

The background of the cover is a photograph of the Washington State Capitol building. The building is a large, classical-style structure with a prominent central dome and a portico supported by several columns. The scene is framed by the branches of cherry blossom trees in full bloom, with white flowers and green leaves visible in the foreground and around the building. The sky is a clear, light blue.

# **Washington State Economic and Revenue Forecast**

November 2018  
Volume XLI, No. 4



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# **Washington State Economic and Revenue Forecast**

Prepared by the  
Economic and Revenue Forecast Council

November 2018  
Volume XLI, No. 4

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# Preface

## **ERFC forecasting structure and schedule**

The Economic and Revenue Forecast Council is required by Chapter 231, Section 34, Laws of 1992 (RCW 82.33.020) to prepare a quarterly state economic and revenue forecast and submit it to the Forecast Council. This report presents the state's economic and General Fund-State revenue forecast. It is issued four times a year. The Washington State GF-S revenue forecast is prepared quarterly in conjunction with the state economic forecast for the Economic and Revenue Forecast Council. The Council consists of six members, two appointed by the Governor and four appointed by the Legislature – one from each caucus of the Senate and House of Representatives. Current members of the Economic and Revenue Forecast Council are listed inside the front cover of this publication. The GF-S revenue forecast is updated four times per year: March (February in even-numbered years), June, September, and November. The staff of the Economic and Revenue Forecast Council is responsible for the preparation of the state's economic forecast and the forecast of the Department of Revenue's GF-S revenue sources as well as GF-S revenue from fines and forfeitures collected by the Administrative Office of the Courts. The staff is also responsible for review and coordination of the revenue forecasts of other agencies that collect relatively large amounts of GF-S revenue. These are the Department of Licensing, the Office of the Insurance Commissioner, the Lottery Commission, the State Treasurer, the Liquor and Cannabis Board and the Office of Financial Management. The Office of Financial Management is responsible for summarizing the forecasts of all other state agencies that collect relatively smaller amounts of GF-S revenue.

## **Forecast Procedure**

For each quarterly update, the staff of the Economic and Revenue Forecast Council, under the direction of the Executive Director, reviews (and if warranted, modifies) a national economic forecast prepared by Global Insight, Inc. A state economic forecast is then prepared using an econometric model that links Washington's economy to the national economy. After review by forecast workgroups; the Governor's Council of Economic Advisors; and the Economic and Revenue Forecast Council, this state economic forecast (updated for newly released data) is used to prepare a baseline revenue forecast for GF-S and the related funds. The forecasts are based on current law and administrative practices and do not reflect pending legal challenges to GF-S receipts until they are resolved. Additionally, at least two alternative forecasts are prepared for all GF-S and related fund sources and presented to the Forecast Council for approval. Once the Council approves the forecast, it becomes the official forecast of GF-S and related fund revenues.

Data in this publication are accurate through November 28, 2018.

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## Executive Summary

- **The national economy is expanding at a solid pace. Real GDP rose 3.5% (SAAR) in the third quarter after growing 4.2% (SAAR) in the second quarter.**
- **The forecast for real GDP growth is unchanged since the previous forecast. Real GDP growth in 2018 and 2019 is 2.9% and 2.6%. Growth remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.**
- **Washington's unemployment rate reached a new all-time low in October.**
- **The comprehensive revision of personal income raised the level of Washington personal income throughout the forecast.**
- **Lower oil prices will result in a decline in Seattle inflation.**
- **General Fund-State (GF-S) revenue collections since the September 2018 forecast have come in \$22 million over the forecasted amount.**
- **Forecasted GF-S revenue has increased by \$118 million in the current biennium, \$189 million in the 2019-21 biennium and \$201 million in the 2021-23 biennium.**
- **Most of the forecasted increase in revenue was due to an increase in the expected value of existing property for the 2019 property tax levy, which carried forward into future levies.**
- **Due to a decrease in the expected growth rate of state personal income and other changes to the economic forecast, forecasted Revenue Act and real estate excise taxes decreased slightly in the 2019-21 and 2021-23 biennia.**
- **Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$163 million in the current biennium, \$196 million in the 2019-21 biennium and \$209 million in the 2021-23 biennium.**

## U.S. Economic Forecast

*The national economy is expanding at a solid pace*

The national economy is expanding at a solid pace. Real GDP rose 3.5% (SAAR) in the third quarter after growing 4.2% in the second quarter. Job gains have remained solid even as the economy is at full employment. The unemployment rate has fallen to below 4%. Consumer and business confidence remain at cyclical highs. Oil prices have started to decline again. Monetary policy has remained steady although there is uncertainty surrounding fiscal policy. The manufacturing sector is strong.

Exports have rebounded, although they are expected to slow over the next two quarters. On the downside, the housing market recovery remains slow. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

*The economic outlook is similar to September*

The economic outlook is similar to the September forecast. As in September, the November Blue Chip forecast for real GDP growth in 2018 and 2019 is 2.9% and 2.6%. The Blue Chip long-range forecast has not been updated since June and remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.

## **Washington Economic Forecast**

*The Washington economy is expanding at a rapid pace*

The Washington economy is expanding at a rapid pace. Washington's unemployment rate reached a new all-time low in October. Seattle home prices and Washington housing construction have weakened. Washington manufacturing activity and export growth remain positive. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*The Washington forecast is very similar to the September forecast*

The Washington forecast is very similar to the September forecast. We expect 2.7% Washington employment growth this year compared to 2.9% in the September forecast. We expect employment growth to average 1.3% per year in 2019 through 2023, which is slightly higher than the 1.2% average growth in the September forecast. Our forecast for nominal personal income growth this year is 6.9%, up from 6.6% in the September forecast. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.8% per year compared to 4.9% per year in the September forecast. We expect 43,700 housing units authorized by building permits this year compared to 43,800 in the September forecast. We expect permits to average 42,300 in 2019 through 2023, down from 42,800 in the September forecast. As in September, we expect the all-items Seattle CPI to rise 3.0% this year. We expect Seattle area inflation will average 2.1% per year in 2019 through 2023, down slightly from 2.2% in the September forecast.

## **Revenue Forecast**

*The revenue forecast has increased mainly due to higher assessed values for property tax.*

Since the September 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$22 million higher than forecasted. This surplus, however, came mainly from higher-than-expected transfers of unclaimed property into the GF-S. Revenue Act taxes, the main source of GF-S revenue, came in \$25 million lower than forecasted. Because of this shortfall, plus lower forecasted growth in state personal income and other changes to the economic forecast, expected revenue from Revenue Act sources has been decreased slightly in the 2019-21 and 2021-23 biennia. These decreases, however, were outweighed by increases in forecasted property tax revenues

that resulted from an increase in the expected value of existing property for the 2019 property tax levy. This increased value will carry forward into future levies, increasing expected taxes in those years as well.

*GF-S forecast  
change by  
biennium  
(millions):*

17-19: +\$118  
19-21: +\$189  
21-23: +\$201

For the current biennium, GF-S revenue sources that are tracked monthly came in \$22.2 million higher than forecasted in September. Changes to the economic forecast resulted in a \$96.3 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$118.5 million in the current 2017-19 biennium. Changes to the economic forecast resulted in increases of \$189.1 million to projected collections for the 2019-21 biennium and \$201.1 million for the 2021-23 biennium. The November 2018 forecast for GF-S revenue totals \$43,926.1 million in the 2017-19 biennium, \$49,063.9 million in the 2019-21 biennium and \$52,777.6 million in the 2021-23 biennium.

*Near GF-S  
forecast change  
by biennium  
(millions):*

17-19: +\$163  
19-21: +\$196  
21-23: +\$209

Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$163 million in the current biennium, \$196 million in the 2019-21 biennium and \$209 million in the 2021-23 biennium. The November 2018 forecast for Near GF-S revenue totals \$45,799.3 million in the 2017-19 biennium, \$50,001.8 million in the 2019-21 biennium and \$53,794.5 million in the 2021-23 biennium.

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## Chapter 1: U.S. Economy – Current Conditions and Forecast

- **The national economy is expanding at a solid pace. Real GDP rose 3.5% (SAAR) in the third quarter after growing 4.2% (SAAR) in the second quarter.**
- **Employment growth has been solid and the unemployment rate is low.**
- **Consumer confidence remains high.**
- **The manufacturing sector is strong while the construction sector has stalled.**
- **U.S. oil production is at an all-time high; oil prices are declining.**
- **Inflation has leveled off.**
- **The forecast for real GDP growth is unchanged since the previous forecast. Real GDP growth in 2018 and 2019 is 2.9% and 2.6%. Growth remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.**
- **Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A slowdown in global growth is the major downside risk.**

### Current Conditions

*The national economy is expanding at a solid pace*

The national economy is expanding at a solid pace. Real GDP rose 3.5% (SAAR) in the third quarter after growing 4.2% in the second quarter. Job gains have remained solid even as the economy is at full employment. The unemployment rate has fallen to below 4%. Consumer and business confidence remain at cyclical highs. Oil prices have started to decline again. Monetary policy has remained steady although there is uncertainty surrounding fiscal policy. The manufacturing sector is strong. Exports have rebounded, although they are expected to slow over the next two quarters. On the downside, the housing market recovery remains slow. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

*U.S. real GDP rose 3.5% (SAAR) in the third quarter*

U.S. real GDP rose 3.5% (SAAR) in the third quarter of 2018 after growing 4.2% (SAAR) in the second quarter. Third quarter growth was not as widespread as the quarter before. Inventories accounted for much of the growth, contributing 2.27 points to

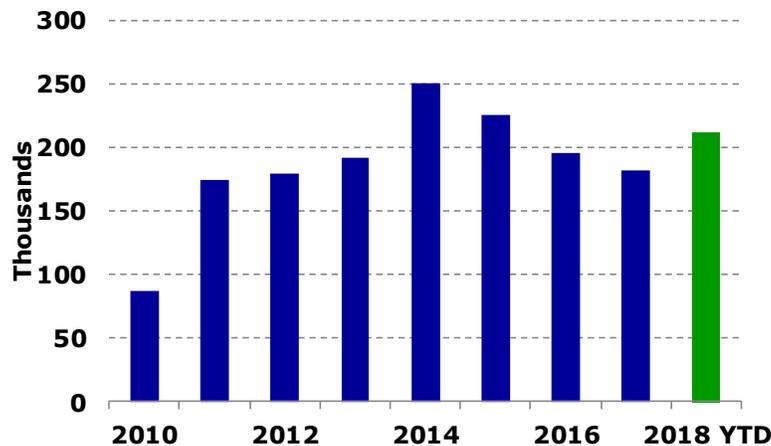
headline GDP growth. Consumer spending was again strong, growing 3.6% (SAAR) after second quarter growth of 3.8% (SAAR). The contribution from consumer spending to overall growth was 2.45 points. Fixed investment slowed, growing 1.4% (SAAR) and adding 0.25 percentage points to GDP growth. Nonresidential investment remained positive while residential investment declined. Final sales increased just 1.2% (SAAR). Government spending was positive with growth at the national, state and local levels. Net exports retreated in the third quarter subtracting 1.91 points from GDP growth. Real disposable income growth improved to 2.4% (SAAR) from 1.8% (SAAR) in the second quarter.

*Employment growth has remained solid*

The trend in employment growth remains solid. Nonfarm payrolls increased 250,000 in October, after a hurricane reduced job gains to 118,000 in September. So far this year, the U.S. economy is averaging 213,000 net new jobs per month, up from 182,000 for 2017 (see Figure 1.1). The goods-producing sector remains strong, increasing by 67,000 jobs in October with large gains in construction (+30,000), durable manufacturing (+21,000), and nondurable manufacturing (+11,000). Private service-providing industries increased by 179,000 jobs in October. Sectors with the highest job gains were health care and social assistance (+46,700), professional and business services (+35,000), and transportation and warehousing (+24,800). The unemployment rate remained at 3.7% in October. Average hourly earnings increased by \$0.05 or 0.2% and are up 3.1% since last year.

**Figure 1.1: Nonfarm Employment Growth**

*Employment growth has outpaced the last two years*



Source: Bureau of Labor Statistics; data through October 2018

*Consumer attitudes remain strong*

Consumer confidence dipped in November but remains high. The Conference Board measure of consumer confidence fell 2.2 points to 135.7. October's reading of 137.9 was the highest reading in 18 years. Confidence is up 7.1 points from a year ago. The present situation component rose slightly in November as

consumers remain confident about the employment picture. The expectations index fell, weighed down by declining optimism for business conditions and future household finances. The University of Michigan Consumer Sentiment index declined 1.1 points in November. The index is now down 1.0 points from a year ago. Unlike the Conference Board survey, respondents had declining confidence in the current economic climate. Respondents were also more worried about finances and business expectations were down.

*Oil prices  
have fallen*

Oil prices have fallen in recent weeks. West Texas Intermediate (WTI) declined to \$57 per barrel for the week of November 16th, down from \$62 the week before. A month ago, WTI prices were at \$70. Brent crude oil has followed a similar path, declining to \$66 from \$70 the previous week. Last month, Brent oil was \$80 per barrel. Both prices remain higher than last year, with WTI up \$1 per barrel and Brent up \$4 per barrel. U.S. production continues to increase sharply and is at an all-time high. Oil production in the U.S. rose 416,000 barrels per day (bpd) in August. Production is now over 11 million bpd for the first time at 11.346 million bpd. The number of drilling structures is once again expanding. The Baker Hughes rig count increased to 1,283 in the third week of November, an increase of 145 since last year. Internationally, Saudi Arabian oil production is at a record high at 11.2 million bpd. Saudi Arabia and Russia had agreed to raise production ahead of U.S. sanctions on Iranian oil. However, OPEC is now likely to cut supply in response to what they see as U.S. oversupply. The Venezuelan military has taken over its country's state run oil production. The lack of expertise and corruption has led to a sharp drop in output. In addition to declining production, Venezuela has had problems with its storage capacity and export terminals, causing oil output to decline faster than expected.

*Inflation has  
leveled off*

Headline inflation has leveled off but remains higher than last year. The Consumer Price Index (CPI) was up 2.5% over the year in October, up from a 2.3% year-over-year increase in September. Headline inflation peaked in July at a 2.9% year-over-year increase. Much of the recent increase was due to an upturn in gasoline prices. Gasoline prices increased 3.0% in October, and are now up 16.1% since last year. Food price inflation remains tame. Prices were down 0.1% over the month and are up 1.2% from last year. Shelter costs continue to be a steady driver of overall price inflation as rents continue to rise. Shelter costs increased 0.2% in October and are now up 3.2% year over year. Core inflation, which excludes food and energy, increased 0.2% in October and is now up 2.1% over the year.

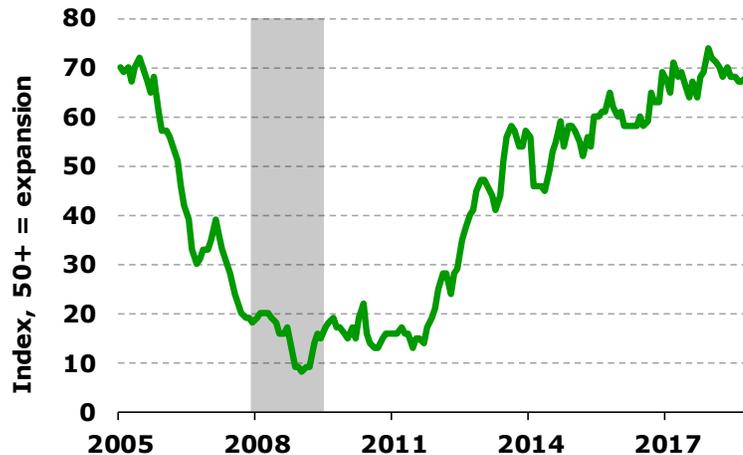
*The housing  
market  
recovery has  
stalled*

The housing market recovery has stalled. Housing starts increased 1.5% in October. Single-family starts declined 1.8% but were offset by a strong increase in multi-family starts of 10.3%. Housing starts are down 2.9% from a year ago. Housing

permits fell 0.4% in October and are down 5.8% from a year ago. Single-family permits are down 0.8% while multi-family permits are down 14.5% since last year. Despite the volatility, the multi-family segment has fully recovered from the housing downturn. New home sales fell 8.9% over the month in October, dropping to more than a two-and-a-half year low. The inventory-to-sales ratio increased to 7.4 months, up from a 6.5-month supply in September. Homebuilder confidence declined sharply in November (see Figure 1.2). The National Association of Homebuilders (NAHB) Housing Market Index, which measures confidence of homebuilders, declined 8 points to 60 in November (readings above 50 indicate a positive view of conditions). While this is still a net positive reading, homebuilder confidence is at the lowest level since August 2018. Homebuilders are reporting that they continue to see signs of demand, but consumers are hesitant due to rising interest rates and home prices.

**Figure 1.2: NAHB Housing Market Index**

*Homebuilder confidence plummeted in November*



Source: National Association of Home Builders; data through November 2018

*Home price appreciation remains strong despite slowing*

Gains in home prices appear to have slowed, but remain strong. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.3% over the month in September. Home prices are now 5.2% higher than a year ago. Prices have increased 50.8% since the trough, and are now 2.8% above their previous peak. Rising prices encourage new construction, and contribute to homebuilder confidence, although rising interest rates are working in the opposite direction. The average rate on the 30 year fixed rate loan was 4.81% in the third week of November, up 89 basis points from a year ago.

*Strong growth in the manufacturing sector*

The manufacturing sector has slowed slightly in recent months but remains strong. The Institute of Supply Management (ISM) Report on Business again indicated expansion in the manufacturing sector in September. Although the index declined to 57.7 from 59.8, index levels above 50 indicate expansion. The new orders component decreased by 4.4 points, but remained

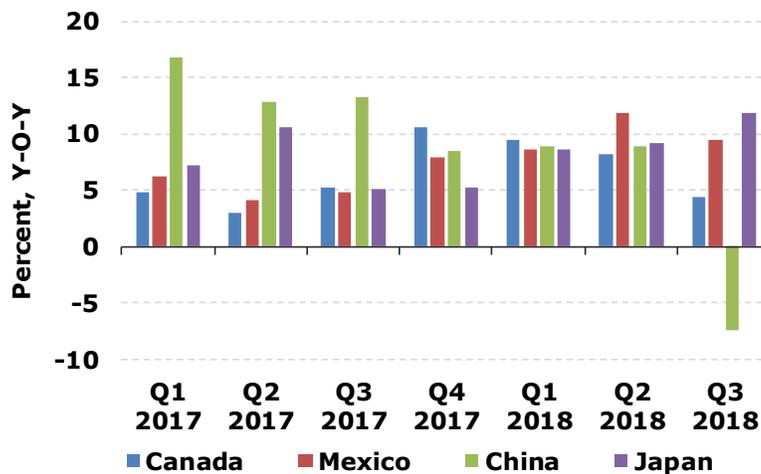
strong at 57.4. Production declined 4.0 points to 59.9. The latest G-17 report from the Federal Reserve indicates manufacturing output increased 0.3% in October. Manufacturing output is now 2.7% higher than last year. The index for durables rose 0.5%, while the index for nondurables rose 0.2%. Other manufacturing (publishing and logging) declined 1.5%. New orders for core capital goods (nondefense capital goods excluding aircraft) were flat in October after declining 0.5% the prior month. New orders are now 6.4% above year-ago levels.

*U.S. exports are growing*

U.S. exports continue to grow. Total exports in the third quarter increased 8.1% year over year. Transportation equipment exports declined, weighing down topline growth. Aerospace exports fell 3.7% year over year and motor vehicles declined 5.9% year over year. Rising energy prices in the third quarter boosted the value of U.S. exports. Petroleum and coal exports increased 26.9% from a year ago. Oil and gas exports continue to surge, up more than double since last year. Global economic growth remains firm. The U.S. dollar has strengthened recently, but has not dampened demand for U.S. goods. Exports to the rest of North America remain solid. Exports in the third quarter to Canada increased 4.4% while exports to Mexico were up 9.4% from a year ago. Exports to Canada and Mexico could potentially be boosted going forward due to the recently signed trade agreement. Trade with China appears to be impacted by U.S.-China trade tensions. Exports to China declined 7.5% year over year in the third quarter after an 8.9% increase in the prior quarter. Exports to Japan, our third largest trade partner, increased 11.9% year over year in the third quarter (see Figure 1.3).

*Exports to China have declined*

**Figure 1.3: U.S. Export Growth**



Source: Wisier Trade; data through 2018Q3

## Forecast

*Our forecast was based on the November IHS Markit control forecast*

The economic forecast was based on a modified version of the November IHS Markit (formerly Global Insight) control forecast for the U.S. economy. Consistent with our standard practice, the U.S. real GDP forecast was adjusted to match the Blue Chip Consensus GDP forecasts for 2018 and 2019. We also matched the latest long-term Blue Chip GDP forecast for 2020 through 2023. Our oil price forecast was adjusted to reflect futures prices for both Brent crude oil and for West Texas Intermediate crude oil.

*The economic outlook is similar to September*

The economic outlook is similar to the September forecast. As in September, the November Blue Chip forecast for real GDP growth in 2018 and 2019 is 2.9% and 2.6%. The Blue Chip long-range forecast has not been updated since June and remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.

*This recovery will be the longest on record*

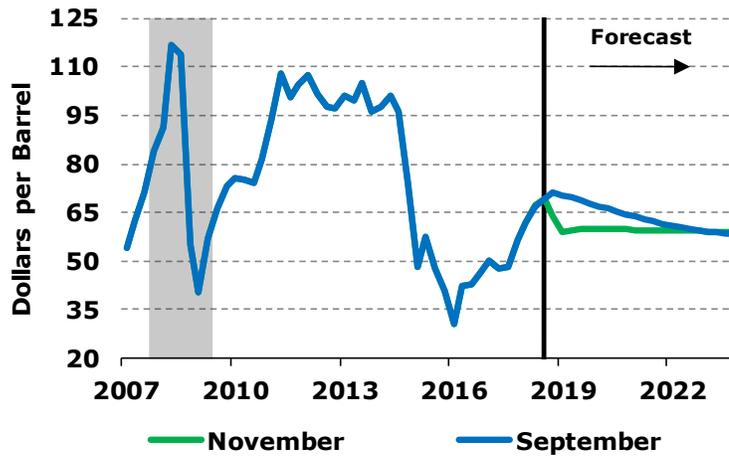
The positive GDP growth throughout the forecast will make the recovery from the 2007-09 recession the longest on record. From the second quarter of 2009 through the end of our forecast in 2023, the recovery will be at least 174 months. Through November, this recovery has already lasted 113 months. Prior to this, the longest recovery was from the 1990-91 recession and lasted 120 months. A major reason for the exceptional length of the current recovery was the depth of the recession. Despite positive GDP growth, the labor market remained weak for an extended period. It took 58 months of recovery just to reach the previous peak in employment. When comparing recoveries in terms of the duration since reaching the previous employment peak, this expansion appears more in line with other post-war expansionary periods. The two longest post-war expansions had 96 and 95 months of additional employment growth after reaching the previous peak. We expect growth to continue through the end of the forecast in 2023, which would result in 115 months of employment gains after reaching the previous employment peak.

*Oil prices are expected to level off*

Oil prices are lower than the prices used in the September forecast. The refiner acquisition price of crude oil is expected to drop to \$59 per barrel in the first quarter of next year. The oil market continues to face challenges. Renewed Iran sanctions are starting to have an impact. Venezuelan oil production continues to fall. Other members of OPEC and U.S. shale drillers have more than made up for any reduction in global supply. In the U.S., pipeline constraints may limit supply over the next few years. Oil prices will remain well below the levels seen earlier in the recovery. The forecast calls for prices to remain flat throughout the forecast, remaining in the \$59 to \$60 range through 2023 (see Figure 1.4).

**Figure 1.4: Average Price of Crude Oil**

*Oil prices are lower for the majority of the forecast*



Source: DOE, November 2018 forecast; historical data through 2018Q3

*Inflation will remain moderate*

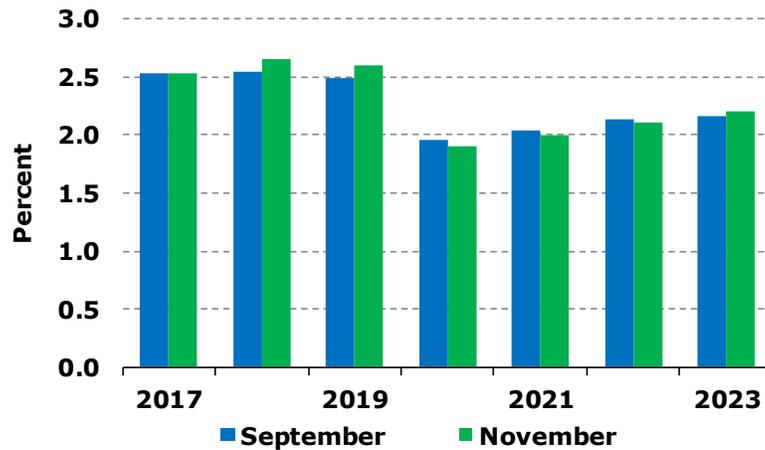
Inflation (as measured by the price index for personal consumption expenditures) has risen in recent years but remained low at 1.8% in 2017. Rising energy prices are adding to overall inflation. Rising housing costs and a tight labor market have put upward pressure on inflation as well. We expect low to moderate inflation throughout the forecast. We expect inflation to be 2.1% this year, unchanged since the September forecast. We then expect inflation to range from 1.9% to 2.1% each year from 2019 through 2023. Core inflation (minus food and energy) is expected to be 1.9% this year then slowly increase throughout the forecast. The forecast calls for core inflation to slightly surpass the Federal Reserve’s goal of 2% at 2.1% in 2021 through 2023.

*Consumer spending growth will continue*

Real consumer spending growth has been strong recently. We expect real consumer spending to grow 2.7% this year, up from 2.5% in the previous forecast (see Figure 1.5). Consumer optimism remains high. Wages are slowly increasing and home prices continue to rise, making consumers feel more confident in their financial situation. Unemployment remains low and more part-time workers are finding full-time jobs. However, the stock market is no longer steadily increasing and has taken a bite out of household net worth recently. The forecast calls for real consumption growth of 2.6% in 2019. Consumer spending growth will then slow to 1.9% in 2020 and 2021 before improving slightly to 2.1% and 2.2% in 2022 and 2023. We expect consumer spending to contribute 1.5 percentage points to real GDP growth on average for each year of the forecast through 2023.

**Figure 1.5: Real Consumer Spending Growth**

*Real consumption growth is slightly higher in the near term*



Source: BEA, ERFC November 2018 forecast; historical data through 2018Q3

*Disposable personal income growth will moderate*

Real disposable personal income is expected to grow 2.8% this year, up from the 2.6% growth in 2017. Growth in real disposable income is expected to moderate throughout the forecast, reaching 2.1% in 2022 and 2023. Nominal disposable income is projected to grow 4.9% this year, led by strong growth in interest income. Interest income is expected to grow 5.7% this year and then average 7.4% as the Federal Reserve continues to tighten monetary policy and interest rates rise. Private sector wages and salaries are forecasted to grow 5.2%. Wage growth in the public sector will again lag, with growth of 2.3% in 2018. Total wages and salaries are forecasted to average 4.5% growth throughout the forecast. Rental income is expected to grow 4.6% this year and 6.3% in 2019. We then expect rental income growth to slow and average 0.9% for the remainder of the forecast. Dividend payments are projected to average 3.6% growth through 2023. Growth in government transfer payments is expected to be 4.3% this year. We expect growth to pick up and average 4.9% per year for the remainder of the forecast as an increasingly older population results in rising Medicare and Social Security payments.

*The employment forecast is mostly unchanged*

The employment forecast is mostly unchanged from the September forecast. Growth in payrolls is anticipated to be 1.6% this year compared to 1.7% in the previous forecast. We expect employment growth of 1.5%, 0.9%, and 0.6% in 2019 through 2021, unchanged from the September forecast. The forecast calls for growth of 0.7% in 2022 and 2023, up slightly from 0.6% and 0.5% in the previous forecast. By 2023, the forecast expects 320,000 more jobs than in September, a difference of 0.2%. Due to the steady job growth, we expect an unemployment rate of 3.9% in 2018, reaching a trough in 2019 of 3.5%. We expect the unemployment rate to increase slowly to 3.8% by 2022 and 2023. The continued strengthening of the labor market will create an incentive for more and more marginally attached

workers to begin looking for a job. We expect the labor force participation rate to grow from 61.5% this year to a peak of 61.7% in 2020 after which the participation rate will resume its long-term secular decline.

*Private sector hiring will continue to outpace public sector hiring*

Employment growth in nonfarm payrolls has been led by private sector hiring throughout the recovery as the public sector has been weighed down by budget concerns. While state and local governments have largely worked through their budgetary issues and have started hiring again, the pace of hiring has been slow. Federal government employment is expected to remain steady throughout the forecast except for the temporary hiring of census workers in 2020. The lack of growth in federal government jobs will be offset by modest gains in state and local government employment, keeping total government employment growth positive throughout the forecast. We expect private sector job growth of 1.9% this year, after growing by 1.8% in 2017. The forecast calls for private sector job growth of 1.7% in 2019, then 0.7% on average through 2023.

*Business investment is expected to be strong*

Real nonresidential fixed investment is expected to grow 6.8% this year after growing 5.3% in 2017. The firming of oil prices has led to additional investment by energy companies. The capital-intensive manufacturing sector remains strong. However, demand for new office space appears to be slowing. New construction of office spaces declined to 5.9 million square feet in the third quarter from 9.7 million square feet a year ago. We expect real nonresidential construction to slow after this year. The forecast calls for growth of 4.9% this year then a gradual slowdown to 3.2% in 2023. Real equipment investment is anticipated to grow 7.1% this year. We expect moderate growth throughout the forecast as businesses expand and improve productivity. The forecast calls for growth of 4.5% in 2019 then slowing to 3.3% in 2023. We expect real nonresidential fixed investment to grow 4.8% in 2019 and then slowly trend down to 3.2% in 2023.

*The housing market is in a slump*

The housing market is in a slump. Construction activity and home sales are dropping. Homebuilder confidence is declining and is at the lowest level in two years. Mortgage rates have increased roughly 86 basis points since the beginning of the year, although they remain low by historical standards. We expect housing starts to grow 4.6% this year, compared to 5.6% in the previous forecast. The forecast calls for growth of 5.3% in 2019 and 6.0% in 2020 before averaging 1.3% through 2023. We expect growth in single-family housing starts of 4.1% this year. The forecast expects the growth in single-family housing starts will follow a pattern similar to overall housing construction. We expect the multi-family segment to grow 5.8% this year after declining 9.2% in 2017. The forecast calls for growth to slowly trend down to 2.6% by 2023.

*Foreign growth is improving at a moderate pace*

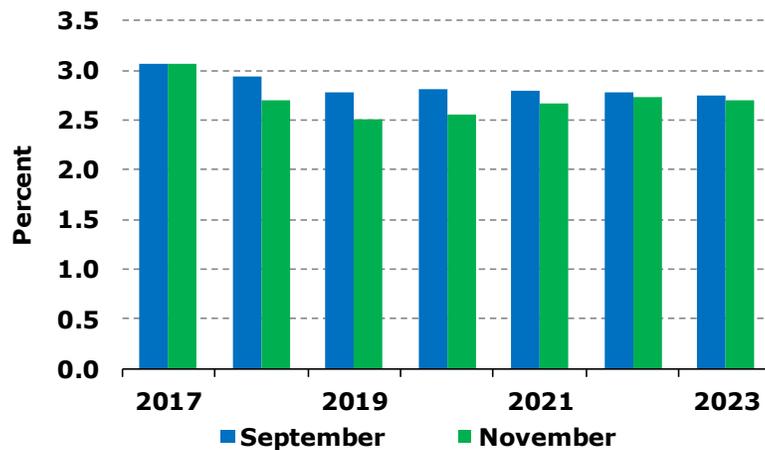
Major foreign economies continue to expand at a moderate pace. The Canadian economy grew 2.9% (SAAR) in the second quarter after just 1.4% (SAAR) growth first quarter. A rebound in exports and stronger consumer spending helped to improve growth. The latest Blue Chip forecast expects growth of 2.1% in Canada for 2018 and 2.0% in 2019, down from 3.0% in 2017. GDP growth in Mexico accelerated to just 0.8% quarter over quarter (q/q) in the third quarter from a 0.2% (q/q) contraction in the second quarter. The Mexican economy grew 2.0% for all of 2017. The Blue Chip forecast calls for 2.1% growth over the next two years. Growth in the Eurozone slowed to the lowest rate in four years in the third quarter at just 0.2% (q/q), weighed down by a growth rate of zero in Italy. The latest Blue Chip forecast calls for 2.0% growth this year and 1.8% in 2019. China, which is the largest U.S. export market outside of North America, continues to slow. The Chinese have had difficulty transitioning to a more domestic consumer driven economy. China reported 6.9% growth in 2017, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.6% this year and 6.2% in 2019. Japan's economy contracted 1.2% (SAAR) in the third quarter, weighed down by a series of natural disasters. Japan's long run potential GDP growth is roughly 0.7% due primarily to demographics. Japan's economy grew 1.7% in 2017. The most recent Blue Chip forecast expects slow growth of 1.1% over the next two years.

*Economic growth of U.S. trading partners is expected to slow*

Economic growth of major U.S. trading partners is expected to be weaker than in the September forecast (see Figure 1.6). After growing 3.1% in 2017, we expect U.S. major trading partner growth of 2.9% this year. The forecast then expects growth of 2.5% in each of the next two years compared to 2.8%

**Figure 1.6: GDP Growth of Major U.S. Trading Partners**

*Growth in major U.S. trading partners has been revised down*



Source: U.S. Census Bureau, September 2018 forecast; historical data through 2018Q2

growth expected in September. The forecast calls for growth of 2.7% in the final three years of the forecast, compared to 2.8% growth expected in September. Despite a strengthening dollar, and uncertainty regarding international trade, U.S. exports are improving. Weaker economic growth abroad has lowered the outlook for U.S. exports slightly, however. Real U.S. exports are forecasted to grow 4.3% this year after increasing 3.0% in 2017. Export growth is forecasted to remain strong over the next two years at 4.0% and 5.1%. We then expect real export growth to slow and average 3.8% through 2023. Export growth is more than offset by increased imports through 2022. In 2023, import growth slows and net exports become a slight positive to overall growth in 2023.

*The federal budget deficit will increase this year*

The federal budget deficit is expected to increase this federal fiscal year to \$779 billion from \$666 billion in 2017. Much of the increase in the deficit is due to the passage of the Tax Cuts and Jobs Act (TCJA). We expect the federal budget deficit to grow through 2022, reaching \$1,203 billion, then decline slightly to \$1,126 billion in 2023. The November forecast expects federal tax receipts to total \$3,329 billion this federal fiscal year. The forecast expects growth in tax receipts to average 4.0% each year through 2023, reaching \$4,045 billion. The forecast calls for real defense spending to grow 3.4% this year, 4.9% in 2019, and 0.8% in 2020. We then expect reductions in real defense spending through 2023. Real nondefense spending is expected to increase 2.4% this year, 4.8% in 2019, then 0.1% in 2020. Like defense spending, we then expect reductions in real nondefense spending through 2023. Real state and local government spending growth is expected to range from 1.4% to 0.9% throughout the forecast.

*The Fed is gradually tightening monetary policy*

The Federal Reserve is gradually tightening monetary policy after years of measures aimed at supporting the economy. The Federal Reserve is facing an upbeat economic outlook but also an uncertain policy environment. The Federal Open Market Committee forecasts anticipate solid GDP growth and further declines in unemployment, along with a gradual rise of inflation to a little above 2%. The forecast assumes several rate hikes over the next few years.

Table 1.1 provides a fiscal year summary of the U.S. economic indicators. For calendar year tables, see the appendix.

## **Risks to the Forecast**

*Risks to the forecast are balanced*

Our view of the risks to the forecast is balanced in the near term (2017-19 biennium) with a relatively high probability of the baseline scenario. In the outer years of the forecast (2019-21 and 2021-23 biennia), the level of uncertainty in the baseline remains elevated, and downside risks once again outweigh upside risks.

## **Downside Risks**

- Increasing geopolitical tensions negatively affect consumer confidence
- An unexpected shift in monetary policy
- A breakdown in trade relations
- Unexpected fallout from Brexit
- Chinese economy experiences a “hard landing” (annual growth under 5%); growth is weaker in emerging market economies
- Weaker than expected employment growth
- Real wage growth stagnates, leading to slower consumer spending
- Slower household formation
- U.S. dollar appreciates against other currencies, limiting exports
- Weak global growth persists, further affecting exports.

## **Upside Risks**

- An infrastructure package passes
- Increased business confidence leads to more hiring
- Increased consumer confidence gives a boost to consumer spending
- The housing sector improves faster than anticipated
- Oil prices decline further as OPEC fails to impact prices
- Labor productivity growth returns to the higher rates seen in 1995-2005
- Employment growth expands faster than in the baseline
- China successfully transitions to a more consumption based economy
- European and emerging market economies grow faster than expected
- The U.S. dollar declines, making U.S. exports cheaper abroad
- Wage growth picks up faster than expected.

Table 1.1  
**U.S. Economic Forecast Summary**  
 Forecast 2019 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
<b>Real National Income Accounts (Billions of Chained 2012 Dollars)</b>								
Real Gross Domestic Product	17,510.2	17,837.3	18,295.0	18,846.7	19,239.3	19,575.8	19,931.4	20,344.5
% Ch	1.8	1.9	2.6	3.0	2.1	1.7	1.8	2.1
Real Consumption	12,084.4	12,402.6	12,714.0	13,081.0	13,354.7	13,612.6	13,889.1	14,198.1
% Ch	3.0	2.6	2.5	2.9	2.1	1.9	2.0	2.2
Real Nonresidential Fixed Investment	2,396.1	2,469.5	2,624.8	2,776.1	2,899.3	3,003.1	3,101.9	3,205.8
% Ch	-0.1	3.1	6.3	5.8	4.4	3.6	3.3	3.4
Real Residential Fixed Investment	579.2	601.0	613.4	604.9	629.0	653.7	665.5	677.3
% Ch	9.4	3.8	2.1	-1.4	4.0	3.9	1.8	1.8
Real Personal Income	15,377.9	15,650.0	16,055.4	16,433.4	16,853.1	17,244.3	17,620.2	18,032.3
% Ch	2.9	1.8	2.6	2.4	2.6	2.3	2.2	2.3
Real Per Capita Income (\$/Person)	47,639	48,136	49,034	49,826	50,737	51,551	52,310	53,169
% Ch	2.1	1.0	1.9	1.6	1.8	1.6	1.5	1.6
<b>Price and Wage Indexes</b>								
PCE Price Index (2012=100)	103.6	105.2	107.2	109.2	111.3	113.5	115.9	118.2
% Ch	0.6	1.6	1.9	1.9	1.9	2.0	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.383	2.427	2.481	2.534	2.586	2.638	2.697	2.754
% Ch	0.7	1.9	2.2	2.1	2.1	2.0	2.2	2.1
Employment Cost Index (Dec. 2005=1.0)	1.248	1.278	1.314	1.356	1.399	1.445	1.495	1.548
% Ch	2.2	2.4	2.8	3.2	3.2	3.3	3.4	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	18,433.8	19,075.1	19,968.2	21,007.9	21,928.3	22,826.4	23,781.6	24,827.4
% Ch	2.8	3.5	4.7	5.2	4.4	4.1	4.2	4.4
Personal Income	15,925.8	16,462.0	17,204.3	17,949.1	18,762.7	19,577.4	20,417.0	21,310.4
% Ch	3.5	3.4	4.5	4.3	4.5	4.3	4.3	4.4
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	158.0	159.8	161.1	162.7	164.4	165.8	166.9	167.9
Total U.S. Employment	150.1	152.4	154.5	156.8	158.7	159.7	160.6	161.6
Unemployment Rate (%)	4.99	4.66	4.11	3.61	3.48	3.68	3.77	3.77
Nonfarm Payroll Employment	143.10	145.54	147.77	150.21	152.04	153.04	154.01	155.10
% Ch	1.9	1.7	1.5	1.6	1.2	0.7	0.6	0.7
Manufacturing	12.36	12.37	12.57	12.80	12.85	12.71	12.63	12.65
% Ch	0.6	0.2	1.5	1.8	0.4	-1.1	-0.6	0.1
Durable Manufacturing	7.75	7.70	7.83	8.01	8.08	7.99	7.92	7.94
% Ch	0.1	-0.6	1.6	2.3	0.8	-1.1	-0.8	0.2
Nondurable Manufacturing	4.61	4.67	4.74	4.79	4.77	4.72	4.71	4.71
% Ch	1.5	1.4	1.4	1.1	-0.2	-1.0	-0.3	0.1
Construction	6.61	6.84	7.08	7.37	7.61	7.94	8.23	8.48
% Ch	4.7	3.6	3.5	4.1	3.3	4.3	3.7	3.0
Service-Providing	123.41	125.66	127.42	129.28	130.82	131.61	132.35	133.18
% Ch	2.0	1.8	1.4	1.5	1.2	0.6	0.6	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	41.7	48.6	58.6	60.9	57.5	57.9	58.0	57.9
Personal Saving/Disposable Income (%)	7.3	6.6	6.8	6.3	6.6	7.0	7.1	6.9
Auto Sales (Millions)	7.2	6.5	5.7	5.0	4.9	4.8	4.8	4.9
% Ch	-5.8	-10.7	-11.6	-12.4	-2.7	-1.1	0.4	1.8
Housing Starts (Millions)	1.149	1.201	1.252	1.266	1.384	1.410	1.429	1.455
% Ch	9.1	4.5	4.3	1.1	9.4	1.8	1.4	1.8
Federal Budget Surplus (Billions)	-614.8	-667.7	-854.1	-988.8	-1,070.9	-1,157.0	-1,219.5	-1,232.2
Net Exports (Billions)	-518.7	-553.1	-588.5	-681.0	-718.1	-719.9	-710.8	-673.2
3-Month Treasury Bill Rate (%)	0.18	0.55	1.41	2.42	2.99	3.21	3.17	3.15
10-Year Treasury Note Yield (%)	2.02	2.10	2.57	3.15	3.39	3.54	3.55	3.52
Bond Index of 20 G.O. Munis. (%)	3.51	3.51	3.67	4.28	4.55	4.69	4.70	4.63
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.82	5.09	5.24	5.23	5.18

Table 1.2

**Forecast Analysis**

Comparison of Forecasts for 2017-19

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2		Average Rate (Percent) 2017:3 to 2019:2	
	<b>Real GDP</b>	<b>PCE Price Index</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2014</b>				
February	2.6	1.3	3.72	6.57
June	2.6	1.5	3.73	6.63
September	2.6	1.6	3.51	6.15
November	2.5	1.9	3.53	6.14
<b>2015</b>				
February	2.5	1.8	3.53	5.71
June	2.5	1.8	3.48	5.75
September	2.5	1.8	2.66	5.16
November	2.3	1.8	2.67	5.23
<b>2016</b>				
February	2.3	1.8	2.28	5.02
June	2.1	1.9	2.09	4.97
September	2.1	1.7	1.63	4.85
November	2.1	1.8	1.39	4.63
<b>2017</b>				
March	2.3	1.6	1.66	5.07
June	2.3	1.6	1.67	4.98
September	2.3	1.7	1.67	4.91
November	2.3	1.8	1.50	4.41
<b>2018</b>				
February	2.6	1.9	1.79	4.49
June	2.8	2.1	1.88	4.46
September	2.8	2.1	1.91	4.44
November	2.8	2.0	1.91	4.49

Table 1.3

**Forecast Analysis**

Comparison of Forecasts for 2019-21

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2019:2-2021:2		Average Rate (Percent) 2019:3 to 2021:2	
	<b>Real GDP</b>	<b>PCE Price Index</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2016</b>				
February	2.2	1.7	2.79	5.60
June	2.2	1.9	2.81	5.67
September	2.2	1.9	2.79	5.77
November	2.1	2.0	2.55	5.57
<b>2017</b>				
March	2.0	1.9	2.80	5.96
June	2.0	2.0	2.81	5.97
September	2.0	1.9	2.83	6.00
November	2.1	2.0	2.56	5.08
<b>2018</b>				
February	2.0	2.0	3.00	5.26
June	1.9	2.1	3.09	5.28
September	1.9	2.0	3.09	5.11
November	1.8	2.0	3.10	5.17

Table 1.4  
**Forecast Comparison**  
 Forecast 2019 to 2023

Fiscal Years

	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>U.S.</b>							
<b>Real GDP</b>							
November Baseline	17837.3	18295.0	18846.7	19239.3	19575.8	19931.4	20344.5
% Ch	1.9	2.6	3.0	2.1	1.7	1.8	2.1
September Baseline	17837.3	18295.8	18845.7	19247.5	19602.1	20001.0	20419.4
% Ch	1.9	2.6	3.0	2.1	1.8	2.0	2.1
<b>PCE Price Index</b>							
November Baseline	105.2	107.2	109.2	111.3	113.5	115.9	118.2
% Ch	1.6	1.9	1.9	1.9	2.0	2.1	2.0
September Baseline	105.2	107.1	109.4	111.6	113.8	116.0	118.2
% Ch	1.6	1.9	2.1	2.0	2.0	1.9	1.9
<b>Unemployment Rate</b>							
November Baseline	4.66	4.11	3.61	3.48	3.68	3.77	3.77
September Baseline	4.67	4.10	3.57	3.49	3.69	3.78	3.85
<b>Mortgage Rate</b>							
November Baseline	3.85	4.16	4.82	5.09	5.24	5.23	5.18
September Baseline	3.85	4.16	4.72	5.06	5.16	5.14	5.11
<b>3 Month T-Bill Rate</b>							
November Baseline	0.55	1.41	2.42	2.99	3.21	3.17	3.15
September Baseline	0.55	1.41	2.41	3.01	3.17	3.15	3.14



## Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid pace.**
- **Washington’s unemployment rate reached a new all-time low in October.**
- **Seattle home prices and Washington housing construction have weakened.**
- **Washington manufacturing activity and export growth remain positive.**
- **Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.**
- **The comprehensive revision of personal income raised the level of Washington personal income throughout the forecast.**
- **Lower oil prices will result in a decline in Seattle inflation.**
- **As in September, we expect the Washington economy to continue to outperform the U.S. economy.**

### Current Conditions

*The Washington economy is expanding at a rapid pace*

The Washington economy is expanding at a rapid pace. Washington’s unemployment rate reached a new all-time low in October. Seattle home prices and Washington housing construction have weakened. Washington manufacturing activity and export growth remain positive. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*Employment growth has been faster than expected*

We have two months of new Washington employment data since the September forecast was released. Total nonfarm payroll employment rose 16,700 (seasonally adjusted) in September and October, which was 3,700 more than the 13,000 expected in the September forecast. Manufacturing added 1,800 jobs, boosted by an increase of 1,200 aerospace employees, and construction employment rose 2,200. Private services-providing

sectors added 9,500 jobs and government payrolls expanded by 3,000 jobs.

*Historical employment estimates were revised lower*

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 August 2018 by 10,100 jobs (0.3%). As a result of the downward revision to history and slightly stronger-than expected growth since August, the net effect is 6,400 (0.2%) fewer jobs in October 2018 than expected in the September forecast.

*Washington's unemployment rate is at an all-time low*

Washington's unemployment rate declined to 4.3% in October from 4.4% in September. This marks yet another all-time low in the series that extends back to 1976. A year ago, in October 2017, the Washington unemployment rate stood at 4.7%.

*Washington UI claims remain near the post-recession low*

Washington initial claims for unemployment insurance remain near the post-recession low. The four-week moving average of seasonally adjusted claims increased to 6,500 in the week ending November 24, 2018 from 6,300 in the previous week. The current level of claims is well below the trough of 7,200 reached during the last expansion and is close to the post-recession trough of 5,800 (see Figure 2.1). Claims have fallen 61% since the peak in early 2009.

**Figure 2.1: Washington Initial U.I. Claims**

*Claims have fallen 61% since the peak in early 2009*



Source: Washington Department of Employment Security; data through November 24, 2018

*Washington exports continue to rise*

Despite a decline in transportation equipment, Washington exports increased over the year for a fourth consecutive quarter. Exports increased 2.6% in the third quarter of 2018 compared to the third quarter of 2017. Transportation equipment exports

(mostly Boeing planes) declined 3.3% over the year but exports of agricultural products rose 29.6% and exports of all other commodities (mostly manufacturing) increased 5.0%.

*Washington housing construction declined in the third quarter*

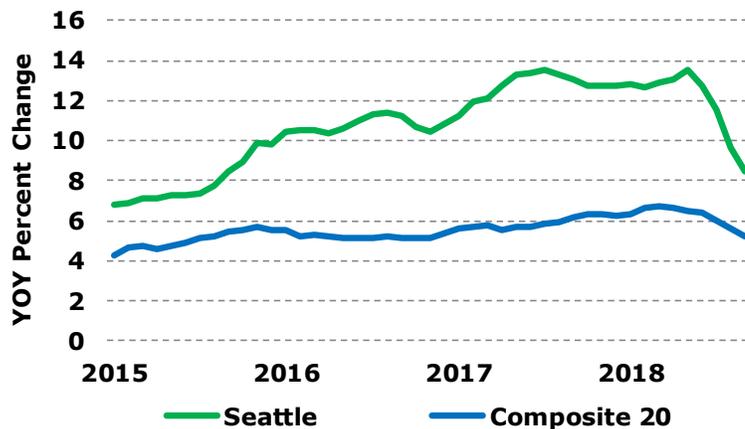
Washington housing construction declined in the third quarter of 2018 but was close to the September forecast. The number of housing units authorized by building permits decreased to 39,700 units (SAAR) in the third quarter of 2018 from 43,200 units in the second quarter. The September forecast expected 40,100 units in the third quarter. Third quarter permits consisted of 23,800 single-family units and 15,900 multi-family units. Housing permits remained weak in October at an average of 39,700 units (SAAR) of which 23,500 were single-family units and 16,200 were multi-family units. The November forecast expects 42,800 units in the fourth quarter as a whole, consisting of 23,600 single-family units and 19,300 multi-family units.

*Seattle home prices have weakened*

In a sign that the housing market is weakening, seasonally adjusted Seattle area home prices fell 0.3% in September following a 1.0% decline in August and a 0.1% decline in July according to the S&P/Case-Shiller Home Price Indices. During the previous year, increases averaged 1.0% per month. In September, the over-the-year growth was 8.4% in Seattle, compared to the 5.2% increase in the Composite-20 index (see Figure 2.2). Seattle home prices are still up 88% since the December 2011 trough and exceed the May 2007 peak by 31%.

**Figure 2.2: Home Price Appreciation**

*Home price growth is slowing*



Source: S&P/Case-Shiller Home Price Indices; data through September 2018

*New vehicle registrations are down over the year*

Car and truck sales rose in September and October after three consecutive declines. Seasonally adjusted new vehicle registrations rose 2.8% in September and 2.5% in October following declines of 2.0% in August, 1.4% in July, and 1.0% in

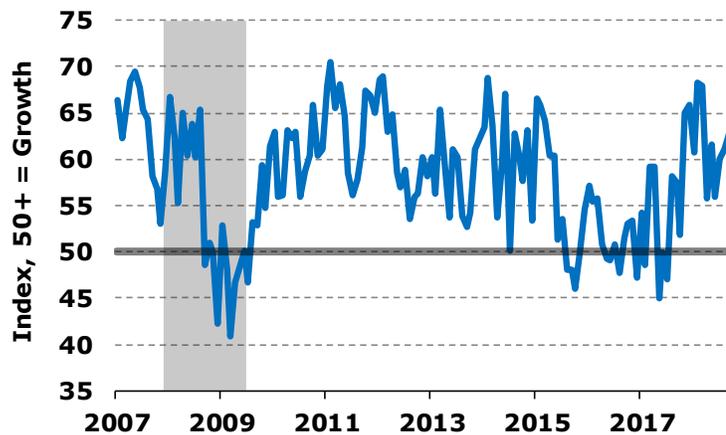
June. Sales are still down 6.2% over the year and 10.3% since the November 2017 post-recession peak.

*Manufacturing growth remains positive*

The Institute of Supply Management - Western Washington Index (ISM-WW) declined in October but remained in positive territory. The index, which measures conditions in the manufacturing sector, decreased from 62.7 in September to 55.0 in October (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 15 months (see Figure 2.3). The production, orders, employment, and inventory components all indicated expansion in October while the deliveries component indicated contraction.

**Figure 2.3: ISM-WW**

*The index has exceeded 50 in each of the last 15 months*



Source: ISM-WW; data through October 2018

*Washington personal income growth remains strong*

In September, after the forecast was released, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released preliminary state personal income estimates for the second quarter of 2018 and revised estimates from 1998 forward. According to these estimates, Washington personal income rose to \$451.1 billion (SAAR) in the second quarter of 2018 from \$449.3 billion in the first quarter. The reported 1.6% growth rate (SAAR) in Washington personal income was the lowest among the states and District of Columbia and significantly trailed the 4.2% growth rate for the U.S. as a whole. The weak Washington growth in the second quarter was due to one-time factors that temporarily boosted growth in the first quarter, when Washington led the nation. Over the last year, from the second quarter of 2017 to the second quarter of 2018, Washington personal income grew 6.1%, which was second highest among the states and the District of Columbia and was well above the 4.6% rate for the nation.

*Historical Washington personal income was revised up*

The September state personal income release also incorporated the results of the BEA's comprehensive update of state personal income. The update revised annual estimates of state personal income for 1998 to 2017. The update also incorporates the results of the July 2018 comprehensive update of the National Income and Product Accounts. The BEA revised its 2017 personal income estimate up \$11.6 billion (2.8%) for 2017. Our revision was less, \$8.8 billion (2.1%) because we had already benchmarked our estimate for wages and salaries to the Quarterly Census of Employment and Wages (QCEW). We use the published BEA estimates for all other components of personal income. The \$8.8 billion increase in our estimate was more than accounted for by proprietors' income which increased \$5.1 billion, and property income (dividends, interest, and rent), which increased \$4.2 billion.

*Seattle area consumer price inflation remains above the national average*

Seattle area consumer price inflation remains above the national average. Over the last year, from October 2017 to October 2018, consumer prices in the Seattle area rose 3.1% (seasonally adjusted) compared to 2.5% for the U.S. city average. Core prices, which exclude food and energy, increased 2.7% in Seattle compared to 2.2% for the nation. The higher Seattle inflation was due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 5.2% compared to 3.2% for the nation. Excluding shelter costs, Seattle inflation was below the national average at 1.9% compared to 2.2%.

## **Washington State Forecast**

*The Washington forecast is very similar to the September forecast*

The Washington forecast is very similar to the September forecast. We expect 2.7% Washington employment growth this year compared to 2.9% in the September forecast. We expect employment growth to average 1.3% per year in 2019 through 2023, which is slightly higher than the 1.2% average growth in the September forecast. Our forecast for nominal personal income growth this year is 6.9%, up from 6.6% in the September forecast. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.8% per year compared to 4.9% per year in the September forecast. We expect 43,700 housing units authorized by building permits this year compared to 43,800 in the September forecast. We expect permits to average 42,300 in 2019 through 2023, down from 42,800 in the September forecast. As in September, we expect the all-items Seattle CPI to rise 3.0% this year. We expect Seattle area inflation will average 2.1% per year in 2019 through 2023, down slightly from 2.2% in the September forecast.

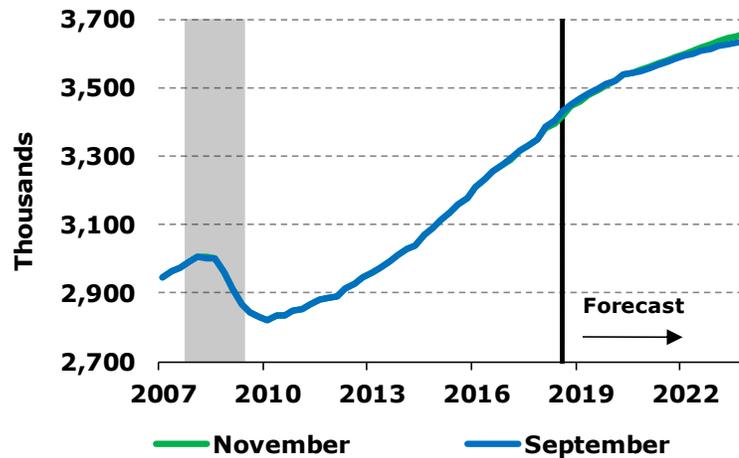
## Washington Payroll Employment

*The employment forecast is lower in 2018 but grows faster than assumed in September*

The Washington employment forecast is very similar to the September forecast (see Figure 2.4). We expect 2.7% Washington employment growth this year compared to 2.9% in the September forecast. As in September, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.3% per year in 2019 through 2023, which is slightly higher than the 1.2% average growth in the September forecast. On an annual basis, we expect 2.2% employment growth in 2019, 1.5% in 2020, and 1.0% per year in 2021, 2022, and 2023.

**Figure 2.4: Washington Employment**

*The Washington employment forecast is very similar to the September forecast*



Source: Bureau of Labor Statistics, ERFC; historical data through Q3 2018

*The aerospace employment forecast is higher than in September*

Washington aerospace employment peaked in the first quarter of 2013. As of the fourth quarter of 2017, 15,400 jobs had been lost with most of the decline in 2016 and 2017. In September, we had assumed that aerospace employment would level off however employment increased in the first three quarters of 2018. We still believe employment will be flat but the level will be 1,000 higher through 2023 than in the September forecast. On an annual average basis, we expect aerospace employment to decline 0.8% in 2018, increase 1.8% in 2019, and then remain unchanged through the rest of the forecast.

*The software employment forecast is little changed since September*

We have slightly reduced the software employment growth forecast in 2018 from 5.7% to 5.5% based on a revision to historical data. However, we also raised the forecasted growth rate for the next five years. The result is that we now expect just 100 fewer software jobs in 2023 than assumed in September. On an annual average basis, we expect growth rates of 2.6% in

2019, 1.0% in 2020, 1.6% in 2021, 1.8% in 2022, and 1.9% in 2023.

*We have reduced our forecast for Washington electronic shopping and mail order employment*

In Washington, the electronic shopping and mail order sector consists almost entirely of electronic shopping employment. Our November forecast for this sector is lower than the forecast adopted in September based on slower than expected employment growth through October 2018. However, we continue to expect strong but slowing employment growth throughout the forecast. Our forecast calls for employment growth of 12,800 from the fourth quarter of 2017 through the fourth quarter of 2023, down from the 14,400 expected in the September forecast. On an annual basis, electronic shopping and mail order employment will grow 9.4% in 2018, 4.7% in 2019, 5.2% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

*Washington construction employment reached a new all-time high*

Washington construction employment reached a new all-time high of 213,300 in the third quarter of 2018. Washington construction employment has grown by 78,300 (57.9%) since the trough in the first quarter of 2012. The forecast calls for construction employment to peak at 215,900 in the fourth quarter of 2019. On an annual average basis, we expect construction employment to grow 6.4% this year and 1.6% in 2019 before declining 0.1% in 2020, 0.3% in 2021, 0.5% in 2022, and 0.6% in 2023.

## **Washington Personal Income**

*The comprehensive revision of state personal income raised the level of Washington personal income*

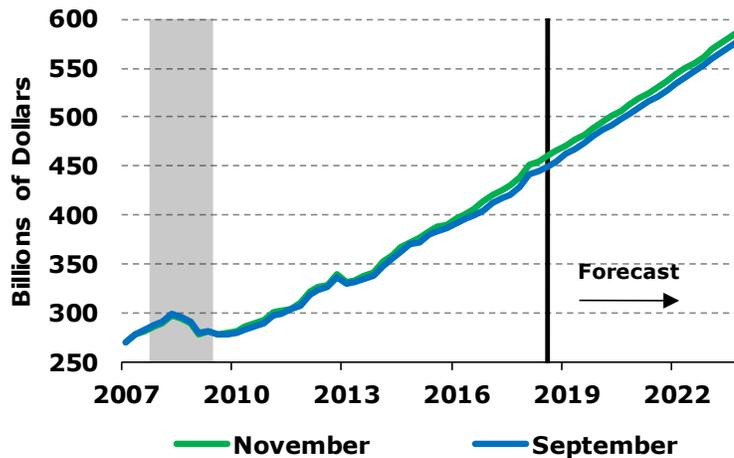
In September, after the forecast was released, the Bureau of Economic Analysis released estimates for state personal income through the second quarter of 2018. We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) data. Our current estimate of Washington personal income in the second quarter of 2018 is \$10.4 billion (2.4%) higher than assumed in the September forecast. The wage forecast was very close but nonwage income was \$10.5 billion (5.0%) above the forecast. The main reason nonwage income was revised higher was the comprehensive revision of state personal income. The revised Washington personal income estimate for 2017 was \$8.8 billion (2.1%) higher than assumed in September. The revision was more than accounted for by proprietors' income which increased \$5.1 billion, and property income (dividends, interest, and rent), which increased \$4.2 billion.

*Our forecast for 2018 personal income is higher than in September*

Our forecast for nominal personal income growth this year is 6.9%, up from 6.6% in the September forecast. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.8% per year compared to 4.9% per year in the September forecast. While personal income growth is similar to the September forecast, the level is higher due to the comprehensive revision (see Figure 2.5). On an annual basis, we expect personal income to grow 4.7% in 2019, 5.0% in 2020, 4.8% in 2021, 4.7% in 2022, and 4.9% in 2023.

*The comprehensive revision raised the level of Washington personal income*

**Figure 2.5: Washington Personal Income**



Source: Bureau of Economic Analysis, ERFC; historical data through Q2 2018

## Washington Building Permits

*The housing recovery in Washington is essentially complete*

The housing recovery in Washington is essentially complete although the composition of new housing will change in coming years. Multi-family housing has recovered from a low of only 4,000 units in 2009 to 22,700 in 2017. We believe 2017 was the peak in multi-family construction in this cycle and that permits will decline to 15,200 by 2023. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 23,100 in 2017. We expect single-family construction to continue to strengthen with the number of units rising to 25,700 in 2020 before levelling off. Overall, the housing construction forecast is very close to the forecast adopted in September. We expect 43,700 housing units authorized by building permits this year compared to 43,800 in the September forecast. We expect permits to average 42,300 in 2019 through 2023, down from 42,800 in the September forecast. On a calendar year basis, we expect 43,600 units in 2019, 43,800 in 2020, 42,200 in 2021, 41,400 in 2022, and 40,600 in 2023.

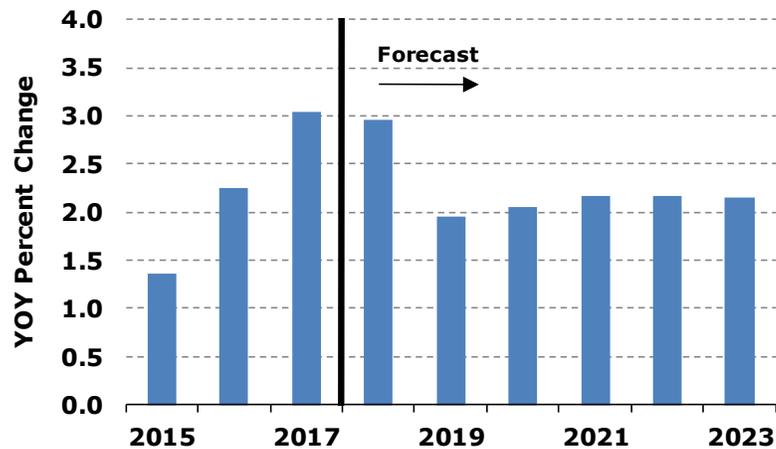
## Seattle Consumer Price Index

*We expect Seattle inflation to fall from 3.0% this year to 2.0% in 2019*

After working to reduce overall inflation considerably in 2015 and 2016, rising energy costs added to headline inflation in 2017 and most of 2018. However, the recent plunge in oil prices indicates that energy costs will moderate headline inflation in 2019 and beyond (see Figure 2.6). We expect Seattle inflation to fall from 3.0% this year to 2.0% in 2019. We expect inflation to remain tame during the remainder of the forecast with rates of 2.1%, 2.2%, 2.2, and 2.1% in 2020, 2021, 2022, and 2023.

*Lower oil prices will result in a decline in Seattle inflation*

**Figure 2.6: Seattle Consumer Price Inflation**



Source: Bureau of Labor Statistics, ERFC; historical data through 2017

*Rents are driving Seattle core inflation higher*

Core inflation (excluding food and energy) in Seattle was 2.8% in 2017 while national core inflation was 1.8%. The reason for the difference was shelter costs, which were rising much faster in Seattle. Recent data show that shelter costs continue to rise faster in Seattle than in the U.S. city average. We expect a Seattle core inflation rate of 2.9% this year compared to 2.1% for the nation. We expect core inflation in Seattle to moderate as shelter costs stabilize. Our forecast calls for core Seattle inflation to average 2.3% in 2019 and 2020, 2.4% in 2021, and 2.3% per year in 2022 and 2023.

Table 2.1 provides a fiscal year summary of the state economic indicators. For calendar year tables, see the appendix.

## Alternative Scenarios

*Alternative forecasts are required by law*

In accordance with state law, the Washington State Economic and Revenue Forecast Council adopted a forecast based on

optimistic assumptions and a forecast based on pessimistic assumptions.

### **Optimistic**

*The optimistic scenario assumes stronger productivity growth and less inflation.*

The optimistic forecast assumes productivity rises at an annual average rate of 2.6%, rebounding from a lackluster post-recession pace that averaged just 0.6% over 2011–2016. Wages grow more quickly as a result. With more real income to spend and brighter job prospects in a low inflation environment, consumers pick up their spending. Thanks to improved finances and higher employment, household formation accelerates. This spurs a sharp rise in housing starts, which peak at 1.67 million. The rest of the world also experiences stronger economic growth due to faster productivity gains, although to a lesser extent than enjoyed in the US.

*The optimistic scenario also assumes a stronger Washington economy*

In addition to reflecting the impact of the stronger U.S. forecast on the state economy, the optimistic Washington forecast assumes that aerospace employment gradually rises through 2023 rather than levelling off as in the baseline. Software employment growth is also much stronger than in the baseline forecast. In the optimistic scenario, the stronger regional economy drives Seattle consumer price inflation above the baseline. Washington average wage growth is also higher in the optimistic scenario than in the baseline. Construction employment continues to rise throughout the forecast rather than peaking in the fourth quarter of 2019 as in the baseline. By the end of 2023, Washington nonfarm payroll employment is higher by 82,800 jobs (2.3%) than in the baseline forecast and Washington personal income is \$48.8 billion (8.3%) higher.

### **Pessimistic**

*The pessimistic scenario assumes a loss in confidence and a three-quarter recession*

In the pessimistic scenario, a broad loss in confidence and growing aversion to risk leads to drops in a wide range of investment and consumer spending categories to end the expansion in its 126th month, a new record. Rising prices have left the real-estate market vulnerable, and this market's growth has been slowing. The slowdown turns into a decline, as real-estate prices correct and confidence plunges. Over the course of the recession, real GDP declines 1.5%. The unemployment rate climbs through most of 2019 and 2020, reaching a high of 5.2% in the fourth quarter of 2020, before declining over the remainder of the forecast.

In addition to reflecting the impact of the weaker U.S. forecast on the state economy, aerospace employment resumes its decline

*This scenario also assumes a weaker local economy*

rather than leveling off as in the baseline. Software employment also declines rather than growing moderately as in the baseline forecast. Construction employment peaks in the fourth quarter of 2018 rather than rising through the fourth quarter of 2019 as in the baseline. The relatively weak local economy also puts downward pressure on Washington wages and the Seattle CPI. By the end of 2023, Washington nonfarm payroll employment is 186,900 (5.2%) lower than in the baseline forecast and Washington personal income is \$63.0 billion (10.7%) lower.

Table 2.2 compares the optimistic and pessimistic forecasts with the baseline forecast.

### **Governor’s Council of Economic Advisors (GCEA)**

In the GCEA scenario, the U.S. and state forecasts were adjusted to match the average view of the Council members.

*The Governor’s Council of Economic Advisors’ national forecast is very close to the baseline*

At the national level, the GCEA forecast for real GDP growth is close to the baseline forecast in each year of the forecast. The GCEA forecast averages 2.2% per year over the six-year interval through 2023, which is the same rate as in the baseline forecast. The GCEA forecast of 2.2% average real consumer spending growth is also the same as the baseline forecast. The GCEA members have a slightly higher PCE inflation forecast at an average rate of 2.2% compared to 2.0% in the baseline. The Council members’ mortgage rate forecast is also the same as the baseline forecast on average but their oil price forecast is higher.

*The GCEA members expect stronger Washington income growth*

The GCEA scenario for Washington real personal income growth averages 3.5% per year in 2018 through 2023 compared to the baseline forecast of 3.1%. Because the council members also expect more inflation, their nominal personal income growth forecast averages 5.7% versus 5.2% in the baseline. The Council members forecast for total employment growth over the six-year period averages 1.6% per year, which is the same as in the baseline forecast. The GCEA forecasts for both manufacturing employment growth and construction employment growth are both slightly more optimistic than the baseline forecast. The GCEA housing permit forecast is slightly lower than ours is, averaging 41,500 units per year through 2023 compared to 42,600 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 2,700 (0.1%) lower than in the baseline forecast but Washington personal income is \$8.6 billion (3.2%) higher.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1  
**Washington Economic Forecast Summary**  
 Forecast 2019 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
<b>Real Income (Billions of Chained 2012 Dollars)</b>								
Real Personal Income	380.413	395.757	414.233	429.019	441.866	454.276	466.073	479.052
% Ch	4.5	4.0	4.7	3.6	3.0	2.8	2.6	2.8
Real Wage and Salary Disb.	190.408	199.860	213.263	223.156	229.343	235.073	241.059	248.191
% Ch	5.0	5.0	6.7	4.6	2.8	2.5	2.5	3.0
Real Nonwage Income	190.005	195.897	200.969	205.863	212.523	219.202	225.014	230.862
% Ch	4.0	3.1	2.6	2.4	3.2	3.1	2.7	2.6
Real Per Capita Income (\$/Person)	52,703	53,885	55,454	56,505	57,315	58,100	58,846	59,764
% Ch	2.8	2.2	2.9	1.9	1.4	1.4	1.3	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.036	1.052	1.071	1.092	1.113	1.135	1.159	1.182
% Ch	0.6	1.6	1.9	1.9	1.9	2.0	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.521	2.589	2.671	2.728	2.788	2.844	2.908	2.970
% Ch	1.9	2.7	3.1	2.2	2.2	2.0	2.2	2.1
Average Nonfarm Annual Wage	59,551	61,895	65,800	68,476	70,461	72,806	75,432	78,419
% Ch	2.7	3.9	6.3	4.1	2.9	3.3	3.6	4.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.00	26.81	27.93	29.05	29.99	30.92	31.93	33.01
% Ch	2.8	3.1	4.2	4.0	3.2	3.1	3.2	3.4
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	393.962	416.282	443.883	468.587	491.938	515.741	540.058	566.143
% Ch	5.1	5.7	6.6	5.6	5.0	4.8	4.7	4.8
Disposable Personal Income	345.944	365.885	391.057	413.756	434.556	455.914	477.057	499.010
% Ch	5.0	5.8	6.9	5.8	5.0	4.9	4.6	4.6
Per Capita Income (\$/Person)	54,580	56,679	59,421	61,715	63,808	65,960	68,186	70,628
% Ch	3.4	3.8	4.8	3.9	3.4	3.4	3.4	3.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,588.0	3,676.4	3,754.6	3,795.4	3,864.6	3,922.4	3,971.9	4,016.9
Total Washington Employment	3,390.1	3,494.7	3,577.0	3,633.3	3,702.3	3,749.1	3,791.6	3,832.9
Unemployment Rate (%)	5.52	4.94	4.73	4.27	4.20	4.42	4.54	4.58
Nonfarm Payroll Employment	3,195.0	3,285.0	3,365.5	3,452.0	3,515.0	3,556.5	3,593.5	3,630.8
% Ch	2.9	2.8	2.4	2.6	1.8	1.2	1.0	1.0
Manufacturing	292.3	286.7	283.4	289.1	290.6	290.1	290.9	294.0
% Ch	0.6	-1.9	-1.2	2.0	0.5	-0.2	0.3	1.1
Durable Manufacturing	210.6	203.7	198.9	203.3	204.5	204.3	204.6	206.9
% Ch	-0.1	-3.3	-2.3	2.2	0.6	-0.1	0.2	1.1
Aerospace	93.2	87.7	82.2	84.7	84.9	84.9	84.9	84.9
% Ch	-1.1	-5.9	-6.2	3.0	0.2	0.0	0.0	0.0
Nondurable Manufacturing	81.7	83.0	84.5	85.8	86.1	85.8	86.3	87.1
% Ch	2.5	1.6	1.7	1.6	0.4	-0.4	0.5	1.0
Construction	178.9	193.5	206.3	215.2	215.6	215.5	214.4	213.2
% Ch	6.5	8.2	6.6	4.3	0.2	-0.1	-0.5	-0.6
Service-Providing	2,717.5	2,798.6	2,869.7	2,941.3	3,002.3	3,044.3	3,081.6	3,117.0
% Ch	3.0	3.0	2.5	2.5	2.1	1.4	1.2	1.1
Software Publishers	57.3	60.2	62.9	65.9	66.7	67.5	68.7	70.0
% Ch	3.2	5.1	4.4	4.8	1.1	1.3	1.7	1.9
Electronic Shopping and Mail-Order	33.2	44.0	53.5	55.1	58.5	61.1	63.1	64.8
% Ch	17.7	32.5	21.7	3.0	6.1	4.4	3.3	2.7
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	40.116	44.526	47.144	42.279	44.070	42.928	41.804	40.970
% Ch	3.3	11.0	5.9	-10.3	4.2	-2.6	-2.6	-2.0
Single-Family	21.823	22.025	24.108	23.888	25.379	25.553	25.423	25.426
% Ch	17.0	0.9	9.5	-0.9	6.2	0.7	-0.5	0.0
Multi-Family	18.294	22.501	23.036	18.390	18.691	17.375	16.381	15.544
% Ch	-9.3	23.0	2.4	-20.2	1.6	-7.0	-5.7	-5.1
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.82	5.09	5.24	5.23	5.18

Table 2.2  
**Comparison of Alternative Forecasts**

Fiscal Years

	2018	2019	2020	2021	2022	2023
<b>U.S.</b>						
<b>Real GDP, Percent Change</b>						
Optimistic	2.6	3.2	3.0	2.7	2.5	2.5
Baseline	2.6	3.0	2.1	1.7	1.8	2.1
Pessimistic	2.6	3.0	1.5	-0.6	2.0	1.6
<b>PCE Price Index, Percent Change</b>						
Optimistic	1.9	2.2	2.1	1.8	2.1	2.1
Baseline	1.9	1.9	1.9	2.0	2.1	2.0
Pessimistic	1.9	2.1	1.8	1.8	2.2	2.1
<b>Mortgage Rate, Percent</b>						
Optimistic	4.16	4.86	5.14	5.24	5.28	5.34
Baseline	4.16	4.82	5.09	5.24	5.23	5.18
Pessimistic	4.16	4.65	4.02	2.88	3.07	3.60
<b>3 Month T-Bill Rate, Percent</b>						
Optimistic	1.41	2.40	2.44	2.67	2.99	3.20
Baseline	1.41	2.42	2.99	3.21	3.17	3.15
Pessimistic	1.41	2.43	1.86	0.23	0.64	1.30
<b>Washington</b>						
<b>Real Personal Income, Percent Change</b>						
Optimistic	4.7	4.6	4.7	4.7	3.9	3.8
Baseline	4.7	3.6	3.0	2.8	2.6	2.8
Pessimistic	4.7	2.3	1.2	-0.8	0.5	1.4
<b>Personal Income, Percent Change</b>						
Optimistic	6.6	6.9	6.9	6.6	6.1	6.0
Baseline	6.6	5.6	5.0	4.8	4.7	4.8
Pessimistic	6.6	4.5	3.1	0.9	2.7	3.5
<b>Employment, Percent Change</b>						
Optimistic	2.4	2.7	2.2	1.7	1.5	1.4
Baseline	2.4	2.6	1.8	1.2	1.0	1.0
Pessimistic	2.4	2.4	0.9	-0.5	0.1	0.2
<b>Housing Permits, Thousands of Authorized Units</b>						
Optimistic	47.1	42.8	45.3	46.4	46.9	46.8
Baseline	47.1	42.3	44.1	42.9	41.8	41.0
Pessimistic	47.1	42.0	41.1	34.2	33.5	31.9

Table 2.3  
**Governor's Council of Economic Advisor's Forecast**

Calendar Years

	2018	2019	2020	2021	2022	2023
<b>U.S.</b>						
<b>Real GDP</b>						
<i>Growth</i>						
ERFC	2.9	2.6	1.8	1.8	1.9	2.1
GCEA Average	2.9	2.5	2.1	1.8	2.0	2.0
<b>Real Consumption</b>						
<i>Growth</i>						
ERFC	2.7	2.6	1.9	2.0	2.1	2.2
GCEA Average	2.8	2.6	2.1	1.9	2.0	2.0
<b>PCE Price Index</b>						
<i>Growth</i>						
ERFC	2.1	1.9	1.9	2.1	2.0	2.0
GCEA Average	2.2	2.3	2.2	2.2	2.0	2.0
<b>Mortgage Rate</b>						
<i>Percent</i>						
ERFC	4.6	5.0	5.2	5.2	5.2	5.1
GCEA Average	4.6	5.1	5.2	5.2	5.3	5.3
<b>Oil Price (Brent)</b>						
<i>Dollars per barrel</i>						
ERFC	71.8	66.4	66.0	65.6	65.2	64.8
GCEA Average	73.8	72.4	70.9	70.5	71.0	71.1
<b>Washington State</b>						
<b>Real Personal Income</b>						
<i>Growth</i>						
ERFC	4.7	2.8	3.0	2.6	2.7	2.8
GCEA Average	4.5	3.6	3.3	3.0	3.1	3.3
<b>Wage and Salary Employment</b>						
<i>Growth</i>						
ERFC	2.7	2.2	1.5	1.0	1.0	1.0
GCEA Average	2.7	1.9	1.4	1.2	1.1	1.0
<b>Manufacturing Employment</b>						
<i>Growth</i>						
ERFC	0.9	1.3	0.1	-0.1	0.7	1.2
GCEA Average	1.0	1.2	0.8	0.8	0.8	0.8
<b>Construction Employment</b>						
<i>Growth</i>						
ERFC	6.4	1.6	-0.1	-0.3	-0.5	-0.6
GCEA Average	5.9	1.9	1.5	1.0	0.5	0.5
<b>Housing Permits</b>						
<i>Thousands of authorized units</i>						
ERFC	43.7	43.6	43.8	42.2	41.4	40.6
GCEA Average	43.7	43.3	41.8	40.5	40.0	39.5
<b>Washington Average Annual Wage</b>						
<i>Growth</i>						
ERFC	6.5	2.6	3.2	3.5	3.8	4.1
GCEA Average	6.2	4.0	3.9	3.9	3.8	3.6

Table 2.4

**Forecast Analysis**

Comparison of Forecasts for 2017-19

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2			Average Annual Rate (Thousands) 2017:3 to 2019:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2014</b>				
February	1.3	4.9	3.5	42.5
June	1.2	5.3	3.8	43.0
September	1.3	5.4	3.8	43.1
November	1.1	5.5	3.6	43.2
<b>2015</b>				
March	1.3	5.4	3.6	43.1
June	1.4	5.6	3.8	44.2
September	1.3	5.4	3.6	43.9
November	1.4	5.4	3.5	44.0
<b>2016</b>				
February	1.2	5.0	3.2	43.3
June	1.2	5.1	3.2	43.7
September	1.4	5.1	3.3	43.8
November	1.5	5.1	3.2	41.0
<b>2017</b>				
March	1.7	5.3	3.6	41.0
June	1.6	5.2	3.6	42.7
September	1.9	4.8	3.1	43.1
November	2.1	5.0	3.2	42.3
<b>2018</b>				
February	2.2	5.3	3.3	44.3
June	2.2	5.6	3.5	45.5
September	2.5	5.9	3.7	44.8
November	2.5	5.9	3.9	44.7

Table 2.5

**Forecast Analysis**

Comparison of Forecasts for 2019-21

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2019:2-2021:2			Average Annual Rate (Thousands) 2019:3 to 2021:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2016</b>				
February	1.1	4.7	3.0	44.3
June	1.1	5.0	3.1	44.3
September	1.1	5.1	3.0	44.3
November	1.2	5.0	3.0	41.5
<b>2017</b>				
March	1.1	4.9	2.9	40.7
June	1.2	5.1	3.0	42.0
September	1.2	5.3	3.3	42.0
November	1.2	5.3	3.2	42.6
<b>2018</b>				
February	1.4	5.2	3.1	42.8
June	1.2	5.0	2.9	43.2
September	1.2	5.0	2.9	44.0
November	1.3	4.9	2.8	43.5

Table 2.6  
**Forecast Comparison**  
 Forecast 2019 to 2023

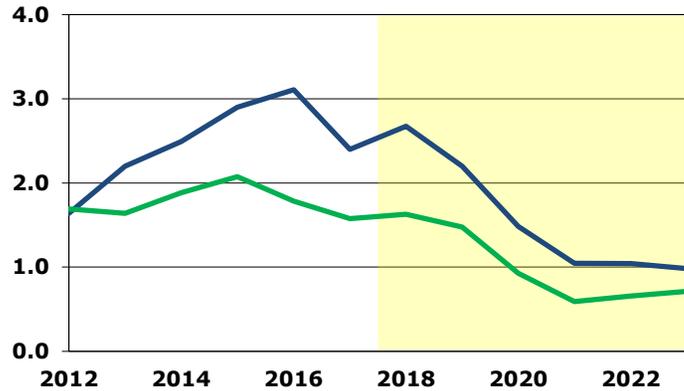
Fiscal Years

	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Washington</b>							
<b>Real Personal Income</b>							
November	395.757	414.233	429.019	441.866	454.276	466.073	479.052
% Ch	4.0	4.7	3.6	3.0	2.8	2.6	2.8
September	388.473	404.960	419.254	432.719	444.876	457.831	470.819
% Ch	3.4	4.2	3.5	3.2	2.8	2.9	2.8
<b>Personal Income</b>							
November	416.282	443.883	468.587	491.938	515.741	540.058	566.143
% Ch	5.7	6.6	5.6	5.0	4.8	4.7	4.8
September	408.618	433.922	458.794	483.140	506.506	531.198	556.562
% Ch	5.0	6.2	5.7	5.3	4.8	4.9	4.8
<b>Employment</b>							
November	3285.0	3365.5	3452.0	3515.0	3556.5	3593.5	3630.8
% Ch	2.8	2.4	2.6	1.8	1.2	1.0	1.0
September	3285.1	3368.9	3459.8	3518.0	3555.6	3589.2	3618.2
% Ch	2.8	2.6	2.7	1.7	1.1	0.9	0.8
<b>Housing Permits</b>							
November	44.526	47.144	42.279	44.070	42.928	41.804	40.970
% Ch	11.0	5.9	-10.3	4.2	-2.6	-2.6	-2.0
September	44.526	47.144	42.510	44.253	43.682	42.486	41.583
% Ch	11.0	5.9	-9.8	4.1	-1.3	-2.7	-2.1

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts  
(Percent change)

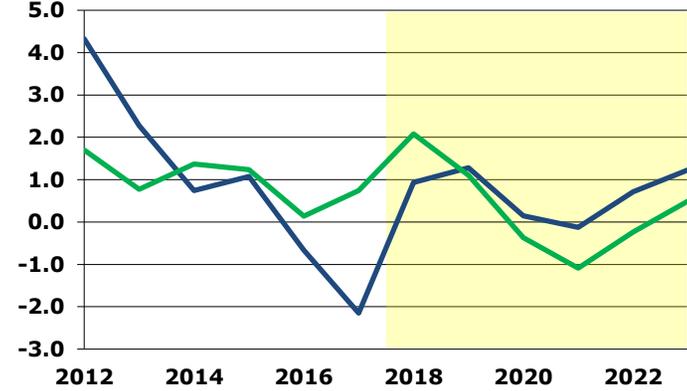
Forecast

Total Nonfarm Payroll Employment



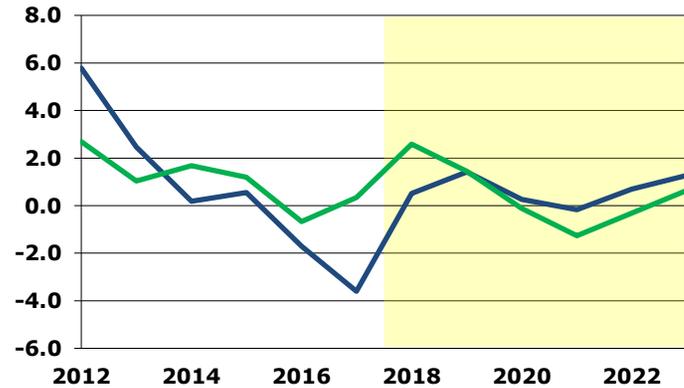
Source: WA State Employment Security Dept. 2017, ERFC 2023

Manufacturing Employment



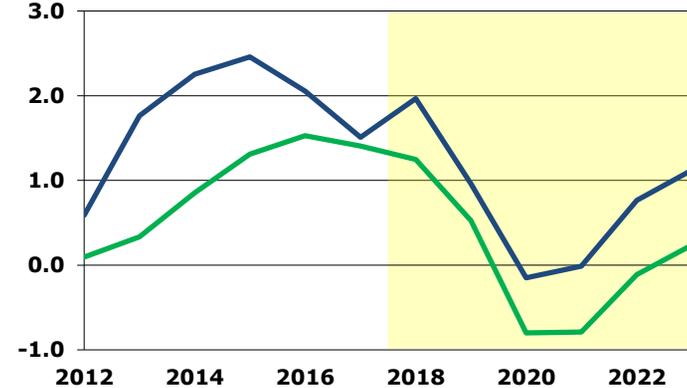
Source: WA State Employment Security Dept. 2017, ERFC 2023

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

Nondurable Manufacturing Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

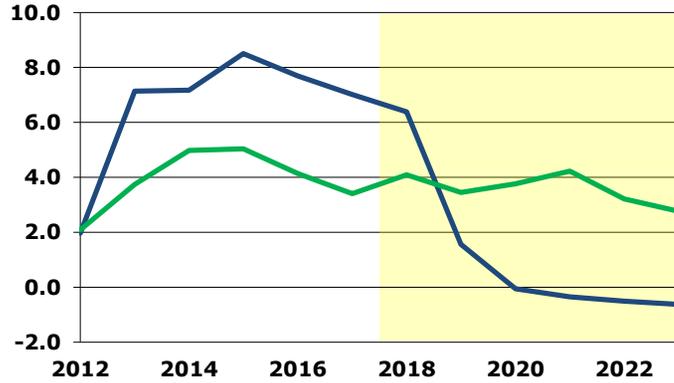
Washington

U.S.

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)  
(Percent change)

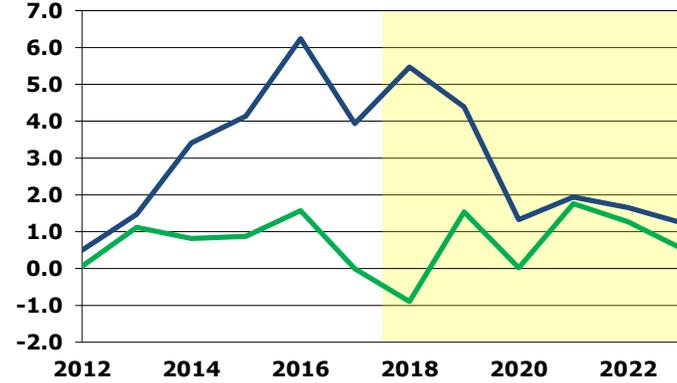
Forecast

Construction Employment



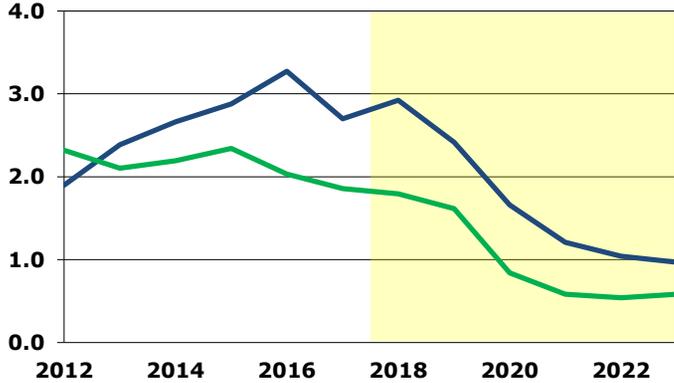
Source: WA State Employment Security Dept. 2017, ERFC 2023

Information Employment



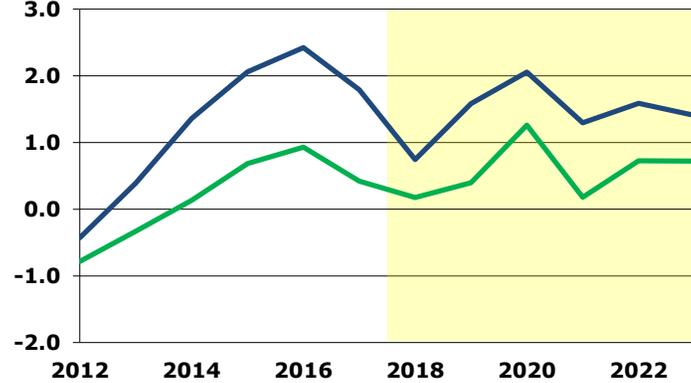
Source: WA State Employment Security Dept. 2017, ERFC 2023

Other Private Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

Government Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

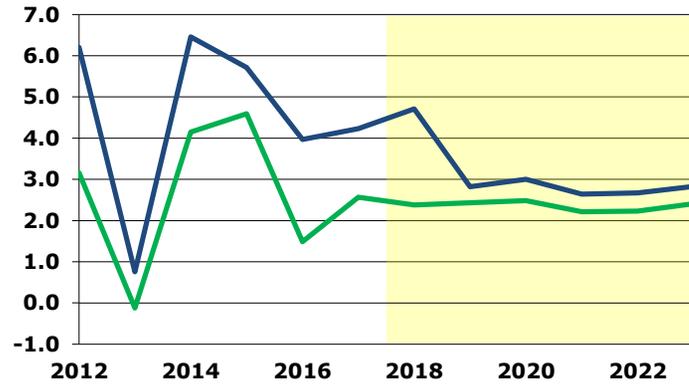
Washington

U.S.

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)  
 (Percent change)

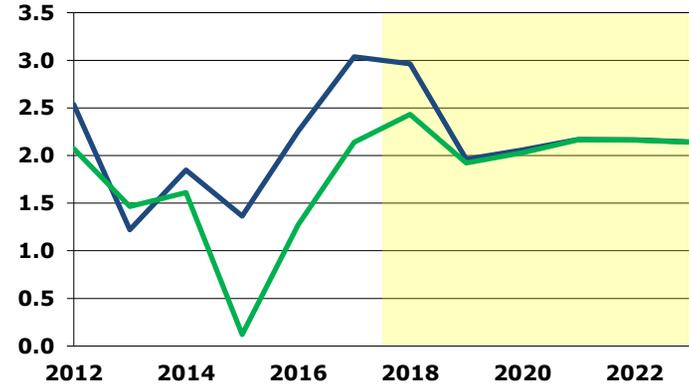
Forecast

Real Personal Income



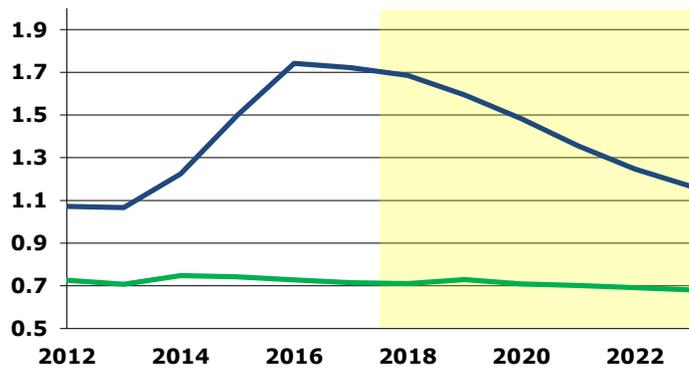
Source: Bureau of Economic Analysis 2017, ERFC 2023

Consumer Price Indices



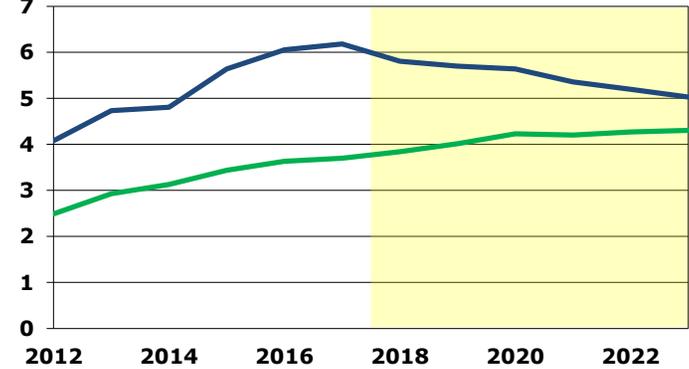
Source: Bureau of Labor Statistics 2017, ERFC 2023

Population



Source: Census Bureau 2017, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2017, ERFC 2023

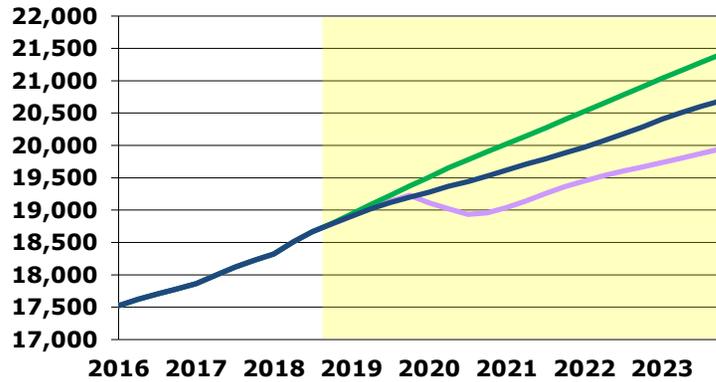
Washington

U.S.

Figure 2.8: Comparison of Alternative U.S. Economic Forecasts

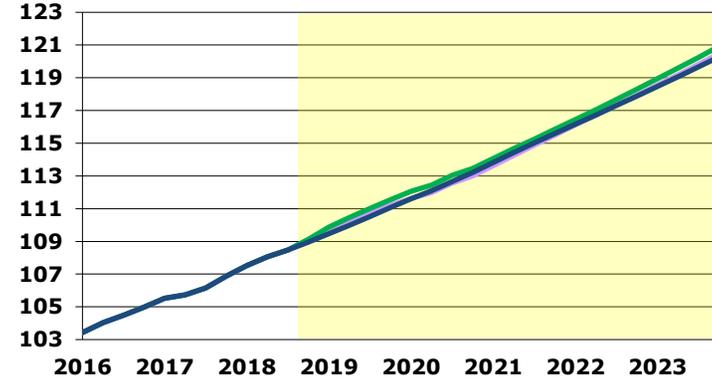
Forecast

Real GDP, Billions of 2012 Dollars



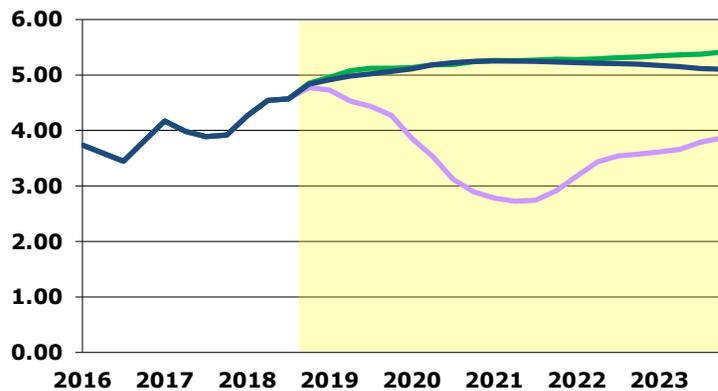
Source: Bureau of Economic Analysis 2018 Q2, ERFC 2023

PCE Price Index, 2012 = 100



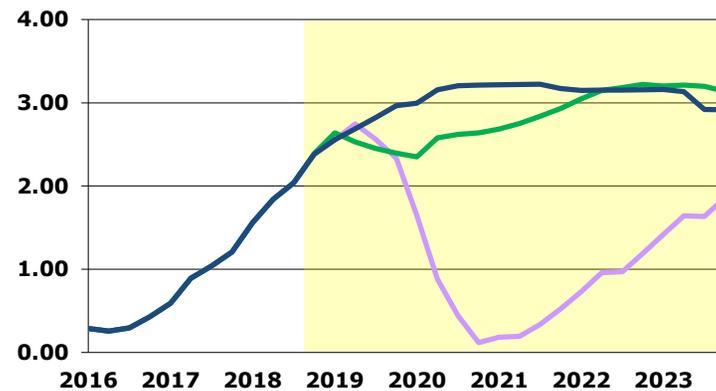
Source: Bureau of Economic Analysis 2018 Q2, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2018 Q2, ERFC 2023

Three Month T-Bill Rate, Percent



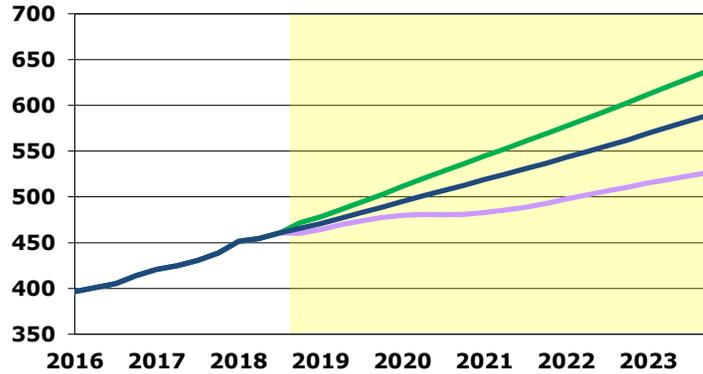
Source: Federal Reserve Board 2018 Q2, ERFC 2023

■ Baseline      ■ Optimistic      ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

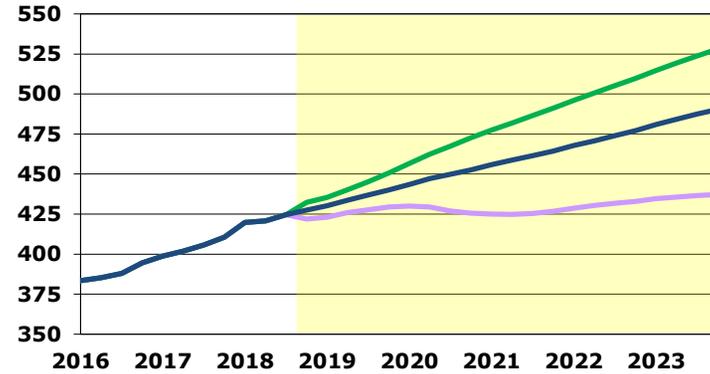
Forecast

Personal Income, Billions of Dollars



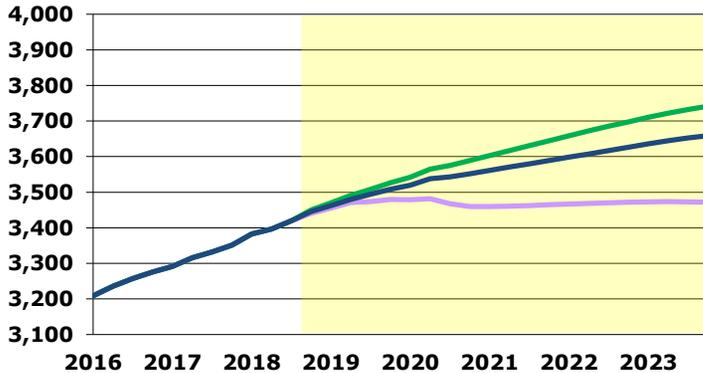
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Real Personal Income, Billions of 2012 Dollars



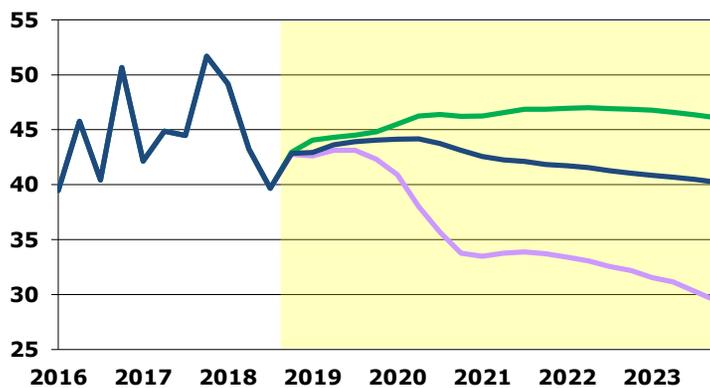
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2018 Q2, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2018 Q2, ERFC 2023

■ Baseline      ■ Optimistic      ■ Pessimistic



## Chapter 3: Washington State Revenue Forecast Summary

- **General Fund-State (GF-S) revenue collections since the September 2018 forecast have come in \$22 million over the forecasted amount.**
- **Forecasted GF-S revenue has increased by \$118 million in the current biennium, \$189 million in the 2019-21 biennium and \$201 million in the 2021-23 biennium.**
- **Most of the forecasted increase in revenue was due to an increase in the expected value of existing property for the 2019 property tax levy, which carried forward into future levies.**
- **Due to a decrease in the expected growth rate of state personal income and other changes to the economic forecast, forecasted Revenue Act and real estate excise taxes decreased slightly in the 2019-21 and 2021-23 biennia.**
- **Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$163 million in the current biennium, \$196 million in the 2019-21 biennium and \$209 million in the 2021-23 biennium.**

### Overview

*The revenue forecast has increased mainly due to higher assessed values for property tax.*

Since the September 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$22 million higher than forecasted. This surplus, however, came mainly from higher-than-expected transfers of unclaimed property into the GF-S. Revenue Act taxes, the main source of GF-S revenue, came in \$25 million lower than forecasted. Because of this shortfall, plus lower forecasted growth in state personal income and other changes to the economic forecast, expected revenue from Revenue Act sources has been decreased slightly in the 2019-21 and 2021-23 biennia. These decreases, however, were outweighed by increases in forecasted property tax revenues that resulted from an increase in the expected value of existing property for the 2019 property tax levy. This increased value will carry forward into future levies, increasing expected taxes in those years as well.

GF-S forecast change by biennium (millions):

17-19: +\$118  
 19-21: +\$189  
 21-23: +\$201

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2017-19 through 2021-23 biennia. For the current biennium, revenue sources that are tracked monthly came in \$22.2 million higher than forecasted in September. Changes to the economic forecast resulted in a \$96.3 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$118.5 million in the current 2017-19 biennium. Changes to the economic forecast resulted in increases of \$189.1 million to projected collections for the 2019-21 biennium and \$201.1 million for the 2021-23 biennium. The November 2018 forecast for GF-S revenue totals \$43,926.1 million in the 2017-19 biennium, \$49,063.9 million in the 2019-21 biennium and \$52,777.6 million in the 2021-23 biennium.

GF-S forecast (\$millions):

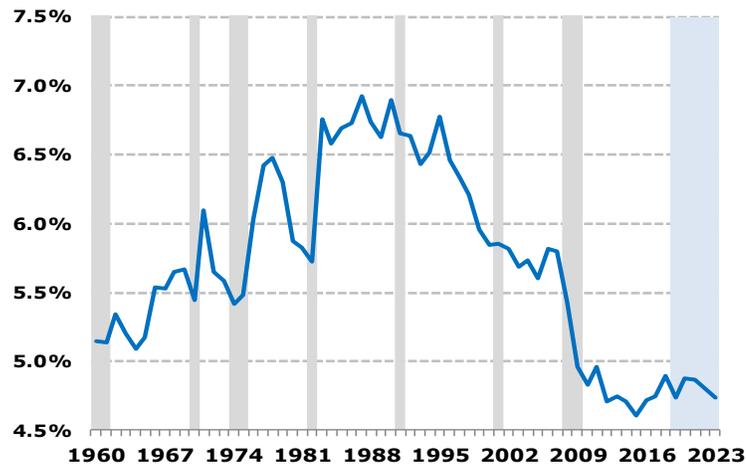
2017-19:  
 \$43,926  
  
 2019-21:  
 \$49,064  
  
 2021-23:  
 \$52,778

**Table 3.1: Revisions to the General Fund-State Forecast (cash basis, millions of dollars)**

	<b>2017-19 Biennium</b>	<b>2019-21 Biennium</b>	<b>2021-23 Biennium</b>
Collection Experience	\$22.2	NA	NA
Non-Economic Change	\$0.0	\$0.0	\$0.0
Forecast Change	\$96.3	\$189.1	\$201.0
<b>Total Change</b>	<b>\$118.5</b>	<b>\$189.1</b>	<b>\$201.0</b>

**Figure 3.1: GF-S Revenue as a Percentage of State Personal Income (Fiscal Years)**

GF-S revenue relative to state personal income has been on a declining trend since 1995



Source: ERFC, data through fiscal year 2018. Gray shaded area indicates recession; blue shaded area indicates forecast.

As can be seen in Figure 3.1, the ratio of GF-S revenue collected relative to state personal income has been increasing after

*Though the ratio of collections to income has increased from the FY 2015 trough, it is still near historical lows*

reaching a trough in FY 2015. The ratio of revenue to income has been on a downward trend since 1995, broken only by the housing boom that raised the ratio from 2005 to mid-2008, and by temporary taxes and transfers of funds from non-GF-S sources into the GF-S that again boosted the ratio in fiscal years 2011 and 2013. The ratio increased slightly in FY 2014 due to low personal income growth and then decreased slightly in FY 2015. The ratio then increased in FY 2016 and 2017, largely due to revenue increases stemming from legislative changes. Additional legislative changes enacted in June of 2017 boosted the FY2018 ratio, but legislative changes from the 2018 session reduced the expected ratio in FY 2019. The ratio rebounds in FY 2020 but then continues its downward trend. Despite the recent increases, the ratio of revenue to income in FY 2023 will still be below that of any fiscal year on record prior to FY 2012.

*Forecast details are at the end of the chapter*

The history of nominal and real GF-S revenue by biennium can be found in Table 3.3. GF-S forecast changes by agency and major revenue classification for the 2017-19 biennium can be found in Table 3.5 (cash) and Table 3.6 (GAAP). Forecast changes for the 2019-21 biennium can be found in Table 3.7 (cash) and Table 3.8 (GAAP). The GF-S forecast by fiscal year and major source category through FY 2023 can be found in Table 3.9.

## Recent Collection Experience

*Collections were \$22 million (0.7%) more than the September 2018 forecast*

Revenue collections from the Department of Revenue (DOR), Department of Licensing, and Administrative Office of the Courts are tracked monthly. In the period since the September 2018 forecast, total revenue from the above sources came in \$22.2 million (0.7%) higher than expected (see Table 3.2). While Revenue Act collections reported by the DOR were \$25.1 million (0.9%) below the forecast, revenue from other DOR tax sources was \$44.6 million (10.1%) above the forecast.

**Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the September 2018 forecast, cash basis, millions of dollars)**

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	(\$25.1)	-0.9%
Non-Revenue Act	\$44.6	10.1%
Subtotal	\$19.5	0.6%
Administrative Office of the Courts	\$2.7	23.1%
<b>Total*</b>	<b>\$22.2</b>	<b>0.7%</b>

\* Detail may not add to total due to rounding.

Source: ERFC; Period: September 11, 2018 - November 10, 2018

Most of the non-Revenue Act forecast variance was due to unclaimed property

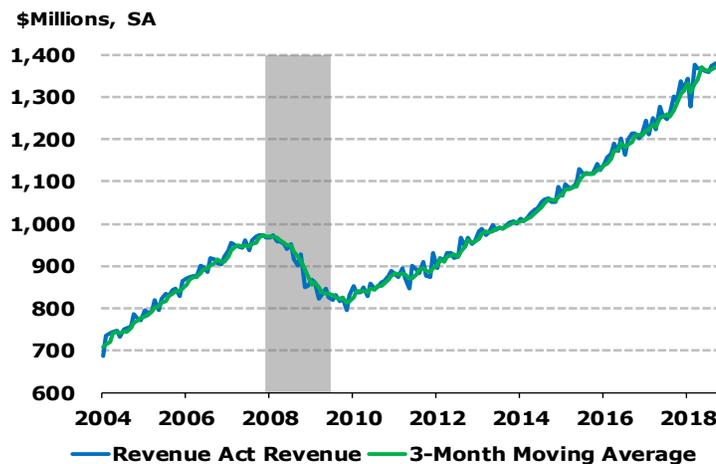
Most of the positive variance in non-Revenue Act collections came from transfers of unclaimed property into the GF-S, which came in \$38.5 million (73.9%) higher than forecasted. October is the highest month for unclaimed property transfers since annual remittances of unclaimed property from businesses to the state are due on October 31, and this year's remittances were the highest on record. Real estate excise taxes (REET) came in \$19.2 million (10.8%) higher than forecasted. Liquor sales and liter tax receipts came in \$3.9 million (9.2%) higher than forecasted. Cigarette tax receipts came in \$0.4 million (0.6%) higher than forecasted. Property tax receipts came in \$18.8 million (23.0%) lower than forecasted. All other DOR revenue sources came in \$1.4 million (5.1%) higher than forecasted. Revenue from the Administrative Office of the Courts was \$2.7 million (23.1%) higher than forecasted.

Adjusted Revenue Act collections were up 7.6% year over year for third quarter 2018 activity

Figure 3.2 shows seasonally adjusted Revenue Act receipts excluding payments received under the tax amnesty program in early 2011 and other large payments. It is also adjusted for some changes in payment patterns. As shown in the figure, collections have been on an upward trend since November 2009. Despite large swings in monthly collections, the three-month moving average has maintained an upward trend. Adjusted for large one-time payments and refunds, collections grew 4.6% year over year in the October 11 – November 10 collections period and 8.5% in the previous period. Adjusted year-over-year growth in collections representing third quarter 2018 activity (August 11 – November 10, 2018 collections) was 7.6% after 8.8% growth for second quarter activity (May 11 – August 10, 2018 collections). Collections growth for first quarter activity was 8.2% and growth in fourth quarter 2017 activity was 8.3%.

**Figure 3.2: Revenue Act Collections\***

Year-over-year growth in adjusted Revenue Act collections began to increase in the fourth quarter of 2017



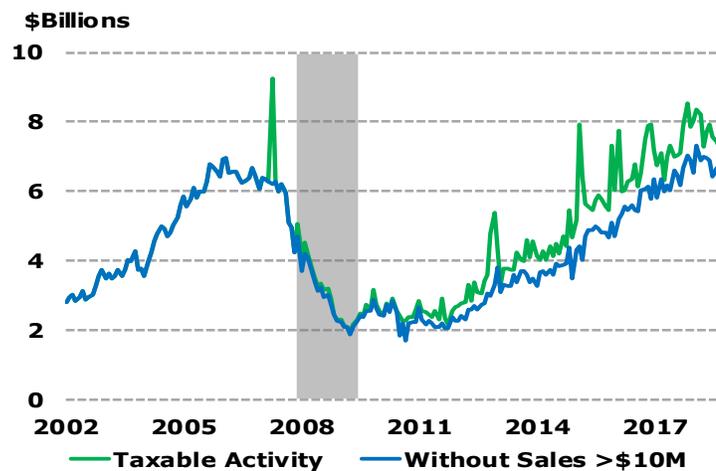
Source: ERFC; Data through November 10, 2018 preliminary allocation  
\*Adjusted for large payments/refunds and payment pattern change

*Sales of large commercial properties remain strong but residential taxable activity has slowed*

Much of the large positive variance in REET collections was once again due to stronger-than-expected sales of large commercial property. Sales of property worth \$10 million or more totaled \$2.1 billion in the two months since the last forecast. These sales totaled \$2.4 billion in the second quarter of 2018 and \$3.5 billion in the third quarter. Large commercial sales and transfers of controlling interest during corporate mergers have been responsible for much of the increase in taxable activity since November 2012, creating many spikes in activity (see Figure 3.3). Residential activity has been slightly weaker than expected since the September 2018 forecast due to a decrease in the number of transactions and moderating prices. As can be seen from the figure, REET collections appear to have peaked in February 2018.

**Figure 3.3: Taxable Real Estate Excise Activity, SA**

*REET collections appear to have peaked in February 2018*



Source: ERFC; data through October 2018

## Revenue Forecasts by Source

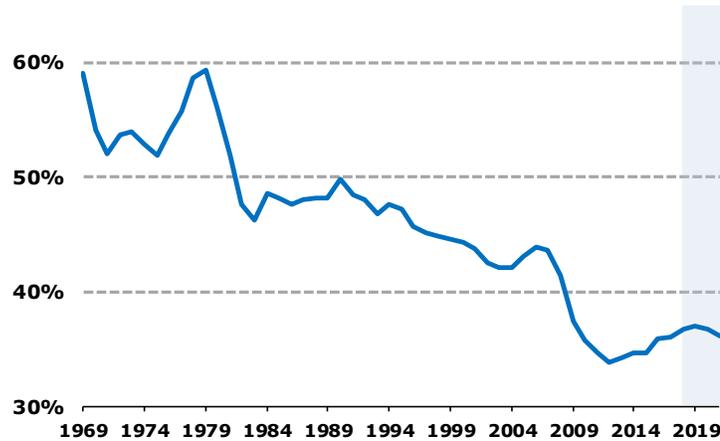
### Department of Revenue

*Taxes collected by DOR are most of GF-S taxes*

The Department of Revenue (DOR) collects and administers the majority of Washington’s GF-S revenue, accounting for 94.7% of total GF-S revenue in FY 2018. The largest tax sources administered by the DOR are the retail sales tax, business and occupation tax, property tax, use tax, cigarette tax and real estate excise tax. The revenue forecasts discussed below can be found in Tables 3.5-3.8.

**Figure 3.4: Taxable Sales\* as Percentage of State Personal Income**

*The ratio of taxable sales to state personal income is on a declining trend*



\*Past tax base adjusted to represent current base. Shaded area indicates forecast

Source: ERFC; Data through FY 2018, forecast through FY 2023

*Retail sales taxes are the largest source of GF-S revenue*

The retail sales tax is the largest source of GF-S revenue, accounting for 47.1% of GF-S revenue in FY 2018. The state's share of the tax is 6.5% of the sales price. While construction labor, repair services, and some other services are taxed, the tax does not apply to most services. Taxable sales as a share of personal income have been declining. Their share fell sharply during the recession and continued to fall through FY 2012. In that year, 34.1% of personal income was spent on taxable items and services, the lowest percentage on record. Increased spending on construction and autos, along with legislative changes to services and companies deemed taxable, caused the share to grow through FY 2017, reaching 36.1% of personal income. Legislation passed in June 2017 that extends the tax to bottled water and certain online sales is forecasted to cause the share to continue to increase through FY 2019. From FY 2019 on, however, the additional revenue will not grow as quickly as personal income, causing the ratio of sales to income to continue its downward trend. The historical and forecasted relationship between taxable sales and income is illustrated in Figure 3.4. Taxable retail sales by fiscal year can be found in Table 3.4.

*Retail sales tax receipt growth forecast:*

- FY19: 7.9%
- FY20: 4.1%
- FY21: 3.5%
- FY22: 3.3%
- FY23: 3.4%

Strong growth in construction and auto sales brought taxable retail sales growth of 8.1% in FY 2015. Legislative changes coupled with continued growth in construction and auto sales boosted growth in FY 2016 taxable activity to 8.4%. Slowing construction growth and flat auto sales lowered growth in FY 2017 activity to 6.3%. Growth increased to 8.6% in FY 2018, due largely to increased taxation of online sales. Forecasted growth in FY 2019 taxable activity stays relatively strong at 6.2% despite slowing auto sales and construction because of continuing increases in the number of online sales that are taxed. Growth then declines to 4.3% in FY 2020 before settling

at 3.4% for FY 2021 through 2023 as auto sales, construction and online sales growth slows (see Table 3.4). Due to the lag between taxable activity and collections and the presence of tax deferrals, credits, refunds, and payments of past due taxes, the growth in actual collections differs from the growth in taxable activity. Growth in collections for FY 2018 was 8.2%. Collections growth is forecasted at 7.9% in FY 2019, 4.1% in FY 2020, 3.5% in FY 2021, 3.3% in FY 2022 and 3.4% in FY 2023.

*Business and Occupation taxes are the second largest source of GF-S revenue*

The business and occupation (B&O) tax is the second largest source of GF-S revenue, accounting for 19.1% of GF-S revenue in FY 2018. It is a tax on the gross receipts of all businesses operating in Washington. The state portion of the tax applies ten different rates according to various classifications of business activities. In FY 2018, the largest contributor to total state B&O tax was the services sector, which had a gross tax rate of 1.5% and represented an estimated 43% of B&O taxes due. The next largest sector was retailing, which is taxed at 0.471% and represented an estimated 23% of taxes due, followed by the wholesaling sector, which is taxed at 0.484% and represented an estimated 19% of taxes due.

*B&O tax growth forecast:*

*FY19: 4.4%  
FY20: 3.6%  
FY21: 4.7%  
FY22: 4.7%  
FY23: 4.9%*

In FY 2018, B&O tax receipts grew by 8.6% due to several large one-time payments of past due taxes and legislative expansion of the tax base. Forecasted growth slows to 4.4% in FY 2019 due to the elevated level of FY 2018 collections and then dips further to 3.6% in FY 2020, mainly due to lower oil prices. Growth then increases to 4.7% in FY 2021 and FY 2022 and 4.9% in FY 2023.

*State property taxes are the third largest source of GF-S revenue*

The state property tax levy is the third largest source of GF-S revenue, accounting for 12.6% of total revenue in FY 2018. Although the tax goes into the GF-S, it is dedicated to the funding of basic education. As discussed in the [September 2017](#) forecast publication, the total amount of the state levy was increased by new legislation in June 2017, with the increases beginning in FY 2018.

*The property tax forecast was increased due to higher expected assessed values*

The September 2018 property tax forecast assumed the assessed value of existing properties for the 2019 levy would increase by 7.4%. The actual growth in assessed value was 10.9%. The additional assessed value increased forecasted property tax receipts by \$57 million in the current biennium, \$259 million in the 2019-21 biennium and \$287 million in the 2021-23 biennium.

*Property tax growth forecast:*

*FY19: -14.1%  
FY20: 52.8%  
FY21: 10.1%  
FY22: 3.5%  
FY23: 2.7%*

Constrained by prior law to a levy growth rate of one percent on existing property (or the rate of inflation if less than one percent), property tax collections grew by 2.1% in FY 2016 and 1.9% in FY 2017. The first payments of the additional state levy began to arrive in the latter half of FY 2018, bringing total GF-S property tax growth of 31.4% for the fiscal year. Legislation from the 2018 session discussed above then decreases collections for

FY 2019 by 14.1% via a temporary reduction in the levy rate for calendar year 2019 and a \$935 million transfer of collections from the new levy to the Education Legacy Trust Account. Growth rebounds to 52.8% in FY 2020 with the absence of a transfer and the end of the temporary levy reduction in the second half of the year. Growth remains high at 10.1% in FY 2021, due to a full year at the unreduced levy rate, before falling to 3.5% in FY 2022 and 2.7% in FY 2023.

*REET was the fourth largest GF-S source in FY 2018*

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2018, accounting for 5.0% of total revenue. The state portion of REET is 1.28% of the sales price. The tax is divided between the GF-S (92.3%), a fund for local public works (2.0%), a fund for assistance of cities and counties (1.6%) and, from July 1, 2013 – June 30, 2023, the Education Legacy Trust Account (4.1%). The tax is applied to both residential and commercial real estate, including purchases of vacant land.

*REET growth forecast:*

*FY19: -6.6%  
FY20: -7.9%  
FY21: 2.7%  
FY22: 1.5%  
FY23: 2.5%*

Due to a high number of large sales of commercial property, REET receipts grew by 34.0% in FY 2013 and 15.2% in FY 2014. Even higher commercial sales coupled with strengthening residential sales boosted FY 2015 collections growth to 20.4% and FY 2016 growth to 19.4%. While large commercial sales slowed somewhat in FY 2017, the residential market accelerated, resulting in a further 13.6% increase. The pattern continued into FY 2018, resulting in further growth of 8.3%. Large commercial sales are expected to decline further in FY 2019 while residential sales also decrease, resulting in a 6.6% reduction in collections in FY 2019 and a 7.9% reduction in FY 2020. Growth then resumes slowly at 2.7% in FY 2021, 1.5% in FY 2022 and 2.5% in FY 2023.

*Use tax was the fifth largest GF-S source in FY 2018*

The state use tax was the fifth largest GF-S revenue source in FY 2018 at 3.2% of total receipts. The state portion of the tax is 6.5% of the purchase price for items used in the state that were not subject to the state retail sales tax. Examples of items subject to the state use tax are goods purchased out-of-state; online and mail-order purchases, where sales tax was not collected; or purchases of used vehicles from private individuals.

*Use tax growth forecast:*

*FY19: 5.4%  
FY20: 0.6%  
FY21: 3.6%  
FY22: 3.9%  
FY23: 4.1%*

Use tax collections grew 2.8% in FY 2018 after 6.0% growth in FY 2017. The low level of 2018 collections, coupled with high actual collections in the current year, boost expected growth to 5.4% in FY 2019. Collections for FY 2020 are expected to slow to 0.6% growth before resuming at more normal growth levels of 3.6% in FY 2021, 3.9% in FY 2022 and 4.1% in FY 2023.

*Public utility taxes were the sixth largest GF-S source in FY 2018*

Public utility taxes were the sixth largest DOR source of GF-S revenue in FY 2018, bringing in 1.9% of total receipts. The tax applies to the gross income of sales to consumers by public and privately owned utilities and is in lieu of the B&O tax. The largest

source of public utility taxes is the 3.873% tax on the distribution and generation of electrical power, followed by the 3.852% tax on the distribution of natural gas.

*Growth  
forecast:*

*FY19: 15.0%  
FY20: -2.4%  
FY21: 6.3%  
FY22: 5.0%  
FY23: 3.8%*

Public utility tax receipts shrank by 1.1% in FY 2018 after 1.4% growth in FY 2017. The low level of FY2018 collections, high actual collections in the year so far and increased electricity prices bring expected growth of 15.0% in FY 2019. Collections are then forecasted to decrease by 2.4% in FY 2020 before growing at 6.3% in FY 2021, 5.0% in FY 2022 and 3.8% in FY 2023.

*The cigarette  
tax was the  
seventh  
largest GF-S  
source in FY  
2017*

The state tax on cigarettes was the seventh largest DOR GF-S revenue source in FY 2018 at 1.6% of total receipts. Prior to FY 2010, the tax made up a much smaller portion of GF-S revenue because much of the tax was dedicated to non-GF-S accounts. In FY 2010, all of the tax except the portion dedicated to the Education Legacy Trust account was redirected to the GF-S, and in FY 2011 all of the cigarette tax was redirected to the GF-S. The current tax rate, which took effect May 1, 2010, is \$3.025 per pack of 20 cigarettes.

*Cigarette tax  
growth  
forecast:*

*FY19: 1.0%  
FY20: -2.9%  
FY21: -1.5%  
FY22: -2.2%  
FY23: -2.4%*

The total number of taxed cigarettes has been on a downward trend due to a continuing decline in the number of smokers. Recently, the rate of decline has been increasing further due to increased consumption of e-cigarettes, which are not subject to the cigarette tax but are subject to retail sales taxes. Collections decreased by 5.4% in FY 2018 after decreasing by 3.5% in FY2017 due to the timing of some collections from tax stamp sales that shifted collections from FY 2018 to FY 2019. Because of the shifted funds, collections are forecasted to increase by 1.0% in FY 2019 before continuing to decline at 2.9% in FY 2020, 1.5% in FY 2021, 2.2% in FY 2022 and 2.4% in FY 2023.

## **Forecasted Revenue from Cannabis-Related Sales**

*Sales of  
cannabis  
products in  
state-licensed  
stores began  
in July 2014*

Initiative 502, approved by voters in the November 2012 election, legalized the sale and use of recreational cannabis and cannabis products in Washington. The first legal sales of cannabis products in state-licensed stores occurred in July 2014. During the 2015 regular and special sessions, legislation was passed that substantially altered the market rules set up by the initiative. 2SSB 5052, passed during the regular session, brought previously unregulated medical marijuana dispensaries into the same regulatory regime as licensed recreational cannabis outlets. This legislation was outlined in our [June 2015](#) forecast publication. Subsequent to the June 2015 forecast, 2E2SHB 2136, passed in the second special session, changed the cannabis excise tax from a 25 percent tax collected from growers, processors and retailers to a 37 percent tax on retail sales only. The law also made changes to the distribution of tax and fee revenue. Cannabis taxes and license fees are still

collected by the Liquor and Cannabis Board and are placed into a dedicated fund with annual appropriations to various other accounts including the GF-S.

*Change in GF-S forecast of total cannabis-related revenue by biennium (millions):*

17-19: *-\$0.05*  
19-21: *\$2.4*  
21-23: *-\$23.4*

Distributions of cannabis excise taxes to the GF-S totaled \$15.3 million in the 2013-15 biennium and \$147.6 million in the 2015-17 biennium. GF-S distributions are forecasted at \$247.3 million in the 2017-19 biennium, a decrease of \$0.05 million from the September forecast, and \$270.5 million in the 2019-21 biennium, an increase of \$2.4 million. The forecast of GF-S distributions for the 2021-23 biennium is \$293.7 million, a decrease of \$23.4 million from the previous forecast. The large decrease in the biennium was due to a revised estimate of the amount of tax revenue that will be transferred to the Basic Health Plan Trust Account. Details of the forecasted distributions from the account can be found in Table 3.18.

## **The Office of Financial Management (Other Agencies)**

*Forecast change by biennium (millions):*

17-19: *-\$3.0*  
19-21: *-\$5.2*  
21-23: *-\$6.2*

The Office of Financial Management (OFM) is responsible for preparing General Fund-State revenue and transfer forecasts for all agencies excluding the Department of Revenue, the Liquor and Cannabis Board, the Insurance Commissioner, the Washington State Lottery, and the State Treasurer. Starting with the September 2017 forecast cycle, the office also added the Department of Licensing to its list of covered agencies. The office's forecast for the 2017-19 biennium was decreased \$3.0 million to \$333.8 million and the forecast for the 2019-21 biennium was decreased \$5.2 million to \$164.8 million. The forecast for the 2021-23 biennium was decreased \$6.2 million to \$153.3 million. Most of the reductions stemmed from decreases in the forecast for securities licenses, permits and fees collected by Department of Financial Institutions and the forecast of health benefit payments from the Health Care Authority.

## **State Treasurer**

*Forecast change by biennium (millions):*

17-19: *\$2.3*  
19-21: *\$0.2*  
21-23: *\$0.0*

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's forecast for the 2017-19 biennium has been increased \$2.3 million to \$30.3 million and the forecast for the 2019-21 biennium has been increased \$0.2 million to \$50.0 million. The office's forecast of revenue for the 2021-23 biennium is unchanged at \$51.6 million.

## **Insurance Commissioner**

The Office of the Insurance Commissioner collects premium taxes on most classes of insurance sold in Washington State. These

*Forecast  
change by  
biennium  
(millions):*

17-19: \$1.0  
19-21: \$1.1  
21-23: \$0.7

taxes are distributed to the GF-S and various accounts in support of fire services. The GF-S revenue forecast for the 2017-19 biennium has been increased \$1.0 million to \$1,224.8 million and the forecast for the 2019-21 biennium has been increased \$1.1 million to \$1,322.0 million. The forecast of revenue for the 2021-23 biennium has been increased \$0.7 million to \$1,427.2 million.

## Liquor and Cannabis Board

*Forecast  
change by  
biennium  
(millions):*

17-19: \$0.9  
19-21: \$3.2  
21-23: -\$23.5

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The forecast of revenue for the 2017-19 biennium has been increased \$0.9 million to \$489.2 million and the forecast for the 2019-21 biennium has been increased \$3.2 million to \$545.1 million. The forecast of revenue for the 2021-23 biennium has been decreased \$23.5 million to \$583.8 million. The forecast changes were a combination of changes to expected fees and taxes associated with beer, wine, and liquor distribution and the changes in expected distributions of cannabis excise taxes to the GF-S discussed above.

## Lottery Commission

*GF-S forecast  
change by  
biennium  
(millions):*

17-19: -\$0.8  
19-21: \$3.1  
21-23: \$1.8

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. Forecasted transfers of lottery revenue into the GF-S for the 2017-19 biennium have been decreased \$0.8 million to \$61.8 million and forecasted transfers for the 2019-21 biennium have been increased \$3.1 million to \$62.5 million. The forecast of GF-S transfers for the 2021-23 biennium has been increased \$1.8 million to \$65.9 million.

*OPA forecast  
change by  
biennium  
(millions):*

17-19: \$16.5  
19-21: \$4.0  
21-23: \$6.5

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The forecast of OPA revenue for the 2017-19 biennium has been increased \$16.5 million to \$2282.2 million due to large Mega Millions ticket sales from a near-record jackpot in October. The forecast for the 2019-21 biennium has been

increased \$4.0 million to \$266.0 million and the forecast for the 2021-23 biennium has been increased \$6.5 million to \$302.5 million.

## **Administrative Office of the Courts**

*Forecast change by biennium (millions):*

17-19: \$0.5  
19-21: \$0.4  
21-23: \$0.1

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast for the 2017-19 biennium has been increased \$0.5 million to \$147.2 million. The forecast of transfers for the 2019-21 biennium has been increased \$0.4 million to \$137.5 million and the forecast of revenue for the 2021-23 biennium has been increased \$0.1 million to \$139.5 million.

## **Track Record for the 2017-19 Biennium**

*The November 2018 forecast is \$944 million (2.2%) higher than the forecasted revenue at the time of the initial 2017-19 budget*

Table 3.10 summarizes the historical changes to the GF-S revenue forecast for the 2017-19 biennium. The February 2014 forecast was the initial forecast for the biennium. The November 2018 forecast is \$5.2 billion (13.5%) higher than the initial forecast. Non-economic changes have increased the forecast by \$1.3 billion (3.4%). Excluding non-economic changes, the current forecast is \$3.9 billion (10.1%) higher than the initial forecast. The June 2017 forecast, coupled with the \$2,079 million in legislative and budget-driven revenue changes passed in the 2017 special legislative sessions, was the basis for the initial budget for the 2017-19 biennium. The November forecast of biennial revenue is \$944 million (2.2%) higher than that sum.

## **Track Record for the 2019-21 Biennium**

*This forecast is \$5.6 billion (12.9%) higher than the initial February 2016 forecast, due mainly to legislative changes*

Table 3.11 summarizes the historical changes to the GF-S revenue forecast for the 2019-21 biennium. The February 2016 forecast was the initial forecast for the biennium. The November 2018 forecast is \$5.6 billion (12.9%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.1 billion (7.2%). Excluding non-economic changes, the current forecast is \$2.5 billion (5.7%) higher than the initial forecast.

## **The Relationship between the Cash and GAAP General Fund-State Revenue Forecasts**

*GAAP forecasts are based on the period in which the revenue is earned rather than received*

Legislation enacted in 1987 requires that the state's biennial budget be in conformance with Generally Accepted Accounting Principles (GAAP). It also requires a GF-S revenue forecast on both a cash and GAAP basis. The GAAP forecasts of GF-S revenue for the 2017-19 and 2019-21 biennia are presented in

Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for those biennia is in Table 3.15. The primary difference between the cash and GAAP forecasts is the timing of the receipt of revenue. On a GAAP basis, revenue is credited to the biennium in which it is earned even though it may not have been received. The cash forecast, on the other hand, reflects expected cash receipts during a fiscal period. The forecast on a GAAP, or accrual, basis is primarily used for financial reporting. The cash forecast is used for cash flow management and revenue tracking. The cash forecast is also the forecast used in the state's budgetary balance sheet, which is the principal tool for assessing the General Fund's current surplus or deficit position. References to the GF-S forecast in the text of this chapter refer to the cash forecast unless otherwise noted. Likewise, figures from revenue tables other than Tables 3.6, 3.8 and 3.16 are projected on a cash basis.

## **Budgetary Balance Sheet for the 2017-19 Biennium**

*The forecast implies total GF-S reserves of \$2.55 billion at the end of the 2017-19 biennium and \$3.44 billion in reserves for GF-S, ELTA and OPA*

Table 3.12 shows the budgetary balance sheets for the 2017-19 biennium as prepared by the Office of Financial Management and the House and Senate fiscal committees. The balance sheet shows not only projected GF-S spending and resources but also total projected spending and resources for the GF-S plus the other main non-transportation state-funded accounts: the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). As shown in the table, the GF-S beginning fund balance for the 2017-19 biennium is \$1,100.6 million and the total beginning balance for GF-S, ELTA and OPA is \$1,148.5 million. Based on the November 2018 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$991.8 million at the end of the 2017-19 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,880.6 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,558.2 million, bringing total projected GF-S reserves to \$2,550.0 million. Projected combined reserves for the ELTA and OPA are \$888.7 million, for total projected reserves of \$3,438.8 million for GF-S, ELTA and OPA at the end of the 2017-19 biennium.

## **Alternative Forecasts for the 2017-19 and 2019-21 Biennia**

*Optimistic scenario (billions):  
17-19: +\$0.5  
19-21: +\$2.5*

*Pessimistic scenario:  
17-19: -\$0.5  
19-21: -\$2.8*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 70% to the baseline forecast, 15% to a scenario based on the upside risks and 15% to a scenario based on the downside risks for the 2017-19 biennium. The probabilities for the 2019-21 biennium are 50% to the baseline forecast, 15% to the optimistic scenario and 35% to the pessimistic scenario. The revenue implications of these alternative scenarios for the 2017-19 biennium are shown in Table 3.13 and those of the 2019-21

biennium are shown in Table 3.14. For the 2017-19 biennium, the optimistic forecast generates \$44,376.7 million in GF-S revenue, \$450.6 million (1.0%) more than the baseline scenario, while the pessimistic forecast produces \$43,451.5 million in revenue, \$474.6 million (1.1%) less than the baseline. For the 2019-21 biennium, the optimistic forecast generates \$51,596.0 million in GF-S revenue, \$2,532.1 million (5.2%) more than the baseline scenario, while the pessimistic forecast produces \$46,215.4 million in revenue, \$2,848.6 million (5.8%) less than the baseline.

### **Near General Fund Forecasts for the 2017-19–2021-23 Biennia**

<p><i>Near General Fund Forecast (millions):</i></p> <p><i>2017-19: \$45,799.3</i></p> <p><i>2019-21: \$50,001.8</i></p> <p><i>2021-23: \$53,794.5</i></p>	<p>“Near General Fund” accounts are those included in the GF-S plus the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). The ELTA is primarily funded by a tax on estates of over \$2 million. Legislation from the 2013 special session, however, added revenue from public utility and real estate excise taxes, which had previously gone into non-GF-S accounts. Subsequent legislation also added revenue from solid waste taxes beginning in FY 2016 and a transfer of \$935 million from the additional property tax levy to the account in FY 2019. The OPA is funded by lottery revenue as discussed above. The forecast of Near General Fund revenue for the 2017-19 biennium is \$45,799.3 million, \$163.4 million more than the September 2018 forecast, and the forecast for the 2019-21 biennium is \$50,001.8 million, \$195.5 million more than the September forecast. The forecast of Near General Fund revenue for the 2021-23 biennium is \$53,794.5 million, \$209.2 million more than the September forecast. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17.</p>
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Table 3.3  
**General Fund-State collections\***  
(millions of dollars, cash basis)

<b>Biennium</b>	<b>Current Dollars</b>	<b>Percent Change</b>	<b>2012</b>	
			<b>Chained Dollars</b>	<b>Percent Change</b>
1961-63	\$817.1		\$4,300.0	
1963-65	866.2	6.0%	4,439.3	3.2%
1965-67	1,128.6	30.3%	5,565.5	25.4%
1967-69	1,440.5	27.6%	6,658.6	19.6%
1969-71	1,732.7	20.3%	8,271.5	24.2%
1971-73	1,922.1	10.9%	8,490.3	2.6%
1973-75	2,372.4	23.4%	9,054.3	6.6%
1975-77	3,395.0	43.1%	11,271.8	24.5%
1977-79	4,490.0	32.3%	13,091.7	16.1%
1979-81	5,356.4	19.3%	12,990.7	-0.8%
1981-83	6,801.4	27.0%	14,354.4	10.5%
1983-85	8,202.4	20.6%	15,975.3	11.3%
1985-87	9,574.6	16.7%	17,604.4	10.2%
1987-89	10,934.1	14.2%	18,775.3	6.7%
1989-91	13,309.0	21.7%	21,047.1	12.1%
1991-93	14,862.2	11.7%	22,112.5	5.1%
1993-95	16,564.6	11.5%	23,547.7	6.5%
1995-97	17,637.7	6.5%	24,059.4	2.2%
1997-99	19,620.1	11.2%	26,059.1	8.3%
1999-01	21,262.1	8.4%	27,187.8	4.3%
2001-03	21,140.7	-0.6%	26,144.9	-3.8%
2003-05	23,388.5	10.6%	27,714.8	6.0%
2005-07	27,772.0	18.7%	31,145.3	12.4%
2007-09	27,703.0	-0.2%	29,633.3	-4.9%
2009-11	28,218.1	1.9%	29,418.7	-0.7%
2011-13	30,657.0	8.6%	30,679.6	4.3%
2013-15	33,666.0	9.8%	32,824.3	7.0%
2015-17	38,317.4	13.8%	36,713.2	11.8%
2017-19 <sup>F</sup>	43,926.1	14.6%	40,603.5	10.6%
2019-21 <sup>F</sup>	49,063.9	11.7%	43,641.0	7.5%
2021-23 <sup>F</sup>	52,777.6	7.6%	45,100.6	3.3%

<sup>F</sup> November 2018 forecast

\*Total General Fund-State revenue and transfers. Cash basis; includes rate base and administrative changes. Modified cash basis: 1985-87 and prior; pure cash basis: 1987-89 and after. May not be comparable because the collection totals include the impact of rate, base and administrative changes.

Source: Department of Revenue, the Office of Financial Management and the Economic and Revenue Forecast Council 's November 2018 forecast.

Table 3.4  
**Taxable retail sales\***  
(millions of dollars)

<b>Fiscal Year</b>	<b>Amount</b>	<b>Percent Change</b>
1981	25,197	4.7%
1982	26,097	3.6%
1983	29,368	12.5%
1984	29,156	-0.7%
1985	30,687	5.3%
1986	32,158	4.8%
1987	34,647	7.7%
1988	37,452	8.1%
1989	41,429	10.6%
1990	47,183	13.9%
1991	49,812	5.6%
1992	53,189	6.8%
1993	55,319	4.0%
1994	59,009	6.7%
1995	61,927	4.9%
1996	62,817	1.4%
1997	66,748	6.3%
1998	72,059	8.0%
1999	77,197	7.1%
2000	83,335	8.0%
2001	85,633	2.8%
2002	84,418	-1.4%
2003	86,165	2.1%
2004	90,139	4.6%
2005	97,253	7.9%
2006	107,071	10.1%
2007	115,527	7.9%
2008	118,676	2.7%
2009	106,379	-10.4%
2010	99,983	-6.0%
2011	101,825	1.8%
2012	106,036	4.1%
2013	113,173	6.7%
2014	120,453	6.4%
2015	130,168	8.1%
2016	141,103	8.4%
2017	149,992	6.3%
2018	162,958	8.6%
2019 <sup>F</sup>	173,091	6.2%
2020 <sup>F</sup>	180,557	4.3%
2021 <sup>F</sup>	186,733	3.4%
2022 <sup>F</sup>	193,007	3.4%
2023 <sup>F</sup>	199,520	3.4%

<sup>F</sup> November 2018 forecast  
Source: ERFC

\* Actual Base. Includes statutory and administrative changes to the tax base. Historical fiscal year data are from quarterly taxable sales reported by taxpayers on the state's Combined Excise tax return. Reported totals affected by enacted legislation. Major base changes include: exemption of off-premises food, beginning 1978:3 (fiscal 1979); extension of the sales tax base to off premises food (1982:2 to 1983:2); food again exempt 1983:3 (fiscal 1984); extension of the sales tax base to candy, gum and bottled water (June 1 - December 2, 2010); elimination of sales tax exemption for residential phone service (July 1, 2013); elimination of sales tax exemption for bottled water (July 1, 2017); extension of economic nexus to certain remote sellers (January 1, 2018).

Table 3.5

**Comparison of the General Fund-State forecast by agency**

2017-19 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept 2018 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov 2018 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$21,268.4	\$0.0	\$5.0	\$21,273.4	\$5.0
Business & Occupation	8,469.0	0.0	14.6	8,483.6	14.6
Use	1,430.4	0.0	(6.0)	1,424.3	(6.0)
Public Utility	856.5	0.0	7.1	863.6	7.1
Liquor Sales/Liter	550.4	0.0	4.7	555.0	4.7
Cigarette	721.5	0.0	(3.1)	718.4	(3.1)
Property (State Levy)	5,036.4	0.0	57.3	5,093.6	57.3
Real Estate Excise	2,082.7	0.0	23.1	2,105.8	23.1
Timber Excise	4.5	0.0	(0.3)	4.2	(0.3)
Other	1,101.8	0.0	15.3	1,117.0	15.3
Subtotal	41,521.5	0.0	117.5	41,639.0	117.5
<b>Insurance Commissioner</b>					
Insurance Premiums	1,223.8	0.0	1.0	1,224.8	1.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	431.0	0.0	0.6	431.6	0.6
Beer & Wine Surtax	57.4	0.0	0.3	57.6	0.3
<b>Lottery Commission</b>					
Lottery Revenue	62.5	0.0	(0.8)	61.8	(0.8)
<b>State Treasurer</b>					
Interest Earnings	28.0	0.0	2.3	30.3	2.3
<b>Office of Financial Management**</b>					
Other Agencies	336.8	0.0	(3.0)	333.8	(3.0)
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	146.6	0.0	0.5	147.2	0.5
<b>Total General Fund-State *</b>	<b>\$43,807.6</b>	<b>\$0.0</b>	<b>\$118.5</b>	<b>\$43,926.1</b>	<b>\$118.5</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 26, 2018<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 20, 2018

\*Detail may not add to totals because of rounding.

\*\*OFM forecast now includes revenue from the Department of Licensing.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.6

**Comparison of the General Fund-State forecast by agency**

2017-19 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept 2018 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov 2018 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$21,341.8	\$0.0	\$3.6	\$21,345.4	\$3.6
Business & Occupation Use	8,512.4	0.0	8.4	8,520.8	8.4
Public Utility	1,439.3	0.0	(6.6)	1,432.7	(6.6)
Liquor Sales/Liter	856.1	0.0	6.8	862.9	6.8
Cigarette	551.0	0.0	4.7	555.6	4.7
Property (State Levy)	730.4	0.0	(3.1)	727.3	(3.1)
Real Estate Excise	5,047.7	0.0	57.3	5,105.0	57.3
Timber Excise	2,083.4	0.0	23.1	2,106.4	23.1
Other	4.1	0.0	(0.3)	3.9	(0.3)
Subtotal	1,161.1	0.0	11.9	1,173.0	11.9
	41,727.3	0.0	105.7	41,833.0	105.7
<b>Insurance Commissioner</b>					
Insurance Premiums	1,223.8	0.0	1.0	1,224.8	1.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	431.0	0.0	0.6	431.6	0.6
Beer & Wine Surtax	57.4	0.0	0.3	57.6	0.3
<b>Lottery Commission</b>					
Lottery Revenue	57.6	0.0	0.1	57.7	0.1
<b>State Treasurer</b>					
Interest Earnings	27.1	0.0	2.2	29.3	2.2
<b>Office of Financial Management**</b>					
Other Agencies	336.8	0.0	(3.0)	333.8	(3.0)
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	146.6	0.0	0.5	147.2	0.5
<b>Total General Fund-State *</b>	<b>\$44,007.5</b>	<b>\$0.0</b>	<b>\$107.4</b>	<b>\$44,114.9</b>	<b>\$107.4</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 26, 2018<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 20, 2018

\*Detail may not add to totals because of rounding.

\*\*OFM forecast now includes revenue from the Department of Licensing.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.7

**Comparison of the General Fund-State forecast by agency**

2019-21 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept 2018 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov 2018 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$23,430.0	\$0.0	(\$32.8)	\$23,397.2	(\$32.8)
Business & Occupation Use	9,221.7	0.0	(34.5)	9,187.2	(34.5)
Public Utility	1,499.2	0.0	(2.5)	1,496.7	(2.5)
Liquor Sales/Liter	935.3	0.0	(5.3)	930.0	(5.3)
Cigarette	576.5	0.0	2.4	579.0	2.4
Property (State Levy)	699.4	0.0	(3.7)	695.7	(3.7)
Real Estate Excise	7,294.4	0.0	259.0	7,553.3	259.0
Timber Excise	1,903.1	0.0	(5.2)	1,897.9	(5.2)
Other	4.7	0.0	0.0	4.7	0.0
Subtotal	1,031.6	0.0	8.8	1,040.4	8.8
<b>Insurance Commissioner</b>	46,595.8	0.0	186.3	46,782.1	186.3
Insurance Premiums	1,320.8	0.0	1.1	1,322.0	1.1
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	484.5	0.0	3.0	487.5	3.0
Beer & Wine Surtax	57.4	0.0	0.2	57.6	0.2
<b>Lottery Commission</b>					
Lottery Revenue	59.3	0.0	3.1	62.5	3.1
<b>State Treasurer</b>					
Interest Earnings	49.8	0.0	0.2	50.0	0.2
<b>Office of Financial Management**</b>					
Other Agencies	170.0	0.0	(5.2)	164.8	(5.2)
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	137.1	0.0	0.4	137.5	0.4
<b>Total General Fund-State *</b>	<b>\$48,874.8</b>	<b>\$0.0</b>	<b>\$189.1</b>	<b>\$49,063.9</b>	<b>\$189.1</b>

<sup>1</sup> Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council September 26, 2018<sup>2</sup> Forecast for the 2019-21 biennium, adopted November 20, 2018

\*Detail may not add to totals because of rounding.

\*\*OFM forecast now includes revenue from the Department of Licensing.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor and Cannabis Board, Office of Financial Management

Table 3.8

**Comparison of the General Fund-State forecast by agency**

2019-21 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept 2018 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov 2018 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$23,430.0	\$0.0	(\$32.8)	\$23,397.2	(\$32.8)
Business & Occupation Use	9,221.7	0.0	(34.5)	9,187.2	(34.5)
Public Utility	1,499.2	0.0	(2.5)	1,496.7	(2.5)
Liquor Sales/Liter	935.3	0.0	(5.3)	930.0	(5.3)
Cigarette	576.5	0.0	2.4	579.0	2.4
Property (State Levy)	699.4	0.0	(3.7)	695.7	(3.7)
Real Estate Excise	7,294.4	0.0	259.0	7,553.3	259.0
Timber Excise	1,903.1	0.0	(5.2)	1,897.9	(5.2)
Other	4.7	0.0	0.0	4.7	0.0
Subtotal	1,031.6	0.0	8.8	1,040.4	8.8
	46,595.8	0.0	186.3	46,782.1	186.3
<b>Insurance Commissioner</b>					
Insurance Premiums	1,320.8	0.0	1.1	1,322.0	1.1
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	484.5	0.0	3.0	487.5	3.0
Beer & Wine Surtax	57.4	0.0	0.2	57.6	0.2
<b>Lottery Commission</b>					
Lottery Revenue	56.4	0.0	2.2	58.6	2.2
<b>State Treasurer</b>					
Interest Earnings	50.8	0.0	0.0	50.8	0.0
<b>Office of Financial Management**</b>					
Other Agencies	170.0	0.0	(5.2)	164.8	(5.2)
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	137.1	0.0	0.4	137.5	0.4
<b>Total General Fund-State *</b>	<b>\$48,872.9</b>	<b>\$0.0</b>	<b>\$188.0</b>	<b>\$49,060.9</b>	<b>\$188.0</b>

<sup>1</sup> Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council September 26, 2018<sup>2</sup> Forecast for the 2019-21 biennium, adopted November 20, 2018

\*Detail may not add to totals because of rounding.

\*\*OFM forecast now includes revenue from the Department of Licensing.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor and Cannabis Board, Office of Financial Management

Table 3.9

**November 2018 General Fund-State forecast detail  
2017-19 to 2021-23 biennia; cash basis**  
(Millions of Dollars)

<b>Forecast by Source</b>	<b>Fiscal 2018</b>	<b>Fiscal 2019</b>	<b>2017-19 Biennium</b>	<b>Fiscal 2020</b>	<b>Fiscal 2021</b>	<b>2019-21 Biennium</b>	<b>Fiscal 2022</b>	<b>Fiscal 2023</b>	<b>2021-23 Biennium</b>
<b>State Taxes</b>									
Retail sales**	\$10,231.4	\$11,042.1	\$21,273.4	\$11,497.8	\$11,899.3	\$23,397.2	\$12,293.5	\$12,709.5	\$25,003.0
Business & occupation Use**	4,151.0	4,332.6	8,483.6	4,488.8	4,698.4	9,187.2	4,918.2	5,159.6	10,077.9
Public Utility	693.4	730.9	1,424.3	735.2	761.6	1,496.7	791.0	823.1	1,614.0
Liquor sales/liter	401.7	461.9	863.6	450.9	479.1	930.0	502.9	521.9	1,024.7
Beer & wine surtax	273.8	281.2	555.0	286.4	292.6	579.0	298.5	303.5	602.0
Cigarette	28.9	28.8	57.6	28.7	28.9	57.6	28.9	29.0	58.0
Tobacco products	366.7	370.4	737.0	359.9	354.8	714.7	347.4	339.2	686.6
Cannabis Excise Taxes	57.1	58.6	115.7	57.8	58.5	116.4	59.2	59.9	119.1
Property (state school levy)	112.0	125.4	237.4	128.9	132.3	261.2	138.7	145.4	284.1
Leasehold Excise Tax	2,739.8	2,353.9	5,093.6	3,595.6	3,957.7	7,553.3	4,095.1	4,207.2	8,302.3
Public utility district	34.1	35.5	69.6	35.9	36.2	72.1	36.5	36.7	73.1
Brokered Natural Gas	56.9	58.5	115.4	59.6	60.7	120.3	61.6	62.6	124.2
Real estate excise***	19.3	19.1	38.4	19.6	20.1	39.7	20.6	21.1	41.7
Timber excise	1,089.0	1,016.8	2,105.8	936.3	961.6	1,897.9	976.3	1,001.0	1,977.3
Estate/inheritance	2.7	1.5	4.2	2.3	2.4	4.7	2.4	2.5	4.9
Boat excise	(5.6)	0.2	(5.4)	0.0	0.0	0.0	0.0	0.0	0.0
Insurance premiums	15.7	15.4	31.1	15.4	15.4	30.8	15.4	16.0	31.4
Penalties and interest on past due taxes	600.6	624.2	1,224.8	648.4	673.6	1,322.0	699.8	727.4	1,427.2
Other	224.8	153.9	378.7	175.4	180.4	355.9	185.9	191.6	377.5
<b>Total Taxes</b>	<b>21,206.7</b>	<b>21,738.9</b>	<b>42,945.6</b>	<b>23,577.0</b>	<b>24,668.1</b>	<b>48,245.1</b>	<b>25,526.9</b>	<b>26,412.9</b>	<b>51,939.8</b>
<b>State Non-Tax Sources</b>									
Licenses, permits, fees	136.3	131.6	267.8	133.8	136.2	270.0	138.5	140.4	278.9
Liquor & Cannabis fees	89.1	105.2	194.3	110.9	115.5	226.3	119.3	122.4	241.7
Earnings on investments	10.6	19.7	30.3	23.0	27.0	50.0	25.8	25.8	51.6
Administrative Office of the Courts	75.6	71.5	147.2	68.8	68.8	137.5	69.4	70.1	139.5
Transfers of unclaimed property	98.8	98.6	197.4	75.9	77.2	153.1	78.3	79.4	157.7
Other revenue & transfers	95.2	48.3	143.5	(8.3)	(9.8)	(18.1)	(10.6)	(21.0)	(31.6)
<b>Total Non-Tax</b>	<b>505.6</b>	<b>474.9</b>	<b>980.5</b>	<b>404.1</b>	<b>414.8</b>	<b>818.9</b>	<b>420.7</b>	<b>417.1</b>	<b>837.8</b>
<b>Total General Fund-State *</b>	<b>\$21,712.3</b>	<b>\$22,213.7</b>	<b>\$43,926.1</b>	<b>\$23,981.0</b>	<b>\$25,082.9</b>	<b>\$49,063.9</b>	<b>\$25,947.6</b>	<b>\$26,830.0</b>	<b>\$52,777.6</b>

\* Detail may not add to totals due to rounding

\*\*GFS portion after Initiative 900 transfer

\*\*\*Includes penalties and interest

Table 3.10

**Track Record for the 2017-19 General Fund-State Cash Forecast**

February 2014 through November 2018

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis#</u></b>
<b>February 2014**</b>	\$36,887	\$1,823				\$38,710
<b>Changes to Forecast</b>						
June 2014	265	50	315	(1) #1	313	39,023
September 2014	227	(63)	164	0	164	39,188
November 2014	388	26	415	0	415	39,602
February 2015	126	28	154	0	154	39,757
June 2015	257	64	321	122 #2	443	40,200
September 2015	4	47	52	286 #3	338	40,538
November 2015	35	(5)	30	0	30	40,567
February 2016	(449)	7	(442)	0	(442)	40,125
June 2016	187	(53)	134	(8) #4	126	40,252
September 2016	135	(10)	125	0	125	40,377
November 2016	131	6	137	0	137	40,514
March 2017	281	22	303	0	303	40,817
June 2017	84	3	87	(1) #5	87	40,903
September 2017	269	11	279	2,079 #6	2,359	43,262
November 2017	297	7	304	0	304	43,566
February 2018	631	16	647	0	647	44,213
June 2018	447	46	493	(1,173) #7	(680)	43,532
September 2018	231	44	275	0	275	43,808
November 2018	118	1	118	0	118	43,926
<b>Total change***:</b>						
From February 2014	3,666	246	3,912	1,304	5,216	
Percent change	9.9	13.5	10.1	3.4	13.5	

\* Excludes legislative, judicial, statutorily required or other major non-economic changes.

\*\* Includes legislative, judicial, statutorily required or other major non-economic changes.

\*\*\* Detail may not add to total due to rounding.

# First official forecast for the 2017-19 biennium.

#1 Sum of legislative and budget-driven revenue changes from the 2014 regular legislative session

#2 Legislative revenue changes from 2015 regular legislative session

#3 Legislative and budget driven revenue changes from 2015 special legislative sessions

#4 Legislative revenue changes from the 2016 regular and first special legislative sessions

#5 Sum of legislative revenue changes from 2017 legislative sessions through June 20, 2017

#6 Sum of legislative and budget driven revenue changes from 2017 special legislative sessions since the June 2017 forecast

#7 Sum of legislative and budget driven revenue changes from the 2018 legislative session

Table 3.11

**Track Record for the 2019-21 General Fund-State Cash Forecast**

February 2016 through November 2018

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis</u></b>
<b>February 2016 #</b>	\$36,887	\$1,823				\$43,441
<b>Changes to Forecast</b>						
June 2016	172	(31)	141	(7) #1	134	43,575
September 2016	86	(31)	55	0	55	43,630
November 2016	21	4	26	0	26	43,656
March 2017	241	(55)	186	0	186	43,842
June 2017	47	(13)	34	(1) #2	34	43,875
September 2017	245	(3)	243	3,278 #3	3,521	47,396
November 2017	188	(2)	186	0	186	47,582
February 2018	655	16	671	0	671	48,253
June 2018	426	22	448	(181) #4	267	48,520
September 2018	295	22	317	38 #5	355	48,875
November 2018	186	3	189	0	189	49,064
<b>Total change***:</b>						
From February 2016	2,564	(69)	2,496	3,127	5,623	
Percent change	7.0	(3.8)	5.7	7.2	12.9	

\* Excludes legislative, judicial, statutorily required or other major non-economic changes.

\*\* Includes legislative, judicial, statutorily required or other major non-economic changes.

\*\*\* Detail may not add to total due to rounding.

# First official forecast for the 2019-21 biennium.

#1 Legislative revenue changes from the 2016 regular and first special legislative sessions

#2 Sum of legislative revenue changes from 2017 legislative sessions through June 20, 2017

#3 Sum of legislative and budget driven revenue changes from 2017 special legislative sessions since the June 2017 forecast

#4 Sum of legislative and budget driven revenue changes from the 2018 legislative session

#5 Estimated increase in sales tax collections due US Supreme Court ruling of June 21, 2018.

Table 3.12

## 2017-19 Enacted Budget Balance Sheet

General Fund-State (GFS), Education Legacy Trust Account (ELTA),

Washington Opportunity Pathways Account (OPA) and Budget Stabilization Account (BSA)

Dollars in Millions

	2017-19		
	GFS	ELTA and OPA	TOTAL
<b>RESOURCES</b>			
<b>Beginning Fund Balance</b>	<b>1,100.6</b>	<b>48.0</b>	<b>1,148.5</b>
September 2018 Revenue Forecast	43,807.6	1,828.3	45,635.9
November 2018 Revenue Forecast change	118.5	45.0	163.4
<b>Current Revenue Totals</b>	<b>43,926.1</b>	<b>1,873.3</b>	<b>45,799.3</b>
Transfer to Budget Stabilization Account (1% of GSR)	(437.0)		(437.0)
Transfer to Budget Stabilization Account (EGSR)	(1,486.2)		(1,486.2)
Transfer from BSA (EGSR)	1,078.0		1,078.0
Enacted Fund Transfers	12.9	254.0	266.9
McCleary Penalty Account Transfer	(105.2)		(105.2)
CAFR Adjustment	(39.5)	13.9	(25.6)
Actual/Assumed Prior Period Adjustments	111.2		111.2
<b>Total Resources (including beginning fund balance)</b>	<b>44,160.8</b>	<b>2,189.2</b>	<b>46,350.0</b>
<b>EXPENDITURES</b>			
<b>Enacted Budgets</b>			
2017-19 Biennium	42,659.6	1,048.8	43,708.4
2018 Supplemental	701.1	251.7	952.8
Actual/Assumed Reversions	(191.8)	-	(191.8)
<b>Total Expenditures</b>	<b>43,169.0</b>	<b>1,300.5</b>	<b>44,469.5</b>
<b>RESERVES</b>			
<b>Projected Ending Balance (GFS + ELTA + OPA)</b>	<b>991.8</b>	<b>888.7</b>	<b>1,880.6</b>
<b>Budget Stabilization Account</b>			
Budget Stabilization Account Beginning Balance	1,638.3		1,638.3
Transfers from General Fund (1% of GSR)	437.0		437.0
Actual/Assumed Interest Earnings and other	41.3		41.3
Transfers from GFS (EGSR)	1,486.2		1,486.2
Less 17-19 Appropriations from BSA	(41.5)		(41.5)
Less 17-19 Transfers to Pension Stabilization Account	(925.2)		(925.2)
Less Transfers out to GFS (EGSR)	(1,078.0)		(1,078.0)
<b>Projected Budget Stabilization Account Ending Balance</b>	<b>1,558.2</b>		<b>1,558.2</b>
<b>Total Reserves (Near General Fund plus Budget Stabilization)</b>	<b>2,550.0</b>	<b>888.7</b>	<b>3,438.8</b>

### Acronyms

GSR- General State Revenues

EGSR- Extraordinary General State Revenues

CAFR- Comprehensive Annual Financial Report

Table 3.13

**Alternative forecasts compared to the baseline forecast  
2017-19 biennium**

(cash basis, millions of dollars)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$21,471.6	\$21,273.4	\$21,045.8
Business & Occupation Use	8,566.6	8,483.6	8,397.1
Public Utility	1,438.2	1,424.3	1,409.1
Property (school levy)	870.4	863.6	854.0
Real Estate Excise	5,152.1	5,093.6	5,027.4
Other	2,190.9	2,105.8	2,101.5
Subtotal	2,333.6	2,394.6	2,382.8
	42,023.4	41,639.0	41,217.7
<b>Insurance Commissioner<sup>1</sup></b>	1,256.3	1,224.8	1,193.3
<b>Lottery Commission</b>	64.9	61.8	58.7
<b>State Treasurer - Interest earnings</b>	46.0	30.3	27.2
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>	502.9	489.2	475.8
<b>Office of Financial Management</b>			
Other agencies	335.2	333.8	332.3
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	148.0	147.2	146.4
<b>Total General Fund - State*</b>	<b>\$44,376.7</b>	<b>\$43,926.1</b>	<b>\$43,451.5</b>
<b>Difference from November 2018 Baseline</b>	<b>\$450.6</b>		<b>(\$474.6)</b>

1 Insurance premiums, General Fund-State portion.

2 Includes beer and wine surtax, cannabis excise tax, distributor fees, retailer fees, licensing fees.

\* Detail may not add to total due to rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the  
State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.14

**Alternative forecasts compared to the baseline forecast  
2019-21 biennium**

(cash basis, millions of dollars)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$24,698.1	\$23,397.2	\$21,957.1
Business & Occupation Use	9,699.1	9,187.2	8,681.8
Public Utility	1,575.4	1,496.7	1,406.9
Property (school levy)	962.9	930.0	894.3
Real Estate Excise	7,800.6	7,553.3	7,282.4
Other	2,092.1	1,897.9	1,645.3
Subtotal	2,336.1	2,319.8	2,212.3
	49,164.2	46,782.1	44,080.1
<b>Insurance Commissioner<sup>1</sup></b>	1,388.7	1,322.0	1,255.3
<b>Lottery Commission</b>	65.6	62.5	59.3
<b>State Treasurer - Interest earnings</b>	95.3	50.0	10.9
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>	569.5	545.1	518.8
<b>Office of Financial Management</b>			
Other agencies	169.7	164.8	159.8
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	142.9	137.5	131.2
<b>Total General Fund - State*</b>	<b>\$51,596.0</b>	<b>\$49,063.9</b>	<b>\$46,215.4</b>
<b>Difference from November 2018 Baseline</b>	<b>\$2,532.1</b>		<b>(\$2,848.6)</b>

1 Insurance premiums, General Fund-State portion.

2 Includes beer and wine surtax, cannabis excise tax, distributor fees, retailer fees, licensing fees.

\* Detail may not add to total due to rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the  
State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.15

**Lottery transfers by fund**November 2018 Forecast  
(cash basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2012	135.1	0.0	2.7	10.0	0.0	0.0	0.3	3.3	118.5	0.2	0.0
2013	139.7	0.0	0.0	10.4	0.0	0.0	0.3	3.5	125.5	0.0	0.0
2011-13 Biennium	274.8	0.0	2.7	20.4	0.0	0.0	0.6	6.9	244.0	0.2	0.0
2014	147.9	9.3	0.0	10.8	0.0	0.0	0.3	3.7	113.7	0.0	10.1
2015	143.1	0.6	0.0	11.2	0.0	0.0	0.3	4.7	120.2	0.0	6.1
2013-15 Biennium	291.0	9.9	0.0	22.0	0.0	0.0	0.6	8.4	233.9	0.0	16.1
2016	171.6	17.1	0.0	11.7	0.0	0.0	0.3	3.3	139.1	0.0	0.0
2017	159.7	14.8	0.0	12.2	0.0	0.0	0.3	4.8	126.6	0.0	0.0
2015-17 Biennium	331.2	31.9	0.0	23.8	0.0	0.0	0.7	8.0	265.7	0.0	0.0
2018	183.6	38.5	0.0	12.6	0.0	0.0	0.3	3.5	128.5	0.0	0.0
2019	195.7	23.3	0.0	13.1	0.0	0.0	0.4	5.3	153.7	0.0	0.0
2017-19 Biennium	379.3	61.8	0.0	25.8	0.0	0.0	0.7	8.8	282.2	0.0	0.0
2020	180.6	31.1	0.0	13.7	0.0	0.0	0.4	4.1	131.3	0.0	0.0
2021	184.8	31.3	0.0	14.2	0.0	0.0	0.4	4.2	134.7	0.0	0.0
2019-21 Biennium	365.4	62.5	0.0	27.9	0.0	0.0	0.8	8.3	266.0	0.0	0.0
2022	187.4	35.7	0.0	0.0	0.0	0.0	0.4	4.2	147.1	0.0	0.0
2023	190.1	30.1	0.0	0.0	0.0	0.0	0.4	4.2	155.3	0.0	0.0
2021-23 Biennium	377.5	65.9	0.0	0.0	0.0	0.0	0.8	8.4	302.5	0.0	0.0

Table 3.16

**Lottery transfers by fund**November 2018 Forecast  
(GAAP basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2012	138.0	0.0	2.7	10.0	0.0	0.0	0.3	3.0	121.8	0.2	0.0
2013	139.2	9.3	0.0	10.4	0.0	0.0	0.3	3.6	115.5	0.0	0.0
2011-13 Biennium	277.2	9.3	2.7	20.4	0.0	0.0	0.6	6.6	237.4	0.2	0.0
2014	147.7	0.6	0.0	10.8	0.0	0.0	0.3	4.0	121.9	0.0	10.1
2015	141.3	0.0	0.0	11.2	0.0	0.0	0.3	4.7	119.0	0.0	6.1
2013-15 Biennium	288.9	0.6	0.0	22.0	0.0	0.0	0.6	8.7	240.9	0.0	16.1
2016	175.5	31.9	0.0	11.7	0.0	0.0	0.3	2.8	128.7	0.0	0.0
2017	161.9	16.8	0.0	12.2	0.0	0.0	0.3	4.9	126.8	0.0	0.0
2015-17 Biennium	337.4	48.7	0.0	23.8	0.0	0.0	0.7	7.7	255.5	0.0	0.0
2018	183.0	31.2	0.0	12.6	0.0	0.0	0.4	4.6	134.2	0.0	0.0
2019	189.3	26.5	0.0	13.1	0.0	0.0	0.4	4.2	145.1	0.0	0.0
2017-19 Biennium	372.3	57.7	0.0	25.8	0.0	0.0	0.7	8.8	279.2	0.0	0.0
2020	182.2	29.3	0.0	13.7	0.0	0.0	0.4	4.2	134.7	0.0	0.0
2021	185.1	29.3	0.0	14.2	0.0	0.0	0.4	4.2	136.9	0.0	0.0
2019-21 Biennium	367.2	58.6	0.0	27.9	0.0	0.0	0.8	8.4	271.6	0.0	0.0
2022	187.7	29.4	0.0	0.0	0.0	0.0	0.4	4.2	153.7	0.0	0.0
2023	190.3	29.5	0.0	0.0	0.0	0.0	0.4	4.2	156.2	0.0	0.0
2021-23 Biennium	377.9	58.9	0.0	0.0	0.0	0.0	0.8	8.4	309.9	0.0	0.0

\* Total Transfers are equal to total sales less total expenses (prizes, cost of sales, administration etc.)

Source: Lottery Commission, ERFC

Table 3.17

**General Fund-State, Education Legacy Trust Account and Opportunity Pathways Account (Near General Fund-State)**

History and Forecast by Fiscal Year (Cash basis)

November 2018 - Millions of Dollars

	General Fund-State (GF-S) (current definition)		Education Legacy Trust Fund* (ELTA)		Total GF-S plus ELTA		WA Opportunity Pathways Account (OPA)		Total GF-S plus ELTA and OPA	
	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.
History:										
FY 1999	\$10,414	3.6%			\$10,414	3.6%			\$10,414	3.6%
FY 2000	\$11,068	6.3%			\$11,068	6.3%			\$11,068	6.3%
FY 2001	\$11,560	4.4%			\$11,560	4.4%			\$11,560	4.4%
FY 2002	\$11,632	0.6%			\$11,632	0.6%			\$11,632	0.6%
FY 2003	\$11,721	0.8%			\$11,721	0.8%			\$11,721	0.8%
FY 2004	\$12,358	5.4%			\$12,358	5.4%			\$12,358	5.4%
FY 2005	\$13,036	5.5%			\$13,036	5.5%			\$13,036	5.5%
FY 2006	\$14,318	9.8%	\$115		\$14,432	10.7%			\$14,432	10.7%
FY 2007	\$15,467	8.0%	\$266	132.2%	\$15,734	9.0%			\$15,734	9.0%
FY 2008	\$15,659	1.2%	\$213	-20.1%	\$15,872	0.9%			\$15,872	0.9%
FY 2009	\$14,158	-9.6%	\$224	5.4%	\$14,382	-9.4%			\$14,382	-9.4%
FY 2010	\$13,571	-4.1%	\$157	-29.9%	\$13,728	-4.6%			\$13,728	-4.6%
FY 2011	\$14,648	7.9%	\$112	-29.0%	\$14,759	7.5%	\$99		\$14,859	8.2%
FY 2012	\$14,874	1.5%	\$114	2.3%	\$14,988	1.6%	\$118	19.1%	\$15,107	1.7%
FY 2013	\$15,783	6.1%	\$101	-11.5%	\$15,884	6.0%	\$126	5.9%	\$16,009	6.0%
FY 2014	\$16,383	3.8%	\$197	95.3%	\$16,580	4.4%	\$114	-9.4%	\$16,694	4.3%
FY 2015	\$17,283	5.5%	\$207	5.0%	\$17,491	5.5%	\$120	5.7%	\$17,611	5.5%
FY 2016	\$18,579	7.5%	\$215	3.6%	\$18,793	7.4%	\$139	15.7%	\$18,933	7.5%
FY 2017	\$19,739	6.2%	\$252	17.5%	\$19,991	6.4%	\$127	-9.0%	\$20,118	6.3%
FY 2018	\$21,712	10.0%	\$302	19.6%	\$22,014	10.1%	\$129	1.5%	\$22,143	10.1%
Forecast:										
FY 2019	\$22,214	2.3%	\$1,289	327.2%	\$23,503	6.8%	\$154	19.5%	\$23,657	6.8%
FY 2020	\$23,981	8.0%	\$330	-74.4%	\$24,311	3.4%	\$131	-14.6%	\$24,443	3.3%
FY 2021	\$25,083	4.6%	\$342	3.4%	\$25,424	4.6%	\$135	2.6%	\$25,559	4.6%
FY 2022	\$25,948	3.4%	\$352	3.0%	\$26,299	3.4%	\$147	9.2%	\$26,447	3.5%
FY 2023	\$26,830	3.4%	\$363	3.1%	\$27,193	3.4%	\$155	5.6%	\$27,348	3.4%
<b>Biennial Totals</b>										
<b>05-07 Biennium</b>	<b>\$29,785</b>	<b>17.3%</b>	<b>\$381</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>
<b>07-09 Biennium</b>	<b>\$29,817</b>	<b>0.1%</b>	<b>\$437</b>	<b>14.8%</b>	<b>\$30,254</b>	<b>0.3%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,254</b>	<b>0.3%</b>
<b>09-11 Biennium</b>	<b>\$28,218</b>	<b>-5.4%</b>	<b>\$269</b>	<b>-38.5%</b>	<b>\$28,487</b>	<b>-5.8%</b>	<b>\$99</b>	<b>NA</b>	<b>\$28,586</b>	<b>-5.5%</b>
<b>11-13 Biennium</b>	<b>\$30,657</b>	<b>8.6%</b>	<b>\$215</b>	<b>-19.9%</b>	<b>\$30,872</b>	<b>8.4%</b>	<b>\$244</b>	<b>145.2%</b>	<b>\$31,116</b>	<b>8.8%</b>
<b>13-15 Biennium</b>	<b>\$33,666</b>	<b>9.8%</b>	<b>\$405</b>	<b>88.0%</b>	<b>\$34,071</b>	<b>10.4%</b>	<b>\$234</b>	<b>-4.1%</b>	<b>\$34,305</b>	<b>10.2%</b>
<b>15-17 Biennium</b>	<b>\$38,317</b>	<b>13.8%</b>	<b>\$467</b>	<b>15.4%</b>	<b>\$38,785</b>	<b>13.8%</b>	<b>\$266</b>	<b>13.6%</b>	<b>\$39,050</b>	<b>13.8%</b>
<b>17-19 Biennium</b>	<b>\$43,926</b>	<b>14.6%</b>	<b>\$1,591</b>	<b>240.6%</b>	<b>\$45,517</b>	<b>17.4%</b>	<b>\$282</b>	<b>6.2%</b>	<b>\$45,799</b>	<b>17.3%</b>
<b>19-21 Biennium</b>	<b>\$49,064</b>	<b>11.7%</b>	<b>\$672</b>	<b>-57.8%</b>	<b>\$49,736</b>	<b>9.3%</b>	<b>\$266</b>	<b>-5.7%</b>	<b>\$50,002</b>	<b>9.2%</b>
<b>21-23 Biennium</b>	<b>\$52,778</b>	<b>7.6%</b>	<b>\$714</b>	<b>6.3%</b>	<b>\$53,492</b>	<b>7.6%</b>	<b>\$302</b>	<b>13.7%</b>	<b>\$53,795</b>	<b>7.6%</b>

\*Education legacy trust fund excluding FY 14 and FY 15 lottery fund transfers. Includes pension stabilization fund interest in FY 08 and FY 09.

Table 3.18  
**Forecasted distribution of excise tax and license fees from cannabis sales**  
 November 2018  
 Thousands of dollars

Fiscal year	Total of cannabis excise taxes plus license fees	LCB administration and pre-distribution allotments	Total to distribute	Distribution of remaining funds							General Fund-State*
				DSHS substance abuse program	Dept. of Health cannabis education program	UW/WSU research	Basic Health Plan Trust Account	Health Care Authority community health centers	OSPI dropout prevention		
2015	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269	
2016	\$168,051	\$8,551	\$159,500	\$12,814	\$7,500	\$345	\$79,750	\$7,791	\$251	\$51,049	
2017	\$300,635	\$9,201	\$291,434	\$27,786	\$7,500	\$345	\$145,717	\$12,979	\$511	\$96,596	
2018	\$360,608	\$13,772	\$346,836	\$27,786	\$9,761	\$365	\$173,418	\$17,616	\$513	\$117,377	
2019	\$388,054	\$14,558	\$373,496	\$0	\$9,764	\$365	\$186,748	\$46,191	\$515	\$129,913	
2020	\$394,103	\$13,548	\$380,555	\$0	\$9,764	\$365	\$190,277	\$46,191	\$515	\$133,442	
2021	\$401,272	\$13,548	\$387,724	\$0	\$9,764	\$365	\$193,862	\$46,191	\$515	\$137,027	
2022	\$414,244	\$13,548	\$400,696	\$0	\$9,764	\$365	\$200,348	\$46,191	\$515	\$143,513	
2023	\$427,641	\$13,548	\$414,093	\$0	\$9,764	\$365	\$207,047	\$46,191	\$515	\$150,212	
<b>Biennial totals</b>											
2013-15	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269	
2015-17	\$468,686	\$17,752	\$450,934	\$40,600	\$15,000	\$690	\$225,467	\$20,770	\$762	\$147,645	
2017-19	\$748,662	\$28,330	\$720,332	\$27,786	\$19,525	\$730	\$360,166	\$63,807	\$1,028	\$247,290	
2019-21	\$795,375	\$27,096	\$768,279	\$0	\$19,528	\$730	\$384,139	\$92,382	\$1,030	\$270,469	
2021-23	\$841,885	\$27,096	\$814,789	\$0	\$19,528	\$730	\$407,395	\$92,382	\$1,030	\$293,725	

\*Before distributions to local governments

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## Detail Components of the Washington State Economic and Revenue Forecast

Calendar Years

*Note: The economic data discussed in these tables were current at the time the forecast was prepared. Many concepts have changed since then due to new releases and data revisions.*

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Table A1.1  
**U.S. Economic Forecast Summary**  
Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
<b>Real National Income Accounts (Billions of Chained 2012 Dollars)</b>								
Real Gross Domestic Product	17,659.2	18,050.7	18,574.2	19,060.3	19,403.4	19,752.7	20,128.0	20,550.6
% Ch	1.6	2.2	2.9	2.6	1.8	1.8	1.9	2.1
Real Consumption	12,248.2	12,558.7	12,892.2	13,227.7	13,479.2	13,749.1	14,038.1	14,346.8
% Ch	2.7	2.5	2.7	2.6	1.9	2.0	2.1	2.2
Real Nonresidential Fixed Investment	2,411.2	2,538.1	2,711.7	2,841.8	2,951.6	3,053.3	3,153.0	3,255.0
% Ch	0.5	5.3	6.8	4.8	3.9	3.4	3.3	3.2
Real Residential Fixed Investment	591.3	611.1	609.7	612.8	643.4	659.9	671.9	681.4
% Ch	6.5	3.3	-0.2	0.5	5.0	2.6	1.8	1.4
Real Personal Income	15,469.7	15,866.8	16,243.9	16,638.9	17,052.8	17,430.3	17,819.0	18,248.9
% Ch	1.5	2.6	2.4	2.4	2.5	2.2	2.2	2.4
Real Per Capita Income (\$/Person)	47,752	48,630	49,434	50,270	51,158	51,926	52,719	53,626
% Ch	0.8	1.8	1.7	1.7	1.8	1.5	1.5	1.7
<b>Price and Wage Indexes</b>								
PCE Price Index (2012=100)	104.2	106.1	108.3	110.3	112.4	114.7	117.0	119.4
% Ch	1.1	1.8	2.1	1.9	1.9	2.1	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.400	2.451	2.511	2.559	2.611	2.668	2.725	2.784
% Ch	1.3	2.1	2.4	1.9	2.0	2.2	2.2	2.1
Employment Cost Index (Dec. 2005=1.0)	1.262	1.295	1.334	1.377	1.422	1.470	1.521	1.576
% Ch	2.4	2.6	3.0	3.2	3.2	3.3	3.5	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	18,707.2	19,485.4	20,498.2	21,475.8	22,370.7	23,299.1	24,290.2	25,360.7
% Ch	2.7	4.2	5.2	4.8	4.2	4.2	4.3	4.4
Personal Income	16,125.1	16,830.9	17,584.6	18,346.9	19,167.3	19,994.9	20,851.3	21,783.6
% Ch	2.6	4.4	4.5	4.3	4.5	4.3	4.3	4.5
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	159.2	160.3	162.0	163.5	165.2	166.4	167.4	168.4
Total U.S. Employment	151.4	153.3	155.7	157.9	159.3	160.2	161.1	162.1
Unemployment Rate (%)	4.87	4.35	3.88	3.46	3.59	3.73	3.78	3.77
Nonfarm Payroll Employment	144.35	146.62	149.01	151.21	152.62	153.52	154.53	155.63
% Ch	1.8	1.6	1.6	1.5	0.9	0.6	0.7	0.7
Manufacturing	12.35	12.44	12.70	12.84	12.80	12.66	12.63	12.69
% Ch	0.1	0.7	2.1	1.1	-0.4	-1.1	-0.2	0.5
Durable Manufacturing	7.71	7.74	7.94	8.05	8.05	7.94	7.92	7.97
% Ch	-0.7	0.3	2.6	1.4	-0.1	-1.3	-0.3	0.6
Nondurable Manufacturing	4.64	4.71	4.76	4.79	4.75	4.71	4.71	4.72
% Ch	1.5	1.4	1.2	0.5	-0.8	-0.8	-0.1	0.2
Construction	6.73	6.95	7.24	7.49	7.77	8.10	8.36	8.59
% Ch	4.1	3.4	4.1	3.4	3.8	4.2	3.2	2.8
Service-Providing	124.60	126.55	128.33	130.13	131.28	131.97	132.75	133.55
% Ch	2.0	1.6	1.4	1.4	0.9	0.5	0.6	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	43.2	51.0	65.4	56.8	57.7	58.0	58.0	57.7
Personal Saving/Disposable Income (%)	6.7	6.7	6.7	6.3	6.9	7.1	7.0	6.9
Auto Sales (Millions)	6.9	6.1	5.2	4.9	4.8	4.8	4.9	5.0
% Ch	-8.6	-11.5	-14.2	-5.9	-1.7	-0.4	0.9	2.6
Housing Starts (Millions)	1.177	1.208	1.263	1.330	1.410	1.412	1.444	1.465
% Ch	6.4	2.6	4.6	5.3	6.0	0.2	2.3	1.5
Federal Budget Surplus (Billions)	-665.1	-695.4	-971.7	-1,027.4	-1,115.5	-1,192.0	-1,234.1	-1,224.4
Net Exports (Billions)	-520.6	-578.4	-627.3	-710.5	-718.3	-717.9	-697.1	-642.9
3-Month Treasury Bill Rate (%)	0.32	0.93	1.96	2.76	3.14	3.21	3.15	3.03
10-Year Treasury Note Yield (%)	1.84	2.33	2.94	3.30	3.48	3.56	3.54	3.49
Bond Index of 20 G.O. Munis. (%)	3.27	3.67	3.98	4.45	4.64	4.71	4.66	4.58
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.55	4.99	5.19	5.25	5.21	5.14

Table A1.2  
**U.S. Economic Forecast Summary**  
Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real National Income Accounts (Billions of Chained 2012 Dollars)</b>								
Real Gross Domestic Product	18,324.0	18,511.6	18,671.5	18,789.6	18,905.3	19,020.6	19,116.8	19,198.6
% Ch , Annual Rate	2.2	4.2	3.5	2.6	2.5	2.5	2.0	1.7
Real Consumption	12,722.8	12,842.0	12,968.5	13,035.5	13,121.0	13,199.2	13,266.8	13,323.8
% Ch , Annual Rate	0.5	3.8	4.0	2.1	2.6	2.4	2.1	1.7
Real Nonresidential Fixed Investment	2,654.0	2,710.1	2,715.7	2,766.9	2,794.7	2,827.0	2,857.4	2,888.0
% Ch , Annual Rate	11.5	8.7	0.8	7.8	4.1	4.7	4.4	4.3
Real Residential Fixed Investment	615.3	613.2	607.0	603.2	603.0	606.6	615.9	625.8
% Ch , Annual Rate	-3.4	-1.3	-4.0	-2.5	-0.1	2.4	6.3	6.6
Real Personal Income	16,107.2	16,195.7	16,298.7	16,373.9	16,472.4	16,588.4	16,697.4	16,797.5
% Ch , Annual Rate	2.6	2.2	2.6	1.9	2.4	2.8	2.7	2.4
Real Per Capita Income (\$/Person)	49,157	49,339	49,551	49,691	49,901	50,162	50,402	50,615
% Ch , Annual Rate	2.0	1.5	1.7	1.1	1.7	2.1	1.9	1.7
<b>Price and Wage Indexes</b>								
PCE Price Index (2012=100)	107.5	108.1	108.5	108.9	109.5	110.0	110.5	111.1
% Ch , Annual Rate	2.5	2.0	1.6	1.8	1.9	2.0	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.494	2.505	2.517	2.528	2.538	2.552	2.566	2.580
% Ch , Annual Rate	3.5	1.7	2.0	1.7	1.6	2.3	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.320	1.328	1.339	1.351	1.362	1.372	1.382	1.394
% Ch , Annual Rate	4.0	2.4	3.4	3.5	3.3	3.1	3.1	3.2
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	20,041.0	20,411.9	20,659.0	20,880.7	21,126.2	21,365.9	21,594.4	21,816.9
% Ch , Annual Rate	4.3	7.6	4.9	4.4	4.8	4.6	4.3	4.2
Personal Income	17,319.2	17,499.8	17,680.2	17,839.4	18,030.7	18,246.1	18,454.0	18,656.7
% Ch , Annual Rate	5.2	4.2	4.2	3.6	4.4	4.9	4.6	4.5
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	161.6	161.7	162.0	162.6	162.9	163.3	163.7	164.2
Total U.S. Employment	154.9	155.4	155.8	156.6	157.2	157.7	158.1	158.5
Unemployment Rate (%)	4.12	3.91	3.80	3.67	3.51	3.44	3.43	3.45
Nonfarm Payroll Employment	148.07	148.70	149.33	149.96	150.51	151.03	151.47	151.84
% Ch , Annual Rate	1.7	1.7	1.7	1.7	1.5	1.4	1.2	1.0
Manufacturing	12.61	12.68	12.74	12.79	12.82	12.84	12.84	12.88
% Ch , Annual Rate	2.7	2.4	1.8	1.7	0.8	0.9	-0.3	1.3
Durable Manufacturing	7.86	7.92	7.97	8.00	8.01	8.06	8.05	8.09
% Ch , Annual Rate	3.6	3.0	2.6	1.7	0.4	2.1	-0.1	2.0
Nondurable Manufacturing	4.74	4.76	4.77	4.78	4.80	4.79	4.78	4.78
% Ch , Annual Rate	1.2	1.3	0.6	1.6	1.5	-1.1	-0.7	0.1
Construction	7.14	7.20	7.26	7.35	7.41	7.46	7.51	7.57
% Ch , Annual Rate	6.6	3.3	3.5	4.6	3.7	2.6	2.7	3.5
Service-Providing	127.61	128.09	128.58	129.06	129.52	129.97	130.37	130.64
% Ch , Annual Rate	1.3	1.5	1.5	1.5	1.4	1.4	1.2	0.8
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	62.9	68.0	69.8	61.1	56.1	56.7	57.2	57.5
Personal Saving/Disposable Income (%)	7.2	6.8	6.4	6.3	6.2	6.3	6.4	6.5
Auto Sales (Millions)	5.4	5.3	5.1	5.0	5.0	4.9	4.9	4.9
% Ch , Annual Rate	-32.0	-8.8	-13.6	-10.6	-2.4	-2.2	-3.0	-1.1
Housing Starts (Millions)	1.317	1.261	1.218	1.258	1.270	1.319	1.351	1.379
% Ch , Annual Rate	19.6	-16.0	-13.0	13.9	3.8	16.4	10.3	8.5
Federal Budget Surplus (Billions)	-969.9	-982.5	-948.5	-985.9	-1,000.6	-1,020.4	-1,034.7	-1,053.8
Net Exports (Billions)	-639.2	-549.8	-646.5	-673.8	-692.8	-710.9	-720.0	-718.5
3-Month Treasury Bill Rate (%)	1.56	1.84	2.04	2.38	2.56	2.69	2.82	2.97
10-Year Treasury Note Yield (%)	2.76	2.92	2.93	3.15	3.22	3.30	3.33	3.36
Bond Index of 20 G.O. Munis. (%)	3.73	3.89	3.97	4.34	4.35	4.44	4.49	4.52
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.84	4.91	4.98	5.02	5.06

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real National Income Accounts (Billions of Chained 2012 Dollars)</b>								
Real Gross Domestic Product	19,275.0	19,366.8	19,443.0	19,528.8	19,621.9	19,709.5	19,794.9	19,884.3
% Ch , Annual Rate	1.6	1.9	1.6	1.8	1.9	1.8	1.7	1.8
Real Consumption	13,382.6	13,445.6	13,510.8	13,577.8	13,647.1	13,714.7	13,782.4	13,852.3
% Ch , Annual Rate	1.8	1.9	2.0	2.0	2.1	2.0	2.0	2.0
Real Nonresidential Fixed Investment	2,914.2	2,937.6	2,964.4	2,989.9	3,017.0	3,041.2	3,065.3	3,089.5
% Ch , Annual Rate	3.7	3.3	3.7	3.5	3.7	3.2	3.2	3.2
Real Residential Fixed Investment	633.6	640.6	646.0	653.2	657.3	658.1	660.0	664.3
% Ch , Annual Rate	5.1	4.5	3.4	4.5	2.5	0.5	1.2	2.6
Real Personal Income	16,904.3	17,013.2	17,103.2	17,190.6	17,297.8	17,385.8	17,473.4	17,564.5
% Ch , Annual Rate	2.6	2.6	2.1	2.1	2.5	2.0	2.0	2.1
Real Per Capita Income (\$/Person)	50,846	51,084	51,264	51,436	51,666	51,839	52,009	52,190
% Ch , Annual Rate	1.8	1.9	1.4	1.3	1.8	1.3	1.3	1.4
<b>Price and Wage Indexes</b>								
PCE Price Index (2012=100)	111.6	112.1	112.6	113.2	113.8	114.4	115.0	115.6
% Ch , Annual Rate	2.0	1.8	1.9	2.0	2.1	2.1	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.594	2.604	2.617	2.630	2.645	2.661	2.675	2.690
% Ch , Annual Rate	2.1	1.6	2.0	1.9	2.4	2.3	2.3	2.2
Employment Cost Index (Dec. 2005=1.0)	1.405	1.416	1.428	1.439	1.451	1.463	1.476	1.488
% Ch , Annual Rate	3.3	3.4	3.3	3.2	3.3	3.3	3.4	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	22,034.5	22,267.2	22,473.0	22,708.2	22,946.6	23,177.9	23,414.6	23,657.5
% Ch , Annual Rate	4.0	4.3	3.7	4.3	4.3	4.1	4.1	4.2
Personal Income	18,866.9	19,073.1	19,266.8	19,462.5	19,688.1	19,892.4	20,095.9	20,303.4
% Ch , Annual Rate	4.6	4.4	4.1	4.1	4.7	4.2	4.2	4.2
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	164.6	165.3	165.4	165.6	165.9	166.2	166.5	166.8
Total U.S. Employment	158.8	159.4	159.4	159.6	159.8	160.1	160.3	160.5
Unemployment Rate (%)	3.51	3.55	3.63	3.67	3.69	3.72	3.75	3.76
Nonfarm Payroll Employment	152.16	152.70	152.73	152.89	153.16	153.40	153.64	153.88
% Ch , Annual Rate	0.8	1.4	0.1	0.4	0.7	0.6	0.6	0.6
Manufacturing	12.87	12.82	12.78	12.72	12.69	12.66	12.65	12.63
% Ch , Annual Rate	-0.3	-1.4	-1.4	-1.8	-0.9	-0.9	-0.4	-0.6
Durable Manufacturing	8.09	8.06	8.03	7.99	7.97	7.95	7.94	7.92
% Ch , Annual Rate	-0.1	-1.4	-1.4	-2.1	-1.1	-1.3	-0.5	-0.7
Nondurable Manufacturing	4.78	4.76	4.74	4.72	4.72	4.71	4.71	4.71
% Ch , Annual Rate	-0.5	-1.5	-1.4	-1.5	-0.6	-0.3	-0.2	-0.3
Construction	7.65	7.72	7.81	7.90	7.99	8.07	8.14	8.20
% Ch , Annual Rate	3.8	4.2	4.6	4.8	4.6	3.9	3.5	3.4
Service-Providing	130.88	131.38	131.36	131.48	131.69	131.89	132.06	132.25
% Ch , Annual Rate	0.8	1.5	-0.1	0.4	0.6	0.6	0.5	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	57.6	57.7	57.8	57.9	58.0	58.0	58.0	58.1
Personal Saving/Disposable Income (%)	6.7	6.9	6.9	7.0	7.1	7.1	7.1	7.0
Auto Sales (Millions)	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
% Ch , Annual Rate	-1.9	-1.3	-1.1	-1.5	0.0	0.3	0.7	0.3
Housing Starts (Millions)	1.397	1.410	1.417	1.414	1.405	1.404	1.415	1.423
% Ch , Annual Rate	5.3	3.8	2.0	-0.9	-2.6	-0.1	3.1	2.3
Federal Budget Surplus (Billions)	-1,082.7	-1,112.4	-1,128.5	-1,138.3	-1,174.3	-1,186.8	-1,198.1	-1,209.1
Net Exports (Billions)	-720.9	-713.1	-722.3	-717.1	-719.5	-720.9	-717.9	-713.2
3-Month Treasury Bill Rate (%)	3.00	3.16	3.21	3.21	3.21	3.22	3.22	3.17
10-Year Treasury Note Yield (%)	3.41	3.47	3.51	3.54	3.56	3.56	3.57	3.56
Bond Index of 20 G.O. Munis. (%)	4.57	4.63	4.66	4.69	4.70	4.71	4.72	4.70
30-Year Fixed Mortgage Rate (%)	5.11	5.18	5.22	5.24	5.25	5.25	5.25	5.23

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
<b>Real National Income Accounts (Billions of Chained 2012 Dollars)</b>								
Real Gross Domestic Product	19,974.0	20,072.5	20,179.2	20,286.2	20,403.4	20,509.2	20,602.9	20,687.0
% Ch , Annual Rate	1.8	2.0	2.1	2.1	2.3	2.1	1.8	1.6
Real Consumption	13,923.9	13,997.7	14,075.0	14,156.0	14,242.2	14,319.1	14,385.4	14,440.6
% Ch , Annual Rate	2.1	2.1	2.2	2.3	2.5	2.2	1.9	1.5
Real Nonresidential Fixed Investment	3,113.5	3,139.3	3,166.5	3,192.7	3,219.7	3,244.4	3,267.2	3,288.6
% Ch , Annual Rate	3.1	3.4	3.5	3.4	3.4	3.1	2.8	2.6
Real Residential Fixed Investment	667.3	670.4	673.7	676.0	678.4	680.9	682.3	684.1
% Ch , Annual Rate	1.8	1.9	2.0	1.4	1.4	1.4	0.9	1.0
Real Personal Income	17,673.8	17,769.0	17,866.8	17,966.5	18,093.7	18,202.2	18,302.8	18,397.1
% Ch , Annual Rate	2.5	2.2	2.2	2.3	2.9	2.4	2.2	2.1
Real Per Capita Income (\$/Person)	52,425	52,616	52,816	53,020	53,305	53,534	53,740	53,926
% Ch , Annual Rate	1.8	1.5	1.5	1.6	2.2	1.7	1.5	1.4
<b>Price and Wage Indexes</b>								
PCE Price Index (2012=100)	116.2	116.7	117.3	117.9	118.5	119.1	119.7	120.3
% Ch , Annual Rate	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.704	2.718	2.733	2.747	2.762	2.776	2.791	2.806
% Ch , Annual Rate	2.1	2.0	2.2	2.1	2.2	2.1	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.501	1.514	1.527	1.541	1.555	1.569	1.583	1.597
% Ch , Annual Rate	3.6	3.6	3.5	3.6	3.7	3.6	3.6	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	23,900.5	24,153.8	24,420.0	24,686.6	24,967.1	25,235.7	25,494.9	25,745.2
% Ch , Annual Rate	4.2	4.3	4.5	4.4	4.6	4.4	4.2	4.0
Personal Income	20,530.0	20,739.0	20,957.5	21,178.6	21,435.3	21,670.2	21,901.5	22,127.5
% Ch , Annual Rate	4.5	4.1	4.3	4.3	4.9	4.5	4.3	4.2
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	167.0	167.3	167.6	167.8	168.1	168.3	168.5	168.8
Total U.S. Employment	160.7	161.0	161.2	161.5	161.7	162.0	162.2	162.4
Unemployment Rate (%)	3.78	3.78	3.78	3.77	3.76	3.75	3.77	3.80
Nonfarm Payroll Employment	154.12	154.38	154.66	154.96	155.26	155.54	155.77	155.96
% Ch, Annual Rate	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.5
Manufacturing	12.63	12.62	12.62	12.64	12.65	12.68	12.70	12.72
% Ch, Annual Rate	-0.1	-0.3	0.1	0.5	0.5	0.7	0.9	0.7
Durable Manufacturing	7.92	7.91	7.92	7.93	7.94	7.96	7.98	8.00
% Ch, Annual Rate	0.0	-0.4	0.2	0.6	0.7	0.9	1.2	0.9
Nondurable Manufacturing	4.71	4.71	4.71	4.71	4.71	4.72	4.72	4.72
% Ch, Annual Rate	-0.1	-0.1	0.1	0.3	0.2	0.3	0.4	0.3
Construction	8.27	8.33	8.39	8.45	8.51	8.56	8.62	8.67
% Ch, Annual Rate	3.2	3.0	2.9	2.8	2.8	2.7	2.6	2.5
Service-Providing	132.43	132.63	132.85	133.07	133.30	133.50	133.65	133.76
% Ch, Annual Rate	0.6	0.6	0.7	0.7	0.7	0.6	0.4	0.3
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	58.1	58.0	58.0	58.0	57.8	57.7	57.6	57.5
Personal Saving/Disposable Income (%)	7.1	7.1	7.0	6.9	7.0	6.9	6.9	7.0
Auto Sales (Millions)	4.8	4.8	4.9	4.9	4.9	5.0	5.0	5.0
% Ch, Annual Rate	1.1	0.8	1.2	3.3	3.2	2.4	3.1	2.8
Housing Starts (Millions)	1.435	1.443	1.447	1.451	1.457	1.464	1.469	1.471
% Ch, Annual Rate	3.5	2.4	0.9	1.3	1.7	1.9	1.2	0.5
Federal Budget Surplus (Billions)	-1,233.6	-1,237.2	-1,235.2	-1,230.4	-1,236.0	-1,227.1	-1,218.0	-1,216.6
Net Exports (Billions)	-709.5	-702.5	-694.1	-682.3	-666.2	-650.3	-634.9	-620.3
3-Month Treasury Bill Rate (%)	3.15	3.15	3.15	3.15	3.16	3.13	2.92	2.91
10-Year Treasury Note Yield (%)	3.55	3.54	3.54	3.53	3.51	3.50	3.48	3.46
Bond Index of 20 G.O. Munis. (%)	4.69	4.67	4.66	4.64	4.62	4.59	4.56	4.54
30-Year Fixed Mortgage Rate (%)	5.22	5.21	5.21	5.19	5.17	5.15	5.12	5.10

Table A1.3  
**Washington Economic Forecast Summary**  
Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
<b>Real Income (Billions of Chained 2012 Dollars)</b>								
Real Personal Income	387.805	404.211	423.238	435.190	448.257	460.085	472.379	485.741
% Ch	4.0	4.2	4.7	2.8	3.0	2.6	2.7	2.8
Real Wage and Salary Disb.	195.037	205.585	219.873	226.231	232.316	237.920	244.506	251.914
% Ch	5.0	5.4	6.9	2.9	2.7	2.4	2.8	3.0
Real Nonwage Income	192.768	198.626	203.365	208.959	215.941	222.165	227.873	233.827
% Ch	3.0	3.0	2.4	2.8	3.3	2.9	2.6	2.6
Real Per Capita Income (\$/Person)	53,259	54,572	56,195	56,875	57,726	58,458	59,280	60,256
% Ch	2.2	2.5	3.0	1.2	1.5	1.3	1.4	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.042	1.061	1.082	1.103	1.124	1.147	1.170	1.194
% Ch	1.1	1.8	2.1	1.9	1.9	2.1	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.550	2.627	2.705	2.758	2.815	2.876	2.939	3.002
% Ch	2.3	3.0	3.0	2.0	2.1	2.2	2.2	2.1
Average Nonfarm Annual Wage	60,498	63,560	67,661	69,400	71,602	74,078	76,877	80,038
% Ch	3.0	5.1	6.5	2.6	3.2	3.5	3.8	4.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.42	27.38	28.45	29.54	30.45	31.41	32.46	33.58
% Ch	3.5	3.6	3.9	3.8	3.1	3.2	3.3	3.5
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	404.232	428.765	458.160	479.863	503.843	527.783	552.767	579.828
% Ch	5.1	6.1	6.9	4.7	5.0	4.8	4.7	4.9
Disposable Personal Income	355.241	376.933	404.564	423.779	445.225	466.516	487.815	510.320
% Ch	5.3	6.1	7.3	4.7	5.1	4.8	4.6	4.6
Per Capita Income (\$/Person)	55,513	57,886	60,830	62,712	64,883	67,058	69,367	71,926
% Ch	3.3	4.3	5.1	3.1	3.5	3.4	3.4	3.7
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,635.7	3,723.3	3,768.9	3,829.9	3,895.9	3,947.8	3,994.9	4,037.9
Total Washington Employment	3,444.0	3,546.3	3,597.0	3,671.0	3,727.7	3,770.6	3,812.4	3,851.9
Unemployment Rate (%)	5.28	4.76	4.56	4.15	4.32	4.49	4.57	4.61
Nonfarm Payroll Employment	3,244.6	3,322.4	3,411.2	3,486.3	3,537.9	3,575.0	3,612.2	3,647.7
% Ch	3.1	2.4	2.7	2.2	1.5	1.0	1.0	1.0
Manufacturing	290.0	283.8	286.4	290.1	290.5	290.2	292.2	295.8
% Ch	-0.7	-2.1	0.9	1.3	0.1	-0.1	0.7	1.2
Durable Manufacturing	207.6	200.1	201.1	204.0	204.5	204.2	205.6	208.2
% Ch	-1.7	-3.6	0.5	1.4	0.3	-0.2	0.7	1.3
Aerospace	91.0	84.1	83.4	84.9	84.9	84.9	84.9	84.9
% Ch	-3.2	-7.6	-0.8	1.8	0.0	0.0	0.0	0.0
Nondurable Manufacturing	82.4	83.7	85.3	86.1	86.0	86.0	86.6	87.6
% Ch	2.1	1.5	2.0	1.0	-0.1	0.0	0.8	1.1
Construction	186.6	199.7	212.5	215.8	215.7	214.9	213.8	212.5
% Ch	7.7	7.0	6.4	1.6	-0.1	-0.3	-0.5	-0.6
Service-Providing	2,761.7	2,832.7	2,906.0	2,973.9	3,025.2	3,063.3	3,099.5	3,132.7
% Ch	3.2	2.6	2.6	2.3	1.7	1.3	1.2	1.1
Software Publishers	58.9	61.3	64.7	66.4	67.0	68.1	69.3	70.7
% Ch	5.3	4.1	5.5	2.6	1.0	1.6	1.8	1.9
Electronic Shopping and Mail-Order	38.2	49.7	54.4	56.9	59.9	62.1	64.0	65.6
% Ch	26.6	30.1	9.4	4.7	5.2	3.8	3.0	2.5
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	44.077	45.794	43.737	43.636	43.800	42.195	41.397	40.572
% Ch	9.2	3.9	-4.5	-0.2	0.4	-3.7	-1.9	-2.0
Single-Family	22.463	23.115	23.826	24.580	25.744	25.332	25.488	25.367
% Ch	13.5	2.9	3.1	3.2	4.7	-1.6	0.6	-0.5
Multi-Family	21.614	22.679	19.911	19.056	18.056	16.863	15.910	15.205
% Ch	5.0	4.9	-12.2	-4.3	-5.2	-6.6	-5.7	-4.4
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.55	4.99	5.19	5.25	5.21	5.14

Table A1.4  
**Washington Economic Forecast Summary**  
Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real Income (Billions of Chained 2012 Dollars)</b>								
Real Personal Income	419.863	420.820	424.671	427.597	430.160	433.646	436.897	440.055
% Ch, Annual Rate	9.5	0.9	3.7	2.8	2.4	3.3	3.0	2.9
Real Wage and Salary Disb.	218.124	218.192	220.623	222.553	223.913	225.535	227.008	228.468
% Ch, Annual Rate	18.3	0.1	4.5	3.5	2.5	2.9	2.6	2.6
Real Nonwage Income	201.738	202.628	204.048	205.044	206.247	208.111	209.888	211.587
% Ch, Annual Rate	0.8	1.8	2.8	2.0	2.4	3.7	3.5	3.3
Real Per Capita Income (\$/Person)	56,093	55,992	56,266	56,428	56,544	56,781	56,989	57,185
% Ch, Annual Rate	7.7	-0.7	2.0	1.2	0.8	1.7	1.5	1.4
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.075	1.080	1.085	1.089	1.095	1.100	1.105	1.111
% Ch, Annual Rate	2.5	2.0	1.6	1.8	1.9	2.0	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.689	2.703	2.708	2.721	2.734	2.751	2.767	2.782
% Ch, Annual Rate	4.2	2.1	0.7	1.9	1.9	2.5	2.3	2.2
Average Nonfarm Annual Wage	67,244	67,293	67,854	68,252	68,653	69,143	69,637	70,166
% Ch, Annual Rate	17.3	0.3	3.4	2.4	2.4	2.9	2.9	3.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.90	28.35	28.55	29.00	29.23	29.43	29.64	29.87
% Ch, Annual Rate	0.5	6.5	2.9	6.5	3.1	2.9	2.9	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	451.436	454.689	460.651	465.865	470.852	476.980	482.861	488.761
% Ch, Annual Rate	12.2	2.9	5.3	4.6	4.4	5.3	5.0	5.0
Disposable Personal Income	398.523	401.640	406.792	411.302	415.736	421.194	426.443	431.741
% Ch, Annual Rate	14.1	3.2	5.2	4.5	4.4	5.4	5.1	5.1
Per Capita Income (\$/Person)	60,312	60,499	61,033	61,478	61,892	62,455	62,984	63,514
% Ch, Annual Rate	10.4	1.2	3.6	2.9	2.7	3.7	3.4	3.4
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,759.5	3,760.4	3,766.5	3,789.3	3,804.2	3,821.7	3,838.6	3,855.3
Total Washington Employment	3,581.6	3,582.6	3,597.4	3,626.5	3,645.2	3,663.8	3,680.0	3,694.9
Unemployment Rate (%)	4.73	4.73	4.49	4.30	4.18	4.13	4.13	4.16
Nonfarm Payroll Employment	3,382.5	3,396.6	3,420.0	3,445.6	3,462.4	3,479.9	3,494.6	3,508.2
% Ch, Annual Rate	3.8	1.7	2.8	3.0	2.0	2.0	1.7	1.6
Manufacturing	283.9	285.1	287.7	289.0	289.6	290.0	290.0	290.8
% Ch, Annual Rate	2.5	1.7	3.7	1.9	0.8	0.6	0.0	1.1
Durable Manufacturing	198.8	200.0	202.4	203.3	203.5	203.9	204.0	204.6
% Ch, Annual Rate	1.7	2.6	4.8	1.8	0.3	1.0	0.1	1.2
Aerospace	81.9	82.6	84.1	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	2.2	3.4	7.5	3.6	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.1	85.0	85.3	85.8	86.2	86.1	86.0	86.2
% Ch, Annual Rate	4.4	-0.2	1.3	2.1	1.9	-0.4	-0.2	0.8
Construction	209.0	211.6	213.3	215.9	215.8	215.8	215.6	215.9
% Ch, Annual Rate	9.2	5.1	3.3	4.8	-0.1	0.1	-0.5	0.6
Service-Providing	2,883.3	2,893.6	2,912.7	2,934.4	2,950.6	2,967.5	2,982.5	2,995.0
% Ch, Annual Rate	3.6	1.4	2.7	3.0	2.2	2.3	2.0	1.7
Software Publishers	63.3	64.4	65.3	65.8	66.1	66.4	66.5	66.5
% Ch, Annual Rate	6.3	7.6	5.9	2.6	2.3	1.4	0.7	0.3
Electronic Shopping and Mail-Order	54.5	54.5	53.9	54.6	55.6	56.5	57.4	58.2
% Ch, Annual Rate	8.7	0.4	-4.3	4.8	7.7	6.9	6.2	5.6
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	49.173	43.245	39.684	42.845	42.940	43.646	43.911	44.048
% Ch, Annual Rate	-18.1	-40.2	-29.1	35.9	0.9	6.7	2.5	1.3
Single-Family	24.952	23.013	23.762	23.577	23.772	24.443	24.847	25.259
% Ch, Annual Rate	4.2	-27.6	13.7	-3.1	3.4	11.8	6.8	6.8
Multi-Family	24.221	20.233	15.922	19.269	19.168	19.203	19.064	18.789
% Ch, Annual Rate	-35.2	-51.3	-61.7	114.5	-2.1	0.7	-2.9	-5.7
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.84	4.91	4.98	5.02	5.06

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real Income (Billions of Chained 2012 Dollars)</b>								
Real Personal Income	443.424	447.089	449.847	452.668	455.925	458.663	461.438	464.315
% Ch, Annual Rate	3.1	3.3	2.5	2.5	2.9	2.4	2.4	2.5
Real Wage and Salary Disb.	229.965	231.931	233.020	234.348	235.779	237.147	238.609	240.145
% Ch, Annual Rate	2.6	3.5	1.9	2.3	2.5	2.3	2.5	2.6
Real Nonwage Income	213.459	215.158	216.827	218.320	220.146	221.516	222.829	224.170
% Ch, Annual Rate	3.6	3.2	3.1	2.8	3.4	2.5	2.4	2.4
Real Per Capita Income (\$/Person)	57,410	57,676	57,828	57,991	58,212	58,370	58,534	58,714
% Ch, Annual Rate	1.6	1.9	1.1	1.1	1.5	1.1	1.1	1.2
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.116	1.121	1.126	1.132	1.138	1.144	1.150	1.156
% Ch, Annual Rate	2.0	1.8	1.9	2.0	2.1	2.1	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.797	2.808	2.822	2.835	2.852	2.868	2.885	2.900
% Ch, Annual Rate	2.1	1.6	2.0	1.9	2.4	2.3	2.3	2.2
Average Nonfarm Annual Wage	70,743	71,297	71,880	72,487	73,116	73,740	74,391	75,063
% Ch, Annual Rate	3.3	3.2	3.3	3.4	3.5	3.5	3.6	3.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	30.10	30.34	30.57	30.80	31.04	31.28	31.53	31.79
% Ch, Annual Rate	3.1	3.2	3.1	3.1	3.2	3.2	3.2	3.3
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	494.907	501.221	506.752	512.492	518.928	524.792	530.694	536.718
% Ch, Annual Rate	5.1	5.2	4.5	4.6	5.1	4.6	4.6	4.6
Disposable Personal Income	437.186	442.854	447.878	452.981	458.838	463.959	469.071	474.196
% Ch, Annual Rate	5.1	5.3	4.6	4.6	5.3	4.5	4.5	4.4
Per Capita Income (\$/Person)	64,076	64,659	65,143	65,655	66,257	66,786	67,320	67,870
% Ch, Annual Rate	3.6	3.7	3.0	3.2	3.7	3.2	3.2	3.3
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,871.6	3,893.0	3,903.0	3,915.8	3,929.0	3,941.8	3,954.1	3,966.2
Total Washington Employment	3,707.8	3,726.5	3,732.9	3,743.5	3,754.8	3,765.3	3,775.8	3,786.4
Unemployment Rate (%)	4.23	4.28	4.36	4.40	4.44	4.48	4.51	4.53
Nonfarm Payroll Employment	3,519.4	3,538.0	3,542.9	3,551.4	3,561.1	3,570.4	3,579.6	3,588.9
% Ch, Annual Rate	1.3	2.1	0.6	1.0	1.1	1.0	1.0	1.0
Manufacturing	290.9	290.7	290.5	290.0	290.0	290.0	290.2	290.5
% Ch, Annual Rate	0.2	-0.4	-0.2	-0.7	0.0	0.0	0.3	0.4
Durable Manufacturing	204.7	204.6	204.6	204.3	204.2	204.1	204.1	204.3
% Ch, Annual Rate	0.2	-0.2	0.0	-0.6	-0.2	-0.3	0.2	0.4
Aerospace	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.2	86.1	85.9	85.7	85.8	85.9	86.1	86.2
% Ch, Annual Rate	0.2	-0.8	-0.7	-0.8	0.3	0.5	0.7	0.6
Construction	215.4	215.7	215.8	215.7	215.3	215.0	214.7	214.6
% Ch, Annual Rate	-1.0	0.6	0.3	-0.2	-0.8	-0.6	-0.5	-0.2
Service-Providing	3,006.6	3,025.1	3,030.0	3,039.1	3,049.2	3,058.9	3,068.1	3,077.2
% Ch, Annual Rate	1.6	2.5	0.7	1.2	1.3	1.3	1.2	1.2
Software Publishers	66.7	66.9	67.1	67.4	67.7	67.9	68.2	68.5
% Ch, Annual Rate	0.8	1.3	1.5	1.5	1.6	1.6	1.7	1.8
Electronic Shopping and Mail-Order	58.9	59.6	60.2	60.8	61.4	61.9	62.4	62.9
% Ch, Annual Rate	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	44.144	44.177	43.761	43.119	42.566	42.266	42.104	41.846
% Ch, Annual Rate	0.9	0.3	-3.7	-5.7	-5.0	-2.8	-1.5	-2.4
Single-Family	25.587	25.825	25.873	25.690	25.404	25.245	25.298	25.381
% Ch, Annual Rate	5.3	3.8	0.8	-2.8	-4.4	-2.5	0.9	1.3
Multi-Family	18.557	18.352	17.888	17.429	17.162	17.021	16.805	16.465
% Ch, Annual Rate	-4.8	-4.3	-9.8	-9.9	-6.0	-3.2	-5.0	-7.9
30-Year Fixed Mortgage Rate (%)	5.11	5.18	5.22	5.24	5.25	5.25	5.25	5.23

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
<b>Real Income (Billions of Chained 2012 Dollars)</b>								
Real Personal Income	467.743	470.797	473.913	477.064	480.939	484.294	487.406	490.323
% Ch, Annual Rate	3.0	2.6	2.7	2.7	3.3	2.8	2.6	2.4
Real Wage and Salary Disb.	241.878	243.603	245.365	247.179	249.156	251.063	252.863	254.574
% Ch, Annual Rate	2.9	2.9	2.9	3.0	3.2	3.1	2.9	2.7
Real Nonwage Income	225.865	227.193	228.549	229.885	231.783	233.231	234.543	235.749
% Ch, Annual Rate	3.1	2.4	2.4	2.4	3.3	2.5	2.3	2.1
Real Per Capita Income (\$/Person)	58,965	59,170	59,383	59,602	59,913	60,159	60,377	60,573
% Ch, Annual Rate	1.7	1.4	1.5	1.5	2.1	1.7	1.5	1.3
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.162	1.167	1.173	1.179	1.185	1.191	1.197	1.203
% Ch, Annual Rate	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.916	2.930	2.946	2.962	2.978	2.993	3.009	3.026
% Ch, Annual Rate	2.1	2.0	2.2	2.1	2.2	2.1	2.2	2.2
Average Nonfarm Annual Wage	75,779	76,493	77,237	78,000	78,815	79,625	80,444	81,269
% Ch, Annual Rate	3.9	3.8	3.9	4.0	4.2	4.2	4.2	4.2
Avg. Hourly Earnings-Mfg. (\$/Hour)	32.06	32.33	32.59	32.87	33.15	33.44	33.72	34.01
% Ch, Annual Rate	3.4	3.4	3.3	3.4	3.5	3.5	3.5	3.5
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	543.331	549.488	555.893	562.354	569.761	576.565	583.240	589.748
% Ch, Annual Rate	5.0	4.6	4.7	4.7	5.4	4.9	4.7	4.5
Disposable Personal Income	479.875	485.084	490.440	495.862	502.072	507.666	513.113	518.429
% Ch, Annual Rate	4.9	4.4	4.5	4.5	5.1	4.5	4.4	4.2
Per Capita Income (\$/Person)	68,494	69,060	69,656	70,258	70,978	71,621	72,249	72,856
% Ch, Annual Rate	3.7	3.3	3.5	3.5	4.2	3.7	3.6	3.4
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,978.0	3,989.4	4,000.7	4,011.7	4,022.5	4,033.0	4,043.2	4,053.0
Total Washington Employment	3,796.8	3,807.2	3,817.6	3,827.9	3,838.2	3,848.0	3,856.7	3,864.5
Unemployment Rate (%)	4.55	4.57	4.58	4.58	4.58	4.59	4.61	4.65
Nonfarm Payroll Employment	3,598.2	3,607.5	3,616.9	3,626.2	3,635.7	3,644.5	3,652.1	3,658.6
% Ch, Annual Rate	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7
Manufacturing	291.2	291.8	292.6	293.5	294.4	295.4	296.3	297.2
% Ch, Annual Rate	0.9	0.8	1.1	1.3	1.3	1.3	1.3	1.1
Durable Manufacturing	204.8	205.2	205.8	206.5	207.2	207.9	208.6	209.2
% Ch, Annual Rate	0.9	0.8	1.2	1.3	1.4	1.4	1.3	1.1
Aerospace	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.3	86.5	86.7	87.0	87.2	87.5	87.8	88.0
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.1	1.2	1.3	1.1
Construction	214.3	214.0	213.7	213.4	213.0	212.7	212.3	212.0
% Ch, Annual Rate	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7
Service-Providing	3,086.2	3,095.1	3,104.0	3,112.8	3,121.6	3,129.8	3,136.8	3,142.8
% Ch, Annual Rate	1.2	1.2	1.2	1.1	1.1	1.0	0.9	0.8
Software Publishers	68.9	69.2	69.5	69.8	70.1	70.5	70.8	71.2
% Ch, Annual Rate	1.9	1.8	1.8	1.9	1.9	2.0	2.0	2.1
Electronic Shopping and Mail-Order	63.3	63.8	64.2	64.6	65.0	65.4	65.8	66.2
% Ch, Annual Rate	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	41.720	41.546	41.275	41.049	40.860	40.696	40.495	40.236
% Ch, Annual Rate	-1.2	-1.7	-2.6	-2.2	-1.8	-1.6	-2.0	-2.5
Single-Family	25.469	25.543	25.494	25.445	25.397	25.367	25.356	25.347
% Ch, Annual Rate	1.4	1.2	-0.8	-0.8	-0.8	-0.5	-0.2	-0.1
Multi-Family	16.251	16.003	15.781	15.604	15.463	15.328	15.139	14.889
% Ch, Annual Rate	-5.1	-6.0	-5.4	-4.4	-3.6	-3.4	-4.9	-6.4
30-Year Fixed Mortgage Rate (%)	5.22	5.21	5.21	5.19	5.17	5.15	5.12	5.10

Table A2.1

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	144.35	146.62	149.01	151.21	152.62	153.52	154.53	155.63
% Ch	1.8	1.6	1.6	1.5	0.9	0.6	0.7	0.7
Manufacturing	12.35	12.44	12.70	12.84	12.80	12.66	12.63	12.69
% Ch	0.1	0.7	2.1	1.1	-0.4	-1.1	-0.2	0.5
Durable Manufacturing	7.71	7.74	7.94	8.05	8.05	7.94	7.92	7.97
% Ch	-0.7	0.3	2.6	1.4	-0.1	-1.3	-0.3	0.6
Wood Products	0.39	0.40	0.41	0.41	0.41	0.42	0.44	0.46
% Ch	2.7	1.1	2.1	0.3	2.0	2.0	4.2	4.7
Primary and Fabricated Metals	1.80	1.80	1.87	1.89	1.89	1.84	1.84	1.89
% Ch	-3.0	0.4	3.5	1.3	0.2	-2.7	-0.2	2.6
Computer and Electronic Products	1.05	1.04	1.07	1.07	1.06	1.07	1.08	1.09
% Ch	-0.5	-0.5	2.3	0.6	-0.8	0.8	1.1	0.9
Machinery and Electrical Equipment	1.46	1.47	1.53	1.55	1.57	1.56	1.58	1.59
% Ch	-3.0	0.6	4.0	1.4	1.3	-0.2	0.8	1.2
Transportation Equipment	1.63	1.63	1.66	1.72	1.69	1.64	1.58	1.51
% Ch	1.6	0.1	2.0	3.1	-1.6	-2.8	-4.1	-4.4
Other Durables	1.39	1.40	1.41	1.42	1.42	1.40	1.40	1.42
% Ch	1.3	0.7	1.0	0.7	-0.3	-1.2	0.2	1.6
Nondurable Manufacturing	4.64	4.71	4.76	4.79	4.75	4.71	4.71	4.72
% Ch	1.5	1.4	1.2	0.5	-0.8	-0.8	-0.1	0.2
Food Manufacturing	1.56	1.60	1.64	1.67	1.68	1.69	1.71	1.74
% Ch	3.0	3.0	2.2	2.0	0.6	0.5	1.2	1.5
Paper and Paper Products	0.37	0.37	0.38	0.37	0.37	0.36	0.36	0.36
% Ch	-0.6	-0.5	1.8	-0.6	-2.1	-1.8	-0.6	0.0
Other Nondurables	2.71	2.73	2.75	2.74	2.70	2.66	2.64	2.63
% Ch	1.0	0.8	0.6	-0.2	-1.5	-1.4	-0.9	-0.5
Natural Resources and Mining	0.67	0.68	0.74	0.75	0.77	0.79	0.80	0.80
% Ch	-17.8	1.5	8.9	2.1	2.5	2.4	0.8	0.5
Construction	6.73	6.95	7.24	7.49	7.77	8.10	8.36	8.59
% Ch	4.1	3.4	4.1	3.4	3.8	4.2	3.2	2.8
Trade, Transportation, and Utilities	27.26	27.49	27.79	27.98	27.85	27.75	27.62	27.50
% Ch	1.4	0.8	1.1	0.7	-0.5	-0.3	-0.5	-0.4
Wholesale Trade	5.86	5.90	5.99	6.08	6.10	6.11	6.11	6.11
% Ch	0.1	0.7	1.4	1.6	0.3	0.1	0.0	0.1
Retail Trade	15.83	15.86	15.91	15.89	15.77	15.70	15.60	15.51
% Ch	1.4	0.2	0.3	-0.2	-0.7	-0.4	-0.6	-0.6
Trans., Warehousing, and Utilities	5.57	5.72	5.89	6.01	5.98	5.95	5.91	5.87
% Ch	2.7	2.8	2.9	2.0	-0.5	-0.6	-0.6	-0.6
Information	2.79	2.79	2.77	2.81	2.81	2.86	2.90	2.91
% Ch	1.6	0.0	-0.9	1.5	0.0	1.8	1.3	0.5
Publishing Industries	0.73	0.72	0.71	0.70	0.67	0.65	0.65	0.64
% Ch	0.5	-1.0	-1.2	-1.7	-4.7	-2.3	-1.3	-0.7
Other Information	2.06	2.07	2.05	2.11	2.14	2.21	2.25	2.27
% Ch	1.9	0.3	-0.8	2.7	1.6	3.0	2.0	0.9
Financial Activities	8.29	8.45	8.57	8.73	8.86	8.86	8.87	8.88
% Ch	2.0	2.0	1.4	1.9	1.5	0.0	0.1	0.0
Professional and Business Services	20.05	20.47	20.99	21.71	22.50	23.04	23.58	24.24
% Ch	2.1	2.1	2.6	3.4	3.6	2.4	2.3	2.8
Education and Health Services	22.64	23.19	23.65	24.03	24.04	24.12	24.22	24.32
% Ch	2.8	2.4	2.0	1.6	0.1	0.3	0.4	0.4
Leisure and Hospitality	15.66	16.06	16.34	16.53	16.70	16.84	16.95	16.98
% Ch	3.3	2.6	1.7	1.2	1.0	0.9	0.6	0.2
Other Services	5.69	5.78	5.86	5.88	5.79	5.72	5.67	5.62
% Ch	1.2	1.5	1.5	0.3	-1.6	-1.1	-0.9	-0.9
Federal Government	2.79	2.81	2.80	2.80	2.92	2.80	2.80	2.80
% Ch	1.4	0.4	-0.3	0.1	4.5	-4.3	0.0	0.0
State and Local Government	19.44	19.52	19.57	19.65	19.81	19.97	20.14	20.31
% Ch	0.9	0.4	0.2	0.4	0.8	0.8	0.8	0.8

Table A2.2

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	148.07	148.70	149.33	149.96	150.51	151.03	151.47	151.84
% Ch, Annual Rate	1.7	1.7	1.7	1.7	1.5	1.4	1.2	1.0
Manufacturing	12.61	12.68	12.74	12.79	12.82	12.84	12.84	12.88
% Ch, Annual Rate	2.7	2.4	1.8	1.7	0.8	0.9	-0.3	1.3
Durable Manufacturing	7.86	7.92	7.97	8.00	8.01	8.06	8.05	8.09
% Ch, Annual Rate	3.6	3.0	2.6	1.7	0.4	2.1	-0.1	2.0
Wood Products	0.40	0.41	0.41	0.41	0.41	0.40	0.41	0.41
% Ch, Annual Rate	5.3	2.5	1.4	0.9	-1.0	-1.8	0.9	4.8
Primary and Fabricated Metals	1.85	1.86	1.88	1.88	1.87	1.89	1.89	1.91
% Ch, Annual Rate	4.7	3.8	2.5	0.0	-1.3	4.1	1.3	3.1
Computer and Electronic Products	1.06	1.06	1.07	1.07	1.08	1.08	1.07	1.07
% Ch, Annual Rate	2.3	2.4	1.8	1.6	1.7	-0.7	-1.9	-1.4
Machinery and Electrical Equipment	1.50	1.52	1.54	1.55	1.54	1.55	1.54	1.56
% Ch, Annual Rate	4.7	5.7	3.5	2.5	-0.5	0.5	-0.3	3.4
Transportation Equipment	1.65	1.66	1.67	1.68	1.70	1.72	1.72	1.73
% Ch, Annual Rate	2.8	2.5	3.7	3.0	3.0	5.2	0.4	1.5
Other Durables	1.41	1.41	1.41	1.42	1.42	1.42	1.42	1.42
% Ch, Annual Rate	2.4	0.5	1.1	2.0	0.1	1.1	-1.0	1.2
Nondurable Manufacturing	4.74	4.76	4.77	4.78	4.80	4.79	4.78	4.78
% Ch, Annual Rate	1.2	1.3	0.6	1.6	1.5	-1.1	-0.7	0.1
Food Manufacturing	1.63	1.64	1.64	1.65	1.67	1.67	1.67	1.68
% Ch, Annual Rate	2.4	1.9	1.1	2.7	3.7	0.8	0.8	1.7
Paper and Paper Products	0.37	0.37	0.38	0.38	0.38	0.37	0.37	0.37
% Ch, Annual Rate	2.5	2.6	2.8	1.1	-1.7	-2.6	-2.6	-0.9
Other Nondurables	2.74	2.75	2.75	2.76	2.76	2.75	2.74	2.73
% Ch, Annual Rate	0.5	0.7	0.0	0.9	0.7	-2.1	-1.3	-0.7
Natural Resources and Mining	0.71	0.73	0.75	0.76	0.76	0.75	0.75	0.75
% Ch, Annual Rate	11.0	12.1	6.5	7.9	-1.5	-2.0	0.7	-2.0
Construction	7.14	7.20	7.26	7.35	7.41	7.46	7.51	7.57
% Ch, Annual Rate	6.6	3.3	3.5	4.6	3.7	2.6	2.7	3.5
Trade, Transportation, and Utilities	27.69	27.76	27.82	27.89	27.97	27.99	27.99	27.97
% Ch, Annual Rate	1.5	1.0	0.8	1.1	1.2	0.2	0.0	-0.3
Wholesale Trade	5.95	5.96	6.00	6.03	6.05	6.08	6.10	6.11
% Ch, Annual Rate	1.5	0.5	2.5	1.9	1.9	1.5	1.4	0.5
Retail Trade	15.91	15.93	15.91	15.89	15.92	15.90	15.88	15.85
% Ch, Annual Rate	1.0	0.7	-0.5	-0.6	0.7	-0.3	-0.7	-0.7
Trans., Warehousing, and Utilities	5.82	5.86	5.90	5.98	6.00	6.01	6.02	6.02
% Ch, Annual Rate	3.0	2.6	2.9	5.0	1.8	0.4	0.5	-0.1
Information	2.76	2.77	2.77	2.78	2.80	2.83	2.82	2.80
% Ch, Annual Rate	-2.7	1.2	-0.5	1.8	3.0	4.4	-1.5	-2.7
Publishing Industries	0.72	0.71	0.71	0.71	0.71	0.71	0.70	0.69
% Ch, Annual Rate	-1.7	-0.5	0.2	-0.4	0.4	-2.9	-5.6	-7.0
Other Information	2.05	2.06	2.05	2.06	2.08	2.12	2.12	2.11
% Ch, Annual Rate	-3.0	1.8	-0.7	2.6	3.9	7.0	-0.1	-1.2
Financial Activities	8.54	8.56	8.59	8.61	8.64	8.70	8.77	8.82
% Ch, Annual Rate	1.5	1.3	1.2	1.0	1.5	2.9	3.2	2.1
Professional and Business Services	20.77	20.92	21.06	21.20	21.32	21.58	21.85	22.08
% Ch, Annual Rate	2.3	3.0	2.7	2.7	2.2	4.9	5.2	4.2
Education and Health Services	23.46	23.58	23.73	23.84	23.93	24.05	24.07	24.06
% Ch, Annual Rate	2.0	2.0	2.5	1.9	1.6	1.9	0.4	-0.1
Leisure and Hospitality	16.24	16.29	16.36	16.45	16.54	16.51	16.53	16.56
% Ch, Annual Rate	1.5	1.3	1.6	2.2	2.3	-0.8	0.6	0.7
Other Services	5.83	5.86	5.87	5.89	5.91	5.89	5.88	5.85
% Ch, Annual Rate	1.1	2.2	0.6	1.5	1.2	-1.3	-1.1	-2.0
Federal Government	2.79	2.79	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	-1.2	0.0	0.5	0.4	0.0	0.0	0.0	0.0
State and Local Government	19.53	19.54	19.59	19.60	19.61	19.63	19.66	19.70
% Ch, Annual Rate	0.0	0.3	1.0	0.2	0.1	0.5	0.7	0.9

Table A2.2 (continued)

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	152.16	152.70	152.73	152.89	153.16	153.40	153.64	153.88
% Ch, Annual Rate	0.8	1.4	0.1	0.4	0.7	0.6	0.6	0.6
Manufacturing	12.87	12.82	12.78	12.72	12.69	12.66	12.65	12.63
% Ch, Annual Rate	-0.3	-1.4	-1.4	-1.8	-0.9	-0.9	-0.4	-0.6
Durable Manufacturing	8.09	8.06	8.03	7.99	7.97	7.95	7.94	7.92
% Ch, Annual Rate	-0.1	-1.4	-1.4	-2.1	-1.1	-1.3	-0.5	-0.7
Wood Products	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.43
% Ch, Annual Rate	1.8	1.5	2.5	0.4	2.6	2.2	2.7	2.5
Primary and Fabricated Metals	1.91	1.90	1.89	1.87	1.86	1.84	1.84	1.83
% Ch, Annual Rate	0.5	-1.8	-2.2	-4.3	-2.7	-3.0	-1.7	-1.2
Computer and Electronic Products	1.06	1.06	1.06	1.07	1.07	1.07	1.07	1.08
% Ch, Annual Rate	-1.3	-0.4	0.7	0.8	1.1	0.9	1.0	1.0
Machinery and Electrical Equipment	1.57	1.57	1.57	1.57	1.57	1.56	1.56	1.56
% Ch, Annual Rate	1.9	0.7	0.9	-1.2	-0.1	-0.9	0.1	0.5
Transportation Equipment	1.72	1.70	1.68	1.66	1.65	1.65	1.64	1.63
% Ch, Annual Rate	-2.3	-4.4	-5.2	-2.6	-2.7	-1.6	-1.0	-3.5
Other Durables	1.42	1.42	1.42	1.41	1.40	1.40	1.40	1.39
% Ch, Annual Rate	-0.1	-1.1	-0.8	-2.1	-0.8	-1.6	-0.9	-0.5
Nondurable Manufacturing	4.78	4.76	4.74	4.72	4.72	4.71	4.71	4.71
% Ch, Annual Rate	-0.5	-1.5	-1.4	-1.5	-0.6	-0.3	-0.2	-0.3
Food Manufacturing	1.68	1.68	1.68	1.68	1.68	1.69	1.69	1.70
% Ch, Annual Rate	1.2	-0.4	-0.3	-0.5	0.8	1.0	1.3	1.0
Paper and Paper Products	0.37	0.37	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-1.8	-2.6	-2.7	-2.6	-1.5	-1.3	-0.9	-0.8
Other Nondurables	2.72	2.71	2.70	2.68	2.67	2.67	2.66	2.65
% Ch, Annual Rate	-1.4	-2.0	-1.9	-1.9	-1.3	-1.1	-1.0	-1.1
Natural Resources and Mining	0.76	0.77	0.78	0.78	0.79	0.79	0.79	0.79
% Ch, Annual Rate	3.9	6.4	4.9	2.6	2.2	0.9	1.1	1.1
Construction	7.65	7.72	7.81	7.90	7.99	8.07	8.14	8.20
% Ch, Annual Rate	3.8	4.2	4.6	4.8	4.6	3.9	3.5	3.4
Trade, Transportation, and Utilities	27.91	27.87	27.82	27.79	27.79	27.77	27.74	27.71
% Ch, Annual Rate	-0.8	-0.7	-0.6	-0.4	0.0	-0.2	-0.5	-0.4
Wholesale Trade	6.10	6.10	6.10	6.10	6.11	6.11	6.11	6.11
% Ch, Annual Rate	-0.4	-0.2	0.1	0.3	0.4	0.0	-0.2	-0.1
Retail Trade	15.82	15.79	15.75	15.72	15.72	15.71	15.69	15.67
% Ch, Annual Rate	-0.8	-0.8	-0.9	-0.6	-0.1	-0.2	-0.6	-0.4
Trans., Warehousing, and Utilities	6.00	5.98	5.97	5.97	5.96	5.95	5.94	5.93
% Ch, Annual Rate	-1.1	-1.0	-0.6	-0.5	-0.3	-0.6	-0.8	-0.8
Information	2.80	2.80	2.82	2.83	2.85	2.86	2.87	2.88
% Ch, Annual Rate	0.2	0.3	1.9	1.9	2.4	1.4	1.8	0.9
Publishing Industries	0.68	0.67	0.67	0.66	0.66	0.66	0.65	0.65
% Ch, Annual Rate	-5.4	-3.3	-2.6	-2.7	-2.2	-2.1	-1.8	-1.6
Other Information	2.12	2.13	2.15	2.17	2.19	2.20	2.22	2.23
% Ch, Annual Rate	2.0	1.5	3.3	3.4	3.8	2.5	2.9	1.7
Financial Activities	8.85	8.86	8.87	8.88	8.87	8.85	8.85	8.86
% Ch, Annual Rate	1.4	0.6	0.4	0.2	-0.3	-0.6	-0.1	0.4
Professional and Business Services	22.29	22.44	22.56	22.70	22.86	22.98	23.10	23.21
% Ch, Annual Rate	3.9	2.8	2.1	2.5	2.8	2.2	2.0	1.9
Education and Health Services	24.03	24.03	24.04	24.06	24.10	24.12	24.13	24.15
% Ch, Annual Rate	-0.5	0.0	0.2	0.3	0.7	0.3	0.2	0.3
Leisure and Hospitality	16.58	16.65	16.76	16.80	16.77	16.82	16.87	16.91
% Ch, Annual Rate	0.6	1.6	2.6	0.9	-0.6	1.1	1.2	1.0
Other Services	5.82	5.79	5.78	5.76	5.75	5.73	5.72	5.70
% Ch, Annual Rate	-1.9	-1.7	-1.2	-1.2	-0.9	-1.0	-1.1	-1.0
Federal Government	2.85	3.15	2.89	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	7.8	49.1	-29.1	-12.2	0.0	0.0	0.0	0.0
State and Local Government	19.75	19.79	19.83	19.87	19.91	19.95	19.99	20.04
% Ch, Annual Rate	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table A2.2 (continued)

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	154.12	154.38	154.66	154.96	155.26	155.54	155.77	155.96
% Ch, Annual Rate	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.5
Manufacturing	12.63	12.62	12.62	12.64	12.65	12.68	12.70	12.72
% Ch, Annual Rate	-0.1	-0.3	0.1	0.5	0.5	0.7	0.9	0.7
Durable Manufacturing	7.92	7.91	7.92	7.93	7.94	7.96	7.98	8.00
% Ch, Annual Rate	0.0	-0.4	0.2	0.6	0.7	0.9	1.2	0.9
Wood Products	0.43	0.44	0.44	0.45	0.45	0.46	0.46	0.47
% Ch, Annual Rate	5.8	4.9	4.9	4.9	4.4	4.7	4.6	4.4
Primary and Fabricated Metals	1.83	1.83	1.84	1.85	1.87	1.88	1.90	1.91
% Ch, Annual Rate	0.2	0.4	1.5	2.4	3.2	3.3	3.2	2.7
Computer and Electronic Products	1.08	1.08	1.09	1.09	1.09	1.09	1.10	1.10
% Ch, Annual Rate	1.3	0.9	1.2	1.2	1.1	0.8	0.5	0.2
Machinery and Electrical Equipment	1.57	1.57	1.58	1.58	1.59	1.59	1.60	1.60
% Ch, Annual Rate	1.1	1.0	1.3	1.5	1.2	1.2	0.9	0.9
Transportation Equipment	1.61	1.59	1.56	1.54	1.52	1.51	1.50	1.49
% Ch, Annual Rate	-4.3	-5.8	-5.5	-5.0	-5.0	-4.3	-1.7	-2.0
Other Durables	1.40	1.40	1.40	1.41	1.42	1.42	1.43	1.43
% Ch, Annual Rate	0.7	0.5	1.3	1.8	1.9	1.8	1.4	1.1
Nondurable Manufacturing	4.71	4.71	4.71	4.71	4.71	4.72	4.72	4.72
% Ch, Annual Rate	-0.1	-0.1	0.1	0.3	0.2	0.3	0.4	0.3
Food Manufacturing	1.70	1.71	1.71	1.72	1.72	1.73	1.74	1.75
% Ch, Annual Rate	1.3	1.2	1.3	1.4	1.5	1.5	1.7	1.6
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-0.5	-0.5	-0.3	-0.1	0.0	0.2	0.3	0.2
Other Nondurables	2.65	2.64	2.64	2.64	2.63	2.63	2.63	2.62
% Ch, Annual Rate	-0.9	-0.8	-0.6	-0.5	-0.5	-0.4	-0.5	-0.6
Natural Resources and Mining	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
% Ch, Annual Rate	0.7	0.5	0.7	0.6	0.5	0.0	0.9	1.4
Construction	8.27	8.33	8.39	8.45	8.51	8.56	8.62	8.67
% Ch, Annual Rate	3.2	3.0	2.9	2.8	2.8	2.7	2.6	2.5
Trade, Transportation, and Utilities	27.67	27.64	27.61	27.58	27.54	27.52	27.49	27.45
% Ch, Annual Rate	-0.6	-0.4	-0.4	-0.4	-0.6	-0.3	-0.5	-0.5
Wholesale Trade	6.11	6.11	6.11	6.11	6.12	6.12	6.11	6.11
% Ch, Annual Rate	0.2	0.0	0.2	0.1	0.3	0.0	-0.1	-0.2
Retail Trade	15.64	15.62	15.59	15.57	15.54	15.52	15.50	15.48
% Ch, Annual Rate	-1.0	-0.5	-0.6	-0.5	-0.9	-0.4	-0.6	-0.6
Trans., Warehousing, and Utilities	5.92	5.91	5.90	5.89	5.89	5.88	5.87	5.86
% Ch, Annual Rate	-0.5	-0.7	-0.6	-0.6	-0.4	-0.6	-0.6	-0.7
Information	2.89	2.90	2.90	2.90	2.91	2.91	2.92	2.92
% Ch, Annual Rate	2.0	1.1	0.5	0.1	0.8	0.6	0.4	0.2
Publishing Industries	0.65	0.65	0.64	0.64	0.64	0.64	0.64	0.64
% Ch, Annual Rate	-1.1	-1.2	-1.2	-1.0	-0.7	-0.5	-0.2	-0.1
Other Information	2.24	2.25	2.26	2.26	2.27	2.27	2.28	2.28
% Ch, Annual Rate	3.0	1.7	1.0	0.4	1.2	0.9	0.6	0.3
Financial Activities	8.87	8.87	8.87	8.87	8.88	8.88	8.87	8.87
% Ch, Annual Rate	0.4	-0.1	0.0	0.1	0.3	-0.1	0.0	-0.1
Professional and Business Services	23.35	23.49	23.65	23.83	24.04	24.20	24.32	24.41
% Ch, Annual Rate	2.4	2.4	2.9	3.0	3.6	2.7	2.0	1.6
Education and Health Services	24.18	24.21	24.24	24.26	24.30	24.31	24.32	24.33
% Ch, Annual Rate	0.6	0.4	0.5	0.4	0.6	0.3	0.2	0.1
Leisure and Hospitality	16.91	16.94	16.96	16.97	16.95	16.97	16.99	17.01
% Ch, Annual Rate	0.0	0.7	0.4	0.4	-0.5	0.5	0.5	0.4
Other Services	5.69	5.68	5.67	5.65	5.64	5.63	5.61	5.60
% Ch, Annual Rate	-0.7	-0.9	-0.9	-1.0	-0.8	-1.0	-1.0	-1.0
Federal Government	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.08	20.12	20.16	20.20	20.24	20.28	20.33	20.37
% Ch, Annual Rate	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table A2.3

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	3,244.6	3,322.4	3,411.2	3,486.3	3,537.9	3,575.0	3,612.2	3,647.7
% Ch	3.1	2.4	2.7	2.2	1.5	1.0	1.0	1.0
Manufacturing	290.0	283.8	286.4	290.1	290.5	290.2	292.2	295.8
% Ch	-0.7	-2.1	0.9	1.3	0.1	-0.1	0.7	1.2
Durable Manufacturing	207.6	200.1	201.1	204.0	204.5	204.2	205.6	208.2
% Ch	-1.7	-3.6	0.5	1.4	0.3	-0.2	0.7	1.3
Wood Products	13.1	12.9	13.2	13.0	12.9	12.9	13.0	13.3
% Ch	-1.6	-1.1	1.7	-1.5	-0.4	-0.4	1.5	1.9
Primary and Fabricated Metals	25.2	25.0	26.1	26.8	26.8	26.0	25.9	26.6
% Ch	-2.0	-0.7	4.3	2.5	0.1	-3.1	-0.3	2.7
Computer and Electronic Products	20.1	19.6	19.8	19.8	19.8	20.3	20.9	21.5
% Ch	0.7	-2.5	1.0	0.5	-0.2	2.5	2.9	2.7
Machinery and Electrical Equipment	20.5	20.6	20.8	21.5	22.5	23.0	23.9	24.9
% Ch	-1.2	0.7	0.9	3.1	4.6	2.5	3.8	4.4
Aerospace	91.0	84.1	83.4	84.9	84.9	84.9	84.9	84.9
% Ch	-3.2	-7.6	-0.8	1.8	0.0	0.0	0.0	0.0
Other Transportation Equip.	10.1	10.2	9.8	9.5	9.0	8.5	8.2	8.0
% Ch	-0.9	0.2	-4.0	-2.4	-5.8	-4.8	-3.4	-2.9
Other Durables	27.6	27.7	28.1	28.5	28.7	28.6	28.8	29.0
% Ch	1.2	0.5	1.5	1.5	0.7	-0.3	0.4	1.0
Nondurable Manufacturing	82.4	83.7	85.3	86.1	86.0	86.0	86.6	87.6
% Ch	2.1	1.5	2.0	1.0	-0.1	0.0	0.8	1.1
Food Manufacturing	37.5	38.0	38.5	38.2	38.2	38.1	38.2	38.5
% Ch	1.9	1.3	1.1	-0.5	-0.2	-0.3	0.4	0.7
Paper and Paper Products	7.8	7.7	7.6	7.3	7.1	6.9	6.8	6.7
% Ch	-3.4	-0.2	-2.2	-3.1	-3.4	-3.0	-1.6	-0.9
Other Nondurables	37.1	37.9	39.3	40.5	40.7	41.0	41.6	42.4
% Ch	3.4	2.1	3.6	3.2	0.4	0.8	1.5	1.8
Natural Resources and Mining	6.3	6.2	6.3	6.5	6.5	6.6	6.6	6.6
% Ch	-0.8	-1.6	2.1	2.7	0.8	0.8	0.5	0.4
Construction	186.6	199.7	212.5	215.8	215.7	214.9	213.8	212.5
% Ch	7.7	7.0	6.4	1.6	-0.1	-0.3	-0.5	-0.6
Trade, Transportation, and Utilities	606.3	626.0	641.3	651.9	655.5	658.2	659.3	659.9
% Ch	3.1	3.2	2.4	1.7	0.6	0.4	0.2	0.1
Wholesale Trade	132.8	134.5	138.6	141.5	142.3	142.6	142.7	142.9
% Ch	0.6	1.3	3.1	2.0	0.6	0.2	0.1	0.1
Retail Trade	369.1	384.7	393.4	399.1	402.2	404.9	406.3	407.2
% Ch	4.0	4.2	2.3	1.5	0.8	0.7	0.3	0.2
Electronic Shopping and Mail-Order	38.2	49.7	54.4	56.9	59.9	62.1	64.0	65.6
% Ch	26.6	30.1	9.4	4.7	5.2	3.8	3.0	2.5
Other Retail Trade	330.9	334.9	339.0	342.2	342.3	342.8	342.3	341.6
% Ch	1.9	1.2	1.2	0.9	0.0	0.2	-0.1	-0.2
Trans., Warehousing, and Utilities	104.4	106.9	109.2	111.3	111.1	110.7	110.3	109.8
% Ch	3.4	2.4	2.2	1.9	-0.2	-0.3	-0.4	-0.4
Information	121.6	126.3	133.2	139.1	140.9	143.7	146.0	147.9
% Ch	6.2	3.9	5.5	4.4	1.3	1.9	1.7	1.2
Software Publishers	58.9	61.3	64.7	66.4	67.0	68.1	69.3	70.7
% Ch	5.3	4.1	5.5	2.6	1.0	1.6	1.8	1.9
Other Publishing Industries	5.9	5.5	5.3	5.2	4.6	4.2	3.8	3.5
% Ch	-4.0	-7.0	-3.6	-1.5	-12.4	-9.4	-8.3	-7.6
Other Information	56.7	59.5	63.2	67.5	69.3	71.4	72.9	73.7
% Ch	8.4	4.9	6.3	6.7	2.8	3.0	2.1	1.0
Financial Activities	150.3	153.1	157.3	160.6	162.4	160.9	159.9	158.8
% Ch	1.8	1.9	2.8	2.1	1.1	-0.9	-0.6	-0.7
Professional and Business Services	403.6	414.1	427.6	444.8	463.0	476.6	489.7	504.4
% Ch	3.5	2.6	3.3	4.0	4.1	2.9	2.7	3.0
Education and Health Services	463.5	476.0	491.3	502.6	508.4	514.6	520.4	525.7
% Ch	3.4	2.7	3.2	2.3	1.2	1.2	1.1	1.0
Leisure and Hospitality	323.3	331.4	341.7	349.3	355.1	359.8	363.4	365.3
% Ch	4.3	2.5	3.1	2.2	1.7	1.3	1.0	0.5
Other Services	117.6	119.9	123.3	126.1	127.9	129.6	131.1	132.3
% Ch	2.3	2.0	2.8	2.3	1.5	1.3	1.1	0.9
Federal Government	74.5	74.9	74.7	74.8	77.6	75.6	75.9	76.2
% Ch	1.9	0.4	-0.2	0.1	3.8	-2.6	0.4	0.4
State and Local Government	501.0	511.0	515.6	524.8	534.3	544.2	553.8	562.3
% Ch	2.5	2.0	0.9	1.8	1.8	1.9	1.7	1.5

Table A2.4

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,382.5	3,396.6	3,420.0	3,445.6	3,462.4	3,479.9	3,494.6	3,508.2
% Ch, Annual Rate	3.8	1.7	2.8	3.0	2.0	2.0	1.7	1.6
Manufacturing	283.9	285.1	287.7	289.0	289.6	290.0	290.0	290.8
% Ch, Annual Rate	2.5	1.7	3.7	1.9	0.8	0.6	0.0	1.1
Durable Manufacturing	198.8	200.0	202.4	203.3	203.5	203.9	204.0	204.6
% Ch, Annual Rate	1.7	2.6	4.8	1.8	0.3	1.0	0.1	1.2
Wood Products	13.2	13.1	13.2	13.2	13.1	12.9	12.9	13.0
% Ch, Annual Rate	3.8	-1.0	1.5	-0.6	-2.9	-3.6	-1.3	1.9
Primary and Fabricated Metals	25.6	25.9	26.3	26.6	26.5	26.8	26.8	27.0
% Ch, Annual Rate	8.0	5.4	6.2	3.7	-1.5	4.2	1.2	3.2
Computer and Electronic Products	19.7	19.7	19.8	19.7	19.9	19.9	19.8	19.8
% Ch, Annual Rate	2.2	0.1	1.0	-1.5	3.8	0.0	-1.9	-1.1
Machinery and Electrical Equipment	20.6	20.7	20.8	21.1	21.2	21.4	21.5	21.9
% Ch, Annual Rate	-4.2	2.6	1.6	5.3	1.7	3.2	2.2	7.6
Aerospace	81.9	82.6	84.1	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	2.2	3.4	7.5	3.6	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.8	9.8	9.9	9.5	9.6	9.6	9.5	9.4
% Ch, Annual Rate	-6.5	0.3	6.4	-16.1	2.7	0.9	-3.3	-5.7
Other Durables	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7
% Ch, Annual Rate	1.3	1.7	1.5	2.4	0.5	2.1	0.8	1.7
Nondurable Manufacturing	85.1	85.0	85.3	85.8	86.2	86.1	86.0	86.2
% Ch, Annual Rate	4.4	-0.2	1.3	2.1	1.9	-0.4	-0.2	0.8
Food Manufacturing	38.9	38.6	38.3	38.0	38.2	38.2	38.2	38.3
% Ch, Annual Rate	8.1	-3.4	-2.9	-3.7	2.9	0.0	0.0	0.9
Paper and Paper Products	7.6	7.6	7.5	7.5	7.4	7.4	7.3	7.3
% Ch, Annual Rate	-2.1	0.6	-4.7	-2.7	-2.8	-3.9	-3.9	-1.9
Other Nondurables	38.5	38.8	39.5	40.3	40.5	40.5	40.5	40.6
% Ch, Annual Rate	2.1	2.9	6.8	8.9	1.8	0.0	0.4	1.1
Natural Resources and Mining	6.3	6.3	6.3	6.4	6.4	6.5	6.5	6.5
% Ch, Annual Rate	4.4	0.7	2.2	4.1	4.4	1.5	2.2	-1.2
Construction	209.0	211.6	213.3	215.9	215.8	215.8	215.6	215.9
% Ch, Annual Rate	9.2	5.1	3.3	4.8	-0.1	0.1	-0.5	0.6
Trade, Transportation, and Utilities	638.8	638.4	642.3	645.5	649.0	651.2	653.0	654.3
% Ch, Annual Rate	4.6	-0.3	2.5	2.0	2.2	1.4	1.1	0.8
Wholesale Trade	137.5	138.1	139.0	139.9	140.6	141.2	141.8	142.2
% Ch, Annual Rate	6.4	1.9	2.7	2.5	2.0	1.9	1.7	1.0
Retail Trade	393.2	391.9	393.3	395.1	397.4	398.8	399.8	400.6
% Ch, Annual Rate	4.4	-1.3	1.4	1.8	2.4	1.4	1.0	0.9
Electronic Shopping and Mail-Order	54.5	54.5	53.9	54.6	55.6	56.5	57.4	58.2
% Ch	8.7	0.4	-4.3	4.8	7.7	6.9	6.2	5.6
Other Retail Trade	338.7	337.4	339.4	340.5	341.8	342.3	342.4	342.5
% Ch	3.7	-1.6	2.4	1.3	1.5	0.5	0.2	0.1
Trans., Warehousing, and Utilities	108.1	108.3	110.0	110.6	111.0	111.2	111.4	111.4
% Ch, Annual Rate	3.4	0.8	6.2	2.3	1.6	0.7	0.7	0.2
Information	129.5	132.0	134.8	136.7	137.9	139.5	139.6	139.4
% Ch, Annual Rate	4.6	7.9	8.8	5.7	3.6	4.7	0.3	-0.6
Software Publishers	63.3	64.4	65.3	65.8	66.1	66.4	66.5	66.5
% Ch, Annual Rate	6.3	7.6	5.9	2.6	2.3	1.4	0.7	0.3
Other Publishing Industries	5.2	5.2	5.3	5.5	5.5	5.4	5.2	4.9
% Ch, Annual Rate	-5.9	-5.0	12.3	15.9	-3.6	-8.7	-13.3	-15.8
Other Information	61.0	62.4	64.1	65.4	66.3	67.7	67.9	67.9
% Ch, Annual Rate	3.8	9.4	11.6	8.0	5.5	9.3	1.1	-0.2
Financial Activities	156.0	156.9	157.7	158.5	159.0	160.1	161.3	162.1
% Ch, Annual Rate	4.3	2.3	2.0	2.0	1.2	2.9	3.1	2.0
Professional and Business Services	422.4	424.7	430.3	433.1	436.4	442.0	447.8	452.9
% Ch, Annual Rate	4.9	2.2	5.4	2.6	3.0	5.2	5.4	4.6
Education and Health Services	487.5	490.3	491.8	495.8	498.8	502.2	504.0	505.4
% Ch, Annual Rate	3.6	2.4	1.2	3.3	2.5	2.7	1.5	1.1
Leisure and Hospitality	338.5	340.4	342.3	345.7	348.0	348.5	349.7	351.0
% Ch, Annual Rate	5.3	2.2	2.3	4.1	2.7	0.5	1.4	1.5
Other Services	122.1	122.6	123.8	124.5	125.3	125.8	126.3	126.8
% Ch, Annual Rate	2.5	1.7	4.1	2.3	2.4	1.7	1.8	1.5
Federal Government	74.7	74.7	75.0	74.5	74.6	74.7	74.8	74.9
% Ch, Annual Rate	-0.7	0.0	1.5	-2.7	0.7	0.6	0.6	0.6
State and Local Government	513.8	513.7	514.7	520.0	521.7	523.6	525.8	528.2
% Ch, Annual Rate	0.5	-0.1	0.8	4.2	1.3	1.5	1.7	1.8

Table A2.4 (continued)

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,519.4	3,538.0	3,542.9	3,551.4	3,561.1	3,570.4	3,579.6	3,588.9
% Ch, Annual Rate	1.3	2.1	0.6	1.0	1.1	1.0	1.0	1.0
Manufacturing	290.9	290.7	290.5	290.0	290.0	290.0	290.2	290.5
% Ch, Annual Rate	0.2	-0.4	-0.2	-0.7	0.0	0.0	0.3	0.4
Durable Manufacturing	204.7	204.6	204.6	204.3	204.2	204.1	204.1	204.3
% Ch, Annual Rate	0.2	-0.2	0.0	-0.6	-0.2	-0.3	0.2	0.4
Wood Products	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
% Ch, Annual Rate	-0.5	-0.8	0.0	-1.8	0.1	-0.3	0.1	0.0
Primary and Fabricated Metals	27.1	26.9	26.8	26.4	26.2	26.0	25.9	25.8
% Ch, Annual Rate	0.3	-2.0	-2.5	-4.7	-3.1	-3.4	-1.9	-1.3
Computer and Electronic Products	19.7	19.7	19.8	20.0	20.1	20.2	20.4	20.5
% Ch, Annual Rate	-0.9	0.4	2.2	2.3	3.0	2.6	2.7	2.8
Machinery and Electrical Equipment	22.2	22.4	22.6	22.7	22.8	22.9	23.1	23.2
% Ch, Annual Rate	5.6	3.8	4.1	1.1	2.7	1.5	2.8	3.4
Aerospace	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.2	9.0	8.8	8.8	8.6	8.6	8.5	8.4
% Ch, Annual Rate	-7.3	-7.4	-7.5	-3.0	-6.8	-2.8	-3.3	-3.6
Other Durables	28.7	28.7	28.8	28.7	28.7	28.6	28.6	28.6
% Ch, Annual Rate	0.6	0.0	0.1	-0.6	-0.2	-0.7	-0.3	0.2
Nondurable Manufacturing	86.2	86.1	85.9	85.7	85.8	85.9	86.1	86.2
% Ch, Annual Rate	0.2	-0.8	-0.7	-0.8	0.3	0.5	0.7	0.6
Food Manufacturing	38.4	38.2	38.1	38.0	38.0	38.0	38.1	38.1
% Ch, Annual Rate	0.5	-1.2	-1.1	-1.3	0.0	0.3	0.5	0.2
Paper and Paper Products	7.2	7.1	7.1	7.0	6.9	6.9	6.9	6.8
% Ch, Annual Rate	-3.0	-4.0	-4.1	-4.0	-2.7	-2.5	-2.0	-1.8
Other Nondurables	40.7	40.7	40.7	40.7	40.9	41.0	41.1	41.2
% Ch, Annual Rate	0.5	0.1	0.2	0.3	1.0	1.2	1.3	1.3
Natural Resources and Mining	6.5	6.5	6.5	6.6	6.6	6.6	6.6	6.6
% Ch, Annual Rate	0.2	2.0	1.2	0.9	0.6	0.5	0.3	0.6
Construction	215.4	215.7	215.8	215.7	215.3	215.0	214.7	214.6
% Ch, Annual Rate	-1.0	0.6	0.3	-0.2	-0.8	-0.6	-0.5	-0.2
Trade, Transportation, and Utilities	654.7	655.3	655.7	656.4	657.4	658.1	658.5	658.9
% Ch, Annual Rate	0.3	0.4	0.3	0.4	0.6	0.5	0.2	0.3
Wholesale Trade	142.1	142.2	142.4	142.5	142.6	142.6	142.6	142.6
% Ch, Annual Rate	-0.1	0.3	0.3	0.3	0.3	0.0	0.0	0.0
Retail Trade	401.3	402.0	402.4	403.0	403.9	404.8	405.2	405.8
% Ch, Annual Rate	0.7	0.6	0.4	0.6	0.9	0.8	0.5	0.5
Electronic Shopping and Mail-Order	58.9	59.6	60.2	60.8	61.4	61.9	62.4	62.9
% Ch	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Other Retail Trade	342.4	342.4	342.1	342.2	342.6	342.9	342.8	342.9
% Ch	-0.1	-0.1	-0.3	0.0	0.4	0.4	0.0	0.1
Trans., Warehousing, and Utilities	111.2	111.1	111.0	110.9	110.9	110.8	110.7	110.5
% Ch, Annual Rate	-0.8	-0.5	-0.4	-0.2	-0.1	-0.4	-0.5	-0.5
Information	140.0	140.6	141.3	141.9	142.8	143.3	144.0	144.5
% Ch, Annual Rate	1.7	1.8	1.9	1.9	2.3	1.7	2.0	1.4
Software Publishers	66.7	66.9	67.1	67.4	67.7	67.9	68.2	68.5
% Ch, Annual Rate	0.8	1.3	1.5	1.5	1.6	1.6	1.7	1.8
Other Publishing Industries	4.8	4.6	4.5	4.4	4.3	4.2	4.1	4.0
% Ch, Annual Rate	-13.7	-10.5	-9.5	-9.9	-9.2	-9.2	-8.7	-8.6
Other Information	68.5	69.1	69.6	70.1	70.8	71.2	71.7	72.0
% Ch, Annual Rate	3.7	3.2	3.0	3.2	3.8	2.4	2.9	1.6
Financial Activities	162.5	162.5	162.4	162.1	161.6	161.0	160.7	160.5
% Ch, Annual Rate	0.8	0.1	-0.3	-0.6	-1.3	-1.6	-0.8	-0.3
Professional and Business Services	457.7	461.5	464.7	468.2	472.0	475.2	478.1	481.0
% Ch, Annual Rate	4.3	3.4	2.8	3.1	3.3	2.7	2.5	2.4
Education and Health Services	506.3	507.7	509.2	510.7	512.5	514.0	515.3	516.6
% Ch, Annual Rate	0.7	1.1	1.2	1.2	1.5	1.1	1.0	1.1
Leisure and Hospitality	352.2	354.0	356.4	357.7	357.9	359.2	360.6	361.7
% Ch, Annual Rate	1.4	2.1	2.7	1.5	0.2	1.5	1.5	1.3
Other Services	127.3	127.7	128.2	128.6	129.0	129.5	129.8	130.2
% Ch, Annual Rate	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.2
Federal Government	75.5	82.8	76.7	75.3	75.4	75.5	75.6	75.7
% Ch, Annual Rate	3.3	44.4	-26.3	-7.0	0.5	0.5	0.5	0.4
State and Local Government	530.6	533.0	535.5	538.1	540.6	543.0	545.5	547.9
% Ch, Annual Rate	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8

Table A2.4 (continued)

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	3,598.2	3,607.5	3,616.9	3,626.2	3,635.7	3,644.5	3,652.1	3,658.6
% Ch, Annual Rate	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7
Manufacturing	291.2	291.8	292.6	293.5	294.4	295.4	296.3	297.2
% Ch, Annual Rate	0.9	0.8	1.1	1.3	1.3	1.3	1.3	1.1
Durable Manufacturing	204.8	205.2	205.8	206.5	207.2	207.9	208.6	209.2
% Ch, Annual Rate	0.9	0.8	1.2	1.3	1.4	1.4	1.3	1.1
Wood Products	13.0	13.0	13.1	13.2	13.2	13.3	13.3	13.4
% Ch, Annual Rate	2.8	2.0	2.1	2.1	1.7	1.9	1.8	1.6
Primary and Fabricated Metals	25.8	25.8	25.9	26.1	26.3	26.5	26.7	26.9
% Ch, Annual Rate	0.1	0.4	1.5	2.5	3.3	3.4	3.3	2.8
Computer and Electronic Products	20.7	20.8	21.0	21.1	21.3	21.4	21.5	21.6
% Ch, Annual Rate	3.3	2.6	3.2	3.2	3.0	2.5	1.9	1.6
Machinery and Electrical Equipment	23.5	23.7	24.0	24.3	24.6	24.8	25.1	25.3
% Ch, Annual Rate	4.3	4.2	4.6	4.9	4.4	4.4	4.1	4.1
Aerospace	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.3	8.3	8.2	8.1	8.1	8.0	8.0	7.9
% Ch, Annual Rate	-3.7	-3.4	-3.1	-2.9	-2.9	-2.8	-2.5	-3.0
Other Durables	28.7	28.7	28.8	28.8	28.9	29.0	29.1	29.2
% Ch, Annual Rate	0.7	0.5	0.8	0.9	1.0	1.1	1.2	1.1
Nondurable Manufacturing	86.3	86.5	86.7	87.0	87.2	87.5	87.8	88.0
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.1	1.2	1.3	1.1
Food Manufacturing	38.2	38.2	38.3	38.3	38.4	38.5	38.6	38.6
% Ch, Annual Rate	0.5	0.4	0.5	0.7	0.7	0.8	0.9	0.9
Paper and Paper Products	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7
% Ch, Annual Rate	-1.4	-1.4	-1.2	-1.0	-0.9	-0.6	-0.5	-0.7
Other Nondurables	41.4	41.5	41.7	41.9	42.1	42.3	42.5	42.7
% Ch, Annual Rate	1.4	1.5	1.8	1.9	1.8	1.9	1.9	1.7
Natural Resources and Mining	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
% Ch, Annual Rate	0.9	0.4	0.2	0.1	0.3	0.5	0.5	0.8
Construction	214.3	214.0	213.7	213.4	213.0	212.7	212.3	212.0
% Ch, Annual Rate	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7
Trade, Transportation, and Utilities	658.9	659.2	659.4	659.7	659.7	659.9	660.0	659.9
% Ch, Annual Rate	0.0	0.2	0.1	0.2	0.0	0.1	0.0	-0.1
Wholesale Trade	142.7	142.7	142.8	142.8	142.9	142.9	142.9	142.9
% Ch, Annual Rate	0.2	0.1	0.2	0.1	0.3	0.0	0.0	-0.1
Retail Trade	405.8	406.2	406.4	406.8	406.8	407.1	407.3	407.4
% Ch, Annual Rate	0.0	0.4	0.2	0.3	0.0	0.4	0.2	0.1
Electronic Shopping and Mail-Order	63.3	63.8	64.2	64.6	65.0	65.4	65.8	66.2
% Ch	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Other Retail Trade	342.5	342.4	342.3	342.2	341.7	341.7	341.5	341.2
% Ch	-0.5	-0.1	-0.2	-0.1	-0.5	0.0	-0.2	-0.3
Trans., Warehousing, and Utilities	110.4	110.3	110.2	110.1	110.0	109.9	109.7	109.6
% Ch, Annual Rate	-0.3	-0.4	-0.4	-0.4	-0.3	-0.5	-0.5	-0.5
Information	145.3	145.9	146.3	146.6	147.2	147.7	148.1	148.5
% Ch, Annual Rate	2.2	1.6	1.2	0.9	1.5	1.3	1.2	1.1
Software Publishers	68.9	69.2	69.5	69.8	70.1	70.5	70.8	71.2
% Ch, Annual Rate	1.9	1.8	1.8	1.9	1.9	2.0	2.0	2.1
Other Publishing Industries	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4
% Ch, Annual Rate	-7.7	-8.2	-8.2	-8.1	-7.5	-7.4	-6.8	-6.6
Other Information	72.5	72.9	73.1	73.1	73.4	73.6	73.8	73.9
% Ch, Annual Rate	3.2	1.8	1.0	0.4	1.5	1.2	0.8	0.5
Financial Activities	160.4	160.1	159.8	159.5	159.3	158.9	158.6	158.3
% Ch, Annual Rate	-0.3	-0.8	-0.8	-0.7	-0.5	-0.9	-0.8	-0.9
Professional and Business Services	484.4	487.7	491.4	495.3	499.7	503.2	506.1	508.5
% Ch, Annual Rate	2.8	2.8	3.1	3.2	3.6	2.9	2.3	1.9
Education and Health Services	518.3	519.7	521.2	522.6	524.1	525.3	526.3	527.2
% Ch, Annual Rate	1.3	1.1	1.1	1.0	1.2	0.9	0.8	0.7
Leisure and Hospitality	362.2	363.1	363.8	364.4	364.4	365.0	365.6	366.1
% Ch, Annual Rate	0.5	1.0	0.8	0.7	0.0	0.7	0.7	0.6
Other Services	130.6	130.9	131.3	131.6	131.9	132.2	132.5	132.8
% Ch, Annual Rate	1.2	1.1	1.0	1.0	1.0	0.9	0.8	0.8
Federal Government	75.8	75.8	75.9	76.0	76.1	76.1	76.2	76.3
% Ch, Annual Rate	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3
State and Local Government	550.3	552.7	554.9	557.1	559.3	561.4	563.4	565.3
% Ch, Annual Rate	1.8	1.7	1.6	1.6	1.6	1.5	1.4	1.4

Table A3.1

**U.S. Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	16,125.1	16,830.9	17,584.6	18,346.9	19,167.3	19,994.9	20,851.3	21,783.6
% Ch	2.6	4.4	4.5	4.3	4.5	4.3	4.3	4.5
Total Wage and Salary Disbursements	8,080.7	8,453.8	8,854.8	9,246.2	9,636.7	10,046.3	10,506.0	11,013.1
% Ch	2.9	4.6	4.7	4.4	4.2	4.3	4.6	4.8
Nonwage Personal Income	8,044.5	8,377.1	8,729.9	9,100.7	9,530.6	9,948.6	10,345.3	10,770.5
% Ch	2.3	4.1	4.2	4.2	4.7	4.4	4.0	4.1
Supplements to Wages and Salaries	1,875.6	1,953.4	2,022.4	2,094.5	2,186.8	2,279.8	2,377.2	2,475.0
% Ch	1.8	4.1	3.5	3.6	4.4	4.3	4.3	4.1
Proprietor's Income	1,419.3	1,500.9	1,571.7	1,624.9	1,651.0	1,670.3	1,672.3	1,687.4
% Ch	-0.2	5.8	4.7	3.4	1.6	1.2	0.1	0.9
Farm	37.5	38.9	32.3	35.9	64.2	81.7	73.3	68.9
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,381.8	1,462.0	1,539.5	1,589.0	1,586.8	1,588.6	1,599.0	1,618.4
% Ch	1.2	5.8	5.3	3.2	-0.1	0.1	0.7	1.2
Less: Contribution For Govt. Soc. Ins.	1,239.9	1,298.6	1,364.2	1,418.5	1,471.9	1,530.8	1,598.3	1,673.4
% Ch	2.9	4.7	5.1	4.0	3.8	4.0	4.4	4.7
Dividends/Int./Rent	3,211.4	3,361.8	3,518.5	3,678.4	3,888.2	4,088.3	4,286.3	4,490.1
% Ch	2.8	4.7	4.7	4.5	5.7	5.1	4.8	4.8
Transfer Payments	2,778.1	2,859.7	2,981.4	3,121.4	3,276.5	3,441.0	3,607.6	3,791.4
% Ch	3.5	2.9	4.3	4.7	5.0	5.0	4.8	5.1

Table A3.2

**U.S. Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	17,319.2	17,499.8	17,680.2	17,839.4	18,030.7	18,246.1	18,454.0	18,656.7
% Ch, Annual Rate	5.2	4.2	4.2	3.6	4.4	4.9	4.6	4.5
Total Wage and Salary Disbursements	8,710.6	8,806.2	8,905.0	8,997.3	9,094.4	9,197.2	9,297.7	9,395.4
% Ch, Annual Rate	5.8	4.5	4.6	4.2	4.4	4.6	4.4	4.3
Nonwage Personal Income	8,608.5	8,693.7	8,775.2	8,842.1	8,936.3	9,048.8	9,156.3	9,261.2
% Ch, Annual Rate	4.5	4.0	3.8	3.1	4.3	5.1	4.8	4.7
Supplements to Wages and Salaries	1,999.4	2,014.5	2,029.8	2,045.7	2,060.9	2,083.2	2,105.7	2,128.2
% Ch, Annual Rate	3.9	3.0	3.1	3.2	3.0	4.4	4.4	4.3
Proprietor's Income	1,549.9	1,568.5	1,580.5	1,588.1	1,607.8	1,620.7	1,631.8	1,639.4
% Ch, Annual Rate	6.4	4.9	3.1	2.0	5.0	3.3	2.8	1.9
Farm	35.2	37.0	29.0	27.8	29.9	32.7	37.4	43.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,514.7	1,531.5	1,551.5	1,560.3	1,577.9	1,588.0	1,594.4	1,595.8
% Ch, Annual Rate	6.6	4.5	5.3	2.3	4.6	2.6	1.6	0.3
Less: Contribution For Govt. Soc. Ins.	1,343.6	1,357.1	1,370.9	1,385.3	1,400.8	1,412.7	1,424.5	1,436.1
% Ch, Annual Rate	8.2	4.1	4.1	4.3	4.5	3.4	3.4	3.3
Dividends/Int./Rent	3,468.8	3,502.0	3,537.7	3,565.6	3,593.3	3,652.7	3,706.9	3,760.7
% Ch, Annual Rate	3.6	3.9	4.1	3.2	3.1	6.8	6.1	5.9
Transfer Payments	2,933.9	2,965.8	2,998.1	3,027.9	3,075.1	3,104.9	3,136.4	3,169.0
% Ch, Annual Rate	6.6	4.4	4.4	4.0	6.4	3.9	4.1	4.2

Table A3.2 (continued)

**U.S. Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,866.9	19,073.1	19,266.8	19,462.5	19,688.1	19,892.4	20,095.9	20,303.4
% Ch, Annual Rate	4.6	4.4	4.1	4.1	4.7	4.2	4.2	4.2
Total Wage and Salary Disbursements	9,490.8	9,595.1	9,682.5	9,778.3	9,883.5	9,990.3	10,099.5	10,211.9
% Ch, Annual Rate	4.1	4.5	3.7	4.0	4.4	4.4	4.4	4.5
Nonwage Personal Income	9,376.1	9,478.0	9,584.2	9,684.2	9,804.6	9,902.0	9,996.3	10,091.5
% Ch, Annual Rate	5.1	4.4	4.6	4.2	5.1	4.0	3.9	3.9
Supplements to Wages and Salaries	2,153.3	2,177.3	2,197.5	2,219.1	2,245.1	2,268.1	2,291.3	2,314.8
% Ch, Annual Rate	4.8	4.5	3.8	4.0	4.8	4.2	4.1	4.2
Proprietor's Income	1,641.8	1,645.4	1,655.7	1,661.1	1,667.5	1,670.4	1,671.2	1,672.3
% Ch, Annual Rate	0.6	0.9	2.5	1.3	1.6	0.7	0.2	0.3
Farm	51.4	59.8	69.8	75.8	80.9	83.1	82.5	80.3
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,590.4	1,585.6	1,585.9	1,585.3	1,586.6	1,587.3	1,588.6	1,591.9
% Ch, Annual Rate	-1.4	-1.2	0.1	-0.2	0.3	0.2	0.3	0.8
Less: Contribution For Govt. Soc. Ins.	1,453.8	1,466.6	1,477.4	1,489.5	1,509.7	1,523.5	1,537.7	1,552.4
% Ch, Annual Rate	5.0	3.6	3.0	3.3	5.5	3.7	3.8	3.9
Dividends/Int./Rent	3,811.7	3,863.0	3,914.7	3,963.4	4,014.2	4,064.4	4,112.8	4,161.8
% Ch, Annual Rate	5.5	5.5	5.5	5.1	5.2	5.1	4.8	4.9
Transfer Payments	3,223.2	3,258.9	3,293.7	3,330.2	3,387.5	3,422.7	3,458.8	3,495.0
% Ch, Annual Rate	7.0	4.5	4.3	4.5	7.1	4.2	4.3	4.3

Table A3.2 (continued)

**U.S. Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	20,530.0	20,739.0	20,957.5	21,178.6	21,435.3	21,670.2	21,901.5	22,127.5
% Ch, Annual Rate	4.5	4.1	4.3	4.3	4.9	4.5	4.3	4.2
Total Wage and Salary Disbursements	10,326.5	10,443.0	10,564.8	10,689.7	10,819.4	10,949.6	11,078.5	11,205.0
% Ch, Annual Rate	4.6	4.6	4.7	4.8	4.9	4.9	4.8	4.6
Nonwage Personal Income	10,203.5	10,296.0	10,392.7	10,488.8	10,615.9	10,720.6	10,823.0	10,922.5
% Ch, Annual Rate	4.5	3.7	3.8	3.8	4.9	4.0	3.9	3.7
Supplements to Wages and Salaries	2,341.8	2,365.3	2,389.1	2,412.8	2,439.8	2,463.3	2,486.8	2,510.2
% Ch, Annual Rate	4.7	4.1	4.1	4.0	4.6	3.9	3.9	3.8
Proprietor's Income	1,670.0	1,670.4	1,673.3	1,675.7	1,679.0	1,683.8	1,689.9	1,696.7
% Ch, Annual Rate	-0.5	0.1	0.7	0.6	0.8	1.2	1.5	1.6
Farm	77.4	74.4	71.8	69.9	68.7	68.4	68.8	69.9
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,592.6	1,596.0	1,601.5	1,605.8	1,610.3	1,615.5	1,621.1	1,626.9
% Ch, Annual Rate	0.2	0.9	1.4	1.1	1.1	1.3	1.4	1.4
Less: Contribution For Govt. Soc. Ins.	1,574.4	1,589.8	1,606.0	1,622.7	1,647.4	1,664.9	1,682.2	1,699.1
% Ch, Annual Rate	5.8	4.0	4.1	4.2	6.2	4.3	4.2	4.1
Dividends/Int./Rent	4,210.3	4,259.8	4,311.7	4,363.5	4,416.3	4,468.1	4,516.2	4,559.9
% Ch, Annual Rate	4.7	4.8	5.0	4.9	4.9	4.8	4.4	3.9
Transfer Payments	3,555.9	3,590.3	3,624.7	3,659.6	3,728.2	3,770.2	3,812.3	3,854.8
% Ch, Annual Rate	7.1	3.9	3.9	3.9	7.7	4.6	4.5	4.5

Table A3.3  
**Washington Personal Income by Component (Billions of Dollars)**  
Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	404.232	428.765	458.160	479.863	503.843	527.783	552.767	579.828
% Ch	5.1	6.1	6.9	4.7	5.0	4.8	4.7	4.9
Total Wage and Salary Disbursements	203.300	218.077	238.016	249.453	261.123	272.928	286.116	300.711
% Ch	6.1	7.3	9.1	4.8	4.7	4.5	4.8	5.1
Manufacturing	21.729	21.691	22.707	23.282	24.047	24.853	25.947	27.264
% Ch	-0.3	-0.2	4.7	2.5	3.3	3.4	4.4	5.1
Durable Manufacturing	17.316	17.080	17.858	18.255	18.869	19.497	20.345	21.371
% Ch	-1.6	-1.4	4.6	2.2	3.4	3.3	4.4	5.0
Nondurable Manufacturing	4.413	4.611	4.849	5.027	5.177	5.356	5.602	5.892
% Ch	4.8	4.5	5.1	3.7	3.0	3.5	4.6	5.2
Nonmanufacturing	174.575	189.496	208.107	218.674	229.283	239.983	251.758	264.700
% Ch	7.1	8.5	9.8	5.1	4.9	4.7	4.9	5.1
Other Private Wages	1.193	1.232	1.399	1.477	1.535	1.592	1.655	1.723
% Ch	4.1	3.3	13.5	5.6	3.9	3.7	4.0	4.1
Farm Wages	1.700	1.467	1.514	1.615	1.716	1.818	1.931	2.053
% Ch	11.5	-13.7	3.2	6.7	6.3	5.9	6.2	6.3
Military Wages	4.103	4.190	4.290	4.406	4.543	4.683	4.825	4.971
% Ch	0.1	2.1	2.4	2.7	3.1	3.1	3.0	3.0
Nonwage Personal Income	200.932	210.688	220.144	230.410	242.720	254.855	266.650	279.117
% Ch	4.1	4.9	4.5	4.7	5.3	5.0	4.6	4.7
Supplements to Wages and Salaries	46.393	48.687	51.300	53.287	55.780	58.256	60.882	63.574
% Ch	5.6	4.9	5.4	3.9	4.7	4.4	4.5	4.4
Proprietor's Income	32.419	35.590	37.234	37.964	38.233	38.522	38.574	38.887
% Ch	-0.2	9.8	4.6	2.0	0.7	0.8	0.1	0.8
Farm	2.016	1.922	1.638	1.189	1.557	1.848	1.706	1.632
% Ch	...	...	...	...	...	...	...	...
Nonfarm	30.403	33.668	35.596	36.774	36.676	36.674	36.868	37.255
% Ch	3.1	10.7	5.7	3.3	-0.3	0.0	0.5	1.1
Less: Contribution For Govt. Soc. Ins.	33.509	36.007	38.830	40.394	41.969	43.635	45.545	47.690
% Ch	4.4	7.5	7.8	4.0	3.9	4.0	4.4	4.7
Plus: Residence Adjustment	4.190	4.301	4.463	4.702	4.930	5.170	5.439	5.736
% Ch	7.8	2.7	3.8	5.3	4.9	4.9	5.2	5.5
Dividends/Int./Rent	91.551	96.125	101.051	106.460	113.398	120.014	126.531	133.195
% Ch	3.8	5.0	5.1	5.4	6.5	5.8	5.4	5.3
Transfer Payments	59.888	61.992	64.925	68.392	72.348	76.527	80.770	85.415
% Ch	5.8	3.5	4.7	5.3	5.8	5.8	5.5	5.8
State U.I. Benefits	0.982	0.975	0.959	0.780	0.964	1.168	1.288	1.367
% Ch	1.2	-0.7	-1.7	-18.7	23.6	21.2	10.3	6.2
Other Transfers	58.906	61.016	63.967	67.612	71.384	75.359	79.482	84.048
% Ch	5.9	3.6	4.8	5.7	5.6	5.6	5.5	5.7

Table A3.4

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	451.436	454.689	460.651	465.865	470.852	476.980	482.861	488.761
% Ch, Annual Rate	12.2	2.9	5.3	4.6	4.4	5.3	5.0	5.0
Total Wage and Salary Disbursements	234.527	235.753	239.315	242.470	245.094	248.073	250.891	253.755
% Ch, Annual Rate	21.2	2.1	6.2	5.4	4.4	5.0	4.6	4.6
Manufacturing	23.408	22.098	22.530	22.792	22.983	23.186	23.363	23.596
% Ch, Annual Rate	32.1	-20.6	8.1	4.7	3.4	3.6	3.1	4.0
Durable Manufacturing	18.597	17.287	17.671	17.877	18.012	18.181	18.323	18.506
% Ch, Annual Rate	37.6	-25.3	9.2	4.8	3.0	3.8	3.2	4.1
Nondurable Manufacturing	4.810	4.811	4.859	4.915	4.971	5.004	5.041	5.090
% Ch, Annual Rate	13.5	0.0	4.1	4.7	4.7	2.7	2.9	3.9
Nonmanufacturing	204.045	206.469	209.535	212.377	214.722	217.423	219.989	222.561
% Ch, Annual Rate	20.7	4.8	6.1	5.5	4.5	5.1	4.8	4.8
Other Private Wages	1.326	1.408	1.423	1.439	1.453	1.470	1.485	1.500
% Ch, Annual Rate	13.1	27.3	4.1	4.7	4.0	4.7	4.2	4.0
Farm Wages	1.487	1.497	1.522	1.549	1.574	1.602	1.628	1.654
% Ch, Annual Rate	3.4	3.0	6.6	7.5	6.6	7.4	6.7	6.4
Military Wages	4.261	4.281	4.305	4.313	4.361	4.392	4.425	4.445
% Ch, Annual Rate	3.4	1.8	2.3	0.7	4.6	2.8	3.1	1.8
Nonwage Personal Income	216.909	218.936	221.336	223.395	225.757	228.907	231.970	235.006
% Ch, Annual Rate	3.3	3.8	4.5	3.8	4.3	5.7	5.5	5.3
Supplements to Wages and Salaries	50.955	50.861	51.400	51.983	52.405	52.997	53.576	54.171
% Ch, Annual Rate	11.7	-0.7	4.3	4.6	3.3	4.6	4.4	4.5
Proprietor's Income	36.592	37.186	37.491	37.668	37.777	37.901	38.042	38.135
% Ch, Annual Rate	4.0	6.7	3.3	1.9	1.2	1.3	1.5	1.0
Farm	1.621	1.835	1.601	1.495	1.232	1.141	1.155	1.229
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	34.970	35.350	35.890	36.173	36.545	36.760	36.887	36.906
% Ch, Annual Rate	6.4	4.4	6.2	3.2	4.2	2.4	1.4	0.2
Less: Contribution For Govt. Soc. Ins.	38.485	38.436	38.931	39.467	39.885	40.234	40.561	40.897
% Ch, Annual Rate	18.2	-0.5	5.3	5.6	4.3	3.5	3.3	3.4
Plus: Residence Adjustment	4.350	4.445	4.502	4.556	4.613	4.673	4.732	4.789
% Ch, Annual Rate	-3.2	9.0	5.3	4.9	5.1	5.3	5.1	4.9
Dividends/Int./Rent	99.548	100.380	101.625	102.653	103.672	105.606	107.392	109.169
% Ch, Annual Rate	3.6	3.4	5.1	4.1	4.0	7.7	6.9	6.8
Transfer Payments	63.950	64.502	65.249	66.001	67.175	67.964	68.789	69.638
% Ch, Annual Rate	4.8	3.5	4.7	4.7	7.3	4.8	4.9	5.0
State U.I. Benefits	1.022	0.979	0.917	0.917	0.804	0.759	0.763	0.793
% Ch, Annual Rate	22.0	-15.7	-23.1	0.0	-41.0	-20.4	2.1	16.6
Other Transfers	62.928	63.522	64.332	65.084	66.372	67.205	68.026	68.845
% Ch, Annual Rate	4.5	3.8	5.2	4.8	8.2	5.1	5.0	4.9

Table A3.4 (continued)

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	494.907	501.221	506.752	512.492	518.928	524.792	530.694	536.718
% Ch, Annual Rate	5.1	5.2	4.5	4.6	5.1	4.6	4.6	4.6
Total Wage and Salary Disbursements	256.665	260.013	262.497	265.319	268.361	271.338	274.421	277.592
% Ch, Annual Rate	4.7	5.3	3.9	4.4	4.7	4.5	4.6	4.7
Manufacturing	23.790	23.962	24.135	24.300	24.508	24.722	24.963	25.217
% Ch, Annual Rate	3.3	2.9	2.9	2.8	3.5	3.5	4.0	4.1
Durable Manufacturing	18.659	18.800	18.943	19.076	19.235	19.397	19.579	19.775
% Ch, Annual Rate	3.3	3.1	3.1	2.8	3.4	3.4	3.8	4.1
Nondurable Manufacturing	5.131	5.162	5.192	5.224	5.272	5.326	5.384	5.442
% Ch, Annual Rate	3.3	2.4	2.3	2.5	3.8	4.1	4.4	4.4
Nonmanufacturing	225.185	228.286	230.531	233.129	235.869	238.559	241.325	244.179
% Ch, Annual Rate	4.8	5.6	4.0	4.6	4.8	4.6	4.7	4.8
Other Private Wages	1.514	1.530	1.541	1.555	1.570	1.584	1.599	1.615
% Ch, Annual Rate	3.8	4.4	3.0	3.5	3.9	3.7	3.8	3.9
Farm Wages	1.679	1.707	1.728	1.752	1.778	1.804	1.831	1.858
% Ch, Annual Rate	6.1	6.9	5.0	5.7	6.2	6.0	6.1	6.1
Military Wages	4.498	4.528	4.562	4.583	4.637	4.668	4.703	4.724
% Ch, Annual Rate	4.8	2.7	3.1	1.9	4.8	2.7	3.0	1.8
Nonwage Personal Income	238.243	241.208	244.255	247.173	250.567	253.454	256.273	259.126
% Ch, Annual Rate	5.6	5.1	5.1	4.9	5.6	4.7	4.5	4.5
Supplements to Wages and Salaries	54.865	55.545	56.066	56.642	57.350	57.946	58.555	59.174
% Ch, Annual Rate	5.2	5.1	3.8	4.2	5.1	4.2	4.3	4.3
Proprietor's Income	38.114	38.139	38.301	38.379	38.480	38.519	38.530	38.559
% Ch, Annual Rate	-0.2	0.3	1.7	0.8	1.1	0.4	0.1	0.3
Farm	1.348	1.484	1.649	1.749	1.835	1.871	1.861	1.824
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.766	36.655	36.651	36.630	36.645	36.648	36.669	36.735
% Ch, Annual Rate	-1.5	-1.2	0.0	-0.2	0.2	0.0	0.2	0.7
Less: Contribution For Govt. Soc. Ins.	41.426	41.841	42.131	42.478	43.056	43.431	43.823	44.230
% Ch, Annual Rate	5.3	4.1	2.8	3.3	5.6	3.5	3.7	3.8
Plus: Residence Adjustment	4.845	4.906	4.957	5.013	5.075	5.137	5.201	5.267
% Ch, Annual Rate	4.7	5.1	4.2	4.6	5.0	5.0	5.1	5.2
Dividends/Int./Rent	110.863	112.564	114.272	115.891	117.567	119.224	120.824	122.441
% Ch, Annual Rate	6.4	6.3	6.2	5.8	5.9	5.8	5.5	5.5
Transfer Payments	70.981	71.895	72.790	73.725	75.150	76.059	76.986	77.914
% Ch, Annual Rate	7.9	5.2	5.1	5.2	8.0	4.9	5.0	4.9
State U.I. Benefits	0.869	0.919	1.009	1.058	1.100	1.151	1.193	1.228
% Ch, Annual Rate	44.4	24.9	45.1	21.3	16.6	19.9	15.3	12.2
Other Transfers	70.112	70.976	71.781	72.667	74.050	74.908	75.793	76.686
% Ch, Annual Rate	7.6	5.0	4.6	5.0	7.8	4.7	4.8	4.8

Table A3.4 (continued)

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	543.331	549.488	555.893	562.354	569.761	576.565	583.240	589.748
% Ch, Annual Rate	5.0	4.6	4.7	4.7	5.4	4.9	4.7	4.5
Total Wage and Salary Disbursements	280.966	284.321	287.809	291.370	295.171	298.898	302.580	306.195
% Ch, Annual Rate	5.0	4.9	5.0	5.0	5.3	5.1	5.0	4.9
Manufacturing	25.500	25.784	26.091	26.414	26.749	27.091	27.437	27.778
% Ch, Annual Rate	4.6	4.5	4.9	5.0	5.2	5.2	5.2	5.1
Durable Manufacturing	19.997	20.217	20.457	20.710	20.971	21.238	21.506	21.770
% Ch, Annual Rate	4.6	4.5	4.8	5.0	5.1	5.2	5.1	5.0
Nondurable Manufacturing	5.503	5.566	5.633	5.704	5.777	5.853	5.931	6.008
% Ch, Annual Rate	4.6	4.7	4.9	5.1	5.2	5.4	5.4	5.3
Nonmanufacturing	247.169	250.164	253.265	256.433	259.795	263.098	266.352	269.555
% Ch, Annual Rate	5.0	4.9	5.0	5.1	5.3	5.2	5.0	4.9
Other Private Wages	1.631	1.647	1.663	1.680	1.698	1.715	1.732	1.749
% Ch, Annual Rate	4.1	4.0	4.1	4.1	4.3	4.1	4.0	3.9
Farm Wages	1.887	1.916	1.945	1.975	2.007	2.038	2.069	2.099
% Ch, Annual Rate	6.4	6.2	6.3	6.3	6.6	6.3	6.2	5.9
Military Wages	4.778	4.810	4.845	4.868	4.922	4.955	4.991	5.015
% Ch, Annual Rate	4.7	2.7	2.9	1.8	4.6	2.7	2.9	1.9
Nonwage Personal Income	262.365	265.168	268.084	270.984	274.590	277.668	280.659	283.553
% Ch, Annual Rate	5.1	4.3	4.5	4.4	5.4	4.6	4.4	4.2
Supplements to Wages and Salaries	59.924	60.559	61.201	61.842	62.610	63.256	63.896	64.534
% Ch, Annual Rate	5.2	4.3	4.3	4.3	5.1	4.2	4.1	4.1
Proprietor's Income	38.515	38.532	38.599	38.651	38.719	38.816	38.938	39.076
% Ch, Annual Rate	-0.5	0.2	0.7	0.5	0.7	1.0	1.3	1.4
Farm	1.775	1.724	1.680	1.647	1.627	1.622	1.630	1.647
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.740	36.808	36.919	37.004	37.091	37.194	37.308	37.428
% Ch, Annual Rate	0.1	0.7	1.2	0.9	0.9	1.1	1.2	1.3
Less: Contribution For Govt. Soc. Ins.	44.871	45.308	45.766	46.236	46.956	47.452	47.939	48.412
% Ch, Annual Rate	5.9	4.0	4.1	4.2	6.4	4.3	4.2	4.0
Plus: Residence Adjustment	5.334	5.403	5.474	5.547	5.623	5.699	5.775	5.849
% Ch, Annual Rate	5.2	5.2	5.4	5.5	5.6	5.5	5.4	5.2
Dividends/Int./Rent	124.039	125.666	127.362	129.055	130.778	132.469	134.044	135.488
% Ch, Annual Rate	5.3	5.3	5.5	5.4	5.4	5.3	4.8	4.4
Transfer Payments	79.423	80.317	81.215	82.125	83.816	84.880	85.945	87.019
% Ch, Annual Rate	8.0	4.6	4.5	4.6	8.5	5.2	5.1	5.1
State U.I. Benefits	1.257	1.282	1.299	1.313	1.321	1.339	1.377	1.433
% Ch, Annual Rate	9.8	8.3	5.3	4.3	2.4	5.5	12.1	17.2
Other Transfers	78.167	79.034	79.916	80.812	82.496	83.542	84.568	85.586
% Ch, Annual Rate	7.9	4.5	4.5	4.6	8.6	5.2	5.0	4.9

Table A4.1  
**Selected Inflation Indicators**  
(PCE Price Index 2012=100; CPI 1982-84=1)

	PCE Price Index*		U.S. CPI#		Seattle CPI+	
	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	21.8	4.2	0.405	4.2	0.382	2.1
1972	22.6	3.4	0.418	3.3	0.393	2.9
1973	23.8	5.4	0.444	6.3	0.418	6.4
1974	26.3	10.4	0.493	11.0	0.464	11.0
1975	28.5	8.3	0.538	9.1	0.511	10.2
1976	30.0	5.5	0.569	5.8	0.540	5.5
1977	32.0	6.5	0.606	6.5	0.583	8.0
1978	34.2	7.0	0.652	7.6	0.640	9.9
1979	37.3	8.9	0.726	11.3	0.709	10.8
1980	41.3	10.8	0.824	13.5	0.827	16.7
1981	45.0	9.0	0.909	10.4	0.916	10.8
1982	47.5	5.6	0.965	6.2	0.978	6.7
1983	49.5	4.3	0.996	3.2	0.993	1.5
1984	51.3	3.8	1.039	4.4	1.030	3.8
1985	53.1	3.5	1.076	3.5	1.056	2.5
1986	54.3	2.2	1.097	1.9	1.066	1.0
1987	56.0	3.1	1.136	3.6	1.092	2.4
1988	58.2	3.9	1.183	4.1	1.128	3.3
1989	60.7	4.4	1.239	4.8	1.181	4.7
1990	63.4	4.4	1.307	5.4	1.268	7.3
1991	65.5	3.3	1.362	4.2	1.341	5.8
1992	67.2	2.7	1.403	3.0	1.390	3.7
1993	68.9	2.5	1.445	3.0	1.429	2.8
1994	70.3	2.1	1.482	2.6	1.478	3.4
1995	71.8	2.1	1.524	2.8	1.522	3.0
1996	73.3	2.1	1.569	2.9	1.575	3.4
1997	74.6	1.7	1.605	2.3	1.630	3.5
1998	75.2	0.8	1.630	1.5	1.677	2.9
1999	76.3	1.5	1.666	2.2	1.728	3.0
2000	78.2	2.5	1.722	3.4	1.792	3.7
2001	79.7	1.9	1.770	2.8	1.857	3.6
2002	80.8	1.3	1.799	1.6	1.893	2.0
2003	82.4	1.9	1.840	2.3	1.924	1.6
2004	84.4	2.5	1.889	2.7	1.947	1.2
2005	86.8	2.8	1.953	3.4	2.002	2.8
2006	89.2	2.7	2.016	3.2	2.076	3.7
2007	91.4	2.5	2.073	2.9	2.157	3.9
2008	94.2	3.0	2.153	3.8	2.247	4.2
2009	94.1	-0.1	2.146	-0.3	2.260	0.6
2010	95.7	1.7	2.181	1.6	2.267	0.3
2011	98.1	2.5	2.249	3.1	2.328	2.7
2012	100.0	1.9	2.296	2.1	2.386	2.5
2013	101.3	1.3	2.330	1.5	2.416	1.2
2014	102.9	1.5	2.367	1.6	2.460	1.8
2015	103.1	0.3	2.370	0.1	2.494	1.4
2016	104.2	1.1	2.400	1.3	2.550	2.3
2017	106.1	1.8	2.451	2.1	2.627	3.0
Forecast						
2018	108.3	2.1	2.511	2.4	2.705	3.0
2019	110.3	1.9	2.559	1.9	2.758	2.0
2020	112.4	1.9	2.611	2.0	2.815	2.1
2021	114.7	2.1	2.668	2.2	2.876	2.2
2022	117.0	2.0	2.725	2.2	2.939	2.2
2023	119.4	2.0	2.784	2.1	3.002	2.1

\* GDP Price Index for Personal Consumption Expenditures

# Consumer Price Index for all Urban Consumers

+ Consumer Price Index for the Seattle-Tacoma-Bremerton, WA CMSA

Consumer Price Index and PCE Price Index values shown here are annual averages of seasonally adjusted quarterly data and may differ slightly from the annual values published by the Bureau of Labor Statistics and Bureau of Economic Analysis.

Table A4.2  
**Price Indexes for Gross Domestic Product**  
(2012=100)

	Services		Food		Fuels		Gasoline	
	Index	Percent Change	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	16.8	5.5	21.4	2.3	4.9	6.4	9.1	0.7
1972	17.5	4.2	22.4	4.8	5.0	0.6	9.2	1.3
1973	18.3	4.8	25.2	12.7	5.7	14.6	10.1	9.6
1974	19.9	8.5	29.0	15.2	9.0	58.9	13.6	35.1
1975	21.6	8.6	31.2	7.5	9.8	8.5	14.6	6.7
1976	23.1	6.9	31.8	1.9	10.5	7.3	15.2	4.2
1977	24.8	7.6	33.7	5.9	11.9	13.2	16.1	5.8
1978	26.8	7.7	36.9	9.6	12.6	5.7	16.8	4.3
1979	29.0	8.4	40.5	9.8	17.3	37.9	22.5	34.0
1980	32.0	10.4	43.9	8.4	24.3	40.4	31.2	38.8
1981	35.3	10.2	47.1	7.1	29.8	22.3	34.7	11.3
1982	38.1	7.8	48.3	2.6	29.2	-1.9	32.9	-5.1
1983	40.4	6.1	48.8	1.1	26.9	-7.8	31.9	-3.3
1984	42.5	5.2	50.3	3.0	27.5	2.2	31.4	-1.5
1985	44.6	4.9	50.9	1.1	26.4	-3.9	31.6	0.8
1986	46.4	4.1	52.1	2.4	20.7	-21.7	24.8	-21.5
1987	47.8	3.0	53.7	3.2	21.2	2.6	25.8	3.8
1988	50.1	4.8	55.3	3.0	21.2	0.0	26.0	0.8
1989	52.4	4.7	58.2	5.3	22.5	5.9	28.4	9.2
1990	54.8	4.6	61.1	4.9	27.1	20.4	32.3	13.8
1991	57.0	3.9	63.0	3.1	25.8	-4.8	31.9	-1.3
1992	59.0	3.6	63.5	0.8	24.7	-4.1	31.8	-0.4
1993	61.1	3.5	64.3	1.4	24.6	-0.7	31.5	-1.0
1994	62.7	2.7	65.4	1.7	24.1	-1.8	31.6	0.5
1995	64.5	2.8	66.8	2.2	23.9	-0.9	32.1	1.6
1996	66.2	2.7	68.9	3.1	27.1	13.3	34.1	6.1
1997	68.1	2.8	70.2	1.9	27.1	0.2	34.1	0.0
1998	69.5	2.1	71.1	1.3	24.0	-11.4	29.7	-12.9
1999	71.0	2.0	72.2	1.6	24.4	1.7	32.3	8.9
2000	72.9	2.8	73.9	2.3	35.8	46.6	41.3	27.8
2001	75.2	3.1	76.1	2.9	35.1	-2.0	39.8	-3.6
2002	77.1	2.6	77.2	1.5	31.3	-10.8	37.4	-6.0
2003	79.5	3.1	78.7	1.9	37.9	20.9	43.6	16.5
2004	82.0	3.1	81.2	3.1	44.1	16.4	51.3	17.6
2005	84.7	3.3	82.6	1.7	58.7	33.0	62.3	21.6
2006	87.6	3.5	84.0	1.7	66.7	13.7	70.3	12.9
2007	90.5	3.3	87.2	3.9	71.3	6.9	76.3	8.4
2008	93.2	3.0	92.6	6.1	96.8	35.7	88.8	16.5
2009	94.2	1.1	93.7	1.2	66.2	-31.6	65.2	-26.6
2010	96.0	1.8	93.9	0.3	77.5	16.9	76.9	18.0
2011	97.8	1.9	97.7	4.0	98.6	27.3	96.6	25.7
2012	100.0	2.2	100.0	2.4	100.0	1.4	100.0	3.5
2013	102.3	2.3	101.0	1.0	98.8	-1.2	97.2	-2.8
2014	104.9	2.5	102.9	1.9	98.3	-0.6	93.5	-3.8
2015	106.8	1.9	104.1	1.1	69.8	-29.0	68.7	-26.6
2016	109.3	2.3	103.0	-1.0	58.0	-16.9	61.0	-11.1
2017	112.0	2.4	102.9	-0.1	66.9	15.3	68.9	12.9
Forecast								
2018	115.0	2.7	103.4	0.5	79.7	19.1	78.5	14.0
2019	118.1	2.7	104.0	0.6	87.3	9.5	79.4	1.1
2020	121.2	2.6	105.6	1.5	91.0	4.3	80.1	0.9
2021	124.4	2.6	107.6	1.9	92.7	1.9	79.8	-0.4
2022	127.6	2.6	109.3	1.5	95.3	2.7	80.2	0.5
2023	130.9	2.6	111.0	1.6	97.1	2.0	79.9	-0.3

Table A5.1  
**Washington Resident Population and Components of Change\***  
(Thousands)

	<u>Population</u>	<u>Change</u>	<u>Percent Change</u>	<u>Births</u>	<u>Deaths</u>	<u>Net Migration</u>
1970	3413.2	16.2	0.5	59.9	30.0	-13.7
1971	3436.3	23.1	0.7	60.0	29.8	-7.1
1972	3430.3	-6.0	-0.2	53.1	30.4	-28.7
1973	3444.3	14.0	0.4	47.7	30.4	-3.3
1974	3508.7	64.4	1.9	48.2	29.9	46.1
1975	3567.9	59.2	1.7	50.1	30.3	39.4
1976	3634.9	67.0	1.9	51.4	30.2	45.8
1977	3715.4	80.5	2.2	54.2	29.1	55.4
1978	3836.2	120.8	3.3	57.3	30.4	93.9
1979	3979.2	143.0	3.7	60.2	30.2	113.0
1980	4132.2	153.0	3.8	65.4	31.3	118.9
1981	4229.3	97.1	2.4	68.2	31.8	60.8
1982	4276.5	47.3	1.1	70.1	31.7	8.9
1983	4307.2	30.7	0.7	69.5	32.5	-6.2
1984	4354.1	46.8	1.1	68.5	33.2	11.6
1985	4415.8	61.7	1.4	69.1	34.0	26.6
1986	4462.2	46.4	1.1	70.2	34.0	10.2
1987	4527.1	64.9	1.5	69.3	34.4	30.0
1988	4616.9	89.8	2.0	71.0	36.0	54.8
1989	4728.1	111.2	2.4	73.0	36.0	74.2
1990	4866.7	138.6	2.9	76.4	36.2	98.5
1991	5000.4	133.7	2.7	79.1	36.6	91.2
1992	5091.1	90.8	1.8	80.2	37.2	47.7
1993	5188.0	96.9	1.9	79.1	39.4	57.1
1994	5291.6	103.6	2.0	78.2	39.5	64.9
1995	5396.6	105.0	2.0	77.5	40.0	67.5
1996	5483.1	86.5	1.6	77.0	41.2	50.7
1997	5579.1	96.0	1.8	78.0	42.6	60.6
1998	5685.5	106.3	1.9	78.8	41.6	69.1
1999	5792.2	106.8	1.9	79.8	43.1	70.1
2000	5894.1	101.9	1.8	79.9	43.7	65.8
2001	5970.5	76.3	1.3	80.7	43.9	39.5
2002	6059.7	89.2	1.5	79.3	44.9	54.9
2003	6126.9	67.2	1.1	79.1	44.7	32.9
2004	6208.5	81.6	1.3	81.0	46.0	46.7
2005	6298.8	90.3	1.5	81.8	45.6	54.0
2006	6420.2	121.4	1.9	83.2	45.3	83.5
2007	6525.1	104.9	1.6	87.8	46.2	63.3
2008	6608.2	83.1	1.3	89.6	47.9	41.5
2009	6672.3	64.0	1.0	89.8	48.1	22.3
2010	6724.5	52.3	0.8	88.4	47.7	11.5
2011	6767.9	43.4	0.6	86.4	48.8	5.8
2012	6817.8	49.9	0.7	87.1	49.2	12.0
2013	6882.4	64.6	0.9	87.3	51.1	28.5
2014	6968.2	85.8	1.2	87.0	50.7	49.5
2015	7061.4	93.2	1.3	88.5	52.8	57.6
2016	7183.7	122.3	1.7	89.8	54.7	87.1
2017	7310.3	126.6	1.8	89.7	56.1	93.0
2018	7427.6	117.3	1.6	88.7	56.6	85.2
<b>Forecast</b>						
2019	7539.8	112.2	1.5	90.0	57.4	79.6
2020	7649.8	110.1	1.5	91.0	58.4	77.4
2021	7753.2	103.3	1.4	92.0	59.5	70.8
2022	7850.2	97.0	1.3	94.0	60.6	63.7
2023	7942.4	92.3	1.2	94.8	61.9	59.4

\* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2  
**Washington Population\***  
 (Thousands)

	<b>2014</b>	<b>2015</b>	<b>Actual 2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Forecast 2021</b>	<b>2022</b>	<b>2023</b>
Total Population	6968.2	7061.4	7183.7	7310.3	7427.6	7539.8	7649.8	7753.2	7850.2	7942.4
Percent Change	1.2	1.3	1.7	1.8	1.6	1.5	1.5	1.4	1.3	1.2
Age 17 and Under	1588.4	1602.8	1625.6	1648.7	1666.9	1684.5	1704.1	1722.0	1737.8	1751.4
Percent of Total	22.8	22.7	22.6	22.6	22.4	22.3	22.3	22.2	22.1	22.1
Age 6-18	1151.0	1162.2	1178.7	1195.4	1211.7	1226.6	1241.1	1257.8	1273.3	1285.2
Percent of Total	16.5	16.5	16.4	16.4	16.3	16.3	16.2	16.2	16.2	16.2
Age 18 and Over	5379.8	5458.7	5558.1	5661.6	5760.7	5855.2	5945.7	6031.2	6112.4	6191.0
Percent of Total	77.2	77.3	77.4	77.4	77.6	77.7	77.7	77.8	77.9	77.9
Age 21 and Over	5107.4	5187.1	5284.0	5383.5	5478.6	5570.6	5661.1	5747.6	5828.2	5902.6
Percent of Total	73.3	73.5	73.6	73.6	73.8	73.9	74.0	74.1	74.2	74.3
Age 20-34	1445.8	1458.8	1482.7	1507.6	1529.1	1550.1	1568.5	1584.0	1596.3	1605.5
Percent of Total	20.7	20.7	20.6	20.6	20.6	20.6	20.5	20.4	20.3	20.2
Age 18-64	4396.9	4431.0	4484.7	4540.3	4587.2	4629.5	4665.2	4697.3	4725.9	4751.8
Percent of Total	63.1	62.7	62.4	62.1	61.8	61.4	61.0	60.6	60.2	59.8
Age 65 and Over	982.8	1027.7	1073.3	1121.3	1173.5	1225.7	1280.6	1333.9	1386.5	1439.2
Percent of Total	14.1	14.6	14.9	15.3	15.8	16.3	16.7	17.2	17.7	18.1

\* As of April 1 of Each Year

Source: Office of Financial Management

Table A6.1

**Summary of National and State Indicators**

<b>Indicator</b>	<b>Latest Data</b>	<b>Indication*</b>
U.S. Leading Index	October 2018	+
U.S. Real GDP Growth	3rd quarter 2018	-
U.S. ISM Index	October 2018	-
U.S. Employment YOY%Δ	October 2018	unchanged
U.S. Unemployment Rate	October 2018	unchanged
U.S. Consumer Confidence	November 2018	-
U.S. Consumer Sentiment	November 2018	-
U.S. Light Vehicle Sales	October 2018	+
U.S. CPI YOY%Δ	October 2018	-
U.S. Home Prices YOY%Δ	September 2018	-
S&P 500 Index	November 2018	-
WA Leading Index	September 2018	+
WA ISM-WW Index	October 2018	-
WA Employment YOY%Δ	October 2018	+
WA Aerospace Empl. YOY%Δ	October 2018	+
WA Unemployment Rate	October 2018	+
WA Help Wanted Index	October 2018	-
WA Business Cycle Indicator	October 2018	+
WA Initial Unemploy. Claims	October 2018	+
WA Housing Permits	October 2018	-
WA Weekly Hours in Mfg.	October 2018	-
WA New Vehicle Registration	October 2018	+
WA In-Migration	August 2018	+
WA Exports-Total YOY%Δ	3rd quarter 2018	-
WA Exports- w/o Trans. Equip. YOY%Δ	3rd quarter 2018	-
Seattle CPI YOY%Δ	October 2018	unchanged
Seattle Home Prices YOY%Δ	September 2018	-
WA Construction Activity Index	September 2018	+

\*Change from the previous reading

Table A6.2

**Washington Business Indicators**

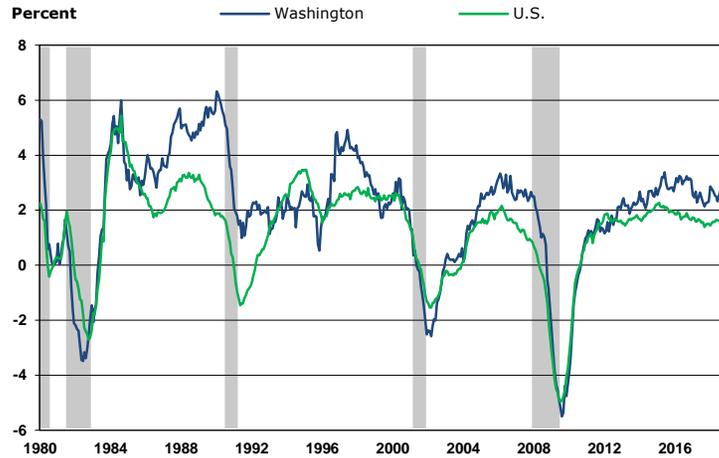
Historical Data

	<b>WA Index of Leading Indicators</b>	<b>U.S. Index of Leading Indicators</b>	<b>WA State Business Cycle Indicator</b>	<b>WA State Construction Index</b>	<b>WA State Help Wanted Index</b>	<b>WA Purchasing Management Index</b>	<b>U.S. Purchasing Management Index</b>
<b>2014:01</b>	113.7	92.0	44.2	95.5	118.2	63.5	51.8
<b>2014:02</b>	113.6	92.5	42.9	93.4	118.5	68.7	54.3
<b>2014:03</b>	114.3	93.4	43.5	94.3	118.6	63.6	54.4
<b>2014:04</b>	115.0	93.5	46.1	97.1	120.6	53.7	55.3
<b>2014:05</b>	115.2	94.0	46.6	96.1	118.7	59.6	55.6
<b>2014:06</b>	116.3	94.7	47.2	97.4	121.0	67.0	55.7
<b>2014:07</b>	116.4	95.2	48.6	97.3	121.3	50.1	56.4
<b>2014:08</b>	116.6	95.5	49.0	97.7	121.6	62.9	58.1
<b>2014:09</b>	116.5	96.1	49.1	99.3	114.3	60.3	56.1
<b>2014:10</b>	117.0	96.4	49.0	100.8	119.0	57.6	57.9
<b>2014:11</b>	117.7	96.8	51.2	102.0	128.0	63.1	57.6
<b>2014:12</b>	117.4	97.3	51.8	103.3	122.0	53.3	55.1
<b>2015:01</b>	117.2	97.4	52.7	99.8	127.6	66.6	53.5
<b>2015:02</b>	118.3	97.4	57.7	108.7	137.2	65.9	52.9
<b>2015:03</b>	117.7	97.9	57.5	100.8	138.8	64.1	51.5
<b>2015:04</b>	118.0	98.4	58.4	99.2	135.7	60.4	51.5
<b>2015:05</b>	118.3	98.8	58.7	98.3	139.0	60.3	52.8
<b>2015:06</b>	118.7	99.3	59.0	99.8	136.0	51.4	53.5
<b>2015:07</b>	118.5	99.1	59.9	99.8	141.0	53.6	52.7
<b>2015:08</b>	118.1	99.1	59.2	99.3	139.1	48.0	51.1
<b>2015:09</b>	117.0	99.0	58.2	95.6	126.6	48.0	50.2
<b>2015:10</b>	118.1	99.4	59.7	99.6	132.4	46.1	50.1
<b>2015:11</b>	118.4	99.8	60.2	101.1	134.3	50.0	48.6
<b>2015:12</b>	117.9	99.6	62.8	98.9	130.7	54.5	48.0
<b>2016:01</b>	117.6	99.3	64.6	101.7	128.7	57.2	48.2
<b>2016:02</b>	117.9	99.2	66.3	101.9	124.9	55.4	49.7
<b>2016:03</b>	118.7	99.2	64.3	105.2	128.9	55.7	51.7
<b>2016:04</b>	119.3	99.7	65.2	102.7	130.9	50.8	50.7
<b>2016:05</b>	120.3	99.5	67.7	106.2	148.2	49.2	51.0
<b>2016:06</b>	120.4	99.8	68.3	104.1	151.3	49.1	52.8
<b>2016:07</b>	120.7	100.2	69.0	102.8	156.3	50.8	52.3
<b>2016:08</b>	120.6	100.2	67.8	102.2	153.1	47.7	49.4
<b>2016:09</b>	121.1	100.4	68.2	107.3	143.4	51.4	51.7
<b>2016:10</b>	120.9	100.5	69.5	102.3	152.3	53.1	52.0
<b>2016:11</b>	120.7	100.7	71.1	104.5	148.8	53.3	53.5
<b>2016:12</b>	120.3	101.2	72.2	103.3	149.2	47.3	54.5
<b>2017:01</b>	121.0	101.8	71.1	103.4	152.5	54.2	56.0
<b>2017:02</b>	120.4	102.1	70.1	103.7	140.1	48.6	57.7
<b>2017:03</b>	121.2	102.6	72.4	102.7	143.4	59.2	57.2
<b>2017:04</b>	122.1	102.8	71.5	108.3	143.3	59.2	54.8
<b>2017:05</b>	122.2	103.2	73.5	102.9	149.2	45.0	54.9
<b>2017:06</b>	122.9	103.8	73.4	106.2	145.4	50.0	57.8
<b>2017:07</b>	123.1	104.1	73.7	105.9	139.5	47.0	56.3
<b>2017:08</b>	123.3	104.5	75.3	106.1	135.1	58.2	58.8
<b>2017:09</b>	123.7	104.5	77.3	102.8	140.4	57.5	60.8
<b>2017:10</b>	124.4	105.9	78.4	106.9	132.7	51.8	58.7
<b>2017:11</b>	123.7	106.3	81.1	98.4	134.7	65.0	58.2
<b>2017:12</b>	125.2	107.1	80.4	106.3	138.6	65.8	59.7
<b>2018:01</b>	124.8	107.8	79.5	101.5	136.8	60.8	59.1
<b>2018:02</b>	125.3	108.5	80.4	103.0	133.3	68.3	60.8
<b>2018:03</b>	126.5	108.8	82.1	110.6	137.4	68.0	59.3
<b>2018:04</b>	126.6	109.3	81.2	107.1	133.7	55.8	57.3
<b>2018:05</b>	125.6	109.4	82.5	104.7	128.0	61.7	58.7
<b>2018:06</b>	125.2	110.0	82.6	104.9	123.1	56.0	60.2
<b>2018:07</b>	125.7	110.8	82.4	104.8	124.8	60.0	58.1
<b>2018:08</b>	125.1	111.3	81.9	102.8	123.4	61.1	61.3
<b>2018:09</b>	126.2	112.0	83.6	104.6	131.5	62.7	59.8
<b>2018:10</b>		112.1	85.2		129.3	55.0	57.7

# Figure A7.1: Washington State Economic Indicators

## Year-over-Year Employment Growth

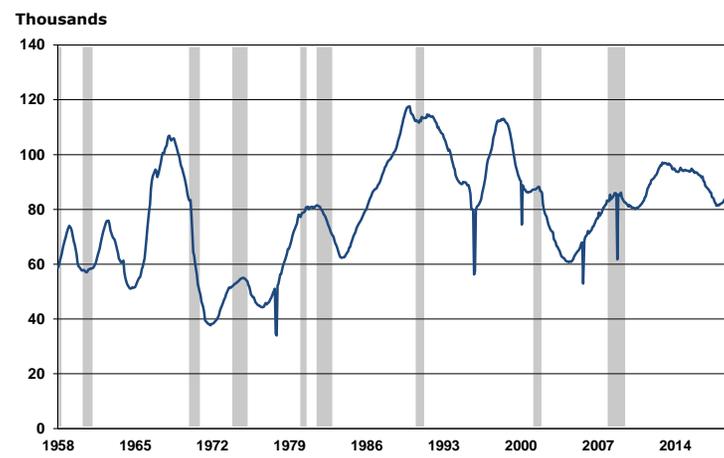
January 1980 to October 2018



\* Bureau of Labor Statistics, WA State Employment Security, ERFC Kalman Filtered Data

## Washington Aircraft and Parts Employment

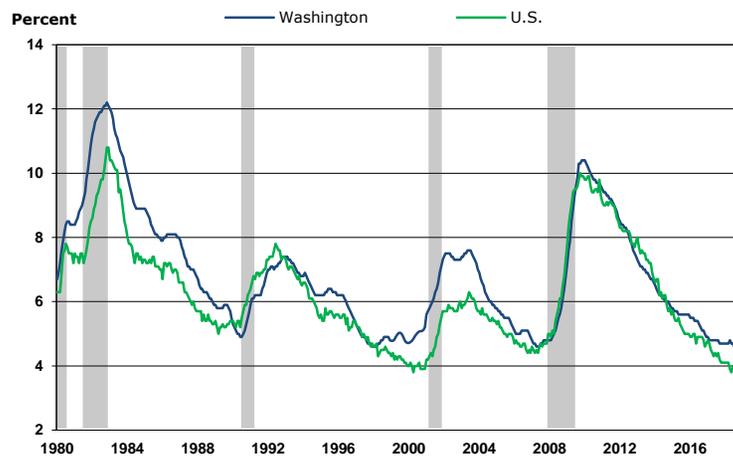
January 1958 to October 2018



\* Source: Bureau of Labor Statistics, ERFC

## Unemployment Rate, S.A.

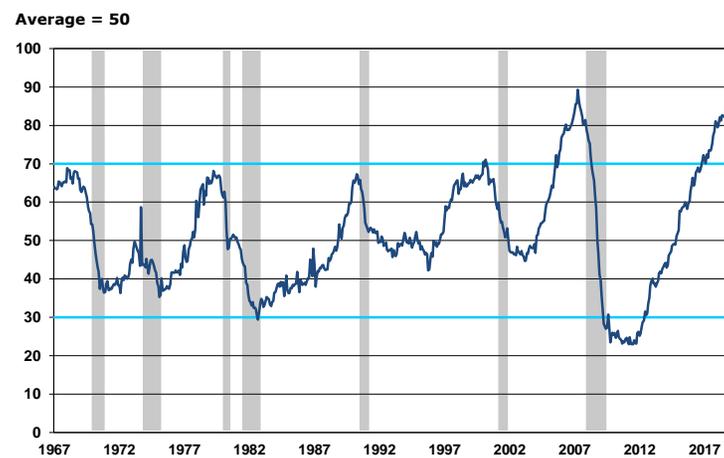
January 1980 to October 2018



\* Source: Bureau of Labor Statistics

## Washington Business Cycle Indicator

January 1968 to August 2018



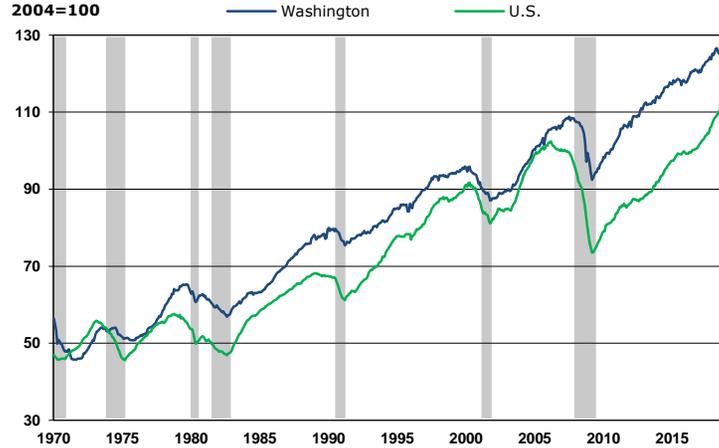
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.2: Washington State Leading Indicators

## The Washington and U.S. Indexes of Leading Indicators

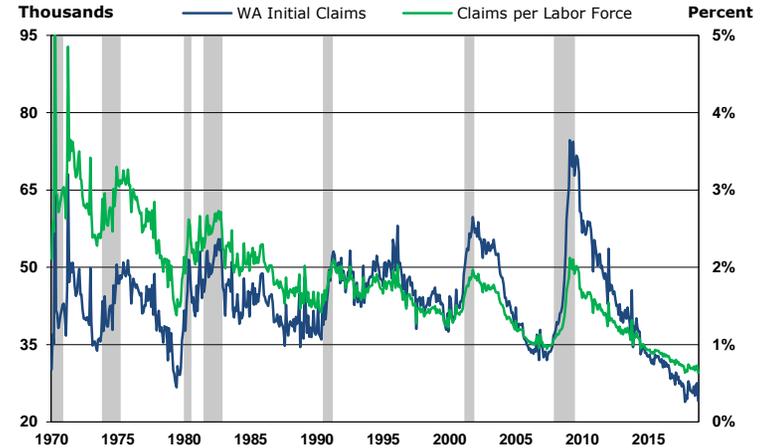
January 1970 to October 2018



\* The Conference Board, ERFC

## Washington Initial Claims for Unemployment Insurance

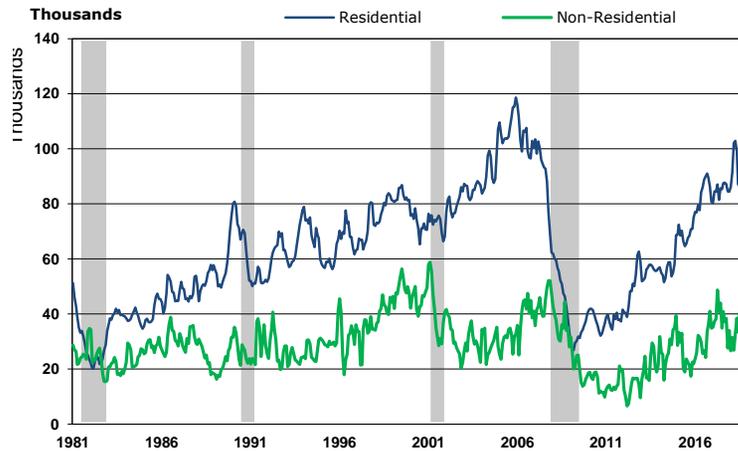
January 1970 to October 2018, S.A.



\* Source: WA State Employment Security, ERFC

## Square Footage of Construction Projects in WA State

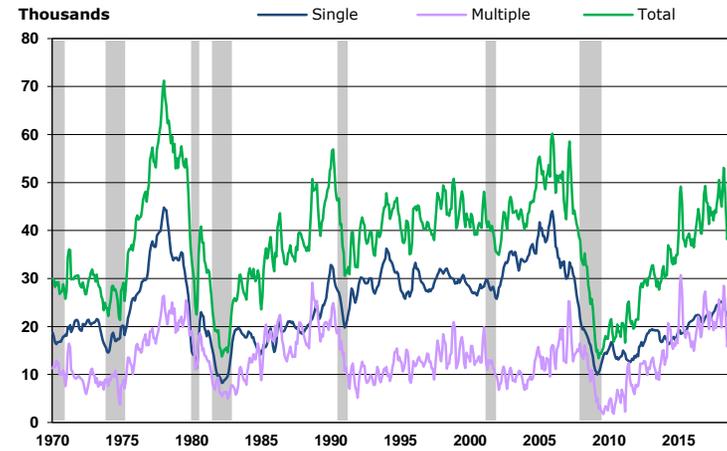
January 1981 to September 2018, 3mma, SAAR



\* Source: McGraw-Hill Construction, ERFC

## Housing Units Authorized in Washington State

January 1970 to October 2018, 3mma, SAAR



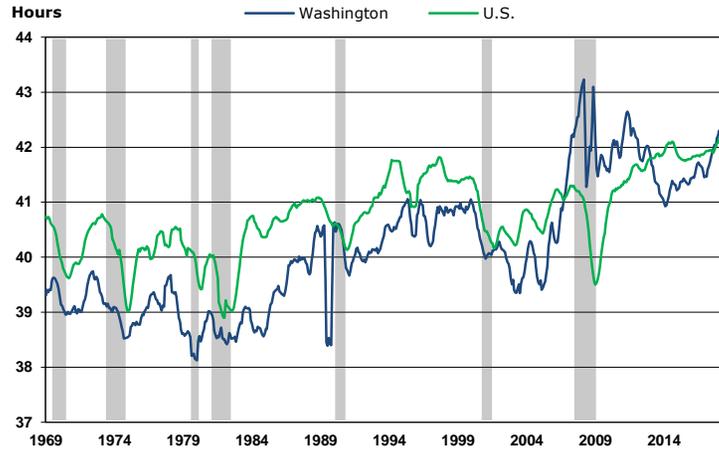
\* Source: Census Bureau, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.3: Other State Economic Indicators

## Average Weekly Hours in Manufacturing

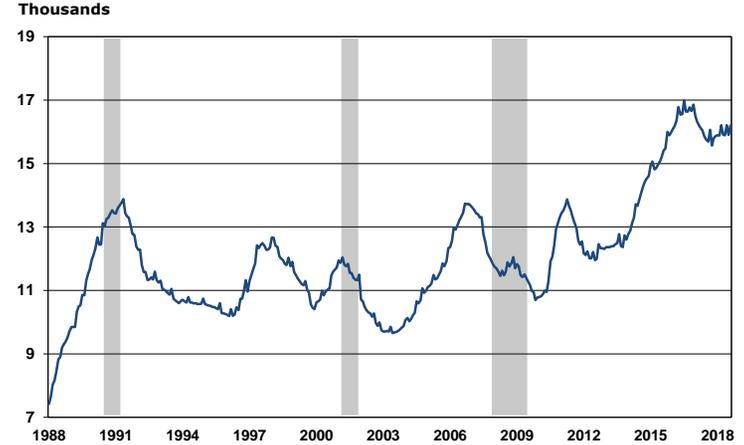
June 1969 to October 2018, 6-Mo. Moving Average, S.A.



\* Bureau of Labor Statistics, ERFC

## Washington Driver's License In-Migration

January 1988 to August 2018, 12-Month Moving Average



\* Source: WA State Department of Licensing, ERFC

## New Car and Truck Registrations in Washington

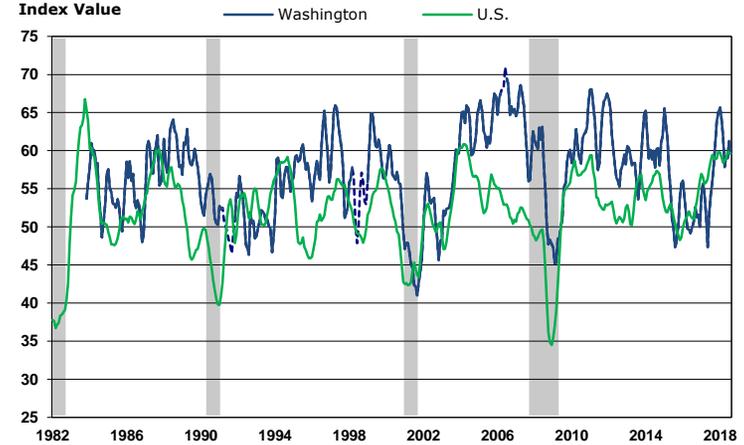
September 1970 to October 2018, 3-Month Moving Average, S.A.



\* Source: WA State Department of Licensing, ERFC

## Institute for Supply Management Index

March 1982 to October 2018, 3-Month Moving Average, S.A.



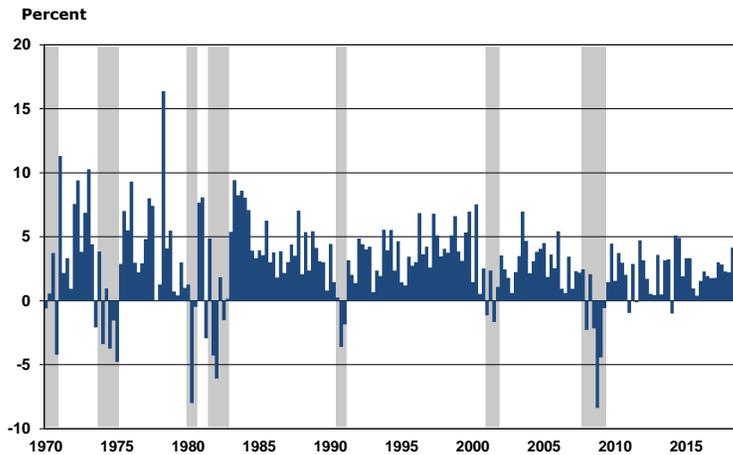
\* Source: Institute for Supply Management, ISM-WW, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.4: Other Economic Indicators

## Quarterly U.S. Real GDP Growth

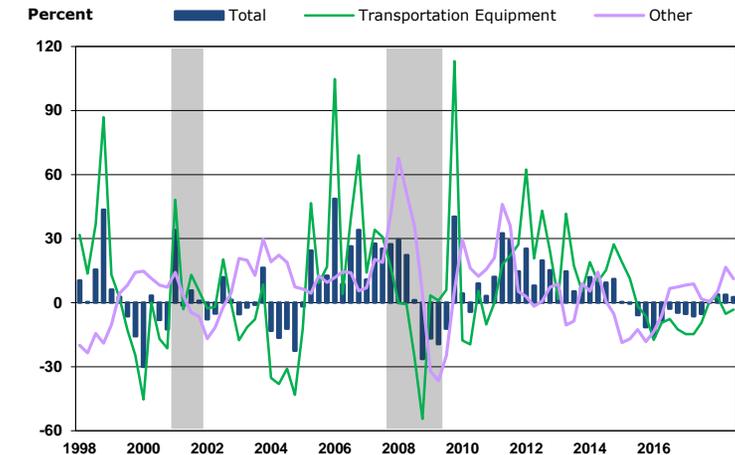
1970Q1 to 2018Q3, SAAR



\* Source: Bureau of Economic Analysis

## Washington State Export Composition

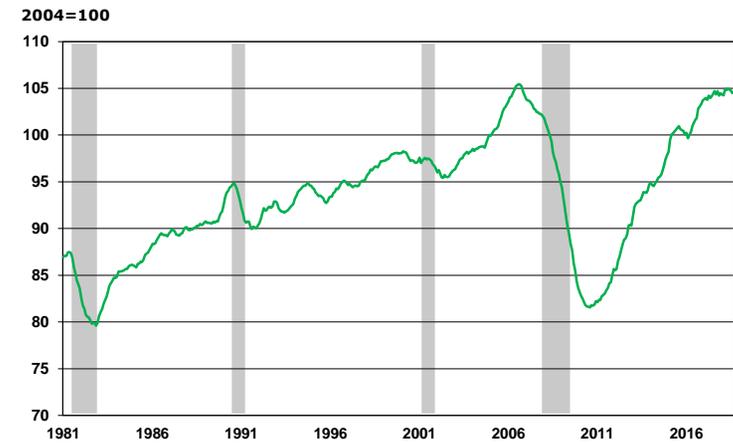
1998Q1 to 2018Q3, Year-over-year percent change



\* Source: WISER

## Washington Construction Index

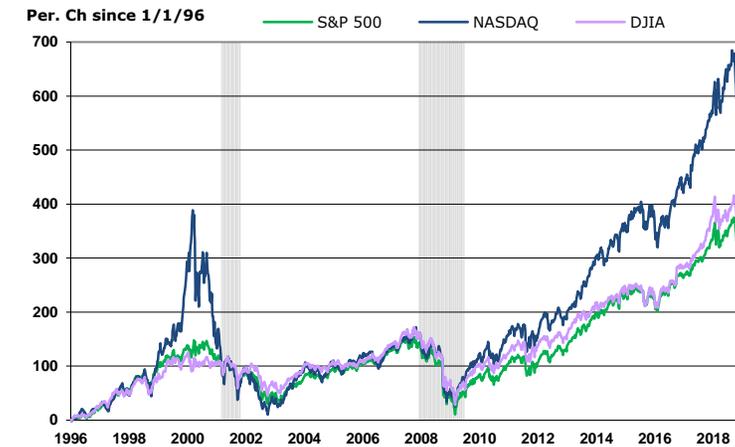
January 1981 to September 2018



\* Source: The Conference Board

## National Stock Indexes

January 1, 1996 to November 19, 2018



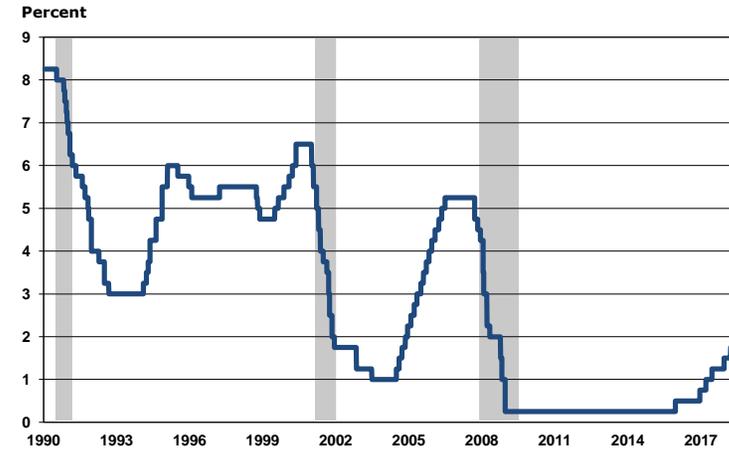
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.4: Other Economic Indicators (continued...)

## Federal Funds Target Rate

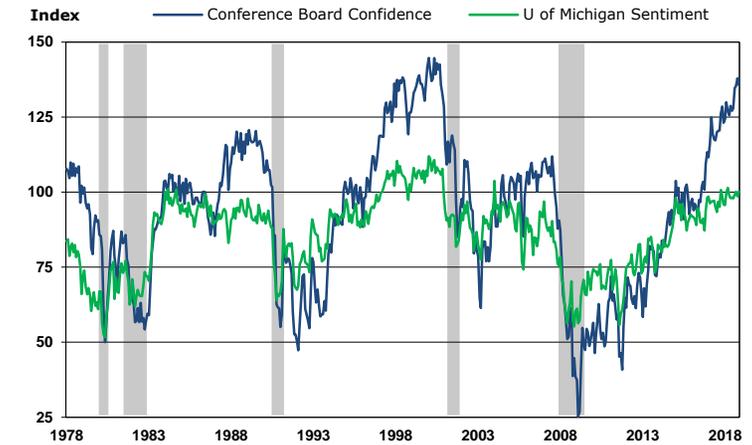
January 1, 1990 to November 29, 2018



\* Federal Reserve

## Consumer Confidence

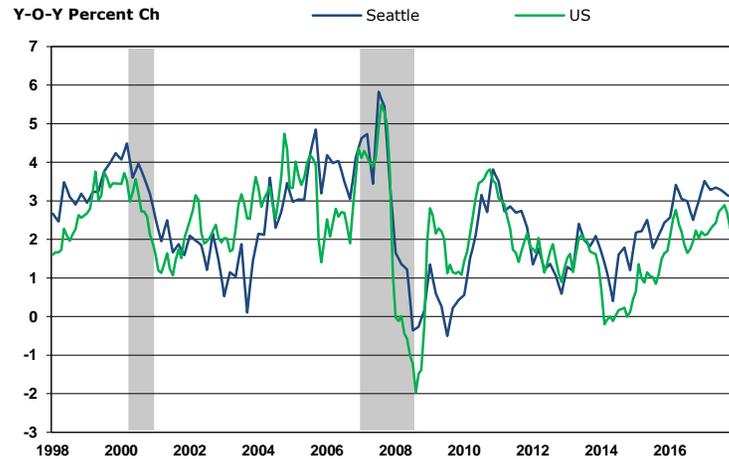
March 1978 to November 2018



\* Source: The Conference Board, University of Michigan

## Seattle vs U.S. CPI (All Urban Consumers)

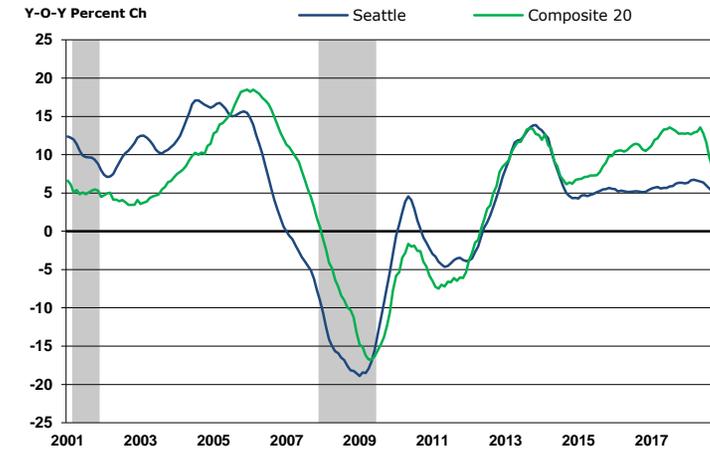
December 1998 to October 2018



\* Source: Bureau of Labor Statistics

## Case Shiller Home Price Index

January 2001 to September 2018, SA



\* Source: Case Shiller, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

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## Glossary

**Biennium:** The state's two years budget cycle.

**Cash Basis:** Cash receipts received during a period. The Forecast Council forecasts revenues on a Cash and GAAP (Generally Accepted Accounting Principles) basis.

**CPI:** The Consumer Price Index for All Urban Consumers. The Bureau of Labor Statistics (BLS) updates the CPI monthly, surveying over 60,000 goods in 85 urban areas.

**Tax Elasticity:** A measure of how tax revenues respond to changes in personal income. If tax revenue elasticity is greater than one, a one percent change in personal income will be associated with more than a one percent increase in tax revenues. If elasticity is less than one, a one percent increase in personal income will be associated with less than a one percent increase in tax revenues.

**Fiscal Year:** The state's budget year. Washington State's fiscal year runs from July 1 through June 30. Fiscal year 2018, for example, ran from July 1, 2017 through June 30, 2018.

**GAAP Basis:** Generally Accepted Accounting Principles measure revenue in the period during which they accrue rather than the period in which they are received.  
General Fund: Accounts for all financial resources and transactions not accounted for in another fund.

**General Fund-State (GF-S) Revenue:** Resources from state sources only, excludes federal monies. The general fund is the principal state fund supporting the operation of the state.

**Implicit Price Deflator, PCE (IPD):** The IPD for consumption is a by-product of the National Income and Product Accounts. It is derived by dividing current dollar (nominal) consumer expenditures by constant dollar (real) consumer expenditures.

**Mortgage Rate:** The average interest rate on 30-year conventional loan (as reported by Freddie Mac).

**Near General Fund:** All accounts included in the General Fund - State plus the Education Legacy Trust Account.

**Non-Wage Income:** Personal income other than from wages and salaries. The major components are: proprietor's income, transfer payments, and dividends, interest and rent.

**Real GDP:** Gross Domestic Production adjusted for the price level.

**Revenue Act:** Revenue Act taxes consist of the retail sales tax, use tax, business and occupation tax, public utility tax and tobacco products tax, plus penalty and interest payments associated with those taxes.

**Personal Income:** Income from wages and salaries; other labor income; proprietor's income; dividends, interest and rent; transfer payments; and a residence adjustment. It is reduced by employee contributions for social insurance.

**Seasonally Adjusted:** Adjusted for normal seasonal variations. Monthly statistics, such as the unemployment rate, are seasonally adjusted to make month-to-month comparisons possible.

**Seasonally Adjusted Annual Rate:** A rate for a given period that is typically less than one year, but that is computed as if the rate were for a full year and seasonally adjusted.

**Nonfarm Payroll Employment:** Civilian non-farm payroll employees. The self-employed, farm workers, members of the armed forces, private household employees, and workers on strike are excluded.