

Economic Review
September 5, 2019



Washington State
Economic and Revenue Forecast Council

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WASHINGTON STATE
ECONOMIC AND REVENUE FORECAST COUNCIL

AGENDA

ECONOMIC REVIEW MEETING

September 5, 2019
10:00 a.m.

- Approval of meeting minutes from June 25, 2019
- Budget Outlook methodology analysis
- Presentation of economic outlook and revenue collection experience
- Forecast supervisor contract renewal

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STATE OF WASHINGTON
ECONOMIC AND REVENUE FORECAST COUNCIL
PO Box 40912 □ Olympia, Washington 98504-0912 □ (360) 534-1560

Meeting Minutes
Revenue Review

June 25, 2019

John L O'Brien, Hearing Room C

Economic and Revenue Forecast Council

Members Present

Ed Orcutt, House of Representatives, ERFC Chair
Christine Rolfes, Senate
John Braun, Senate (via phone)
Timm Ormsby, House of Representatives (via phone)
Duane Davidson, Treasurer
David Schumacher, Office of Financial Management

Staff

Steve Lerch, Executive Director

Call to Order

Representative Orcutt called the meeting to order at 10:01 a.m.

Motion

Treasurer Davidson moved, seconded by Representative Orcutt, to adopt the June 6 and June 11, 2019 meeting minutes. Council approved the motion unanimously at 10:02 a.m.

Forecast Presentation

Dr. Lerch presented information on the economic and revenue forecast. Dr. Lerch summarized the forecast changes.

Motion

Senator Rolfes moved, seconded by Representative Orcutt, to adopt the revenue forecasts. Council approved the motion unanimously at 10:16 a.m.

Motion

Senator Rolfes moved, seconded by Representative Orcutt, that the staff of the council separately forecast business and occupation revenues as outlined in E2SHB 2158 (2019), an act relating to creating a workforce education investment to train Washington students for Washington jobs. Council approved the motion unanimously at 10:22 a.m.

Adjournment

With no further business, the meeting adjourned at 10:22 a.m.

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Budget Outlook Report

State Budget Outlook Workgroup

September 5, 2019

Budget Outlook Report Requirement

"The state budget outlook work group, in consultation with the economic and revenue forecast work group and outside experts if necessary, must analyze the extent to which the proposed methodology for projecting expenditures for the ensuing fiscal biennia may be reliably used to determine the future impact of appropriations and make recommendations to change the outlook process to increase reliability and accuracy. The recommendations are due by December 1, 2013, and every five years thereafter."

What is Included and Excluded in Estimates of Ensuing Biennium Expenditures?

➤ Included:

- Continuation of current programs.
- Forecasted growth of current entitlement programs.
- Actions required by law, including legislation with a future implementation date.

➤ Excluded:

- Legislation not yet enacted by the Legislature.
- Collective bargaining agreements not yet approved by the Legislature.
- Changes to levels of funding for employee salaries and benefits unless those changes are required by statute.
- Costs of court rulings issued during or within fewer than ninety days before the beginning of the current legislative session.

Methodology Elements in Estimating Ensuing Biennium Expenditures

- Growth Factors Updated Each Biennium and Adopted by the ERFC.
- K-12 and Debt Service Models.
- Custom Adjustments.

Reliability Analysis

2015-17 Biennium Maintenance Level Budget- \$ in Millions				
Session	Outlook Estimated	Enacted 2015 Session Adj. For I-1351	Difference	Difference Percent
2013	36,052	37,111	1,059	2.9%
2014	36,576	37,111	535	1.5%
2017-19 Biennium Maintenance Level Budget- \$ in Millions				
Session	Outlook Estimated	Enacted 2017 Session	Difference	Difference Percent
2015	41,575	41,636	61	0.1%
2016	41,728	41,636	-92	-0.2%
2019-21 Biennium Maintenance Level Budget- \$ in Millions				
Session	Outlook Estimated	Enacted 2019 Session	Difference	Difference Percent
2017	49,890	50,485	595	1.2%
2018	50,485	50,485	0	0.0%

Recommendations

- Continue to update fiscal growth factors in the fall of each even numbered year.
- Continue to use the K-12 model for estimating ensuing biennium expenditures for K-12.
- Continue to use the debt service model for estimating ensuing biennium expenditures for debt service.

To: Economic and Revenue Forecast Council

From: State Budget Outlook Work Group

Date: August 20, 2019

Subject: Accuracy of projections for ensuing biennium expenditures.

Chapter 82.33.060 RCW requires the state budget outlook work group to analyze the reliability of the methodology for projecting ensuing fiscal biennia and to make recommendations to change the outlook process to increase reliability and accuracy. Following is the language from the statute:

"The state budget outlook work group, in consultation with the economic and revenue forecast work group and outside experts if necessary, must analyze the extent to which the proposed methodology for projecting expenditures for the ensuing fiscal biennia may be reliably used to determine the future impact of appropriations and make recommendations to change the outlook process to increase reliability and accuracy. The recommendations are due by December 1, 2013, and every five years thereafter."

The following memo provides an update from the state budget outlook workgroup.

Background:

Chapter 8, Laws of 2012 (SSB 6636) requires that beginning with the 2013-2015 fiscal biennium, the Legislature must enact a budget bill that leaves a positive ending fund balance in the state General Fund and related funds and that the projected maintenance level (ML) for the budget in the ensuing biennium may not exceed available fiscal resources. Related funds for purposes of this requirement are defined as the Washington Opportunity Pathways Account and the Education Legacy Trust Account. The act directed that the estimate of ensuing biennium expenditures must include ML items including, but not limited to:

- Continuation of current programs.
- Forecasted growth of current entitlement programs.
- Actions required by law, including legislation with a future implementation date.

The act also directed that estimates of ensuing biennium expenditures must exclude policy items including, but not limited to:

- Legislation not yet enacted by the Legislature.

- Collective bargaining agreements (CBAs) not yet approved by the Legislature.
- Changes to levels of funding for employee salaries and benefits unless those changes are required by statute.
- Costs of court rulings issued during or within fewer than ninety days before the beginning of the current legislative session.

Summary of the Methodology Used to Project Ensuing Biennium Expenditures

The current methodology for estimating expenditures for the ensuing biennium has been developed by the technical work group and approved by the Economic and Revenue Forecast Council (ERFC). The general approach to estimating ensuing biennia costs for current programs and growth in entitlement programs is by applying a historical growth factor to the second fiscal year (FY) for agency base budgets and for the cost or savings associated with each budget item to derive the ensuing biennia by FY. The historical growth factors used to estimate increased costs in the subsequent fiscal biennium are updated each biennium by the technical work group and adopted by the ERFC.

There are some cases whereby simply applying the growth factor to the cost or savings of a budget item is not used to estimate costs in the subsequent fiscal biennium. These include the following situations:

- **Custom adjustments.** Custom adjustments are used when the estimated annual costs in the subsequent fiscal biennium are expected to be significantly different from the second FY of the current biennium. This occurs primarily when a policy is being phased in during the second FY of a biennium or may be delayed until the subsequent fiscal biennium. In most cases, the growth factor is applied after a custom adjustment is made to reflect the phase in for the policy item. In a small number of cases, the custom adjustment already accounts for the types of growth captured by the growth factor and so the growth factor is not applied.
- **One-Time costs.** Certain items in the budget are one-time for the current biennium and therefore the related costs or savings are not carried forward into the subsequent biennium.
- **Compensation items.** Because the Outlook statute specifically excludes any additional future costs related to collective bargaining agreements (CBAs) not approved by the Legislature, or salaries and benefits, no growth factor is applied to most compensation related items. However, a custom adjustment is applied to items that are not fully implemented in the second year of the biennium to capture the full cost in the subsequent fiscal biennium. In addition, adjustments for compensation increases that are required under current law such as cost of living adjustments that are required under Initiative 732 (now applies only to community & technical colleges) and K-12 education

are included. Also included is the impact of estimated pension rate changes (assuming no change to pension funding methodologies or benefits).

- **K-12.** Beginning with the 2017 legislative session, K-12 calculations for the ensuing biennium shifted from a growth factor approach to utilization of a K-12 model. The K-12 model updates the growth and inflationary factors with each forecast and is continually updated for other factors such as levy equalization, enrollment, student transportation, and staff mix. The K-12 model is also used for fiscal notes and legislative policy proposals.
- **Debt Service.** Beginning with the 2018 legislative session, debt service calculations for the ensuing biennium shifted from a growth factor approach to utilization of the debt service model.

Challenges in Assessing the Reliability

There are a variety of challenges in assessing the reliability of the methodology that has been used to estimate ensuing biennium expenditures. These include:

- **Supplemental budget policy changes.** The original biennial budget provides an estimate of the projected ML of the ensuing biennium including the policy changes made during that legislative session. However, policy changes made in the supplemental budget continue to revise the budget and ensuing biennium projections. Data available to staff do not provide the detail to know what portion of actual ML costs in the following biennium are specifically related to policy changes made in the supplemental budget.
- **Initiatives, court rulings, and changes in federal law.** Initiatives, court rulings, and changes in federal law which come after a budget is enacted and an Outlook is adopted can drive significant changes in ML expenditures. An example of this is Initiative 1351 (K-12 class size funding), approved by voters in November of 2014 (after the 2014 supplemental budget and related outlook was adopted). The ML adjustment for I-1351 was an increase of \$2 billion dollars in the 2015-17 biennium. Ultimately, the 2015-17 budget suspended the initiative in policy level but the maintenance level shows these increased costs. These costs were not (and could not) have been included in the outlook adopted in May 2014 for the enacted 2014 supplemental operating budget as the initiative had yet to be considered by the voters.
- **Health benefits and compensation.** As noted above, the outlook statute requires that, changes to levels of funding for employee salaries and benefits be excluded from ensuing biennium estimates unless those changes are required by statute. Budgeted funds for health benefit employer contribution rates in some sessions are adjusted for surplus balances that may not be available the following year when the biennial budget for the ensuing biennium is being written.

Analysis of the Reliability of for the 2015-17, 2017-19, and FY 2019-21 Biennia.

Since the Outlook requirements were adopted, there are three biennia, which provide an opportunity to compare an enacted ML to the estimates that were projected in prior budget Outlooks. The following table provides the estimated and actual ML expenditures for these biennia. To improve comparability, an adjustment was made for the 2015-17 biennium to remove the \$2 billion in ML expenditures that were associated with Initiative 1351, which was adopted after the 2014 budget and Outlook were adopted.

2015-17 Biennium Maintenance Level Budget- \$ in Millions				
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While we have included the estimates for both the original budget and the supplemental budget, the most accurate comparison is the supplemental budget sessions (e.g. 2014, 2016, and 2018 sessions) as there is no way to identify what the ML for 2015-17 and 2017-19 and 2019-21 would have been without the policy changes adopted in those sessions. In comparing those three sessions, the variation between the Outlook estimated and the enacted maintenance level budgets was as follows:

- 2014: The outlook for the enacted supplemental budget under-estimated the ensuing biennium costs by 1.5% (after adjusting for I-1351)
- 2016: The outlook for the enacted supplemental budget over-estimated the ensuing biennium costs by 0.2%.

- 2018: The outlook for the enacted supplemental budget exactly estimated the ensuing biennium costs.

Recommendations

As noted above, the original methodology has evolved to utilize the K-12 model and debt service model for more accurate projections in these areas. Fiscal growth factors have been reviewed and updated each biennium.

The workgroup believes that the fiscal growth factors should continue to be updated in the fall of even numbered years, and the approach of using the K-12 model and debt service model should be continued. Based on the above analysis, the workgroup has no further recommendations for changes to the methodology for projecting ensuing biennium expenditures.

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**Economic & Revenue Forecast Council
State of Washington**



Economic Review: September 5, 2019

Executive Summary

United States

- This forecast is based on a modified version of IHS Markit's August 2019 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. The August Blue Chip forecast for real GDP growth in 2019 and 2020 was 2.4% and 1.8% compared to 2.5% and 1.8% in June. The Blue Chip long-range forecast, which has not been updated since March, calls for growth rates of 1.7%, 1.9%, and 2.0% in 2021, 2022, and 2023.
- Our oil price forecast reflects the futures markets, primarily the Brent (North Sea) oil price but also the West Texas Intermediate (WTI) benchmark. This forecast was based on the Wednesday, August 28, 2019 closing prices for Brent and WTI futures. The latest futures prices indicate slightly higher prices in the near term but also a larger decline than assumed in June.
- The forecast includes tariffs on solar panels and metals, a 25% tariff on roughly 44% of goods imported from China, and China's retaliatory tariffs on \$100 billion of U.S. exports to China. It does not include a 10% tariff, announced by President Trump on August 1st, effective September 1st, on Chinese goods not yet subject to tariffs. It also does not reflect China's response last Friday that it will increase tariffs on \$75 billion of American goods. The latest developments in trade will be reflected in the final September forecast.
- The U.S. economy added 164,000 net new jobs in July. Employment data for May and June were revised down by 41,000 jobs. Sectors with notable employment gains in July included professional and technical services (+31,000), health care (+29,000), social assistance (+20,000) and manufacturing (+16,000). Sectors with net employment declines in July included information (-10,000), transit and ground passenger transportation (-8,000), electronics and appliance stores (-6,000) and mining (-5,000).
- The second estimate of real U.S. GDP growth for the second quarter of 2019 was 2.0% (SAAR). In the first quarter, real GDP grew by 3.1%.
- Two key measures of consumer confidence decreased this month. The University of Michigan consumer sentiment survey fell by 8.6 points to 89.8 in August. This is the largest monthly decline for the University of Michigan index since December 2012. The Conference Board index of consumer confidence also dipped in August, but by a much smaller 0.7 points.
- Initial claims for unemployment insurance increased by 4,000 to 215,000 (SA) in the week ending August 24th. The four-week moving average of initial claims decreased by 500 to 214,500.
- Industrial production decreased by 0.2% (SA) in July following a 0.2% increase in June. New orders for core capital goods (i.e., durables excluding

aircraft and military), which is a proxy for business investment, increased by 0.4% (SA) in July according to advance U.S. Census Bureau data.

- Housing data were generally stronger this month, with both construction activity and home sales improving compared to year-ago levels. Housing units authorized by building permits in July were 8.4% (SA) above their June level and 1.5% above their year-ago level. July housing starts decreased by 4.0% (SA) compared to June but were 0.6% above their July 2018 level. New home sales in July decreased by 12.8% (SA) compared to June but were 4.3% above their year-ago level. Existing home sales in July increased by 2.5% (SA) compared to June and were up 0.6% compared to July 2018. The seasonally adjusted Case-Shiller national home price index for June was 0.2% above its May level and 3.2% above its year-ago level.
- Major threats to the U.S. and Washington economies remain, including concerns about international trade and fiscal policy as well as geopolitical risks.

Washington

- We have two months of new Washington employment data since the June forecast was released. Total nonfarm payroll employment rose 18,800 (seasonally adjusted) in June and July which was 8,200 more than expected in the June forecast. Private services-providing sectors added 13,500 jobs in the two-month period. The manufacturing sector added 1,900 jobs of which 1,200 were aerospace jobs. The construction sector lost 300 jobs in June and July but government added 3,900 jobs.
- We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions lowered the estimated level of total employment in May 2019 by 12,300 jobs (0.4%). As a result of the downward revision to history and stronger-than-expected growth, the combined effect is 4,100 (0.1%) fewer jobs in July 2019 than expected in the June forecast.
- While Boeing has suspended deliveries of the 737 Max, production continues though at a reduced rate. We do not have any information on the impact on employment or hours but do not believe they are large at this point. Boeing has issued no worker adjustment and retraining notifications (WARNs) since the grounding of the 737 Max and overall aerospace employment is actually up.
- Washington's unemployment rate remained at 4.6% in July for a third consecutive month. The state's unemployment rate remains near its all-time low of 4.4% last reached in October 2018.
- In June, the Bureau of Economic Analysis released estimates for state personal income through the first quarter of 2019. We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) data. Our current estimate of Washington personal income in the first quarter of 2019 is \$1.8 billion (0.4%) higher than assumed in the June forecast. Wages were \$1.0 billion (0.4%) above the forecast and nonwage income was \$0.7 billion (0.3%) above the forecast.
- Washington housing construction increased in the second quarter of 2019 and slightly exceeded the June forecast. The number of housing units authorized

by building permits increased to 48,600 units (SAAR) in the second quarter of 2019 from 43,800 units in the first quarter. Second quarter permits were made up of 22,100 single-family units and 26,500 multi-family units. The June forecast assumed 48,000 units (SAAR) in the second quarter, consisting of 22,400 single-family units and 25,600 multi-family units. Washington housing construction got off to a very strong start in the third quarter of 2019, though mostly as a result of a surge in multi-family permits. In July, 54,200 units (SAAR) were permitted consisting of 23,500 single-family units and 30,700 multi-family units. The June forecast assumed an average rate of 41,600 (SAAR) units for the third quarter as a whole.

- Seattle area home prices declined over the year for a second consecutive month in June. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices decreased 0.1% in June while the composite-20 index was unchanged. Monthly Seattle home prices have, on average, been trending down since May 2018. As of June 2019, Seattle home prices were down 1.4% over the year compared to a 12.7% increase during the previous year. The 20-City Composite Home Price Index increased 2.2% over the most recent year. Seattle home prices are still up 88% since the December 2011 trough and exceed the May 2007 peak by 31%.
- Seattle area consumer price inflation has exceeded the U.S. City Average for the past several years due to rapid shelter cost inflation. This may be changing. In June 2019, over-the-year shelter cost inflation in Seattle lagged the national average for the first time since December 2012. From June 2018 to June 2019, shelter costs in the Seattle area rose 3.1% (seasonally adjusted) compared to 3.5% for the U.S. city average. Overall Seattle inflation still exceeded the national average at 2.3% compared to 1.7%. Core prices, which exclude food and energy, increased 2.5% over the year in Seattle compared to 2.1% for the U.S. City Average.
- Washington exports declined sharply over the year in the second quarter of 2019. Exports decreased 27.6% in the second quarter of 2019 compared to the second quarter of 2018 due largely to a 41.9% drop in transportation equipment exports (mostly Boeing planes). Boeing suspended deliveries of the 737 Max in March which clearly affected second quarter exports. However exports of agricultural products also declined 22.4% over the year and exports of all other commodities (mostly manufacturing) declined 5.6%.
- The Institute of Supply Management - Western Washington Index (ISM-WW) improved in July and remained in positive territory. The index, which measures conditions in the manufacturing sector, increased from 56.7 in June to 57.0 in July (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 24 months. The production, orders, and employment components indicated expansion in July while the inventory component indicated contraction. The deliveries component was neutral at 50 in July.
- Washington car and truck sales declined for a third consecutive month. Seasonally adjusted new vehicle registrations fell 2.7% in May, 3.2% in June, and 3.5% in July. Car and truck sales are down 6.6% over the year and 18.3% since the November 2017 post-recession peak. Monthly sales are erratic but have been trending down since mid-2016.
- We expect 1.9% Washington employment growth this year, down from 2.2% in the June forecast. As in June, we expect growth to decelerate. We expect

employment growth to average 1.3% per year in 2020 through 2023, up slightly from 1.2% in the June forecast. Our forecast for nominal personal income growth this year is 5.7%, up from 4.9% in the June forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.9% per year, the same rate as in the June forecast.

Washington State Economic Outlook & Revenue Collection Experience

Presented to
The Economic & Revenue Forecast Council

Steve Lerch
Executive Director

September 5, 2019
Olympia, Washington



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ECONOMIC AND REVENUE FORECAST COUNCIL**

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Summary

- The preliminary economic forecast for both the U.S. and WA are very similar to the June forecast
- 737 MAX production is assumed to drop to 32/month, returning to 52/month in 2020 Q1
- Despite a strong labor market, wage growth and inflation remain moderate
- Downside risks to the baseline include uncertainty regarding trade policy, geopolitical concerns and a maturing economic expansion
- Revenue collections since the June forecast are \$108 million (3.1%) above expectations

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Forecast risks

Upside

- Consumer and business confidence remain at high levels
- Strong U.S., WA labor markets

Downside

- International trade policy uncertainty
- Geopolitical risks: North Korea, China, Russia, Iran, Venezuela, Brexit
- Maturing economic expansion

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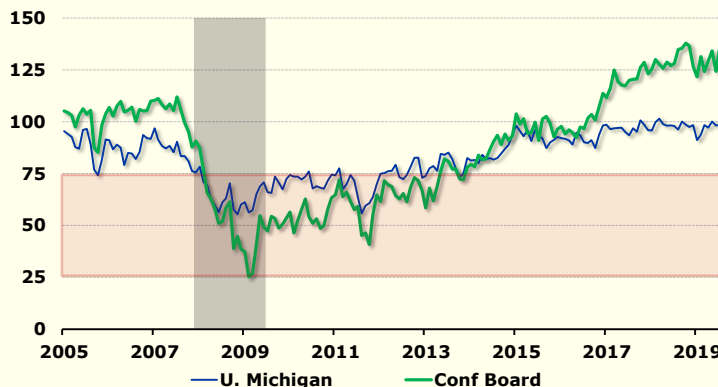
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Despite some volatility this year, consumer confidence remains at high levels

Index
Mich: 1966Q1 = 100, SA
Conf Board: 1985 = 100, SA



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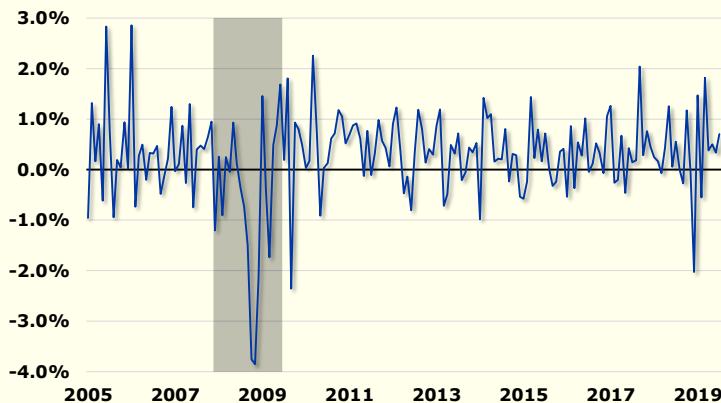
Sources: University of Michigan, Conference Board; data through August 2019

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Monthly retail sales have increased for five consecutive months

Retail & food service sales, monthly growth



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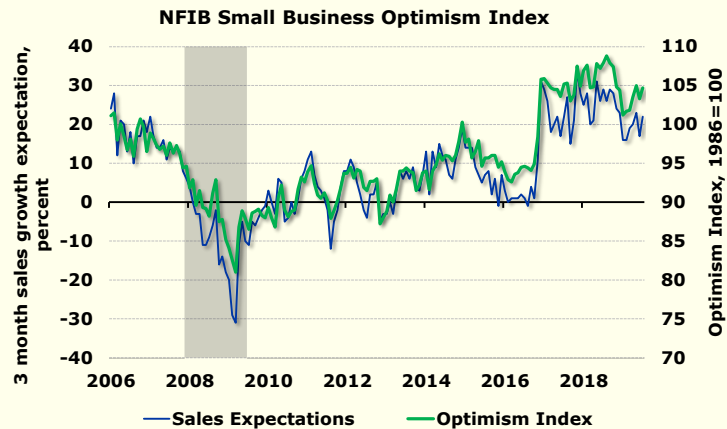
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Source: U.S. Census, advanced sales data through July 2019

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Small business optimism dipped in June, bounced back in July



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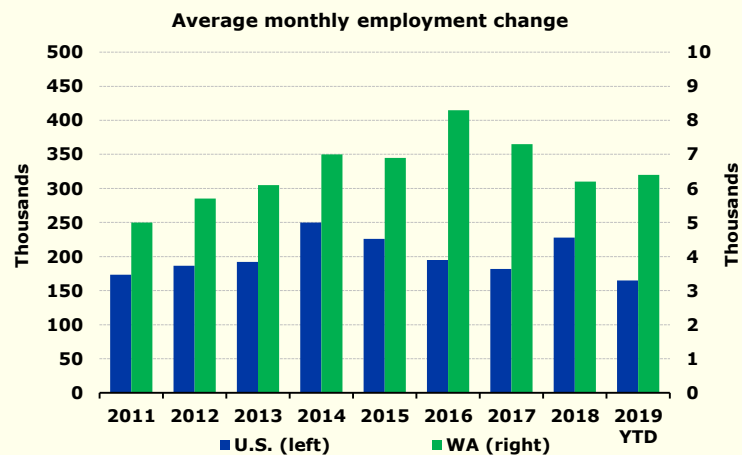
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Source: National Federation of Independent Business; data through July 2019

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U.S. job growth is below 2018 average but remains healthy



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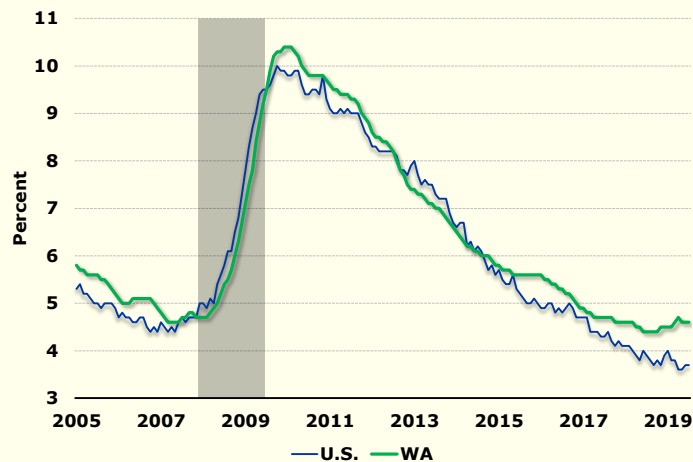
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Source: Bureau of Labor Statistics, Employment Security Dept.; data through July 2019

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Unemployment rates remain low



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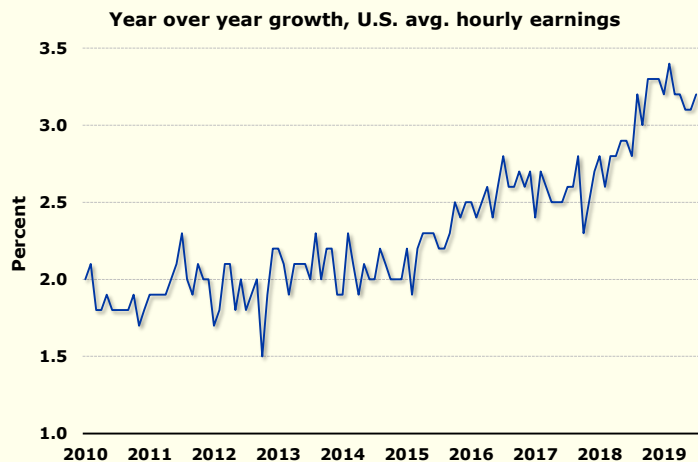
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Sources: U.S. Bureau of Labor Statistics, WA Employment Security Dept.; data through July 2019

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Hourly earnings are increasing but at a moderate rate



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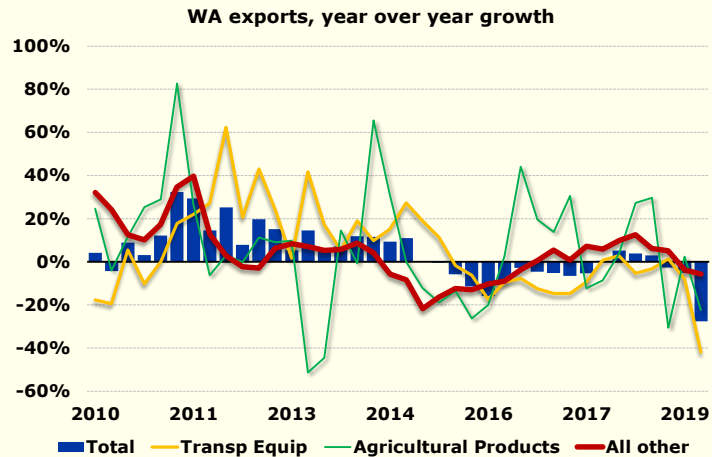
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Source: Bureau of Labor Statistics, data through July 2019

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



In 2019 Q2 WA exports declined by 27.6% over the year; largest drop since 2000 Q1



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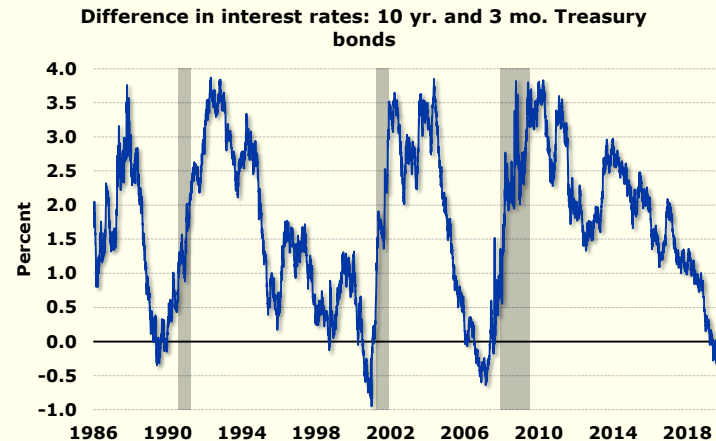
Source: WISERTrade, data through 2019 Q2

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The 10 year – 3 month yield curve has been inverted since May 23rd

The yield curve has inverted before the last three recessions but is not always a recession signal



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Source: Federal Reserve Bank of St. Louis, daily data through 8/30/2019

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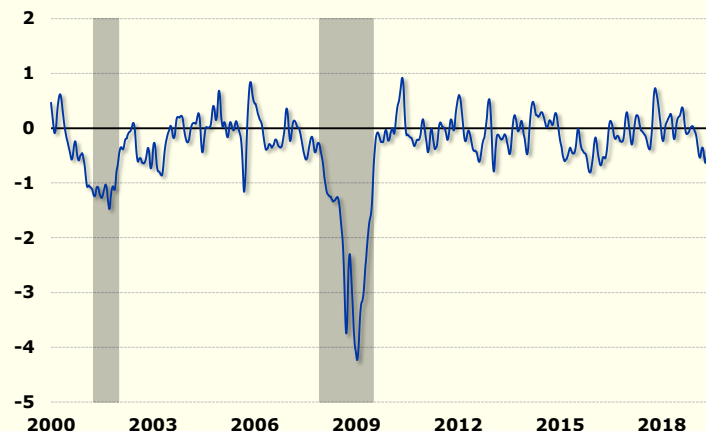
Business Conditions index is below average value of zero but not in recession territory

The index is based on a mix of weekly, monthly and quarterly data such as initial UI claims, industrial production and personal income.

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Aruoba-Diebold-Scotti Business Conditions Index



Source: Federal Reserve Bank of Philadelphia; daily data through Sept. 2, 2019

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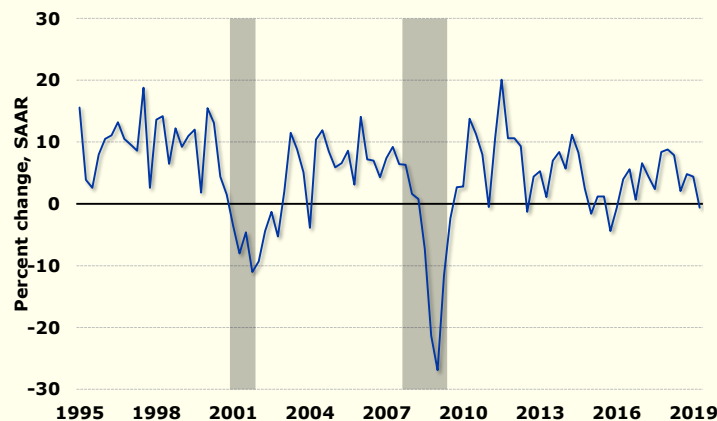


Nonresidential private fixed investment growth has slowed recently

Nonresidential private fixed investment includes business investment in buildings and other structures, equipment and intellectual property

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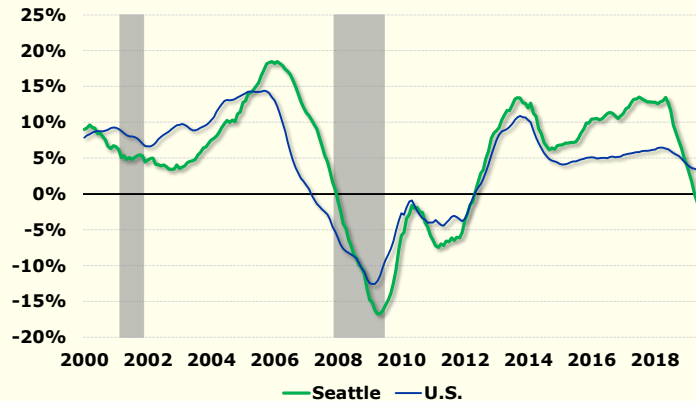
Source: U.S. Bureau of Economic Analysis, data through 2019 Q2

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Year over year Seattle home prices have fallen for two consecutive months

Case-Shiller home price index, year over year % change, SA



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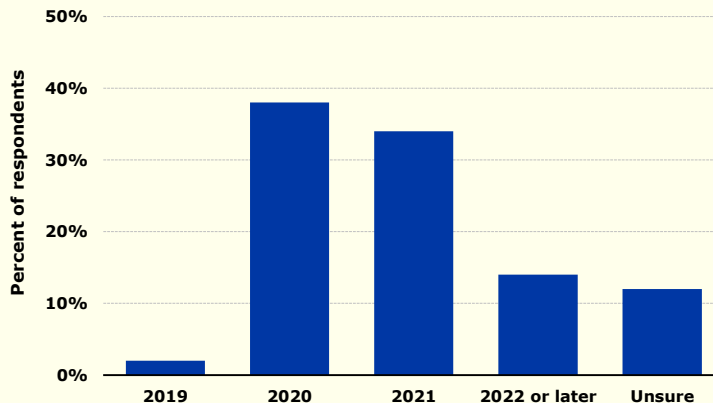
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Source: Case-Shiller, data through June 2019

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Timing of next recession: National Association of Business Economists survey



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Source: National Association of Business Economists, Aug. 2019 Economic Policy Survey

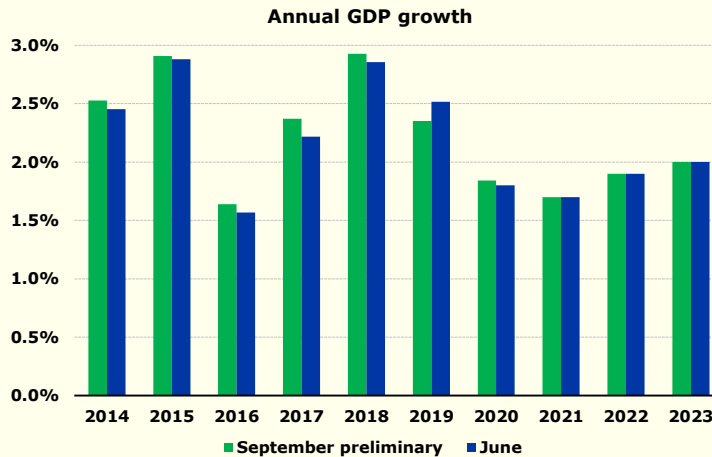
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GDP growth is slightly lower this year, slightly higher next year compared to the June forecast

As a result of the annual update of GDP data in July, GDP growth for 2014 - 2018 is slightly higher than reported in June.

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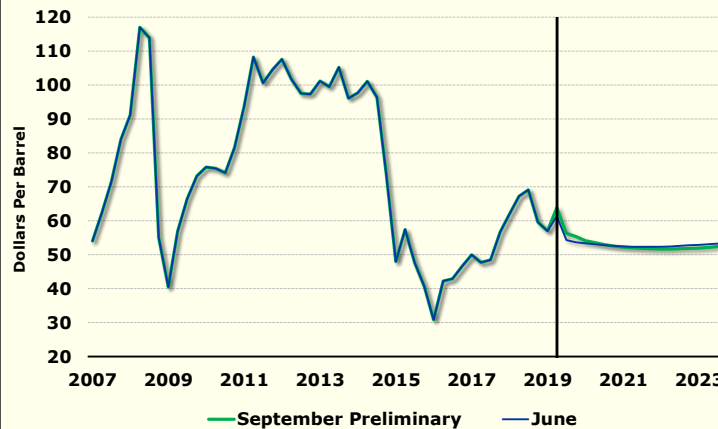


Source: IHS Markit, ERFC September 2019 preliminary forecast; data through 2018

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Oil prices are very similar to the June forecast



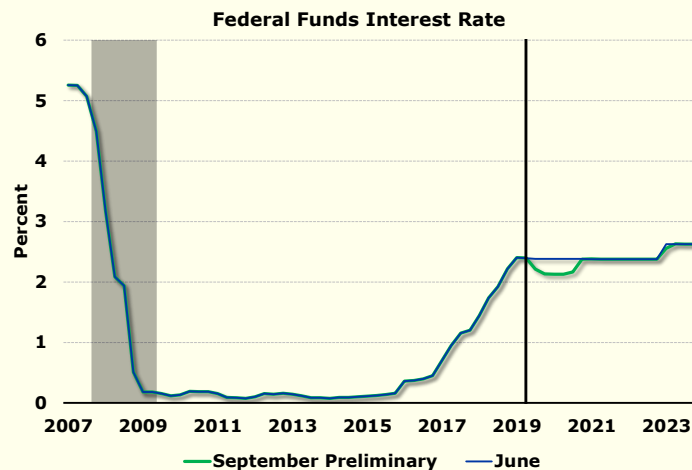
Economic Review
September 5, 2019
Slide 16

Source: Energy Information Administration, IHS Markit, ERFC; data through Q2 2019
Note: Vertical black line indicates last actual

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



The fed funds rate forecast is temporarily lower than in June



Economic Review
September 5, 2019

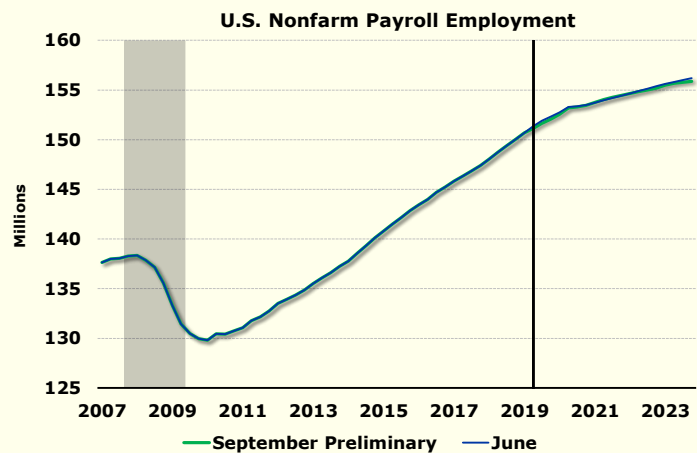
Slide 17

Source: ERFC September 2019 Preliminary forecast; historical data through Q2 2019

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



U.S. nonfarm payroll employment is close to the June forecast



Economic Review
September 5, 2019

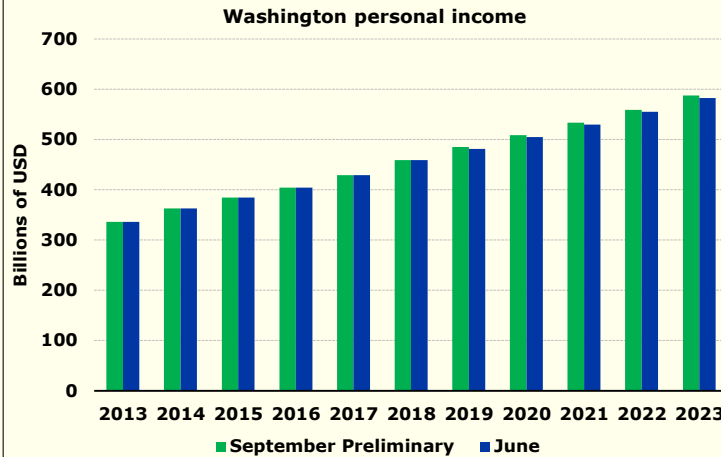
Slide 18

Source: IHS Markit, ERFC; data through Q2 2019
Note: Vertical black line indicates last actual

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



The WA personal income forecast is slightly higher than in the June forecast



Economic Review
September 5, 2019

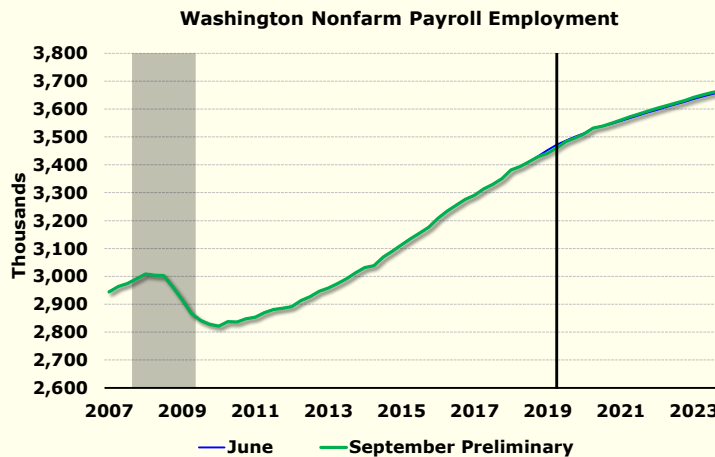
Slide 19

Source: ERFC September 2019 Preliminary forecast; historical data through 2018

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Washington employment forecast is nearly identical to June



Economic Review
September 5, 2019

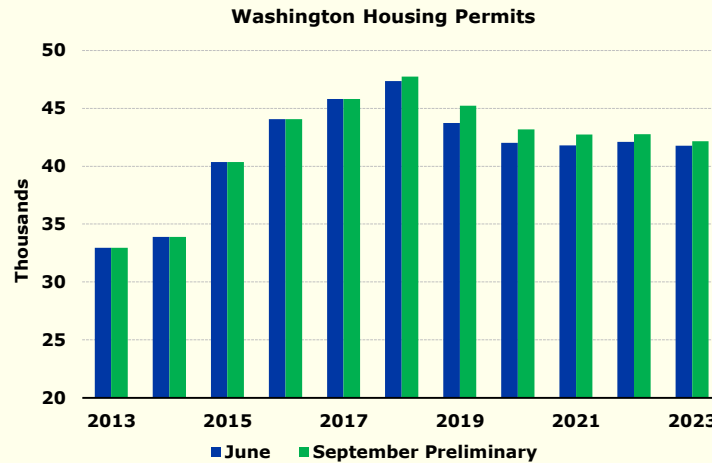
Slide 20

Source: ERFC September 2019 Preliminary forecast; historical data through Q2 2019

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Washington housing permits forecast is slightly higher than in June



Economic Review
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Source: ERFC September 2019 Preliminary forecast; historical data through 2018

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Rev Act collections still growing faster than personal income

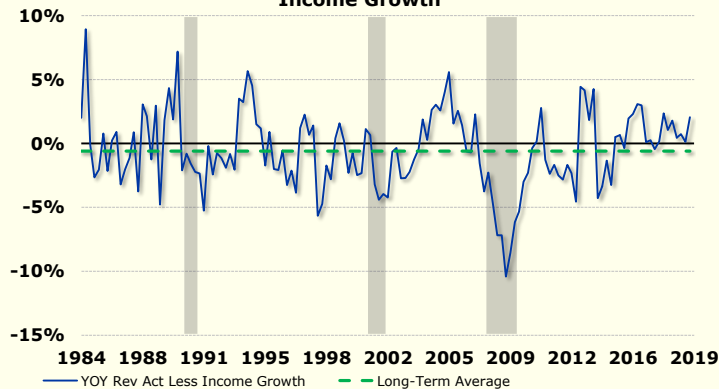
Adjusted Rev Act
growth YOY:

18Q3: 7.6%
18Q4: 7.4%
19Q1: 5.6%
19Q2: 8.1%

September
preliminary
personal income
YOY growth
estimates:

18Q3: 7.1%
18Q4: 6.7%
19Q1: 5.5%
19Q2: 6.0%

**Year-Over-Year Rev Act* Growth Less State Personal
Income Growth**



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*Adjusted for large one-time payments and refunds and payments under the amnesty program
Source: ERFC; Quarterly revenue data through Q2 2019, September 2019 preliminary income estimates

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



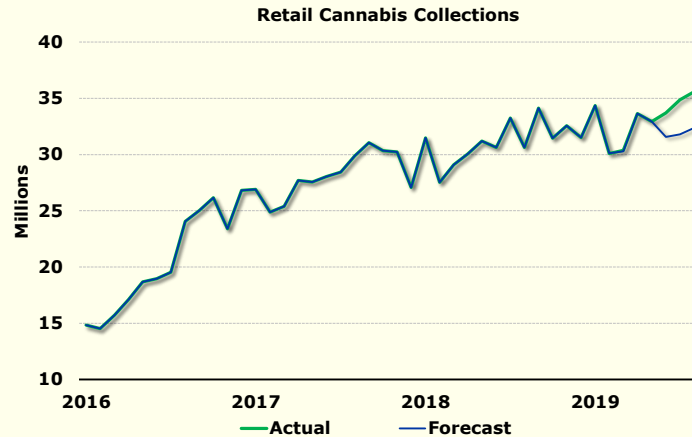
Cannabis revenue has been strong the past few months

Collections were 10.0% above forecast in August

Collections are 8.8% above forecast since June

Economic Review
September 5, 2019

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Source: LCB, ERFC June 2019 Forecast; data through August 2019

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



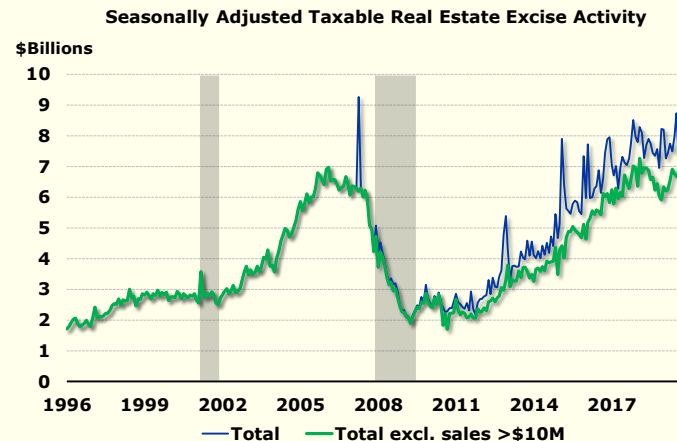
Taxable REET activity strong but leveling off/declining

Large commercial sales (>\$10 million) fell to \$600 million (preliminary) in August after a \$2 billion spike in July but could spike again to beat REET rate increase that takes effect January 1, 2020.

Residential sales are down from their May peak but still strong.

Economic Review
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Source: ERFC; Monthly data through August 2019 preliminary

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Revenue collections to date

Collections Variance Since June Forecast (June 11 – August 10, 2019) dollars in thousands

	<u>Estimate</u>	<u>Actual</u>	<u>Difference</u>	<u>Pct.</u>
Dept. of Revenue	\$3,421,755	\$3,528,701	\$106,946	3.1%
All other agencies	\$11,204	\$12,065	\$861	7.7%
Total GF-S	\$3,432,959	\$3,540,766	\$107,807	3.1%

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WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Conclusion

- The U.S. and Washington economic forecasts are very similar to June, with WA personal income and housing permits slightly stronger
- As has been the case for some time, Washington's economy is continuing to outperform the nation
- Threats to economic expansion include concerns about international trade and fiscal policy, geopolitical risks and a maturing expansion
- The next monthly revenue collection report will be available on September 17th and the revenue forecast will be presented on September 25th

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WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL



Questions

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September 5, 2019
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Economic & Revenue Forecast Council
PO BOX 40912
Olympia WA 98504-0912
www.ercf.wa.gov
360-534-1560

U.S. Economic Forecast Comparison

August 2019

	2019Q2	2019Q3	2019Q4	2020Q1	2018	2019	2020	2021	2022	2023
Real GDP, Percent Change, Annual Rate										
ERFC (September Preliminary)	2.1	2.2	2.1	1.8	2.9	2.4	1.8	1.7	1.9	2.0
IHS	2.1	1.9	2.2	2.5	2.9	2.3	2.3	2.1	1.8	1.6
Economy.com	2.1	1.9	2.0	1.9	2.9	2.3	1.7	2.1		
Blue Chip Average*		2.0	2.0	1.9		2.4	1.8	1.7	1.9	2.0
Blue Chip Top 10*		2.4	2.4	2.4		2.5	2.2	2.2	2.3	2.4
Blue Chip Bottom 10*		1.6	1.4	1.3		2.2	1.3	1.3	1.6	1.6
Real Consumption, Percent Change, Annual Rate										
ERFC (September Preliminary)	4.3	2.5	2.3	2.2	3.0	2.5	2.2	1.9	2.0	2.0
IHS	4.3	2.6	2.9	2.9	3.0	2.5	2.9	2.8	2.6	2.5
Economy.com	4.3	2.0	1.7	1.5	3.0	2.4	1.5	1.4		
Blue Chip Average*		2.5	2.2	2.0		2.5	2.2	1.9	2.0	2.0
Blue Chip Top 10*		3.0	2.7	2.5		2.7	2.6	2.3	2.5	2.5
Blue Chip Bottom 10*		1.9	1.5	1.5		2.3	1.7	1.4	1.7	1.6
Federal Funds Rate										
ERFC (September Preliminary)	2.4	2.2	2.1	2.1	1.8	2.3	2.2	2.4	2.4	2.6
IHS	2.4	2.2	2.1	2.1	1.8	2.3	2.2	2.4	2.4	2.6
Economy.com	2.4	2.2	1.9	1.7	1.8	2.2	1.7	1.9		
Three Month T-Bill Rate										
ERFC (September Preliminary)	2.3	2.1	2.1	2.1	1.9	2.2	2.1	2.2	2.1	2.4
IHS	2.3	2.1	2.1	2.1	1.9	2.2	2.1	2.2	2.1	2.4
Blue Chip Average*		2.1	1.9	1.9		2.2	1.8	2.5	2.6	2.7
Blue Chip Top 10*		2.2	2.2	2.1		2.3	2.1	3.2	3.3	3.2
Blue Chip Bottom 10*		1.9	1.8	1.6		2.1	1.4	1.6	1.7	2.0
10-Yr. T-Note Yield										
ERFC (September Preliminary)	2.3	2.1	2.2	2.4	2.9	2.3	2.5	2.9	3.2	3.3
IHS	2.3	2.1	2.3	2.4	2.9	2.3	2.6	3.0	3.2	3.3
Economy.com	2.3	2.1	2.3	2.6	2.9	2.4	2.7	3.2		
Blue Chip Average*		2.0	2.0	2.1		2.2	2.1	3.1	3.2	3.4
Blue Chip Top 10*		2.2	2.3	2.4		2.4	2.6	3.8	3.8	3.8
Blue Chip Bottom 10*		1.9	1.8	1.8		2.1	1.8	2.4	2.7	2.9
Consumer Price Index, Percent Change, Annual Rate										
ERFC (September Preliminary)	2.9	2.0	1.8	1.8	2.4	1.8	1.9	2.0	2.2	2.2
IHS	2.9	2.5	2.4	1.9	2.4	1.9	2.1	2.1	2.4	2.4
Economy.com	2.9	2.5	2.2	1.7	2.4	1.9	2.1	2.4		
Blue Chip Average*		1.9	2.0	2.1		1.8	2.1	2.2	2.2	2.2
Blue Chip Top 10*		2.6	2.7	2.6		2.0	2.5	2.6	2.6	2.6
Blue Chip Bottom 10*		1.2	1.0	1.6		1.7	1.7	1.9	1.9	1.9
Payroll Employment, Millions										
ERFC (September Preliminary)	151.1	151.7	152.1	152.6	149.1	151.4	153.1	154.1	154.9	155.7
Percent Change, Annual Rate	1.2	1.4	1.1	1.3	1.7	1.6	1.2	0.6	0.5	0.5
IHS	151.1	151.6	152.0	152.5	149.1	151.4	153.3	154.8	155.8	156.1
Percent Change, Annual Rate	1.2	1.3	1.1	1.3	1.7	1.5	1.3	1.0	0.6	0.2
Economy.com	151.1	151.6	152.0	152.4	149.1	151.4	152.7	152.7		
Percent Change, Annual Rate	1.2	1.3	1.1	0.9	1.7	1.5	0.9	0.0		
Unemployment Rate, Percent										
ERFC (September Preliminary)	3.6	3.6	3.5	3.5	3.9	3.6	3.5	3.6	3.8	3.9
IHS	3.6	3.6	3.5	3.5	3.9	3.7	3.4	3.3	3.5	3.9
Economy.com	3.6	3.5	3.5	3.6	3.9	3.6	3.7	4.2		
Blue Chip Average*		3.6	3.6	3.6		3.7	3.6	4.1	4.2	4.3
Blue Chip Top 10*		3.7	3.7	3.8		3.7	4.0	4.9	5.0	4.9
Blue Chip Bottom 10*		3.6	3.5	3.4		3.6	3.4	3.5	3.6	3.7
Real Disposable Personal Income, Percent Change, Annual Rate										
ERFC (September Preliminary)	2.5	2.3	2.3	2.9	4.0	3.1	2.5	2.4	2.3	2.3
IHS	2.5	2.0	1.9	3.0	4.0	3.0	2.6	2.7	2.2	2.1
Blue Chip Average*		2.3	2.2	2.2		2.8	2.1	1.8	2.0	2.1
Blue Chip Top 10*		3.1	3.0	2.9		3.3	2.7	2.2	2.4	2.4
Blue Chip Bottom 10*		1.6	1.5	1.6		3.0	1.7	1.4	1.7	1.7
West Texas Intermediate										
ERFC (September Preliminary)	59.8	56.0	55.5	54.5	64.9	56.5	53.4	51.6	51.2	51.7
IHS	59.8	60.1	63.6	63.0	64.9	59.6	60.1	59.3	62.5	65.7
Economy.com	60.0	59.1	62.0	62.5	64.8	58.9	61.7	61.3		

* Forecasts beyond 2020 are from the March 2019 Blue Chip Economic Indicators

U.S. Forecast Comparison

	2019Q2	2019Q3	2019Q4	2020Q1
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Real GDP (Billions of 2012 Dollars)

September Forecast, Preliminary	19,024	19,128	19,226	19,313
Percent Change	2.1%	2.2%	2.1%	1.8%
June Forecast	18,984	19,076	19,167	19,256
Percent Change	1.6%	2.0%	1.9%	1.9%

Real Consumption (Billions of 2012 Dollars)

September Forecast, Preliminary	13,241	13,323	13,398	13,470
Percent Change	4.3%	2.5%	2.3%	2.2%
June Forecast	13,161	13,232	13,303	13,377
Percent Change	2.7%	2.2%	2.2%	2.3%

PCE Price Index (2012=100)

September Forecast, Preliminary	109.5	110.0	110.5	111.0
Percent Change	2.3%	1.9%	1.8%	1.8%
June Forecast	109.6	110.1	110.6	111.1
Percent Change	2.5%	1.7%	1.6%	1.9%

Real Personal Income (Billions of 2012 Dollars)

September Forecast, Preliminary	16,982	17,087	17,184	17,306
Percent Change	3.0%	2.5%	2.3%	2.9%
June Forecast	16,575	16,679	16,791	16,907
Percent Change	1.9%	2.5%	2.7%	2.8%

Nonfarm Payroll Employment (Millions)

September Forecast, Preliminary	151.1	151.7	152.1	152.6
Percent Change	1.2%	1.4%	1.1%	1.3%
June Forecast	151.4	151.9	152.3	152.7
Percent Change	1.8%	1.5%	1.1%	1.1%

Unemployment Rate (Percent of Labor Force)

September Forecast, Preliminary	3.6	3.6	3.5	3.5
June Forecast	3.6	3.5	3.5	3.5

Oil Price, Refiner's Acquisition

September Forecast, Preliminary	63.9	56.2	55.3	54.1
June Forecast	61.4	54.3	53.6	53.3

30 Year Fixed Mortgage Rate (Percent, average)

September Forecast, Preliminary	4.0	3.8	4.0	4.1
June Forecast	4.1	4.0	4.0	4.1

3 Month T-Bill Rate (Percent, average)

September Forecast, Preliminary	2.3	2.1	2.1	2.1
June Forecast	2.4	2.4	2.3	2.3

2017	2018	2019	2020	2021	2022	2023
------	------	------	------	------	------	------

18,108	18,638	19,076	19,428	19,758	20,133	20,536
2.4%	2.9%	2.4%	1.8%	1.7%	1.9%	2.0%
18,051	18,566	19,034	19,376	19,706	20,080	20,482
2.2%	2.9%	2.5%	1.8%	1.7%	1.9%	2.0%

12,567	12,945	13,266	13,558	13,816	14,092	14,374
2.6%	3.0%	2.5%	2.2%	1.9%	2.0%	2.0%
12,559	12,888	13,193	13,469	13,725	13,999	14,279
2.5%	2.6%	2.4%	2.1%	1.9%	2.0%	2.0%

105.9	108.1	109.7	111.8	113.9	116.2	118.4
1.8%	2.1%	1.5%	1.9%	1.9%	2.0%	2.0%
106.1	108.2	109.8	111.8	114.0	116.2	118.4
1.8%	2.0%	1.5%	1.8%	1.9%	1.9%	1.9%

15,933	16,477	17,027	17,464	17,871	18,277	18,734
2.9%	3.4%	3.3%	2.6%	2.3%	2.3%	2.5%
15,867	16,233	16,636	17,071	17,491	17,915	18,356
2.6%	2.3%	2.5%	2.6%	2.5%	2.4%	2.5%

146.6	149.1	151.4	153.1	154.1	154.9	155.7
1.6%	1.7%	1.6%	1.2%	0.6%	0.5%	0.5%
146.6	149.1	151.6	153.2	154.1	155.0	155.9
1.6%	1.7%	1.7%	1.1%	0.6%	0.6%	0.6%

4.4	3.9	3.6	3.5	3.6	3.8	3.9
4.4	3.9	3.6	3.6	3.8	3.9	4.0

50.7	64.5	58.1	53.3	51.9	51.7	52.3
50.7	64.5	56.6	52.9	52.3	52.5	53.2

4.0	4.5	4.1	4.2	4.6	4.8	4.9
4.0	4.5	4.1	4.3	4.6	4.7	4.8

0.9	1.9	2.2	2.1	2.2	2.1	2.4
0.9	1.9	2.4	2.2	2.2	2.1	2.4

Washington Forecast Comparison

	2019Q2	2019Q3	2019Q4	2020Q1
Real Personal Income (Billions of 2012 Dollars)				
September Forecast, Preliminary	440.5	444.1	446.7	450.1
Percent Change	3.6%	3.3%	2.4%	3.1%
June Forecast	436.2	439.1	442.5	446.0
Percent Change	1.6%	2.6%	3.2%	3.2%
Personal Income (Billions of Dollars)				
September Forecast, Preliminary	482.4	488.7	493.8	499.8
Percent Change	6.0%	5.3%	4.2%	5.0%
June Forecast	478.3	483.5	489.2	495.4
Percent Change	4.1%	4.4%	4.8%	5.2%
Disposable Personal Income (Billions of Dollars)				
September Forecast, Preliminary	430.7	436.2	440.8	446.3
Percent Change	6.3%	5.2%	4.3%	5.1%
June Forecast	424.9	429.6	434.7	440.2
Percent Change	3.6%	4.5%	4.9%	5.2%
Nonfarm Payroll Employment (Thousands)				
September Forecast, Preliminary	3461	3483	3497	3511
Percent Change	2.3%	2.6%	1.5%	1.6%
June Forecast	3472	3487	3501	3514
Percent Change	2.2%	1.8%	1.6%	1.5%
Unemployment Rate (Percent of Labor Force)				
September Forecast, Preliminary	4.6	4.6	4.5	4.6
June Forecast	4.7	4.6	4.5	4.6
Manufacturing Employment (Thousands)				
September Forecast, Preliminary	294.4	296.3	296.3	296.7
Percent Change	0.8%	2.7%	0.0%	0.4%
June Forecast	292.1	292.1	292.8	293.0
Percent Change	-0.1%	-0.1%	1.0%	0.3%
Construction Employment (Thousands)				
September Forecast, Preliminary	218.1	217.2	216.7	215.3
Percent Change	3.8%	-1.6%	-1.0%	-2.6%
June Forecast	223.5	222.4	221.9	220.6
Percent Change	4.8%	-2.0%	-0.8%	-2.3%
Housing Permits (Thousands)				
September Forecast, Preliminary	48.6	45.4	43.2	42.9
Percent Change	52.3%	-23.8%	-18.2%	-2.6%
June Forecast	48.0	41.6	41.6	41.7
Percent Change	44.6%	-43.5%	-0.2%	1.5%

	2017	2018	2019	2020	2021	2022	2023
	404.8	424.2	442.0	455.2	468.0	481.0	496.0
	4.2%	4.8%	4.2%	3.0%	2.8%	2.8%	3.1%
	404.2	423.8	438.1	451.3	464.5	477.6	491.8
	4.2%	4.9%	3.4%	3.0%	2.9%	2.8%	3.0%
	428.8	458.8	485.0	508.9	533.3	558.8	587.5
	6.1%	7.0%	5.7%	4.9%	4.8%	4.8%	5.1%
	428.8	458.7	481.1	504.7	529.4	554.9	582.4
	6.1%	7.0%	4.9%	4.9%	4.9%	4.8%	5.0%
	380.3	410.0	433.0	454.7	477.2	500.2	525.0
	6.0%	7.8%	5.6%	5.0%	4.9%	4.8%	5.0%
	380.3	408.5	427.6	448.5	470.7	493.1	516.7
	6.0%	7.4%	4.7%	4.9%	4.9%	4.8%	4.8%
	3321	3404	3470	3533	3577	3617	3655
	2.4%	2.5%	1.9%	1.8%	1.3%	1.1%	1.0%
	3321	3405	3478	3533	3573	3612	3649
	2.4%	2.5%	2.2%	1.6%	1.1%	1.1%	1.0%
	4.7	4.5	4.6	4.6	4.6	4.8	4.9
	4.7	4.5	4.6	4.6	4.8	4.9	4.9
	284.2	287.5	295.2	294.6	292.2	293.5	296.7
	-2.1%	1.2%	2.7%	-0.2%	-0.8%	0.5%	1.1%
	284.2	287.5	292.3	292.2	292.1	293.5	296.3
	-2.1%	1.2%	1.7%	0.0%	0.0%	0.5%	0.9%
	199.8	213.4	217.0	214.4	211.8	210.7	210.5
	7.0%	6.8%	1.7%	-1.2%	-1.2%	-0.5%	-0.1%
	199.8	213.4	222.2	219.8	217.6	216.9	217.3
	7.0%	6.8%	4.1%	-1.0%	-1.0%	-0.3%	0.2%
	45.8	47.7	45.2	43.2	42.7	42.8	42.2
	3.9%	4.3%	-5.2%	-4.5%	-1.0%	0.1%	-1.4%
	45.8	47.4	43.7	42.0	41.8	42.1	41.8
	3.9%	3.4%	-7.7%	-3.9%	-0.5%	0.7%	-0.8%

U.S. Forecast Comparison				Fiscal Years		
	2018	2019	2020	2021	2022	2023
Real GDP						
Billions of 2012 dollars						
September Preliminary Forecast	18,381	18,867	19,265	19,587	19,939	20,334
Growth	2.8%	2.6%	2.1%	1.7%	1.8%	2.0%
June Forecast	18,295	18,830	19,209	19,538	19,885	20,281
Growth	2.6%	2.9%	2.0%	1.7%	1.8%	2.0%
Difference in level	86	37	56	49	54	54
<i>Difference in growth forecast</i>	<i>0.3%</i>	<i>-0.3%</i>	<i>0.1%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Real Consumption						
Billions of 2012 dollars						
September Preliminary Forecast	12,752	13,108	13,432	13,680	13,954	14,232
Growth	2.8%	2.8%	2.5%	1.8%	2.0%	2.0%
June Forecast	12,714	13,056	13,339	13,592	13,861	14,139
Growth	2.5%	2.7%	2.2%	1.9%	2.0%	2.0%
Difference in level	38	52	93	87	93	94
<i>Difference in growth forecast</i>	<i>0.3%</i>	<i>0.1%</i>	<i>0.3%</i>	<i>-0.1%</i>	<i>0.0%</i>	<i>0.0%</i>
PCE Price Index						
2012 = 100						
September Preliminary Forecast	107.0	108.9	110.8	112.9	115.0	117.3
Growth	1.9%	1.7%	1.7%	1.9%	1.9%	2.0%
June Forecast	107.2	109.0	110.8	112.9	115.1	117.3
Growth	1.9%	1.7%	1.7%	1.9%	1.9%	1.9%
Difference in level	-0.1	-0.1	0.0	0.0	0.0	0.0
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.1%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Unemployment Rate						
Percent of Labor Force						
September Preliminary Forecast	4.1%	3.8%	3.5%	3.6%	3.7%	3.9%
June Forecast	4.1%	3.8%	3.5%	3.7%	3.9%	3.9%
<i>Difference in forecast</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>-0.1%</i>	<i>-0.2%</i>	<i>-0.1%</i>
30 Year Fixed Mortgage Rate						
Annual Average						
September Preliminary Forecast	4.2%	4.4%	4.0%	4.4%	4.7%	4.8%
June Forecast	4.2%	4.5%	4.1%	4.4%	4.7%	4.8%
<i>Difference in forecast</i>	<i>0.0%</i>	<i>0.0%</i>	<i>-0.1%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.1%</i>
3 Month T-Bill Rate						
Annual Average						
September Preliminary Forecast	1.4%	2.3%	2.1%	2.1%	2.1%	2.3%
June Forecast	1.4%	2.3%	2.3%	2.2%	2.1%	2.3%
<i>Difference in forecast</i>	<i>0.0%</i>	<i>0.0%</i>	<i>-0.2%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>

Washington Forecast Comparison

Fiscal Years

2018 2019 2020 2021 2022 2023

Real Personal Income

Billions of 2012 dollars

September Preliminary Forecast	414.5	433.3	448.7	461.7	474.3	488.4
<i>Growth</i>	4.6%	4.5%	3.6%	2.9%	2.7%	3.0%
June Forecast	414.3	431.3	444.4	458.1	471.0	484.6
<i>Growth</i>	4.7%	4.1%	3.0%	3.1%	2.8%	2.9%
Difference in level	0.2	2.0	4.3	3.6	3.3	3.7
<i>Difference in growth forecast</i>	-0.1%	0.4%	0.5%	-0.2%	-0.1%	0.1%

Nominal Personal Income

Billions of dollars

September Preliminary Forecast	443.7	471.8	497.1	521.1	545.7	572.8
<i>Growth</i>	6.6%	6.3%	5.4%	4.8%	4.7%	5.0%
June Forecast	444.0	470.0	492.5	517.1	542.0	568.5
<i>Growth</i>	6.7%	5.9%	4.8%	5.0%	4.8%	4.9%
Difference in level	-0.3	1.8	4.6	4.0	3.7	4.4
<i>Difference in growth forecast</i>	-0.1%	0.5%	0.6%	-0.2%	-0.1%	0.1%

Nonfarm Payroll Employment

Thousands

September Preliminary Forecast	3,363.9	3,435.7	3,505.5	3,555.4	3,597.6	3,636.5
<i>Growth</i>	2.4%	2.1%	2.0%	1.4%	1.2%	1.1%
June Forecast	3,363.9	3,442.0	3,508.5	3,552.7	3,592.6	3,631.1
<i>Growth</i>	2.4%	2.3%	1.9%	1.3%	1.1%	1.1%
Difference in level	0.0	-6.3	-3.1	2.7	5.0	5.4
<i>Difference in growth forecast</i>	0.0%	-0.2%	0.1%	0.2%	0.1%	0.0%

Housing Permits

Units Authorized, Thousands

September Preliminary Forecast	48.8	46.0	43.7	43.0	42.9	42.4
<i>Growth</i>	9.6%	-5.6%	-5.2%	-1.5%	-0.1%	-1.3%
June Forecast	48.6	45.7	41.7	42.0	42.0	42.0
<i>Growth</i>	9.2%	-6.0%	-8.7%	0.6%	0.2%	-0.2%
Difference in level	0.2	0.3	2.0	1.0	0.9	0.4
<i>Difference in growth forecast</i>	0.5%	0.3%	3.6%	-2.1%	-0.3%	-1.1%

Year-Over-Year Employment Growth by Industry (June 2018 to June 2019) Washington vs. U.S.

	Washington		U.S.
	(000)	% Chg.	% Chg.
Total	68.4	2.0%	1.5%
Electronic Shopping and Mail-Order Houses	5.4	10.0%	1.3%
Software Publishers	5.2	7.9%	6.0%
Aerospace Product and Parts Manufacturing	5.9	7.1%	6.0%
Information Excluding Software	3.5	5.1%	-0.8%
Other Services	4.6	3.7%	1.4%
Education and Health Services	13.9	2.8%	2.5%
Professional and Business Services	11.3	2.6%	2.2%
Construction	5.3	2.5%	3.0%
Leisure and Hospitality	8.3	2.4%	2.2%
Wholesale Trade	2.4	1.7%	1.7%
Manufacturing Excluding Aerospace	2.9	1.4%	1.9%
Transportation, Warehousing and Utilities	0.6	0.5%	2.6%
State and Local Gov Non-Education	0.4	0.2%	0.7%
Financial Activities	-0.2	-0.1%	1.1%
State and Local Gov Education	-1.4	-0.5%	-0.1%
Mining and Logging	-0.4	-5.7%	3.0%
Information	8.6	6.5%	-0.1%
Manufacturing	8.8	3.1%	1.3%
Retail Trade	3.7	1.0%	-0.3%

Source: WA State ERFC Kalman filtered data, U.S. Bureau of Labor Statistics

Washington Exports By Industry

All Industries

Millions of Dollars

Ranked by 2019 Q2 Exports

	2012	2013	2014	2015	2016	2017	2018	2018 Q2	2019 Q2	12-13 % Chg	13-14 % Chg	14-15 % Chg	15-16 % Chg	16-17 % Chg	17-18 % Chg	18Q2 -19Q2 % Chg
Total All Industries	75,654	81,630	90,558	86,375	79,553	76,414	77,700	19,414	14,049	7.9	10.9	-4.6	-7.9	-3.9	1.7	-27.6
Transportation Equipment	38,128	44,067	51,848	54,180	47,892	43,348	42,849	10,401	6,047	15.6	17.7	4.5	-11.6	-9.5	-1.1	-41.9
Total Excluding Transportation Equip.	37,526	37,563	38,710	32,194	31,662	33,066	34,851	9,012	8,003	0.1	3.1	-16.8	-1.7	4.4	5.4	-11.2
Agricultural Products	12,018	10,375	11,639	9,457	10,190	10,481	10,778	2,985	2,315	-13.7	12.2	-18.8	7.8	2.8	2.8	-22.4
Total Excluding Trans. Equip. and Ag.	25,508	27,188	27,070	22,737	21,471	22,585	24,073	6,027	5,687	6.6	-0.4	-16.0	-5.6	5.2	6.6	-5.6
Computer And Electronic Products	3,724	3,706	3,919	3,839	3,844	4,243	4,420	1,104	1,005	-0.5	5.7	-2.0	0.1	10.4	4.2	-9.0
Food And Kindred Products	3,324	3,458	3,526	3,303	3,119	3,156	3,605	980	871	4.0	2.0	-6.3	-5.6	1.2	14.2	-11.1
Machinery, Except Electrical	2,305	2,467	2,379	2,123	1,937	2,086	2,224	583	666	7.0	-3.6	-10.8	-8.8	7.7	6.6	14.3
Petroleum And Coal Products	3,866	4,767	4,290	2,362	2,078	1,845	2,176	430	493	23.3	-10.0	-44.9	-12.0	-11.2	17.9	14.6
Electrical Equipment, Appliances, And Componen	846	891	1,254	1,141	1,020	1,219	1,333	346	305	5.2	40.8	-9.0	-10.6	19.4	9.4	-11.7
Paper	1,234	1,218	1,200	1,133	1,081	1,147	1,154	278	276	-1.3	-1.5	-5.6	-4.7	6.2	0.5	-0.8
Primary Metal Manufacturing	1,505	1,540	1,457	1,203	952	1,035	876	230	218	2.3	-5.4	-17.4	-20.9	8.7	-15.4	-5.3
Chemicals	1,287	1,111	1,204	999	1,012	1,070	1,044	275	252	-13.6	8.4	-17.1	1.3	5.7	-2.5	-8.3
Fish, Fresh, Chilled, Or Frozen And Other Marine	1,074	1,121	1,098	1,012	937	1,121	1,064	237	216	4.4	-2.1	-7.8	-7.4	19.5	-5.0	-8.8
Forestry Products, Nesoi	742	1,081	1,030	691	704	772	727	188	117	45.8	-4.7	-32.9	1.8	9.6	-5.7	-37.6
Miscellaneous Manufactured Commodities	908	1,092	1,232	964	827	847	893	192	179	20.3	12.8	-21.7	-14.2	2.4	5.5	-6.8
Oil And Gas	172	216	248	311	300	440	592	166	116	25.8	14.8	25.5	-3.5	46.6	34.6	-30.3
Waste And Scrap	1,062	882	805	611	529	648	794	228	188	-16.9	-8.8	-24.1	-13.3	22.5	22.5	-17.9
Wood Products	696	846	779	631	619	584	600	169	130	21.5	-7.9	-18.9	-2.0	-5.6	2.7	-23.3
Fabricated Metal Products, Nesoi	557	579	591	535	712	529	700	182	188	4.0	2.1	-9.5	33.0	-25.8	32.5	3.1
Plastics And Rubber Products	370	379	386	395	373	381	423	111	112	2.4	2.1	2.2	-5.6	2.3	10.8	0.4
Livestock And Livestock Products	351	415	226	310	181	195	57	11	8	18.3	-45.5	37.1	-41.6	7.8	-70.9	-27.5
Minerals And Ores	351	268	283	113	159	265	290	44	80	-23.5	5.4	-60.0	40.8	66.5	9.4	81.0
Nonmetallic Mineral Products	260	253	234	218	213	208	225	63	58	-2.7	-7.3	-6.8	-2.4	-2.4	8.2	-7.3
Used Or Second-Hand Merchandise	249	213	162	122	200	152	172	41	34	-14.4	-23.8	-24.7	63.3	-24.1	13.2	-15.3
Furniture And Fixtures	192	167	172	152	132	141	167	43	39	-13.0	2.8	-11.8	-13.1	7.0	18.8	-9.0
Beverages And Tobacco Products	96	143	180	117	157	112	105	26	27	49.0	26.0	-34.8	33.3	-28.3	-6.6	2.3
Special Classification Provisions, Nesoi	83	95	112	162	100	94	121	27	29	14.3	17.6	44.5	-38.4	-5.7	28.8	11.1
Printing, Publishing And Similar Products	69	68	70	67	69	83	83	21	25	-1.1	2.4	-3.8	2.7	20.1	0.6	18.9
Textile Mill Products	74	80	82	69	66	68	77	18	19	8.2	2.3	-15.8	-4.1	2.7	12.8	7.0
Textiles And Fabrics	51	51	54	60	53	53	57	15	11	1.1	5.1	11.8	-12.3	0.0	8.4	-22.2
Apparel And Accessories	26	37	48	46	58	52	57	10	14	42.0	28.3	-4.7	26.4	-9.4	8.4	42.1
Leather And Allied Products	27	32	38	37	32	33	33	8	9	19.2	17.8	-2.3	-12.8	3.9	-1.5	8.2
Goods Returned To Canada (Exports Only); U.S.	8	10	11	8	7	5	4	1	1	25.7	11.5	-24.9	-11.0	-25.7	-22.0	18.7