Mid-Year Update

Economic Forecast
Revenues Through January
Revised Forecast FY 2019-20
Preliminary Forecast FY 2020-21



January 28, 2020



PA Economic Forecast: June 2019 vs January 2020

			Annual G	rowth Rate	s or Change	2
		2017	2018	2019	2020	2021
Real GDP	Jun 2019	1.7%	2.1%	1.9%	1.9%	
	Jan 2020	0.6%	2.6%	2.1%	1.9%	1.9%
Total Wages	Jun 2019	4.0%	4.1%	4.1%	4.1%	
	Jan 2020	4.0%	4.3%	4.4%	3.9%	4.0%
Philly CPI-U	Jun 2019	1.3%	1.3%	1.7%	2.0%	
	Jan 2020	1.3%	1.3%	2.0%	1.8%	1.9%
Net Payroll	Jun 2019	58.8	65.6	57.7	54.6	
Employment (000s)	Jan 2020	58.8	65.6	45.6	45.4	45.7

Annual Economic Trends

	2015	2016	2017	2018	2019
United States					
Real GDP	2.9%	1.6%	2.4%	2.9%	2.3%
Wages-Salaries	5.1%	2.9%	4.7%	5.0%	4.9%
Real Equip Investment	3.2%	-1.3%	4.7%	6.8%	1.7%
Pennsylvania					
Real GDP	2.2%	1.3%	0.6%	2.6%	2.1%
Wages-Salaries	4.1%	1.3%	4.0%	4.3%	4.4%
Net Jobs Creation (000s)	46.2	48.8	58.8	65.6	45.6
U.S. Financials					
Corporate Domestic Profits	-1.5%	-6.0%	-1.0%	0.9%	-1.5%
10 Year Note Yield	2.14	1.84	2.33	2.91	2.14
S&P 500 Index (annual avg.)	5.8%	2.0%	16.6%	12.2%	7.6%

Note: S&P 500 Index uses average values for entire year. Corporate Domestic Profits for non-financial firms only. Includes S corporations.

Source: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics. U.S. forecasts by IHS Markit. PA forecasts by IFO.

Recent Quarterly Economic Trends

	2018.4	2019.1	2019.2	2019.3	2019.4
United States					
Real GDP	3.5%	2.9%	1.1%	3.1%	2.0%
Wages-Salaries	5.3%	5.2%	4.0%	5.0%	4.8%
Real Equip Investment	7.2%	6.4%	5.0%	3.3%	2.7%
Pennsylvania					
Real GDP	0.4%	3.3%	1.7%	2.1%	
Wages-Salaries	3.2%	4.6%	4.6%	4.3%	4.1%
Net Jobs Creation (000s)	60.4	50.8	49.4	37.3	41.1
U.S. Financial					
Corporate Domestic Profits	7.3%	-3.1%	-1.1%	-6.0%	
10 Year Note Yield	3.03	2.65	2.33	1.80	1.79
S&P 500 Index (prior year)	-6.2%	7.3%	8.2%	2.2%	29.5%

Note: Real GDP growth rates are quarterly annualized rates. All others are year-over-year. Interest rates are levels. Corporate Domestic Profits for non-financial firms only. S&P 500 Index uses values at the closing day of the quarter, not averages for the quarter.

Source: U.S. forecasts from IHS Markit.

Annual PA Employment Change (000s)

	2017	2018	2019
Mining-Logging	1.7	1.9	1.0
Construction	9.9	7.0	5.4
Manufacturing	2.0	6.3	-3.6
Wholesale-Retail	-7.8	-2.9	-4.4
Transportation-Warehousing	7.3	9.1	7.1
Professional Services	5.3	3.5	6.5
Healthcare-Social Service	26.4	27.2	20.5
Leisure-Hospitality	9.1	4.9	6.1
State-Federal Gov't	-0.5	-1.0	2.9
Local Gov't	0.7	0.7	0.2
All Other Sectors	<u>4.5</u>	<u>8.9</u>	<u>4.0</u>
Total Payroll Job Gains	58.8	65.6	45.6

Note: Figures represent change in average level for calendar year. Excludes independent contractors and self-employed. Source: U.S. Bureau of Labor Statistics. Figures for 2019 based on preliminary data through December.

Other PA Economic Indicators

	Year-Over-Year Growth						
	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>		
# Refinancing Applications	43.0%	107.0%	88.0%	120.9%	125.2%		
# Home Sales	2.7%	-3.4%	1.4%	0.5%	-0.3%		
Median Home Sales Price	5.8%	6.1%	6.4%	6.9%	7.8%		
FHFA House Price Index		5.1%			5.1%		
	<u>2018.3</u>	<u>2018.4</u>	<u>2019.1</u>	<u>2019.2</u>	2019.3		
Auto Loan	1.5%	2.0%	3.6%	5.0%	4.7%		
Credit Card Loan	4.0%	6.9%	3.0%	4.3%	1.0%		
All Mortgage Loans	0.6%	<u>-1.1%</u>	<u>-1.3%</u>	4.2%	<u>3.6%</u>		
All Consumer Debt	1.8%	0.9%	0.5%	4.3%	3.5%		

Note: Home sales not seasonally adjusted. Median price seasonally adjusted.

Source: Home sales and median home price from Zillow. House Price Index from Federal Housing Finance Agency. Debt data from New York Federal Reserve Board.

Demographic Trends Cause Tight Labor Market

			Annual Cha	ınge (000s)		
	2015	2016	2017	2018	2019	2020
Total Population	-3.5	-2.6	5.4	13.3	1.1	
Organic Growth	8.4	9.9	1.7	2.3	1.1	
International Migrate	31.8	38.0	31.0	31.7	19.5	
Domestic Migrate	-43.7	-50.4	-27.4	-20.7	-19.6	
Age 20-64	-23.9	-32.5	-32.2	-26.7	-30.6	-32.4
Net Payroll Jobs	46.2	48.8	58.8	65.6	45.6	45.4
Unemployment Rate	5.3	5.4	4.9	4.3	4.0	
Note: Payroll jobs exclude independent contract Source: U.S. Census Bureau, U.S. Bureau of La						

Revenues July 2019 to January 2020

	Actua	al Revenue	es	IFO Estimate		Admin Est	timate
	Amount	Growth	Adjust	Amount	\$ Diff	Amount	\$ Diff
General Fund	\$18,710	3.1%	4.1%	\$18,517	\$194	\$18,534	\$177
Corp. Net Income	1,665	0.9		1,632	33	1,797	-132
Sales - Non-Motor	5,933	3.0	5.5	5,970	-37	5,891	42
Sales - Motor Veh.	919	5.5		900	19	890	29
PIT - Withholding	6,276	3.6	4.4	6,268	8	6,300	-25
PIT - Other	1,485	13.4		1,463	22	1,355	130
All Tobacco	697	-5.4		695	3	696	1
Inheritance	650	8.7		600	50	628	22
Escheats	2	-102.2		-98	100	-87	90
All Other	1,082	-15.5		1,087	-5	1,063	21

Note: Millions of dollars. Adjusted column controls for (1) \$115m SUT transfer and \$27m higher CFA transfer and (2) \$74m withholding transfer this year and \$25m last year.

Update for FY 2019-20

	IFO Official		Mid-Year l	Jpdate	
	Estimate	Amount	\$ Change	Growth	Adjust
General Fund	\$35,518	\$35,738	\$220	2.5%	3.1%
Corporate Net Income	3,458	3,433	-25	1.0	
Sales - Non-Motor	9,996	10,051	55	4.5	5.9
Sales - Motor Vehicle	1,548	1,564	17	5.4	
PIT - Withholding	10,793	10,810	18	3.5	4.0
PIT - Other	3,751	3,796	45	3.9	
All Tobacco	1,083	1,075	-8	-13.9	
Inheritance	1,067	1,118	52	6.1	
Escheats	91	205	114	151.0	
All Other	3,733	3,685	-48	-5.0	

Note: Millions of dollars. For FY 19-20 IFO Official Estimate is \$21 million higher than the Administration. Adjusted column controls for (1) \$115m SUT transfer and \$15m higher CFA transfer for FY 19-20 and (2) \$82m in withholding transfers for FY 19-20 and \$25m in transfers for FY 18-19.

Personal Income Tax

CY 2019 withholding strong ~4.3%

- 2019 Q2 notably strong ~+5.0%
- Some deceleration since then | 2019 Q4 ~4.1% | net jobs growth slows too
- Outlook is for ~3.9% growth

Estimated payments very strong

- April +12.3% | June +13.0% | Sept +11.1%
- Jan-Dec: +9.6% (prelim)

Anticipating flat March-April final payment

- Down by -3.0% | form of payment shift | impact from safe harbors
- Upside: strong stock market to end year
- Natural gas royalties down due to prices

PIT Payments Growth

			Tax Yea	r Basis		
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Quarterlies	16.1%	-3.2%	11.5%	-5.6%	10.9%	
Annuals	<u>-7.5%</u>	<u>-0.9%</u>	<u>6.4%</u>	<u>28.5%</u>	<u>-3.0%</u>	
Total Non-Withheld	4.8%	-2.2%	9.3%	8.6%	4.0%	5.4%
Quarterly Share Total	57.8%	57.2%	58.3%	50.7%	54.0%	
Withholding	2.3%	2.4%	4.2%	4.3%	4.3%	3.9%
Total Payments	2.9%	1.3%	5.4%	5.4%	4.2%	4.3%
Note: Withholding growth rates for 201	8 and 2019 adjusted	d for transfers.				

Sales and Use Tax

Solid Gains in non-motor | +5.5% thru January (adjusted)

- Wealth effects from stock market
- Applications for mortgage refis double August through November
- Continued phase in of marketplace sales
- Growth of streaming services

Solid gains in motor vehicle too | +5.5% thru January

- Auto loan debt up ~+5% for 2019 Q2-Q3
- Delinquencies remain low
- Continued shift to truck and SUV

Broad Growth in Sales Tax in 18-19

		Annu	al Growth R	ates	
	15-16	16-17	17-18	18-19	19-20
Total	3.2%	2.1%	3.8%	6.9%	4.6%
Motor Vehicle	1.6	1.5	1.9	6.6	5.4
Wholesale-Retail	0.7	1.5	3.7	4.5	
Food-Beverage Stores	4.5	-0.9	0.4	4.9	
Food-Drink Establishment	5.1	0.4	2.2	5.1	
Accommodations	3.6	4.6	2.3	6.8	
Electronic or On-line	17.1	19.4	25.0	67.7	
Publishing-Broadcasting	-0.9	1.0	-2.2	14.5	
Building Materials	4.1	2.2	3.6	8.9	
All Other	5.1	2.9	5.4	3.4	
Source: DOR Annual Statistical Supplement to the	ne Tax Compendium.				

Corporate Net Income Tax

Estimated payments flat (tax year 2019)

- March -1.8% | June +5.8% | Sept -0.4% | Dec +0.5%
- Consistent with U.S. Corporate Profits

Expect flat final payment March to May ~+2.0%

- Strong correlation between growth estimated and finals
- Phase in to 40% NOL offset taxable income
- Profits shift into tax year 2018

Outlook for 2020: 3.5% taxable profits growth

Growth Rates: Corporate Payments, Profits, S&P 500

	Year-Over-Year Growth, Tax Year Basis						
	2015	2016	2017	2018	2019	2020	
Estimated	-7.9%	1.0%	8.0%	16.0%	1.1%		
Finals	<u>-12.6%</u>	<u>1.7%</u>	9.2%	<u>11.9%</u>	<u>1.8%</u>		
Total	-9.9%	1.3%	8.5%	14.3%	1.4%	3.5%	
Share Finals	40.3%	40.4%	40.7%	39.8%	40.0%		
Corporate Domestic Profits	-1.5%	-6.0%	-1.0%	0.9%	-1.5%	3.5%	
S&P 500 Index (ann avg.)	5.8%	2.0%	16.6%	12.2%	7.6%		

Miscellaneous Revenue Sources

Large Gain for Escheats 19-20

- 15-16 \$251m | 16-17 \$192m | 17-18 \$71m | 18-19 \$82m
- 19-20 original forecast \$91m | adding \$114m
- Lump sum deposit in September of \$40m

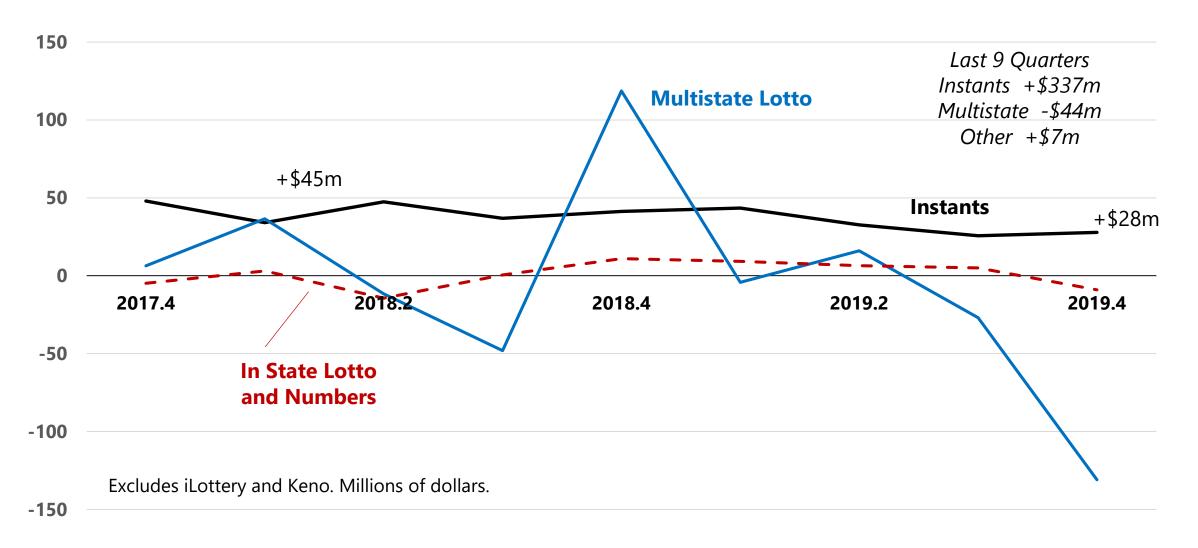
Cigarette and Other Tobacco

- Legal age raised to 21
- FDA bans most e-cig flavors
- -\$8m for 19-20 | -\$32m for 20-21

Gross Receipts

- EIA electric sales | CY 2018 +3.5% | CY 2019 -5.3% (through Oct)
- Total collections TY 2018 -11.5% | estimated payments TY 2019 +16%
- Fiscal year revenues | 18-19 +8.7% | 19-20 -4.3%

Year-Over-Year Change in Lottery Sales



Wage Growth Drives Revenue Growth

	15-16	16-17	17-18	18-19	19-20	20-21	15-16 to 20-21
Wages-Salaries	4.1%	1.3%	4.0%	4.3%	4.4%	3.9%	3.6%
SUT	3.2%	2.1%	3.8%	6.9%	5.7%	2.8%	4.2%
PIT	3.3	1.3	5.8	5.4	3.9	4.4	4.1
CNIT	<u>1.1</u>	<u>-3.2</u>	<u>4.6</u>	<u>18.0</u>	<u>1.0</u>	<u>3.3</u>	<u>4.5</u>
Total	3.0	1.1	4.9	7.3	4.3	3.6	4.2
Adjusted	2.8%	1.1%	4.7%	6.5%	3.9%	3.6%	3.9%

Note: The adjusted growth rates remove the estimated impact of Act 43-2017 and PA Bulletin 2018-01 from SUT. PIT for FY 20-21 excludes extra withholding deposit date.

Initial Outlook for FY 2020-21

	FY 20-21 Prelim	Change from FY 19-20		
		Dollar	Growth	Adjusted
General Fund	\$37,117	\$1,379	3.9%	3.0%
Corporate Net Income	3,546	113	3.3	
Sales - Non-Motor	10,464	413	4.1	2.9
Sales - Motor Vehicle	1,591	27	1.7	
PIT - Withholding	11,417	607	5.6	3.8
PIT - Other	4,033	237	6.2	
All Tobacco	992	-83	-7.7	
Inheritance	1,137	19	1.7	
Escheats	206	1	0.3	
All Other	3,732	46	1.3	

Note: Millions of dollars. Adjusted growth rate controls for \$115m transfer from SUT and \$69m transfer from withholding in FY 19-20. All Tobacco includes a \$115m transfer in FY 19-20 and FY 20-21. Adjusted withholding growth rate controls for extra Wednesday deposit date in FY 20-21.

Things to Watch in 2020

Will stocks continue to post gains?

- Continued disconnect with profits
- PE ratio high by historical standards
- China impact | election uncertainty

Recent uptick in PA consumer debt

- Mortgages and auto loans | delinquency rates remain very low
- 2019 Q4 data released next month

PA labor market

- Can it continue to expand at moderate pace?
- Does tight labor market/demographics affect business expansion decisions?