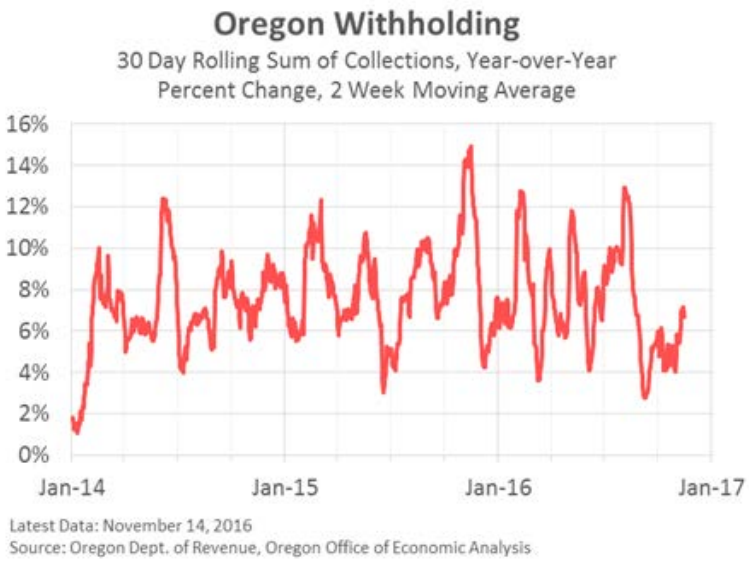
REVENUE OUTLOOK

Revenue Summary

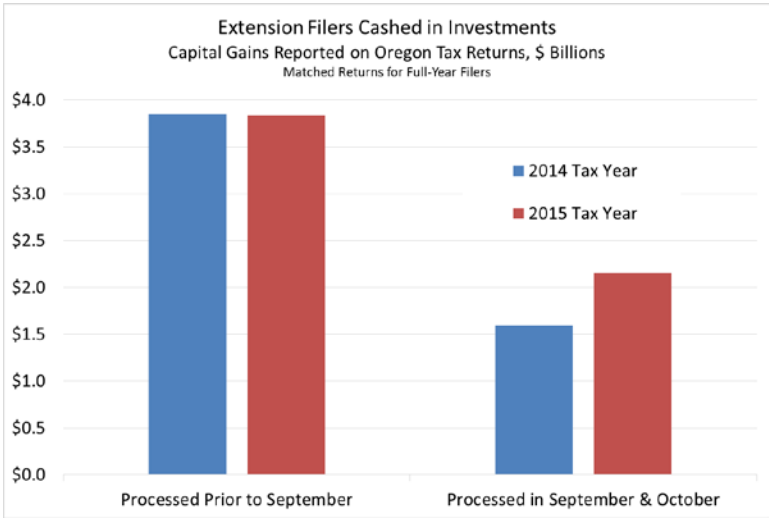
Oregon's General Fund revenue outlook remains stable. Revenue growth has slowed in recent months along with growth in the underlying economy. However, this slowdown did not come as a surprise, with less growth having already been built into the baseline forecast. As such, expectations have remained virtually unchanged since the 2015-17 biennial budget was crafted. Currently, General Fund revenues are expected to land within $8 million of the Close of Session estimate.

As job growth began to shift down over the spring and summer months, growth in personal income taxes withheld out of worker pay slowed down as well. Growth in withholdings currently rests near the bottom of the range seen over the past three years. Over this period, growth in employment and tax revenues have been running hot, as Oregon's labor market worked to heal itself from the recession of 2009. Going forward, slower, more sustainable growth rates are expected to be the norm.

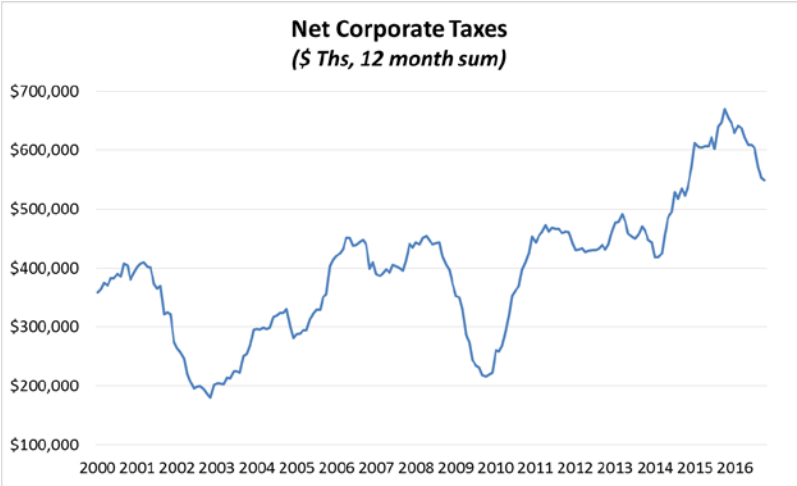


Since the last revenue forecast was published in August, income tax returns have come due for 2015 taxpayers who filed for extensions. Delayed and amended tax returns that are filed in the fall months often have an outsized impact on overall collections. Although returns processed in the early fall account for only 4% of all full-year filers, they account for a much larger share of reported income and tax liability. Extension filers are often taxpayers with the most complicated returns, including many of the wealthiest households in the state. This year, returns processed in early fall have accounted for 15% of overall refunds issued and taxes paid with returns.

Income trends among extension filers generally matched returns filed in April, with one notable exception: Extension filers enjoyed growth in their taxable investments during 2015, while the typical household did not. Capital gains reported in September and October were $500 million larger than last year, leading to a somewhat healthier collection season than was first evident in April.



Corporate tax collections have been falling sharply in recent months, having shrunk by one fifth over the past year. Given the expectation that collections would return to historical norms, revenue declines were built into the forecast, leaving the outlook very close to the Close of Session forecast for now. Nationwide, corporate profits have taken a step back, largely due to rapid appreciation of the U.S. dollar and struggles among energy firms and other commodity producers. With these downward pressures on profits having now stabilized, the sharp declines in corporate profits and related tax collections are expected to end soon.



Revenue growth in Oregon and other states will face considerable downward pressure over the 10-year extended forecast horizon. As the baby boom population cohort works less and spends less, traditional state tax instruments such as personal income taxes and general sales taxes will become less effective, and revenue growth will fail to match the pace seen in the past.

2015-17 General Fund Revenues

General Fund revenues for the 2015-17 biennium are expected to reach $18,008 million. This represents a decrease of $14.6 million (-0.1%) from the September 2016 forecast, and an increase of $1.9 billion (11.8%) relative to the 2013-15 biennium. General Fund revenues for the 2015-17 biennium are now expected to come in $8 million (0.0%) above the Close of Session forecast.

Personal Income Tax

Personal income tax collections were $1,941 million during the first quarter of fiscal year 2017, $57 million (3.0%) above the latest forecast. Compared to the year-ago level, total personal income tax collections grew by 3.5% relative to a forecast that called for 0.5% growth. Table B.8 in Appendix B presents a comparison of actual and projected personal income tax revenues for the July-September quarter. It should be noted, however, that comparisons with past tax collections have been complicated by the use of a new personal income tax processing system.

Corporate Excise Tax

Corporate excise tax collections equaled $142 million for the first quarter of fiscal year 2017, $1 million above the September forecast. Compared to the year-ago level, net corporate excise tax collections fell by 28.5% relative to a forecast that called for a 28.9% decline.

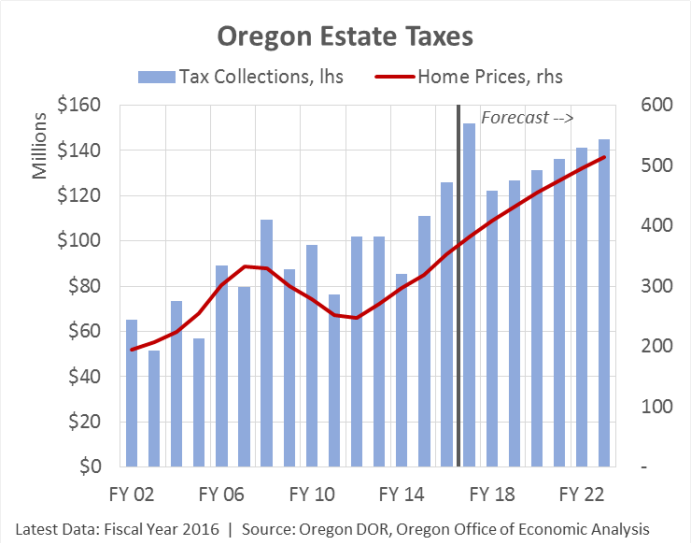
Following recent declines, corporate tax collections have returned to their historical norms. In addition to profitability, recent law changes have supported collections, as has a decline in outstanding Business Energy Tax Credits. The baseline outlook calls for corporate collections to stabilize going forward.

Corporate income tax collections for 2015-17 are now expected to end the biennium 0.3% higher than what was called for in the Close of Session forecast.

Estate Tax Revenue

At the time the 2015-17 biennium budget was set by the Legislature, the estate tax forecast called for record levels of revenue. The first year of the biennium exceeded this record-expecting forecast by approximately $16 million (+15%), a considerable margin. And so far in fiscal year 2017, revenues continue to come in above expectations. In fact, August brought record levels of estate tax collections – more than twice as large as any single month in history. As a result, the current outlook for such tax collections has been raised considerably.

There are three competing factors influencing the outlook. The first is that over time asset prices, stocks and houses in particular, will increase. The second is that the large Baby Boomer generation is aging into their retirement years today and into their later ages in the coming decades. As such there will be an increase in the number of Oregonians passing away in the relatively near future. Both of these first two factors suggest a robust outlook for estate tax collections. However the third factor influencing the outlook is increased, or improved estate planning on the part of families and their accountants. Through various plans and gifts and the like, legal tax avoidance or minimization can be achieved. Relative to the robust outlook due to growing asset values and an aging population, the baseline forecast is adjusted lower to account for estate planning on the part of Oregon families and their tax professionals.



Other Sources of Revenue

Criminal Fines and Assessments, or the Criminal Fine Account, has been lowered $14 million relative to previous outlooks. The reduction is due to lower than expected revenues from photo radar traffic enforcement in the City of Portland. To date just one of the proposed four sets of cameras have been installed. And the one location is issuing fewer tickets than expected as well. Future biennia are lowered approximately $10 million to account for the lower number of tickets issued, but does assume cameras are installed at all four locations beginning in 2017.

All other sources of General Fund revenues remain relatively unchanged in recent months. The net adjustment for these sources is an increase of $1.8 million relative to the previous forecast. These minor adjustments included a slight increase in insurance taxes that were offset by a decrease in security fees. In terms of judicial revenues, the outlook for state court fees has decreased somewhat as well.

Table R.1

2015-17 General Fund Forecast Summary

(Millions)	2015 COS Forecast	September 2016 Forecast	December 2016 Forecast	Change from Prior Forecast	Change from COS Forecast
Structural Revenues					
Personal Income Tax	$15,713.5	$15,713.7	$15,678.4	-$35.3	-$35.1
Corporate Income Tax	$1,100.0	$1,110.8	$1,103.7	-$7.1	$3.7
All Other Revenues	$1,184.6	$1,197.8	$1,225.7	$27.9	$41.1
Gross GF Revenues	$17,998.1	$18,022.3	$18,007.7	-$14.6	$9.7
Offsets and Transfers	-$42.8	-$44.4	-$44.2	$0.3	-$1.4
Administrative Actions[1]	-$20.2	-$14.0	-$14.0	$0.0	$6.2
Legislative Actions	-$158.9	-$158.3	-$158.3	$0.0	$0.6
Net Available Resources	**$18,309.1**	**$18,334.3**	**$18,320.0**	**-$14.3**	**$10.9**
Confidence Intervals					
67% Confidence	**+/- 3.1%**		**$551.1**	**$17.46B to $18.56B**	
95% Confidence	**+/- 6.1%**		**$1,102.2**	**$16.91B to $19.11B**	

1 Reflects cost of cashflow management actions, exclusive of internal borrowing.

Extended General Fund Outlook

Table R.2 exhibits the long-run forecast for General Fund revenues through the 2023-25 biennium. Users should note that the potential for error in the forecast increases substantially the further ahead we look.

Revenue growth in Oregon and other states will face considerable downward pressure over the 10-year extended forecast horizon. As the baby boom population cohort works less and spends less, traditional state tax instruments such as personal income taxes and general sales taxes will become less effective, and revenue growth will fail to match the pace seen in the past.

Table R.2

General Fund Revenue Forecast Summary (Millions of Dollars, Current Law)

Revenue Source	Forecast 2013-15 Biennium	% Chg	Forecast 2015-17 Biennium	% Chg	Forecast 2017-19 Biennium	% Chg	Forecast 2019-21 Biennium	% Chg	Forecast 2021-23 Biennium	% Chg	Forecast 2023-25 Biennium	% Chg
Personal Income Taxes	13,958.3	15.2%	15,678.4	12.3%	17,373.1	10.8%	19,234.8	10.7%	21,401.3	11.3%	23,369.1	9.2%
Corporate Income Taxes	1,116.5	26.3%	1,103.7	-1.2%	1,028.5	-6.8%	1,050.9	2.2%	1,097.8	4.5%	1,146.6	4.4%
All Others	1,030.2	-11.4%	1,225.7	19.0%	1,124.9	-8.2%	1,179.8	4.9%	1,261.6	6.9%	1,338.5	6.1%
Gross General Fund	16,105.0	13.7%	18,007.7	11.8%	19,526.4	8.4%	21,465.5	9.9%	23,760.7	10.7%	25,854.1	8.8%
Offsets and Transfers	*(74.5)*		*(44.2)*		*(72.3)*		*(75.0)*		*(75.7)*		*(77.8)*	
Net Revenue	16,030.5	13.3%	17,963.6	12.1%	19,454.1	8.3%	21,390.5	10.0%	23,685.0	10.7%	25,776.3	8.8%

General Fund revenues are expected to total $19,526 million in the 2017-19 biennium, an increase of 8.4% percent from the prior period, and $40 million below the September forecast. In the 2019-21 biennium, revenue growth is expected to reach 9.9%, followed by rates of 10.7% in the 2021-23 biennium and 8.8% in the 2023-25 biennium. The slowdown in long-run revenue growth is largely due to the impact of slower labor force growth and changes in savings behavior. In particular, the labor force will lose many very productive workers with a lifetime of experience over the coming years. On a smaller scale, a newly enacted minimum wage increase will weigh on the outlook over the extended horizon. Table B.2 in Appendix presents a more detailed look at the long-term General Fund revenue forecast.

Tax Law Assumptions

The revenue forecast is based on existing law, including measures and actions signed into law during the 2015 Oregon Legislative Session. OEA makes routine adjustments to the forecast to account for legislative and other actions not factored into the personal and corporate income tax models. These adjustments can include expected kicker refunds, when applicable, as well as any tax law changes not yet present in the historical data. A summary of actions taken during the 2015 Legislative Session can be found in Appendix B Table B.3. For a detailed treatment of the components of the 2015 Legislatively Enacted Budget, see: LFO 2015-17 Budget Summary. For changes made during the 2016 short session see: Budget Highlights 20152017.

Although based on current law, many of the tax policies that impact the revenue forecast are not set in stone. In particular, sunset dates for many large tax credits have been scheduled. As credits are allowed to disappear,

considerable support is lent to the revenue outlook in the outer years of the forecast. To the extent that tax credits are extended and not allowed to expire when their sunset dates arrive, the outlook for revenue growth will be reduced. The current forecast relies on estimates taken from the Oregon Department of Revenue's 2015-17 Tax Expenditure Report together with more timely updates produced by the Legislative Revenue Office.

Alternative Scenarios

The latest revenue forecast for the current biennium represents the most probable outcome given available information. OEA feels that it is important that anyone using this forecast for decision-making purposes recognize the potential for actual revenues to depart significantly from this projection.

Currently, the overwhelming downside risk facing the revenue outlook is the threat that the U.S. economic recovery will lose steam in the near term. Such a scenario, however it played out, would result in drastic revenue losses. Two recessionary scenarios are displayed in table R.2b. In a severe recession, biennial revenues could come in as much as $2 billion lower than predicted[7].

[7] The methodology for computing alternative scenarios has been changed to reflect recent work done by the Legislative Revenue Office. Assumptions: Recessions begin in 2017 and return to baseline income by 2024. The moderate recession scenario assumes personal income growth will be reduced by one-half relative to the baseline in 2017 and 2018. The severe recession scenario assumes personal income will decline in 2017 by as much as it did in 2009. The percentage deviation in personal income taxes is 1.4 times the deviation in personal income. The percentage deviation in corporate income taxes is 2.0 times the deviation in personal income.

TABLE R2b **December 2016**

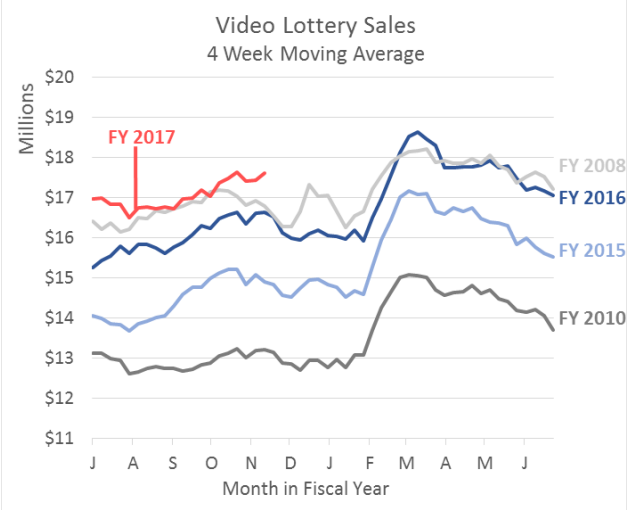
Alternative Cyclical Revenue Forecast ($ millions)

	2015-17 BN		2017-19 BN		2019-21 BN		2021-23 BN		2023-25 BN	
Baseline Case	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**FY '22**	**FY '23**	**FY '24**	**FY '25**
Personal Income										
Level	180.78	189.61	200.08	211.57	223.47	234.55	244.43	257.60	269.43	281.94
% change	*5.6%*	*4.9%*	*5.5%*	*5.7%*	*5.6%*	*5.0%*	*4.2%*	*5.4%*	*4.6%*	*4.6%*
Taxes										
Personal Income	7,763	7,916	8,447	8,926	9,326	9,909	10,465	10,936	11,423	11,946
Corporate Excise & Income	610	494	507	522	525	526	540	558	568	578
Other General Fund	533	692	552	573	577	602	621	641	659	679
Total General Fund	8,906	9,102	9,506	10,021	10,428	11,038	11,626	12,135	12,651	13,203
% change	*5.2%*	*2.2%*	*4.4%*	*5.4%*	*4.1%*	*5.8%*	*5.3%*	*4.4%*	*4.3%*	*4.4%*
Moderate Recession	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**FY '22**	**FY '23**	**FY '24**	**FY '25**
Personal Income										
Level	180.8	185.0	190.5	203.6	217.5	230.2	241.7	255.3	267.5	281.6
% change	*5.6%*	*2.3%*	*3.0%*	*6.9%*	*6.8%*	*5.8%*	*5.0%*	*5.7%*	*4.7%*	*5.3%*
Taxes										
Personal Income	7,763	7,646	7,879	8,455	8,979	9,651	10,300	10,792	11,290	11,897
Deviation from baseline		*-270*	*-568*	*-471*	*-347*	*-258*	*-165*	*-144*	*-133*	*-49*
Corporate Excise & Income	610	470	458	483	497	507	528	548	560	577
Deviation from baseline		*-24*	*-49*	*-39*	*-28*	*-20*	*-12*	*-10*	*-8*	*-2*
Other General Fund	533	692	552	573	577	602	621	641	659	679
Total General Fund	8,906	8,808	8,889	9,510	10,053	10,760	11,448	11,981	12,510	13,152
% change	*5.2%*	*-1.1%*	*0.9%*	*7.0%*	*5.7%*	*7.0%*	*6.4%*	*4.7%*	*4.4%*	*5.1%*
Deviation from baseline		*-294*	*-617*	*-511*	*-375*	*-278*	*-177*	*-154*	*-141*	*-51*
Biennial Deviation		*-294*		*-1,127*		*-653*		*-331*		*-192*
Severe Recession	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**FY '22**	**FY '23**	**FY '24**	**FY '25**
Personal Income										
Level	180.8	172.8	180.6	195.8	211.7	226.6	240.4	254.0	266.1	279.2
% change	*5.6%*	*-4.4%*	*4.5%*	*8.4%*	*8.2%*	*7.0%*	*6.1%*	*5.7%*	*4.7%*	*4.9%*
Taxes										
Personal Income	7,763	6,933	7,296	7,993	8,641	9,439	10,223	10,712	11,207	11,744
Deviation from baseline		*-983*	*-1,151*	*-933*	*-685*	*-470*	*-242*	*-224*	*-216*	*-202*
Corporate Excise & Income	610	406	408	444	470	491	522	542	554	565
Deviation from baseline		*-88*	*-99*	*-78*	*-55*	*-36*	*-18*	*-16*	*-14*	*-14*
Other General Fund	533	692	552	573	577	602	621	641	659	679
Total General Fund	8,906	8,031	8,256	9,010	9,688	10,532	11,366	11,895	12,420	12,988
% change	*5.2%*	*-9.8%*	*2.8%*	*9.1%*	*7.5%*	*8.7%*	*7.9%*	*4.7%*	*4.4%*	*4.6%*
Deviation from baseline		*-1,070*	*-1,250*	*-1,011*	*-740*	*-505*	*-260*	*-240*	*-231*	*-215*
Biennial Deviation		*-1,070*		*-2,261*		*-1,246*		*-499*		*-446*

Lottery Earnings

Lottery proceeds continue to exhibit strong gains and are matching expectations. As such the forecast overall is relatively unchanged prior to three months ago. Actual forecast adjustments total $1 or $2 million per biennium over the 10 year forecast horizon. However this reflects offsetting forecast changes between traditional lottery games and video lottery.

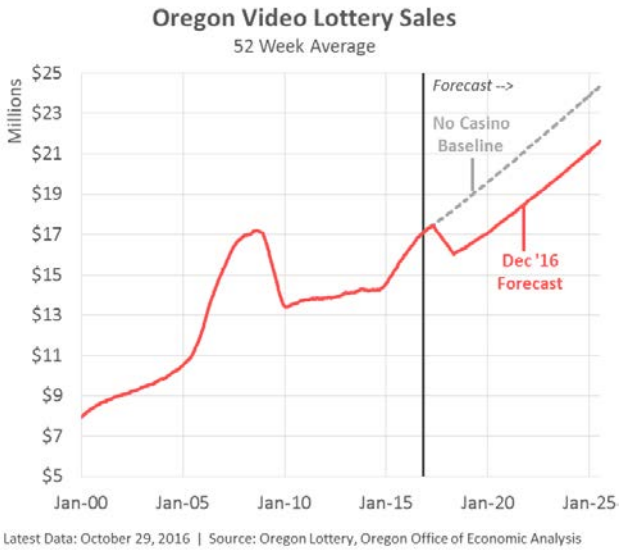
The downward revision to traditional lottery games – scratch-its, jackpot games, keno and the like – reflects a technical adjustment to the assumed transfer rates. These newly revised transfer rates – essentially net proceeds after administrative costs and prizes are paid – reflect the actual transfers experienced in recent years. Previous forecasts had assumed too large of transfers for any given level of sales. The sales outlook for traditional lottery games is revised lower by a smaller degree.



The upward revision to video lottery sales is the result of refining, or lowering, the estimated impact of the Cowlitz Tribe's Ilani Casino Resort on the forecast. Recent video lottery sales are closely matching the previous forecast and are on track to set new sales records in fiscal year 2017. That said, sales continue to slow somewhat, edging lower from 10 percent growth a year ago to 6 percent growth today. This is to be expected. Sales do not grow at double-digit rates forever. The outlook overall remains intact and on track.

Cowlitz Tribe's Ilani Casino Resort Impact

Our office continues to refine the estimated impact of the upcoming casino in La Center, Washington (16 miles north of Portland) which is set to open in "late spring" 2017. While the casino won approval a year or two ago, legal challenges remained and our office had previously taken a wait and see approach before adjusting the outlook accordingly. Beginning with the June 2016 quarterly forecast, our office started incorporating the casino's impact.



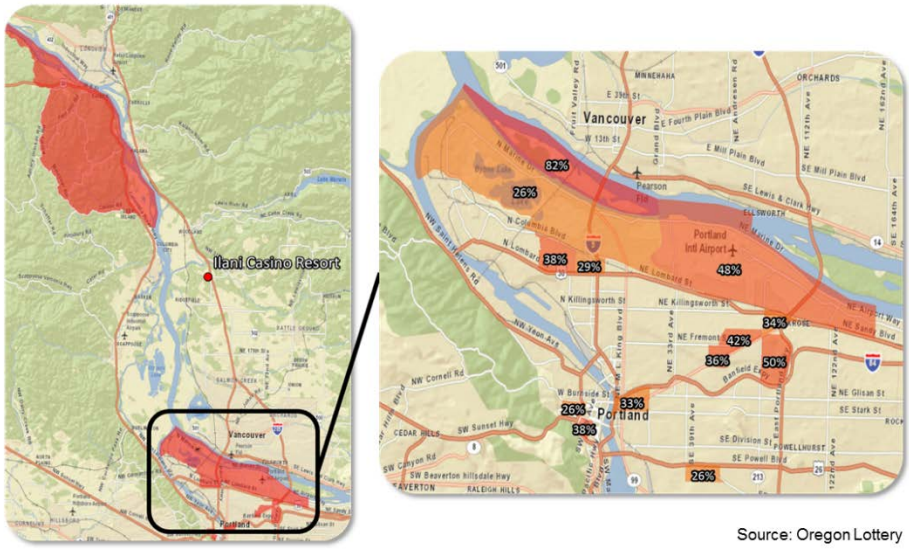
As of this forecast, our office's estimate of the casino's impact is a loss of around $110 million per year in video lottery sales, or a nearly $72 million per year reduction in transfers. This represents a slightly smaller impact than was assumed in the September outlook.

Back in June 2016, our office's initial estimate of the casino's impact was set at a loss of around $100 million per year in video lottery sales. This estimate was based off the Legislative Revenue Office's previous work on the impact of the proposed Wood Village casino in 2012, with some updates to incorporate the larger gaming market today and the like. That approach started by examining the total gaming market in the Portland region and estimating what share of the market the new casino would take. It was a top-down approach to arrive at an estimate.

Last quarter, in the September 2016 forecast, our office increased the estimated impact to around $120 million per year. This larger estimate was based on a bottom-up approach that started by examining video lottery sales at the individual retailer and neighborhood/zip code level. More than half of Oregon's statewide video lottery

sales occur within the Portland MSA. 11 percent of statewide video lottery sales occur within just the northern portion of the Portland MSA – from St. Johns through Parkrose, including Hayden Island. Anecdotal evidence plus statistical analysis indicated that the border effect with the State of Washington, which does not have video lottery in its bars and restaurants, was large. This is particularly true directly across the two interstate bridges in Portland. However such trends are also seen in the population centers along Oregon's borders with California and Idaho too. If these northern Portland zip codes see a 40-50 percent decline in video lottery sales, that means total statewide video lottery sales would decline 4.5 to 5.5 percent. Factoring in additional losses of around 10-15 percent throughout the rest of the Portland region brings the statewide total impact to nearly 12 percent, relative to the no casino baseline.

Both the top-down and bottom-up approaches yielded fairly close estimates in terms of the impact of the new casino.



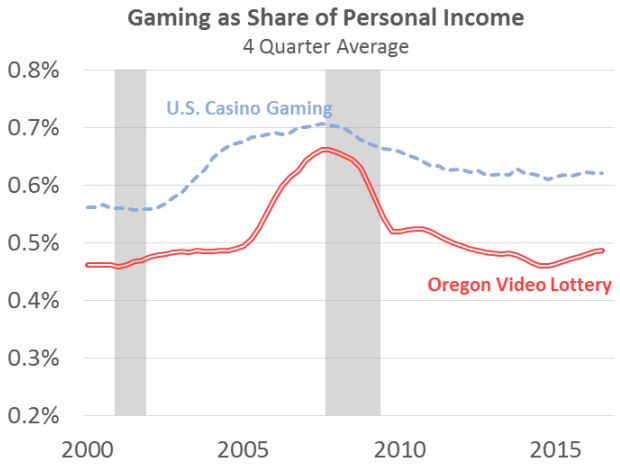
Source: Oregon Lottery

In recent months, the Oregon Lottery research team also analyzed video lottery jackpot winner records. As seen in the nearby maps, the share of such winners in neighborhoods (Census tracts) along the Oregon-Washington border are quite large. There is substantial cross-border activity. However, the share of Washingtonian winners in neighborhoods not along the border is considerably smaller, as is to be expected. Given the results of the new research, our office has lessened the casino impact and brought it back to the middle of the range established via the top-down and bottom-up approaches.

As always, our office will continue to work on refining the estimates and updating the likely impact in the coming forecasts.

Lottery Outlook

The robust gains seen in video lottery sales following the first wave of terminal replacements are slowing. This is to be expected. The second wave of replacements are nearing completion today, however their impact on sales is less, even as the upgrade in new technology and underlying infrastructure is important.



Latest Data: 2016q3 | Source: BEA, Oregon Lottery, Oregon Office of Economic Analysis

While video lottery sales remain strong, expectations are for a continued modest deceleration in growth until the Cowlitz Tribe casino opens approximately six to nine months from now. Video lottery growth has

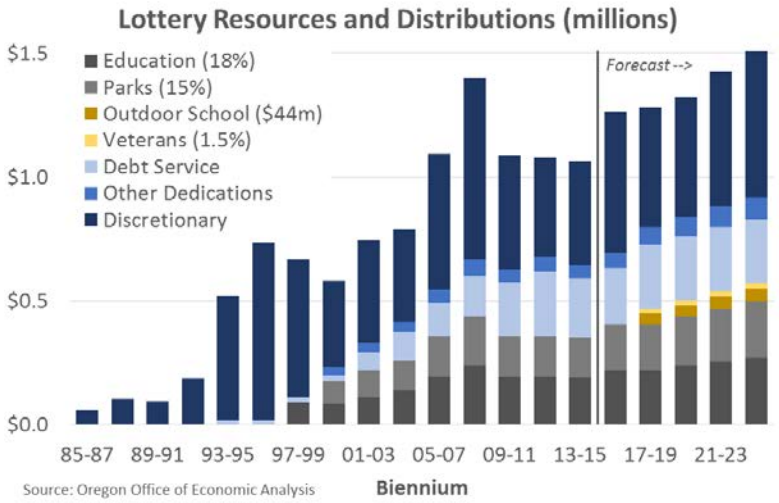
already slowed from around 10 percent year-over-year to 6 percent today. Over the next year, sales are projected to slow further to 5 or 6 percent. After that time, sales are expected to fall nearly 9 percent before resuming growth due to the underlying improvements in the economy and increases in consumer spending.

Other issues to watch include broader and national trends in gaming markets, demographic preferences for recreational activities, and to what extent consumers increase the share of their incomes spent on gaming. In much of the past 6 years, consumers have remained cautious with their disposable income.

The current outlook does leave room for both upside and downside risks. The Cowlitz Tribe casino may still be derailed due to legal challenges and if not, its impact may be greater or smaller than the current forecast assumes. The stronger economy and new terminals may unlock permanently higher sales. However the increases seen may also prove temporary and just a novelty-bump as Oregonians tried the new machines simply because they were new.

Lastly, Oregon voters approved two new constitutional amendments for where lottery resources are to be spent. The Outdoor School Education Fund is set to receive the lesser of 4 percent of net proceeds or $5.5 million per quarter ($44 million per biennium) and adjusted for inflation moving forward. The Veterans' Services Fund is set to receive 1.5 percent of net proceeds.

The full extended outlook for lottery earnings can be found in Table B.9 in Appendix B.



Budgetary Reserves

The state currently administers two general reserve accounts, the Oregon Rainy Day Fund[8] (ORDF) and the Education Stability Fund[9] (ESF). This section updates balances and recalculates the outlook for these funds based on the June revenue forecast.

[8] The ORDF is funded from ending balances each biennium, up to one percent of appropriations. The Legislature can deposit additional funds, as it did in first populating the ORDF with surplus corporate income tax revenues from the 2005-07 biennium. The ORDF also retains interest earnings. Withdrawals from the ORDF require one of three triggers, including a decline in employment, a projected budgetary shortfall, or declaration of a state of emergency, plus a three-fifths vote. Withdrawals are capped at two-thirds of the balance as of the beginning of the biennium in question. Fund balances are capped at 7.5 percent of General Fund revenues in the prior biennium.

[9] The ESF gained its current reserve structure and mechanics via constitutional amendment in 2002. The ESF receives 18 percent of lottery earnings, deposited on a quarterly basis – 5% of which are deposited in the Oregon Growth sub-account. The ESF does not retain interest earnings. The ESF has similar triggers as the ORDF, but does not have the two-thirds cap on withdrawals. The ESF balance is capped at five percent of General Fund revenues collected in the prior biennium.

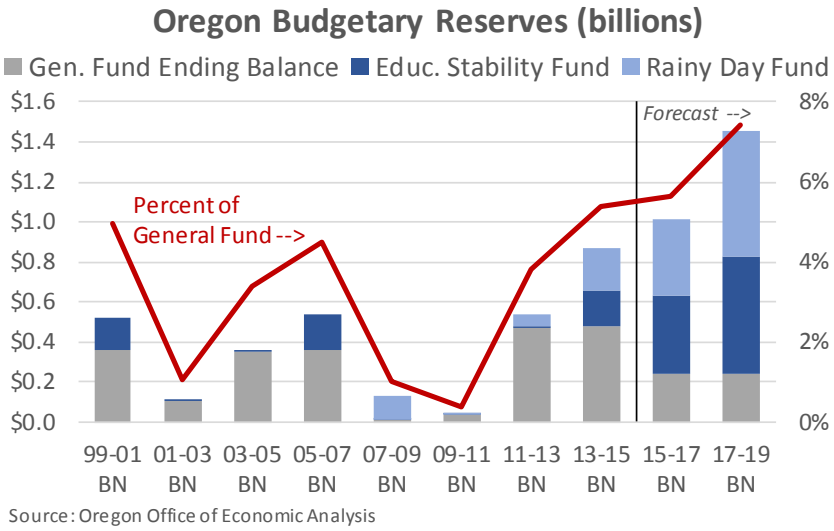
As of this forecast, the two reserve funds currently total a combined $703.5 million. Additionally there is a projected General Fund ending balance for this biennium of $245.4 million, bringing effective reserves to $948.9 million, or about 5.3 percent of current biennium's revenue.

The forecast for the ORDF includes two deposits for this biennium. The first, $158.3 million, is related to the General Fund ending balance from last biennium (2013-15) and occurred in February 2016. The second, $11.5 million, is due to the increased corporate taxes from Measure 67. This brings the projected ORDF ending balance at the end of 2015-17 to $387.6 million.

The forecast calls for $203.8 million in deposits into the ESF in 2015-17 based on the current Lottery forecast. This would bring the ESF balance to $383.2 million at the end of the current biennium.

Together, the ORDF and ESF are projected to have a combined balance of $770.8 million at the close of the 2015-17 biennium. Provided the General Fund ending balance remains unallocated, total effective reserves at the end of 2015-17 would just over $1 billion, or 5.6 percent of current revenues.

Such levels of reserve balances are bigger than Oregon has ever been able to accumulate, at least in the state's recent history. However, that does not indicate they are sufficient to withstand a recession's impact on the state budget. Reserve balances of approximately 7 percent are generally accepted to be able to withstand a recession of average size[10]. Provided the economic expansion continues, Oregon's reserves are projected to reach 7 percent of expenditures at the end of the 2017-19 biennium.



Effective Reserves ($ millions)

	Oct 2016	End 2015-17
ESF	$330.1	$383.2
RDF	$373.4	$387.6
Reserves	$703.5	$770.8
Ending Balance	$245.4	$245.4
Total	**$948.9**	**$1,016.2**
% of GF	5.3%	5.6%

B.10 in Appendix B provides more details for Oregon's budgetary reserves.

[10] Based on a one standard deviation change in revenues. Larger reserves needed to insure against a more severe recession.

POPULATION AND DEMOGRAPHIC OUTLOOK

Population and Demographic Summary

Oregon's population count on April 1, 2010 was 3,831,074. Oregon gained 409,550 persons between the years 2000 and 2010. The population growth during the decade of 2000 to 2010 was 12.0 percent, down from 20.4 percent growth from the previous decade. Oregon's rankings in terms of decennial growth rate dropped from 11th between 1990-2000 to 18th between 2000 and 2010. Oregon's national ranking in population growth rate was 16th between 2010 and 2015 lagging behind all of the neighboring states, except California. Slow population growth during the decade preceding the 2010 Census characterized by double recessions probably cost Oregon one additional seat in the U.S. House of Representatives. Actually, Oregon's decennial population growth rate during the most recent decade was the second lowest since 1900. As a result of economic downturn and sluggish recovery that followed, Oregon's population increased at a slow pace in the recent past. However, Oregon's current population is showing very strong growth as a consequence of state's strong economic recovery. Growth in 2015 ranked 10th fastest in the nation, surpassing Idaho and California. Based on the current forecast, Oregon's population will reach 4.59 million in the year 2026 with an annual rate of growth of 1.2 percent between 2016 and 2026.

Oregon's economic condition heavily influences the state's population growth. Its economy determines the ability to retain existing work force as well as attract job seekers from national and international labor market. As Oregon's total fertility rate remains below the replacement level and number of deaths continue to rise due to ageing population, long-term growth comes mainly from net in-migration. Working-age adults come to Oregon as long as we have favorable economic and employment environments. During the 1980s, which include a major recession and a net loss of population during the early years, net migration contributed to 22 percent of the population change. On the other extreme, net migration accounted for 73 percent of the population change during the booming economy of 1990s. This share of migration to population change declined to 32 percent in 2010, lowest since early 1980s when we actually had negative net migration for several years. As a sign of slow to modest economic gain, the ratio of net migration-to-population change has already exceeded 80 percent and remain that way throughout the forecast horizon due largely to combination of continued high net migration and rise in the number of deaths among elderly population associated with increasing number of elderly population. Although economy and employment situation in Oregon looked stagnant in the recent past, migration situation was not similar to the early 1980s pattern of negative net migration. Potential Oregon out-migrants had no better place to go since other states were also in the same boat in terms of economy and employment. California is the number one state of origin of migrants to Oregon. As California's housing market improves, we expect positive impact on Oregon's net migration.

Age structure and its change affect employment, state revenue, and expenditure. Demographics are the major budget drivers, which are modified by policy choices on service coverage and delivery. Growth in many age groups will show the effects of the baby-boom and their echo generations during the period of 2016-2026. It will also reflect demographics impacted by the depression era birth cohort combined with diminished migration of working age population and elderly retirees. After a period of slow growth during the 1990s and early 2000s, the elderly population (65+) has picked up a faster pace of growth and will surge to the record high levels as the baby-boom generation continue to enter this age group and attrition of small depression era cohort due to death. The average annual growth of the elderly population will be 3.4 percent during the 2016-2026 forecast period. However, the youngest elderly (aged 65-74) has been growing at an extremely fast pace in the recent

past and will continue the trend in the near future exceeding 5 percent annual rate of growth due to the direct impact of the baby-boom generation entering the retirement age and smaller pre-baby boom cohort exiting the 65-74 age group. The annual growth rate will taper off to below one percent by the end of the forecast period as a sign of baby-boom generation's transition to elderly age group. Reversing several years of slow growth and shrinking population, the elderly aged 75-84 started to show a positive growth as the effect of depression era birth-cohort has dissipated. An unprecedented fast pace of growth of population in this age group has started as the baby-boom generation starts to mature into 75-84 age group. Annual growth rate during the forecast period is expected to be unusually high 5.5 percent. The oldest elderly (aged 85+) will continue to grow at a slow but steady rate due to the combination of cohort change, continued positive net migration, and improving longevity. The average annual rate of growth for this oldest elderly over the forecast horizon will be 1.8 percent. An unprecedented growth in oldest elderly will commence near the end of the forecast horizon.

As the baby-boom generation matures out of oldest working-age cohort combined with slowing net migration, the once fast-paced growth of population aged 45-64 has gradually tapered off to below zero percent rate of growth by 2012 and will remain at slow or below zero growth phase for several years. The size of this older working-age population will remain virtually unchanged at the beginning to the end of the forecast period. The 25-44 age group population is recovering from several years of declining and slow growing trend. The decline was mainly due to the exiting baby-boom cohort. This age group has seen positive growth starting in the year 2004 and will increase by 1.6 percent annual average rate during the forecast horizon mainly because of the exiting smaller birth (baby-bust) cohort being replaced by baby-boom echo cohort. The young adult population (aged 18-24) will remain nearly unchanged over the forecast period. Although the slow or stagnant growth of college-age population (age 18-24), in general, tend to ease the pressure on public spending on higher education, college enrollment typically goes up during the time of high unemployment and scarcity of well-paying jobs when even the older people flock back to colleges to better position themselves in a tough job market. The growth in K-12 population (aged 5-17) will remain very low which will translate into slow growth in school enrollments. This school-age population has actually declined in size in recent past years and will grow in the future at well below the overall state average. The growth rate for children under the age of five has remained below or near zero percent in the recent past due to the sharp decline in the number of births. This cohort of children will see steady positive growth after 2016. Although the number of children under the age of five declined in the recent years, the demand for child care services and pre-Kindergarten program will be additionally determined by the labor force participation and poverty rates of the parents. Overall, elderly population over age 65 will increase rapidly whereas population groups under age 65 will experience slow growth in the coming years. Hence, based solely on demographics of Oregon, demand for public services geared towards children and young adults will likely to increase at a slower pace, whereas demand for elderly care and services will increase rapidly.

Procedure and Assumptions

Population forecasts by age and sex are developed using the cohort-component projection procedure. The population by single year of age and sex is projected based on the specific assumptions of vital events and migrations. Oregon's estimated population of July 1, 2010 based on the most recent decennial census is the base for the forecast. To explain the cohort-component projection procedure very briefly, the forecasting model "survives" the initial population distribution by age and sex to the next age-sex category in the following year,

and then applies age-sex-specific birth and migration rates to the mid-period population. Further iterations subject the in-and-out migrants to the same mortality and fertility rates.

Populations by age-sex detail for the years 2000 through 2009, called intercensal estimates, in the following tables are developed by OEA based on 2000 and 2010 censuses. Post-censal population totals for the years 2010 through 2015 are from the Population Research Center, Portland State University. The numbers of births and deaths through 2015 are from Oregon's Center for Health Statistics. All other numbers and age-sex detail are generated by OEA.

Annual numbers of births are determined from the age-specific fertility rates projected based on Oregon's past trends and past and projected national trends. Oregon's total fertility rate is assumed to remain below the replacement level of 2.1 children per woman during the forecast period, tracking at slightly lower than the national rate.

Life Table survival rates are developed for the year 2010. Male and female life expectancies for the 2010-202 period are projected based on the past three decades of trends and national projected life expectancies. Gradual improvements in life expectancies are expected over the forecast period. At the same time, the difference between the male and female life expectancies will continue to shrink. The male life expectancy at births of 77.4 and the female life expectancy of 81.8 in 2010 are projected to improve to 79.0 years for males and 83.2 years for females by the year 2026.

Estimates and forecasts of the number of net migrations are based on the residuals from the difference between population change and natural increase (births minus deaths) in a given forecast period. The migration forecasting model uses Oregon’s employment, unemployment rates, income/wage data from Oregon and neighboring states, and past trends. Distribution of migrants by age and sex is based on detailed data from the American Community Survey. The annual net migration between 2016 and 2026 is expected to remain in the range of 38,700 to 50,600, averaging 42,800 persons annually. Slowdown in Oregon’s economy in the recent years resulted in smaller net migration and slow population growth. Estimated population growth and net migration rates in 2010 and 2011 were the lowest in over two decades. Oregon’s population growth has already rebounded and will continue high rate of growth in the near future. Migration is intrinsically related to economy and employment situation of the state. Still, high unemployment and job loss in the recent past have impacted net migration and population growth, but not to the extent in the early 1980s. Main reason for this is the fact that other states of potential destination for Oregon out-migrants were not faring any better either. Hence the potential out-migrants had very limited destination choices. The future growth will not look like high growth period of 1990s. The role of net migration in Oregon’s population growth will get more prominence as the natural increase will decline considerably due to rapid increase in the number of deaths associated with ageing population.