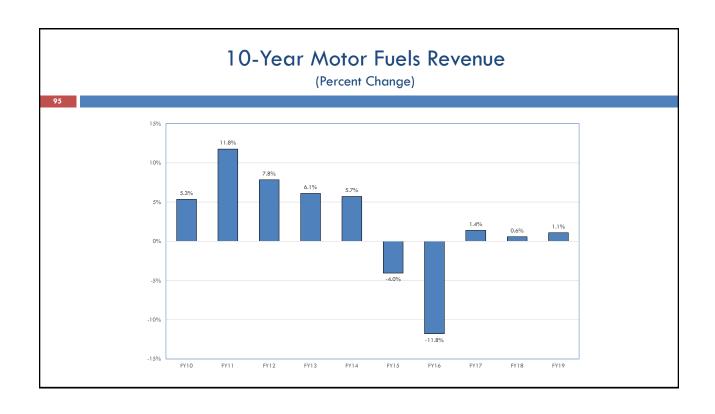
Road Fund- Actual v. Estimate

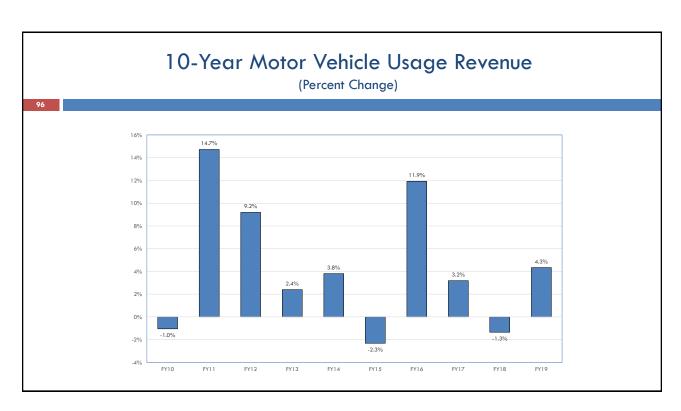
(\$ millions)

		FY1	L8			FY1	L9	
	Actual	Estimate	Diff (\$)	Diff (%)	Actual	Estimate	Diff (\$)	Diff (%)
Motor Fuels	764.9	761.2	3.7	0.5	773.2	759.2	14.0	1.9
Motor Vehicle Usage	493.1	493.9	-0.8	-0.2	514.5	494	20.5	4.2
Motor Vehicle License	112.9	113.4	-0.6	-0.5	120.9	116.4	4.5	3.8
MV Operators	16.8	16.6	0.2	1.2	16.6	16.7	-0.1	-0.4
Weight Distance	81.7	81.4	0.3	0.4	83.7	82.1	1.6	2.0
Investment Income	2.8	2	0.8	41.9	11.9	3.1	8.8	284.6
Other	<u>38.7</u>	<u>34.8</u>	<u>3.9</u>	<u>11.3</u>	45.1	<u>35</u>	<u>10.1</u>	29.0
Total Road Fund	1,511.0	1,503.3	7.7	0.5	1,566.1	1,506.6	59.5	4.0









Legislative Changes

97

- □ Handicap Placards (HB81, 2018 RS)
 - Renewal cycle extended from 2 to 6 years
 - Reinstitutes a \$10 fee for duplicate/replacement placards
 - Stopped charging the fee in 2009, issuances increased from 32,000 to 209,000
 - □ FY19 receipts include 9 months of collections (\$475K)
 - FY20 estimates and beyond include an additional 3 months of revenue (\$160K)

Legislative Changes

98

REAL ID

- Compliance to 2005 REAL ID Act Changes standards, procedures and requirements for driver's licenses and identification cards
- Rollout currently under way in Kentucky
- Increase Motor Vehicle Operators receipts
 - 20% of full implementation total in FY20
 - 85% of full implementation total in FY21
 - 100% for FY22 and beyond

Road Fund Forecast, Control Scenario

FY20 - FY24

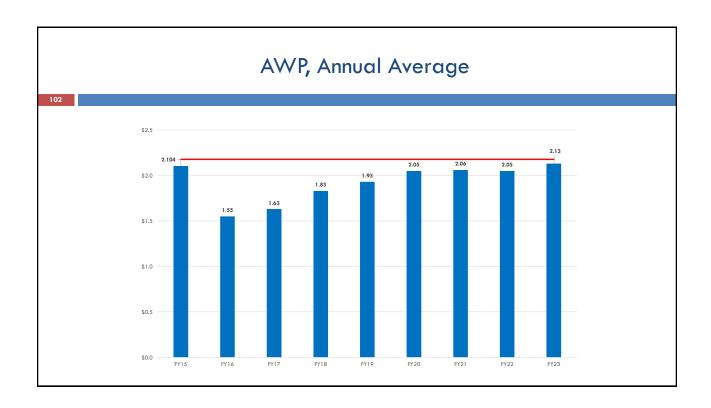
	FY2	0	FY2	1	FY2	2	FY2	3	FY2	4
	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg
Motor Fuels	779.5	0.8	784.5	0.6	786.6	0.3	789.7	0.4	792.8	0.4
MV Usage	509.0	-1.1	517.8	1.7	527.9	2.0	543.4	2.9	552.6	1.7
MV License	118.3	-2.2	122.7	3.7	128.2	4.5	130.4	1.7	132.7	1.8
MV Operators	18.4	10.6	23.9	29.9	25.2	5.4	25.3	0.4	25.4	0.4
Weight Distance	83.9	0.2	84.7	1.0	85.2	0.6	85.8	0.7	86.5	0.8
Investment	10.0	-16.1	8.0	-20.0	6.0	-25.0	5.0	-16.7	4.0	-20.0
Other	<u>40.7</u>	<u>-9.8</u>	<u>44.5</u>	<u>9.3</u>	42.8	<u>-3.8</u>	<u>45.8</u>	<u>7.0</u>	43.8	<u>-4.4</u>
Total Road Fund	1,559.8	-0.4	1,586.1	1.7	1,601.9	1.0	1,625.4	1.5	1,637.8	0.8

Motor Fuels Tax Structure

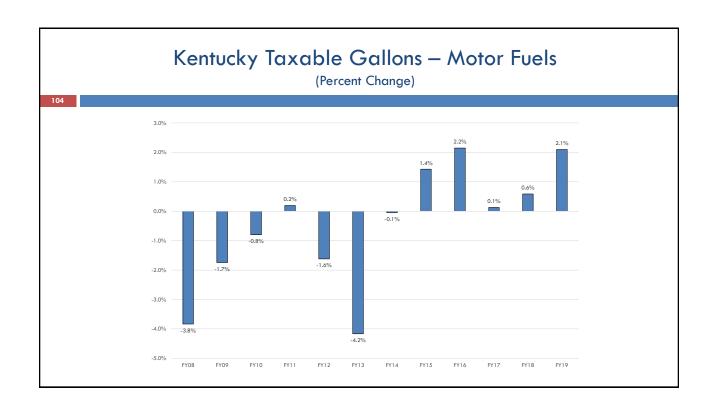
- □ Three components of the tax:
- □ Two Fixed:
 - □ Supplemental User Tax @ 5 cents/gallon for gasoline
 - 2 cents/gallon for special fuels (diesel and LP)
 - □ UST @ 1.4 cents/gallon
- One Variable:
 - 9% of the average wholesale price (AWP)

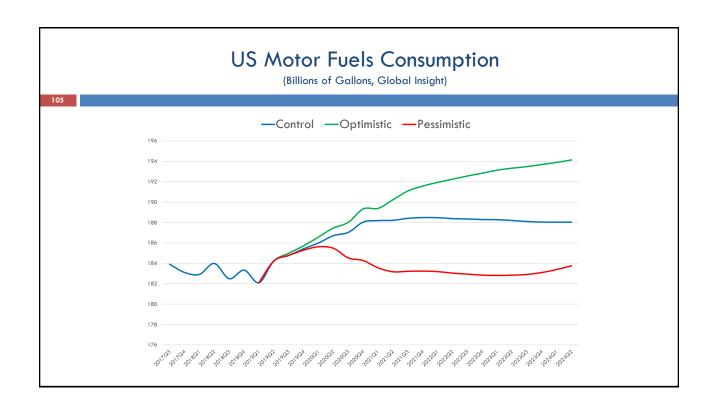
AWP and Model

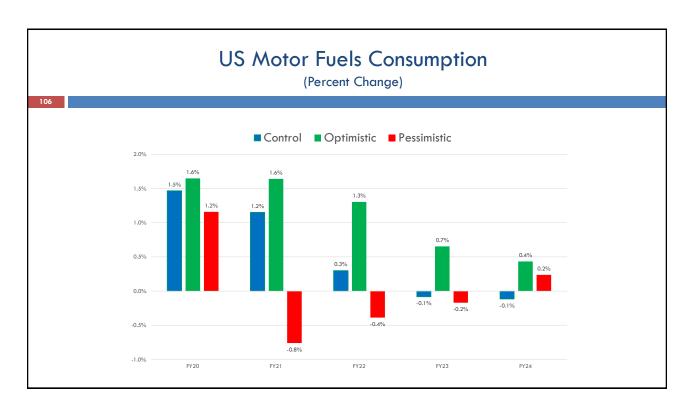
- DOR calculates AWP quarterly
- □ Tax rate is 9 percent of the average AWP in the prior FY
 - The statutory floor is \$2.177 per gallon, or 19.6 cents per gallon
- □ Once set, tax rate in effect for the entire year
- □ Limited to a 10% annual increase or decrease
- □ Motor fuels = f(US Gasoline and Special Fuels consumption)

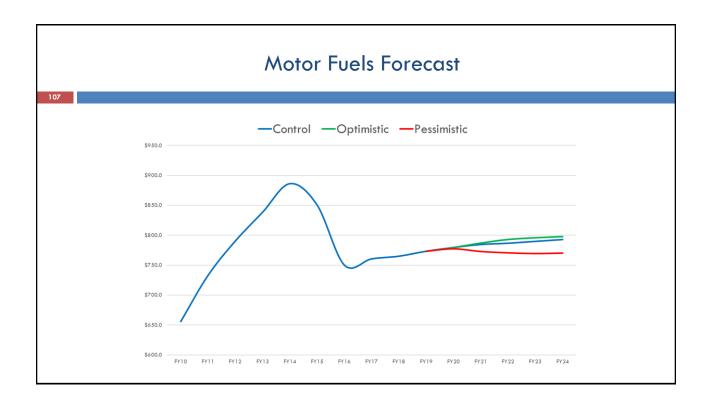


103		Mo	otor Fu	els Tax	Fore	cast	
			Million \$		G	rowth Rate (9	%)
		С	0	Р	С	0	Р
	FY20	779.5	779.7	777.4	0.8	0.8	0.5
	FY21	784.5	787.1	772.9	0.6	0.9	-0.6
	FY22	786.6	793.1	770.6	0.3	0.8	-0.3
	FY23	789.7	796.0	769.4	0.4	0.4	-0.2
	FY24	792.8	797.9	770.2	0.4	0.2	0.1







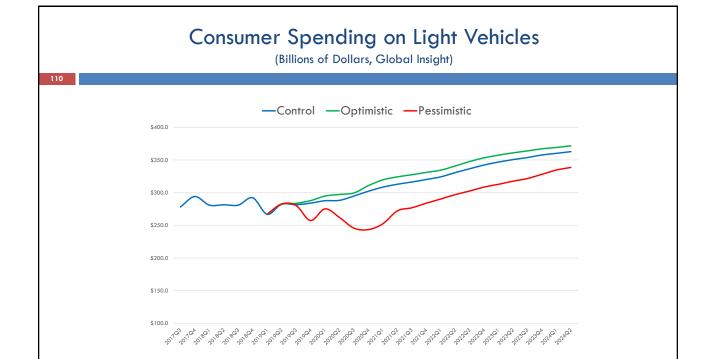


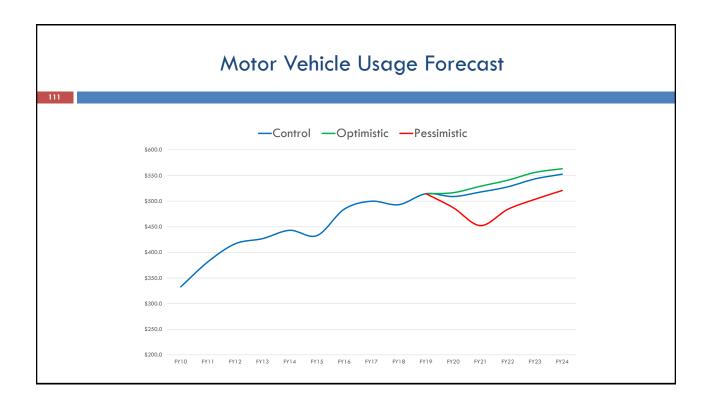


- □ Rate is 6 percent of retail price of the vehicle
- A reduction in retail price is allowed for any vehicle traded-in by the buyer
- □ Trade-in allowance available for new or used vehicle purchases
- MVUT = f(US consumer spending on light vehicles)

Motor	Vehicle	Usage	Tax	Forecast

,		Million \$		G	rowth Rate (9	%)
	С	0	Р	С	0	Р
FY20	509.0	516.5	487.2	-1.1	0.4	-5.3
FY21	517.8	529.1	452.3	1.7	2.4	-7.2
FY22	527.9	540.8	484.0	2.0	2.2	7.0
FY23	543.4	556.0	503.6	2.9	2.8	4.0
FY24	552.6	563.3	520.7	1.7	1.3	3.4

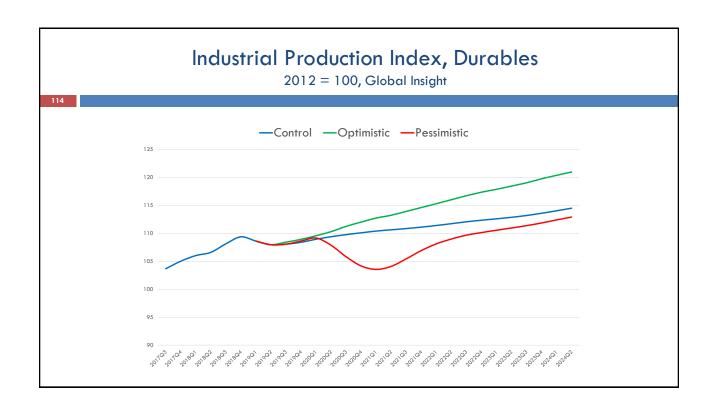


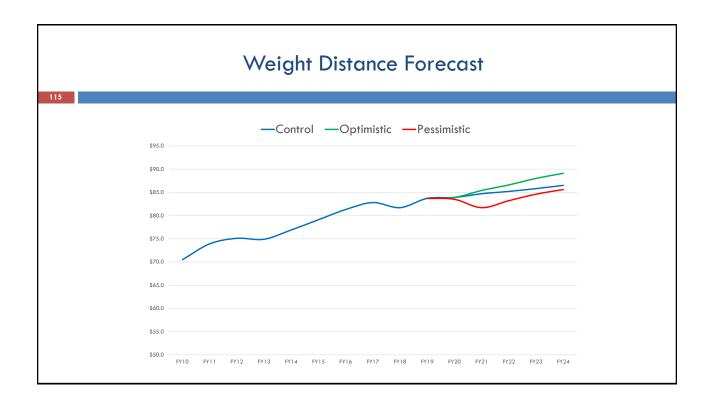




- 2.85 cents/mile for vehicles with licensed weight in excess of 59,999 pounds
- Calculated and paid quarterly
- □ WD = f(Industrial production index, durable goods)

113		Wei	ght Dis	tance	Гах Fo	recast	•
			Million \$		G	rowth Rate (S	%)
		С	0	Р	С	0	Р
	FY20	83.9	83.9	83.5	0.2	0.2	-0.3
	FY21	84.7	85.4	81.7	1.0	1.8	-2.2
	FY22	85.2	86.6	83.2	0.6	1.4	1.8
	FY23	85.8	88.0	84.6	0.7	1.6	1.7
	FY24	86.5	89.1	85.6	0.8	1.3	1.2





Motor Vehicle Operators

- Kentucky is transitioning to the REAL ID for all driver's licenses, permits and personal IDs
- Individuals can opt for the Standard Credential or the Voluntary Travel ID
- □ Can also opt for a 4-year (temporarily) or an 8year license
- □ Small increase from current fees
- ARIMA Model
 - Stable series and difficult to find explanatory variables

REAL ID Costs

CREDENTIAL



VOLUNTARY TRAVEL ID

\$15 3-year

MOTORCYCLE PERMIT

DRIVER'S PERMIT

\$18 3-year

\$15 1-year

\$18 1-year

\$23/\$11.50 8-year/4-year **PERSONAL ID**

\$28/\$14 8-year/4-year

\$43/\$21.50 8-year/4-year **DRIVER'S LICENSE**

\$48/\$24 8-year/4-year

\$43/\$21.50

MOTORCYCLE LICENSE

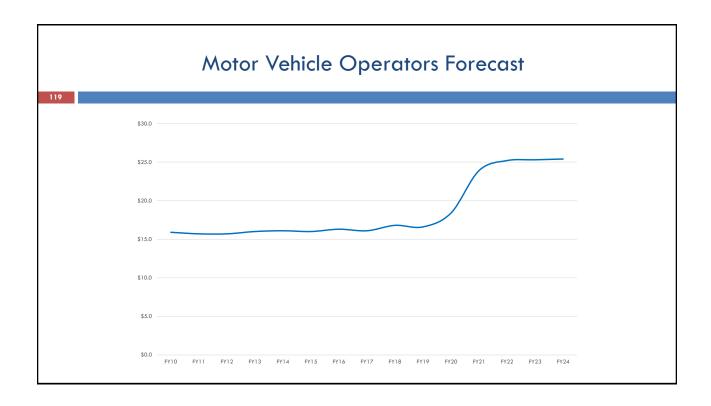
\$48/\$24 8-year/4-year

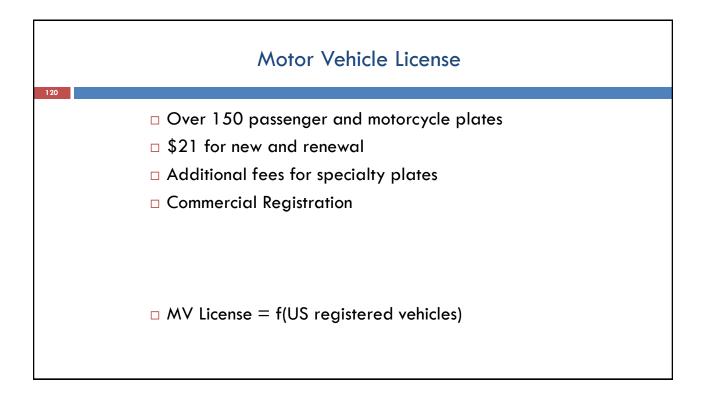
\$53/\$26.50 8-year/4-year DRIVER/MOTORCYCLE **LICENSE COMBO**

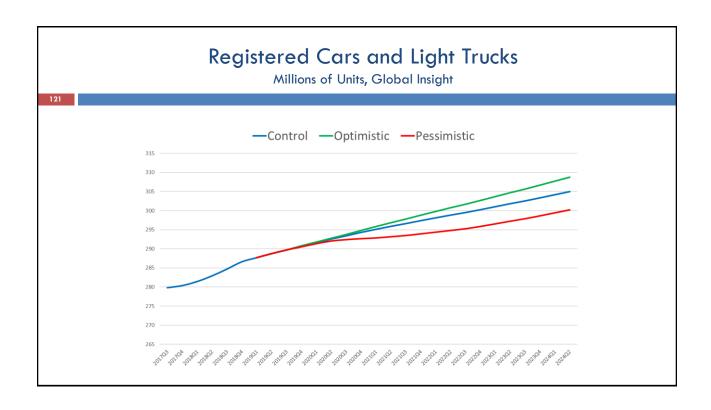
\$58/\$29 8-year/4-year

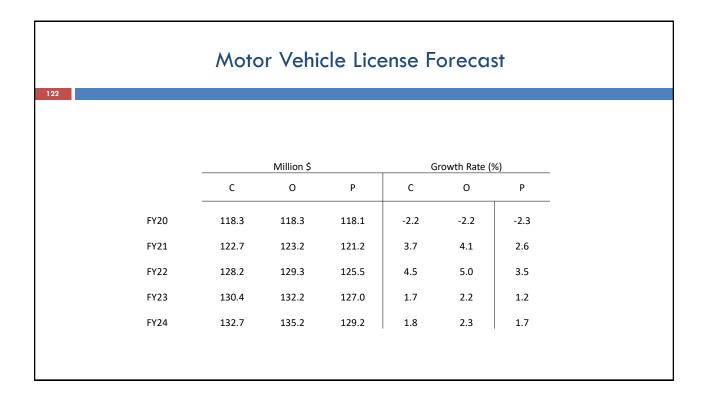
Motor Vehicle Operators Forecast

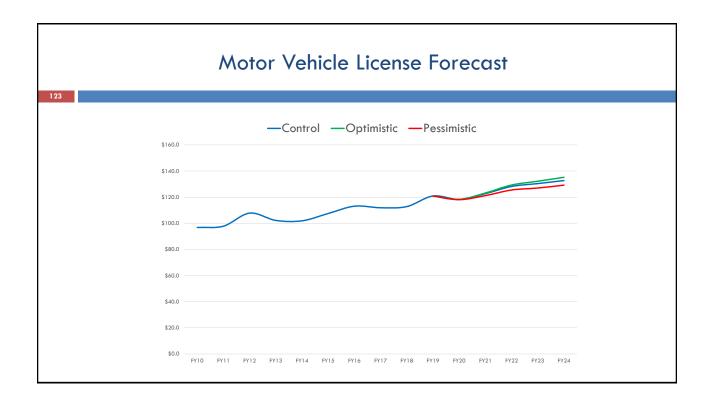
	Millions \$	Growth Rate(%)
FY20	18.4	10.6
FY21	23.9	29.9
FY22	25.2	5.4
FY23	25.3	0.4
FY24	25.4	0.4

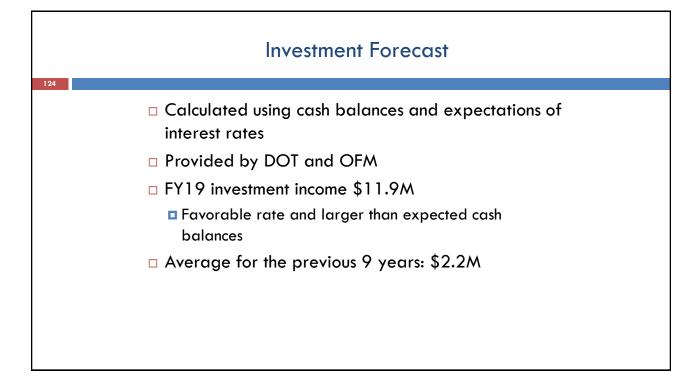


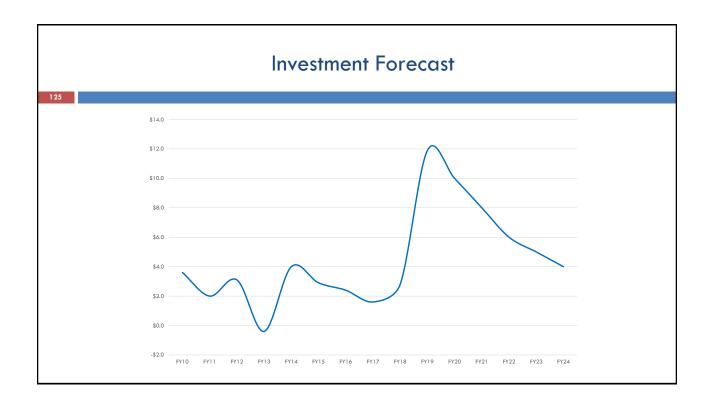


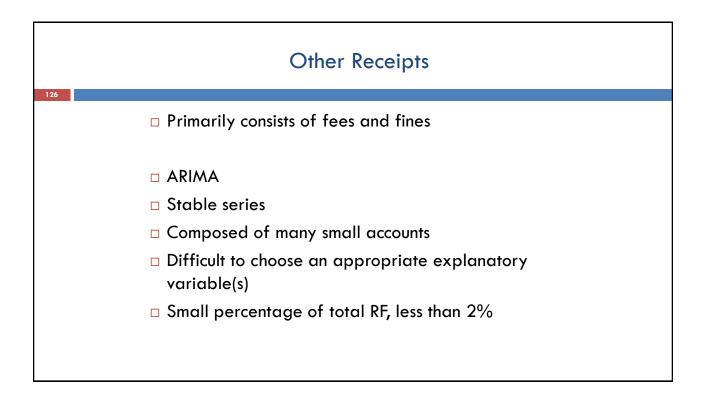




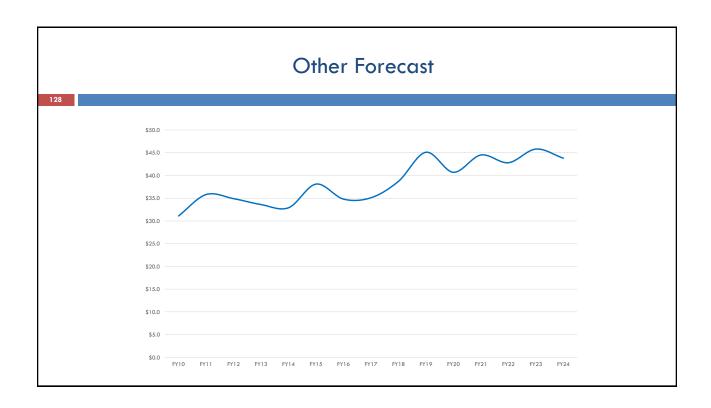








127		Other Fo	precast	
		Millions \$	Growth Rate(%)	
	FY20	40.7	-9.8	_
	FY21	44.5	9.3	
	FY22	42.8	-3.8	
	FY23	45.8	7.0	
	FY24	43.8	-4.4	



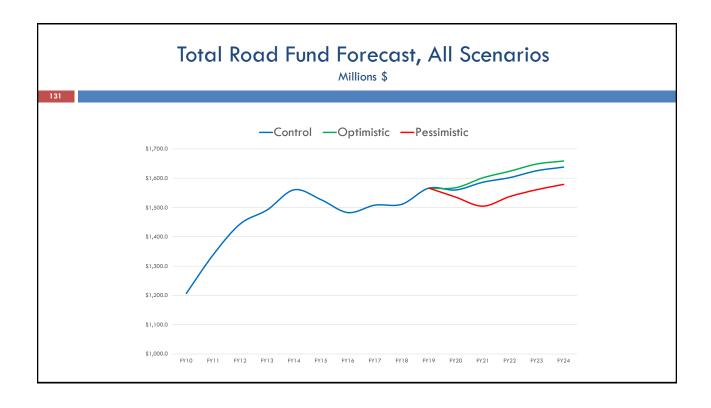
Road Fund Forecast, Optimistic Scenario

FY20 - FY24

	FY20		FY21		FY22		FY23		FY24		
	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	
Motor Fuels	779.7	0.8	787.1	0.9	793.1	0.8	796.0	0.4	797.9	0.2	
MV Usage	516.5	0.4	529.1	2.4	540.8	2.2	556.0	2.8	563.3	1.3	
MV License	118.3	-2.2	123.2	4.1	129.3	5.0	132.2	2.2	135.2	2.3	
MV Operators	18.4	10.6	23.9	29.9	25.2	5.4	25.3	0.4	25.4	0.4	
Weight Distance	83.9	0.2	85.4	1.8	86.6	1.4	88.0	1.6	89.1	1.3	
Investment	10.0	-16.1	8.0	-20.0	6.0	-25.0	5.0	-16.7	4.0	-20.0	
Other	40.7	<u>-9.8</u>	<u>44.5</u>	<u>9.3</u>	42.8	<u>-3.8</u>	<u>45.8</u>	<u>7.0</u>	43.8	<u>-4.4</u>	
Total Road Fund	1,567.5	0.1	1,601.2	2.1	1,623.8	1.4	1,648.3	1.5	1,658.7	0.6	

Road Fund Forecast, Pessimistic Scenario

	FY20 – FY24										
130											
		FY20		FY21		FY22		FY23		FY24	
		\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg	\$M	%Chg
	Motor Fuels	777.4	0.5	772.9	-0.6	770.6	-0.3	769.4	-0.2	770.2	0.1
	MV Usage	487.2	-5.3	452.3	-7.2	484.0	7.0	503.6	4.0	520.7	3.4
	MV License	118.1	-2.3	121.2	2.6	125.5	3.5	127.0	1.2	129.2	1.7
	MV Operators	18.4	10.6	23.9	29.9	25.2	5.4	25.3	0.4	25.4	0.4
	Weight Distance	83.5	-0.3	81.7	-2.2	83.2	1.8	84.6	1.7	85.6	1.2
	Investment	10.0	-16.1	8.0	-20.0	6.0	-25.0	5.0	-16.7	4.0	-20.0
	Other	<u>40.7</u>	<u>-9.8</u>	<u>44.5</u>	<u>9.3</u>	<u>42.8</u>	<u>-3.8</u>	<u>45.8</u>	<u>7.0</u>	<u>43.8</u>	<u>-4.4</u>
	Total Road Fund	1,535.3	-2.0	1,504.5	-2.0	1,537.3	2.2	1,560.7	1.5	1,579.9	1.2





The Master Settlement Agreement

133

- ☐ The Master Settlement Agreement (MSA) resolved litigation brought by the States vs. major tobacco companies for costs incurred in treating smoking-related illnesses
- □ 52 States and Territories are collectively the "Settling States"
- ☐ The original, major tobacco companies that were sued are the "Original Participating Manufacturers" (OPMs)
- ☐ The tobacco companies that subsequently joined in the settlement are the "Subsequent Participating Manufacturers" (SPMs)

The Master Settlement Agreement

- OPMs and SPMs are subject to significant restrictions on advertising and marketing of tobacco products
- OPMs and SPMs have made and continue to make significant settlement payments to the Settling States
- The Commonwealth of Kentucky has received \$117.59 million in FY19 and \$2.198 billion in MSA payments in total

The Master Settlement Agreement

135

Three types of payments to the States:

Initial Payments (1998 and 2000-2003)

- \$12.7 Billion

Annual Payments (2000 - Perpetuity)

- \$207.9 Billion through 2025
- \$3.6 Billion to Kentucky through 2025
- Based on "Allocable Share" For Kentucky -1.76%

"Strategic Contribution Fund" payments

- \$8.6 Billion in 2008-2017
- \$50.7 Million to Kentucky in 2008-2017
- Not based on "Allocable Share" For Kentucky -0.75%

The Master Settlement Agreement

136

Three potential adjustments to the payments:

Inflation adjustment

- Greater of CPI growth or 3%

Volume adjustment

- Based on reductions relative to base volume

Non-participating manufacturers (NPM) adjustment

What is the NPM Adjustment?

137

- □ Tobacco companies that don't join the MSA are "Non-Participating Manufacturers" (NPMs) and are free from MSA's marketing restrictions and the settlement payment obligations
- □ To prevent the NPMs from having a significant advantage in the marketplace, the Settling States each passed a "Qualifying Statute" requiring NPMs to make escrow payments for the cigarettes sold in each State
- ☐ The states are required to "diligently enforce" the provisions of the MSA, though "diligent enforcement " is not defined
- ☐ The reduction in payments is punitive payments are reduced by triple the net market share loss above 2%

NPM Adjustment Settlement

- ☐ The Commonwealth entered into a settlement agreement with the OPMs and the SPMs in June, 2014
- □ Settled the issue of the 2003-2012 NPM Adjustments and 2014-2017 have been settled subsequently
- Eliminated the budgetary impact of the adverse 2003 NPM Adjustment decision
- Reduces the volatility in future annual MSA payments OPMs agree to withhold significantly smaller portion of potential NPM Adjustment
- $\hfill\Box$ Eliminated the need for costly litigation for more than decade
- When litigation is required, the Commonwealth's case will be stronger than the current case for diligence for past years
- □ Thirty-eight States and Territories have entered into settlements of the NPM Adjustment issue

August 2019 - Planning Revenue Estimates

139

Preliminary Estimates

Fiscal Year 2020	\$111.3 Million
Fiscal Year 2021	\$107.2 Million
Fiscal Year 2022	\$103.6 Million
Fiscal Year 2023	\$100.8 Million
Fiscal Year 2024	\$ 98.1 Million