

Washington State Economic and Revenue Forecast

March 2019
Volume XLII, No. 1



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

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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 March 28, 2019.

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Executive Summary

- The national economy is expanding at a solid but slowing pace. Real GDP rose 2.2% (SAAR) in the fourth quarter after growing 3.4% (SAAR) in the third quarter.
- The forecast for real GDP growth in 2019 is 2.4%, down from 2.6% in November. The long-range forecast is now expected to be 1.9%, 1.7%, 1.9% and 2.0% in 2020 through 2023. This compares to growth rates of 1.8%, 1.8%, 1.9% and 2.1% for 2020 through 2023 in the November forecast.
- Washington annual personal income growth continued to lead the nation in 2018.
- Seattle home prices continue to weaken though housing construction remains strong.
- The Washington economic forecast is very similar to the November forecast.
- General Fund-State (GF-S) revenue collections since the November 2018 forecast have come in \$245 million over the forecasted amount, but \$37 million of that amount was revenue that arrived earlier than expected rather than a true surplus.
- Forecasted GF-S revenue has increased by \$256 million in the current biennium, \$545 million in the 2019-21 biennium and \$559 million in the 2021-23 biennium.
- Recently enacted legislation will increase forecasted Revenue Act tax receipts by \$115 million in the 2019-21 biennium and \$190 million in the 2021-23 biennium.
- Besides the legislative increase, forecasted Revenue Act taxes were further increased due to stronger-than-expected receipts since the November forecast.
- Forecasted property tax revenue was increased due to an increase in the expected value of existing property for the 2019 levy, which will carry forward into future levies.
- Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$307 million in the current biennium, \$553 million in the 2019-21 biennium and \$564 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 but slowing pace. Real GDP rose 2.2% (SAAR) in the fourth quarter after growing 3.4% in the third quarter. Job gains were weak in the latest

report, but the trend remains moderate. The unemployment rate has fallen to below 4%. Consumer and business confidence remain near cyclical highs. Oil prices are increasing but remain low. Monetary policy has remained steady. The manufacturing sector has slowed but growth is still positive. On the downside, the housing market recovery remains slow. Exports have declined due to trade tensions. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

The economic outlook is similar to November

The economic outlook is similar to the November forecast. The March Blue Chip forecast for real GDP growth in 2019 is 2.4%, down from 2.6% in November. The Blue Chip long-range forecast is now expected to be 1.9%, 1.7%, 1.9% and 2.0% in 2020 through 2023. This compares to growth rates of 1.8%, 1.8%, 1.9% and 2.1% for 2020 through 2023 in the November forecast.

Washington Economic Forecast

The Washington economy is expanding at a rapid pace

The Washington economy is expanding at a rapid pace. Washington job growth remains strong and the unemployment rate remains near its all-time low. Washington annual personal income growth continued to lead the nation in 2018. Seattle home prices continue to weaken though housing construction remains strong. Washington manufacturing activity continues to expand but exports declined over the year. Seattle area consumer price inflation remains above the national average.

The Washington economic forecast is very similar to the November forecast

The Washington economic forecast is very similar to the November forecast. We expect 2.2% Washington employment growth this year, the same rate we expected in the November forecast. We expect employment growth to average 1.1% per year in 2020 through 2023, which is also the same rate as in the November forecast. Our forecast for nominal personal income growth this year is 4.6%, down from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, the same rate as in the November forecast. We expect 42,600 housing units authorized by building permits this year compared to 43,600 in the November forecast. We expect permits to average 42,200 in 2020 through 2023, compared to 42,000 in the November forecast. We expect Seattle inflation to fall from 3.2% last year to 2.8% in 2019. We expect inflation to remain moderate during the remainder of the forecast with rates of 2.3%, 2.2%, 2.2%, and 2.1% in 2020, 2021, 2022, and 2023.

Revenue Forecast

The revenue forecast has increased due to legislative...

Since the November 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$245 million higher than forecasted. \$37 million of that amount, however, represented revenue that arrived earlier than expected rather than a true

*...changes,
strong
Revenue Act
receipts and
increased
property
valuations*

surplus in collections. Most of the actual surplus came from Revenue Act taxes, which came in much stronger than forecasted. Because of this strength, plus recently enacted legislation that will increase tax receipts in the 2019-21 and 2021-23 biennia, forecasted Revenue Act receipts have increased despite there being little change in the economic forecast. Forecasted property tax collections have also increased, due to an increase in the expected value of existing property for the 2019 property tax levy, which will carry forward into future levies. The other main forecast increase was in real estate excise taxes, which have also been coming in higher than forecasted.

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

*17-19: +\$256
19-21: +\$545
21-23: +\$559*

For the current biennium, revenue sources that are tracked monthly came in \$255.7 million higher than forecasted in November. Changes to the economic forecast resulted in a \$10.7 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$255.7 million in the current 2017-19 biennium. Legislative changes added \$114.9 million to projected collections for the 2019-21 biennium and \$190.0 million for the 2021-23 biennium. Changes to the economic forecast resulted in increases of \$429.8 million to projected collections for the 2019-21 biennium and \$369.0 million for the 2021-23 biennium. The March 2019 forecast for GF-S revenue totals \$44,181.7 million in the 2017-19 biennium, \$49,608.6 million in the 2019-21 biennium and \$53,336.7 million in the 2021-23 biennium.

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

*17-19: +\$307
19-21: +\$553
21-23: +\$564*

Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$307.0 million in the current biennium, \$553.5 million in the 2019-21 biennium and \$563.9 million in the 2021-23 biennium. The March 2019 forecast for Near GF-S revenue totals \$46,106.4 million in the 2017-19 biennium, \$50,555.3 million in the 2019-21 biennium and \$54,358.5 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 but slowing pace. Real GDP rose 2.2% (SAAR) in the fourth quarter after growing 3.4% (SAAR) in the third quarter.
- Employment growth was weak in February, but the trend remains solid and the unemployment rate is low.
- Consumer confidence remains high.
- The manufacturing sector has slowed and the construction sector has stalled.
- U.S. oil production is at an all-time high; oil prices are picking up.
- Inflation remains low.
- The forecast for real GDP growth in 2019 is 2.4%, down from 2.6% in November. The long-range forecast is now expected to be 1.9%, 1.7%, 1.9% and 2.0% in 2020 through 2023. This compares to growth rates of 1.8%, 1.8%, 1.9% and 2.1% for 2020 through 2023 in the November forecast.
- Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A further 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 but slowing pace. Real GDP rose 2.2% (SAAR) in the fourth quarter after growing 3.4% in the third quarter. Job gains were weak in the latest report, but the trend remains solid. The unemployment rate has fallen to below 4%. Consumer and business confidence remain near cyclical highs. Oil prices are increasing but remain low. Monetary policy has remained steady. The manufacturing sector has slowed but growth is still positive. On the downside, the housing market recovery remains slow. Exports have declined due to trade tensions. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

U.S. real GDP rose 2.2% (SAAR) in the fourth quarter

U.S. real GDP rose 2.2% (SAAR) in the fourth quarter of 2018 after growing 3.4% (SAAR) in the third quarter. For all of 2018, GDP rose 2.9%, up from 2.2% in 2017. In the fourth quarter,

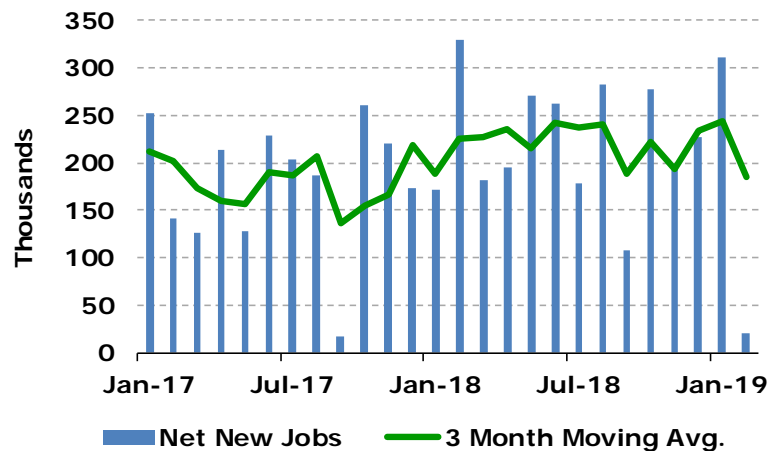
consumer spending slowed but remained solid, growing 2.5% (SAAR) after third growth of 3.5% (SAAR). Consumer spending again accounted for the bulk of overall growth, contributing 1.7 points to top line GDP growth. Fixed investment slowed from the robust third quarter growth of 15.2% (SAAR) to 3.7% (SAAR) in the fourth quarter, adding 0.7 percentage points to GDP growth. Nonresidential investment remained positive while residential investment declined. Final sales increased 2.1% (SAAR) after growing just 1.0% (SAAR) the quarter before. Government spending was negative due to a 6.1% (SAAR) decline in federal nondefense spending and a 1.3% (SAAR) decline from state and local government. Exports increased 1.8% (SAAR), but it was not enough to offset the increase in imports, causing net exports to subtract 0.1 points from GDP growth. Real disposable income growth improved to 4.3% (SAAR) from 2.6% (SAAR) in the third quarter.

Employment growth has remained solid despite the weak February report

The trend in employment growth remains solid despite the weak February jobs report. Nonfarm payrolls increased just 20,000 in February. In the past three months, the U.S. economy is averaging 186,000 net new jobs per month (see Figure 1.1). In 2018, the U.S. economy averaged 211,000 net new jobs each month, up from 180,000 in 2017. In February, the goods-producing sector declined 32,000 jobs due primarily to a 31,000 job decline in construction. Private service-providing industries increased by 57,000 jobs in February. Sectors with the highest job gains were professional and technical services (+22,000) and health care (+20,800). Notable employment declines were in education services (-18,700), retail trade (-6,100), and state and local government education (-10,600). The unemployment rate declined to 3.8% from 4.0%, helped by furloughed federal employees going back to work. Average hourly earnings increased by \$0.11 or 0.4% and are up 3.4% since last year.

Figure 1.1: Nonfarm Employment Growth

Employment growth in February was weak



Source: Bureau of Labor Statistics; data through February 2019

Consumer attitudes remain strong

Consumer confidence is down from last year but remains high. The Conference Board measure of consumer confidence fell 7.3 points to 124.1. Confidence is down 2.9 points from a year ago. The present situation component declined 12.2 points as consumers felt worse about the job market. The expectations index fell as well, weighed down by declining optimism for business conditions. The University of Michigan Consumer Sentiment index moved in the opposite direction as the Conference Board reading in March, increasing 4.0 points to 97.8. The index is now down 3.6 points from a year ago. Respondents were more optimistic about both current conditions and future expectations. Consumers' assessment of their household finances improved both in regards to income and assets.

Oil prices have risen

Oil prices have risen to start the year. West Texas Intermediate (WTI) increased to \$59 per barrel for the week of March 22nd, up from \$58 the week before and \$45 at the end of December. Brent crude oil has followed a similar path, increasing to \$67 from \$66 the previous week. In the final week of December, Brent oil was \$51 per barrel. U.S. production is at an all-time high. Oil production in the U.S. remained at 12.1 million barrels per day (bpd) in the third week of March. A year ago, production was at 10.4 million bpd. The number of drilling structures has fallen recently. The Baker Hughes rig count fell to 1,121 in the third week of March, a decline of 35 since last year. Internationally, Saudi Arabia is cutting oil production in a push to firm up oil prices. Venezuelan oil production is in jeopardy due to turmoil in the country. Venezuela suffered a catastrophic blackout that shut down its main oil export terminal and its heavy crude processing complex.

Inflation has declined

Headline inflation has declined. The Consumer Price Index (CPI) was up 1.5% over the year in February, unchanged from the month before. Headline inflation peaked in July at a 2.9% year-over-year increase. Much of the recent decline was due to a drop in gasoline prices. Gasoline prices increased 1.5% in February, but are still down 9.1% since last year. Food price inflation is slowly starting to creep up. Prices were up 0.4% over the month and are up 2.0% from last year. Shelter costs continue to be a steady driver of overall price inflation as rents continue to rise. Shelter costs increased 0.3% in February and are now up 3.4% year over year. Core inflation, which excludes food and energy, was 0.1% in February and 2.1% over the year.

The housing market recovery has stalled

The housing market recovery has stalled. Housing starts fell 8.7% in February and are 9.9% below their February 2018 level. Single-family starts plummeted 17.0% but this was after a 19.2% increase in January. Single-family starts are down 10.6% from a year ago. Housing starts for the volatile multi-family sector increased 23.5% in February but remain down 5.4% since February 2018. Housing permits fell 1.6% in February and are down 2.0% from a year ago. Single-family permits are down

7.3% while multi-family permits are up 8.7% since last year. Despite the volatility, the multi-family segment has fully recovered from the housing downturn. New home sales fell 6.9% over the month in January, and are down 4.1% from a year ago. The inventory-to-sales ratio increased to 6.6 months, up from a 6.3-month supply in December. The increase was due to sales dropping faster than the reduction in inventory. Homebuilder confidence has stabilized. The National Association of Homebuilders (NAHB) Housing Market Index, which measures confidence of homebuilders, remained steady at 62 in March (readings above 50 indicate a positive view of conditions). Homebuilder confidence has improved from the recent trough of 56 in December, but remains below the 70 points registered in March 2018.

Home price appreciation has slowed

Home price appreciation has slowed. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.1% over the month in January. Home prices are now 3.5% higher than a year ago. Prices have increased 52.4% since the trough, and are now 3.8% above their previous peak. Rising prices encourage new construction, and contribute to homebuilder confidence. The recent decline in mortgage rates should also help home prices, as more potential buyers are able to afford a house. The average rate on the 30 year fixed rate loan was 4.06% in the third week of March 2019, down from the recent peak of 4.94% in November 2018 (see Figure 1.2).

Figure 1.2: U.S. 30-Year Fixed Mortgage Rate

Mortgage rates are declining



Source: Freddie Mac; data through March 28, 2019

The manufacturing sector has slowed

The manufacturing sector has slowed in recent months. The Institute of Supply Management (ISM) Report on Business again indicated expansion in the manufacturing sector in February. Although the index declined to 56.6 from 54.2, index levels above 50 indicate expansion. The new orders component decreased by 2.7 points, but remained strong at 55.5. Production

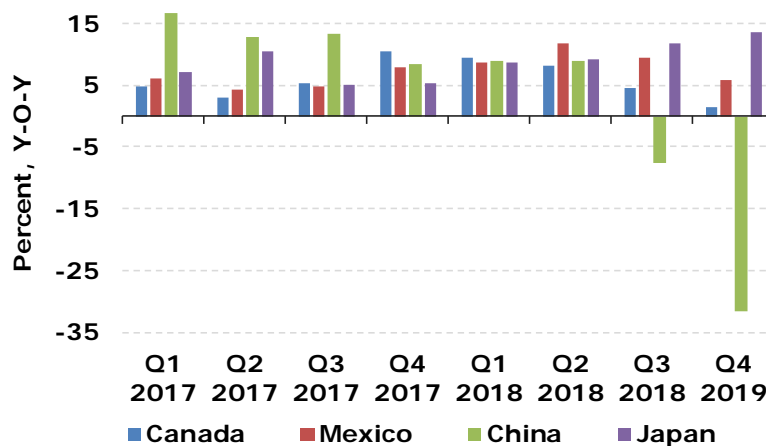
declined 5.7 points to 54.8. The latest G-17 report from the Federal Reserve indicates manufacturing output decreased 0.4% in February. Manufacturing output is now 1.0% higher than last year. The index for durables declined 0.1% in February, while the index for nondurables declined 0.7%. Other manufacturing (publishing and logging) rose 0.5%. New orders for core capital goods (nondefense capital goods excluding aircraft) rose 0.8% in January after declining 0.9% the prior month. New orders are now 3.1% above year-ago levels.

U.S. export growth is slowing

U.S. export growth is slowing. Total exports in the fourth quarter increased 3.5% year over year after posting an 8.1% year-over-year gain in the third quarter. Transportation equipment exports grew 2.7% after declining 3.0% in the third quarter. Aerospace exports increased 11.5% year over year while motor vehicles declined 13.2% year over year. Energy exports continue to grow rapidly. Petroleum and coal exports increased 14.9% from a year ago. Oil and gas exports continue to surge, up 48.5% since last year. Global economic growth appears to be slowing. The U.S. dollar has strengthened recently, which could hinder exports further. Exports to the rest of North America remain positive, although they are slowing. Exports in the fourth quarter to Canada increased 1.5% while exports to Mexico were up 5.9% from a year ago. Exports to Canada and Mexico could potentially be boosted by the recently signed trade agreement. Trade with China appears to be impacted by U.S.-China trade tensions. Exports to China declined 31.5% year over year in the fourth quarter, after a 7.5% decrease in the prior quarter. Exports to Japan, our third largest trade partner, increased 13.6% year over year in the fourth quarter (see Figure 1.3).

Exports to China have declined

Figure 1.3: U.S. Export Growth



Source: Wisier Trade; data through 2018Q4

Forecast

Our forecast was based on the March IHS Markit control forecast

The economic forecast was based on a modified version of the March 2019 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 March Blue Chip Consensus GDP forecasts for 2019 and 2020. We also matched the latest long-term Blue Chip GDP forecast for 2021 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 November

The economic outlook is similar to the November forecast. The March Blue Chip forecast for real GDP growth in 2019 is 2.4%, down from 2.6% in November. The Blue Chip long-range forecast is now expected to be 1.9%, 1.7%, 1.9% and 2.0% in 2020 through 2023. This compares to growth rates of 1.8%, 1.8%, 1.9% and 2.1% for 2020 through 2023 in the November forecast.

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 117 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 expansions. 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 slightly lower than the prices used in the November forecast. The refiner acquisition price of crude oil in 2019 is now expected to average \$59 per barrel compared to \$60 in the November forecast. Sanctions on Iranian oil are having an impact since taking affect in November. Venezuela's oil industry is at risk of collapsing due to the failing economy. Other members of OPEC and U.S. shale drillers have more than made up for any reduction in global supply. The United States will soon be a consistent net exporter of oil as new pipelines continue to come online. Oil prices will remain well below the levels seen earlier in the recovery. By 2023, the refiner acquisition price is expected to average \$55 per barrel compared to \$59 in the November forecast.

Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) has risen in recent years but remained low at 2.0% in 2018. Rising housing costs and a tight labor market have put upward pressure on inflation, although falling energy prices have kept overall inflation in check. We expect low to moderate inflation throughout the forecast. We expect inflation to be 1.8% this year, down from 1.9% in the previous forecast. We then expect inflation to range from 2.1% to 1.9% each year from 2020 through 2023. Core inflation (minus food and energy) is expected to be 2.0% this year. The forecast calls for core inflation to slightly surpass the Federal Reserve's goal of 2% next year at 2.1% and then peak at 2.2% in 2020. Core inflation is then expected to be 2.1% and 2.0% in 2022 and 2023.

Consumer spending growth will continue

Real consumer spending growth has been strong recently. We expect real consumer spending to grow 2.5% this year, down from 2.6% in the previous forecast. 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 to slow and average 2.0% from 2020 through 2023. We expect consumer spending to contribute 1.7 percentage points to real GDP growth this year then contribute 1.3 points on average for each year of the forecast through 2023.

Disposable personal income growth will moderate

Real disposable personal income is expected to grow 2.6% this year, down from the 2.9% growth in 2018. 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 4.4% this year, led by strong growth in transfer payments of 6.5%. We expect growth in transfer payments to average 4.9% per year for the remainder of the forecast as an increasingly older population results in rising Medicare and Social Security payments. Private sector wages and salaries are forecasted to grow 4.8%. Wage growth in the public sector will again lag, with growth of 2.5% in 2019. Total wages and salaries are forecasted to average 4.4% growth throughout the forecast. Rental income is expected to grow 4.3% this year and 4.9% in 2020. We then expect rental income growth to slow and reach 1.9% by the end of the forecast. Interest income is expected to grow 2.4% this year and then pick up and average 6.7% as the Federal Reserve continues to tighten monetary policy and interest rates rise. Dividend payments are projected to average 3.2% growth through 2023.

The employment forecast is mostly unchanged

The employment forecast is changed slightly from the November forecast. Growth in payrolls is anticipated to be 1.7% this year compared to 1.5% in the previous forecast. We then expect

slightly slower growth from 2020 through 2023 compared to November. Employment growth is expected to be 0.9%, 0.4%, 0.6%, and 0.6% in 2020 through 2023. By 2023, the forecast expects 295,000 fewer jobs than in November, a difference of 0.2%. Due to the steady job growth, we expect the unemployment rate to decline from 3.9% in 2018 to 3.6% in 2019. We expect the unemployment rate to increase slowly to 4.1% by 2023. The November forecast expected the unemployment rate to reach 3.8% in 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 61.6% 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 slow

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 also growing by 1.9% in 2018. The forecast calls for private sector job growth to average 0.6% from 2020 to 2023.

Business investment is expected to be strong

Real nonresidential fixed investment is expected to grow 4.0% this year after growing 7.0% in 2017. The softening of oil prices has led to a downshift in investment by energy companies. The capital-intensive manufacturing sector has slowed. Demand for new office space appears to be slowing as well. The U.S. office vacancy rate rose to 16.7% in the fourth quarter from 16.4% last year. New construction of office spaces declined to 10.4 million square feet in the fourth quarter from 12.0 million square feet a year ago. We expect real nonresidential construction to be flat this year. The forecast calls for a gradual ramp up to 4.5% by 2023. Real equipment investment is expected to grow 3.5% this year. We expect moderate growth throughout the forecast as businesses expand and improve productivity. The forecast calls for growth to average 3.6% from 2020 to 2023. We expect real nonresidential fixed investment growth to average 3.7% from 2020 to 2023.

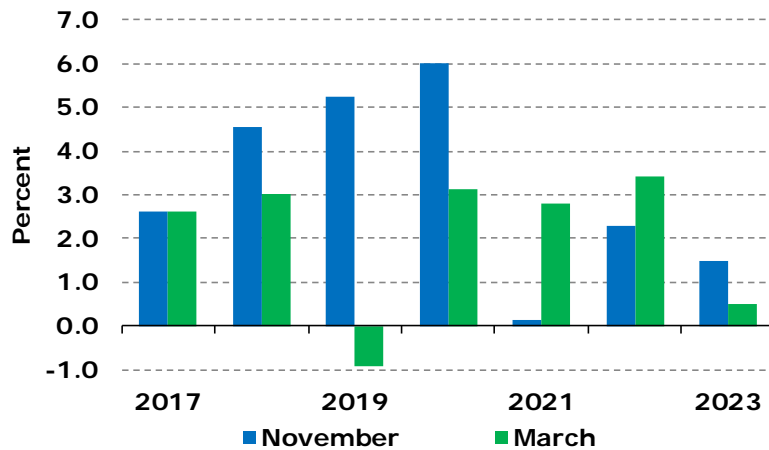
The housing market is in a slump

The housing market has yet to break out of its slump. Construction activity is declining and home sales are weak. Homebuilder confidence is no longer declining, but recent gains have been minimal. The forecast calls for housing starts to decline 0.9% this year, compared to 5.3% growth in the

previous forecast (see Figure 1.4). We expect the decline to be temporary and growth to resume throughout the remainder of the forecast. The forecast calls for growth of 3.1%, 2.8%, 3.4%, and 0.5% in 2020 through 2023. We expect growth in single-family housing starts of 0.3% 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 decline 3.7% this year. The forecast calls for growth to resume in 2020 and average 2.5% through 2023.

Figure 1.4: Growth in U.S. Housing Starts

The decline in housing starts will be temporary



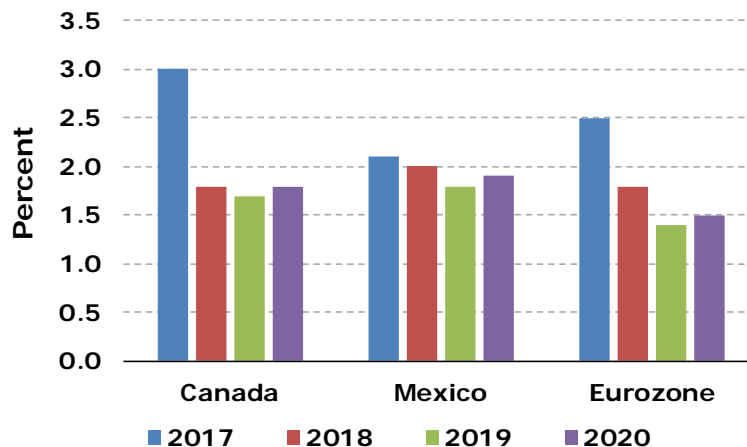
Source: U.S. Census Bureau, March 2019 forecast; historical data through 2018

Foreign growth is slowing

Major foreign economies are experiencing a slowdown (see Figure 1.5). The Canadian economy grew just 0.4% (SAAR) in the fourth quarter after 2.0% (SAAR) growth in the third quarter.

Figure 1.5: GDP Growth in Canada, Mexico, and the Eurozone

Growth in major economies is expected to slow



Source: Blue Chip, March 2019 forecast; historical data through 2018

Consumption grew at the slowest pace in almost four years and housing fell by the most in a decade. The latest Blue Chip forecast expects growth of 1.7% in Canada for 2019 and 1.8% in 2020. GDP growth in Mexico slowed to just 0.2% quarter over quarter (q/q) in the fourth quarter. A fall in industrial output led to the weak growth. The Mexican economy grew 2.0% for all of 2018, the lowest GDP growth since 2013. The Blue Chip forecast calls for 1.8% growth this year followed by 1.9% growth in 2020. Growth in the Eurozone remains sluggish. GDP rose by 0.2% (q/q) in the fourth quarter after growing just 0.1% (q/q) in the third quarter. Greece and Italy each declined by 0.1% (q/q) while Germany was static. The latest Blue Chip forecast calls for 1.4% growth this year in the Eurozone and 1.5% in 2020.

The Chinese economy continues to slow

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 6.6% growth in 2018, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.2% this year and 6.0% in 2020. Japan's economy rebounded in the fourth quarter, growing 1.9% (SAAR) after contracting 2.4% (SAAR) in the third quarter due to impacts from natural disasters. Early first quarter data suggest that the rebound will be short lived, however, with January GDP contracting 1.2% due to a slowdown in exports. 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 0.9% this year followed by 0.6% in 2020.

Economic growth of U.S. trading partners is expected to be weaker

Economic growth of major U.S. trading partners is expected to be weaker than in the November forecast. After growing 2.6% in 2018, we expect U.S. major trading partner growth of 2.3% this year. The forecast then expects growth of 2.4% in each of the next three years compared to 2.5%, 2.7%, and 2.7% growth expected in November. The forecast calls for growth of 2.6% in the final year of the forecast, compared to 2.7% growth expected in November. Weaker foreign growth, a strengthening dollar, and uncertainty regarding international trade have all caused U.S. exports to weaken. Real U.S. exports are forecasted to grow 3.2% this year after increasing 3.9% in 2018. Export growth is forecasted to pick up next year to 5.7%. We then expect real export growth to slow and average 4.5% 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 \$1,053 billion from \$779 billion in 2018. 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 \$1,242 billion, then decline slightly to \$1,182 billion in 2023. The March forecast expects federal tax

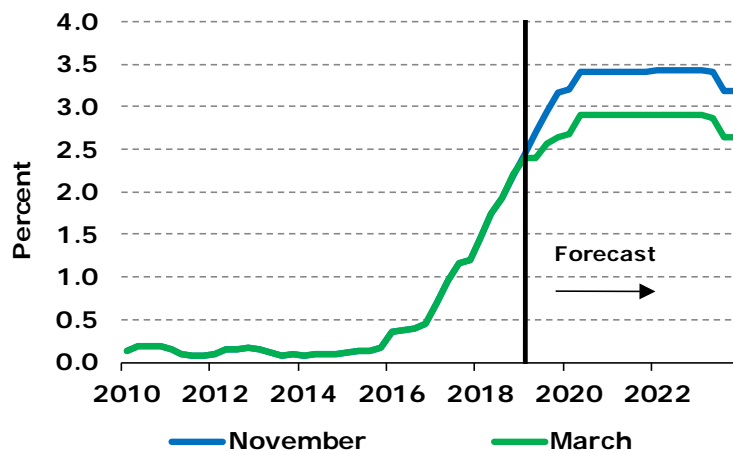
receipts to total \$3,351 billion this federal fiscal year, up 0.7% from the prior fiscal year. The forecast expects growth in tax receipts to average 4.2% each fiscal year from 2020 through 2023, reaching \$3,956 billion. The forecast calls for real defense spending to grow 4.4% this year and 0.5% in 2020. We then expect reductions in real defense spending through 2023. Real nondefense spending is anticipated to increase 3.3% this year and 0.7% 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 average 1.0% throughout the forecast.

The Fed is pausing on raising the Federal Funds Rate

The Federal Reserve is gradually tightening monetary policy after years of measures aimed at supporting the economy. The Federal Open Market Committee will soon decide how to manage the transition from a shrinking to a stable balance sheet. Rising uncertainties in the outlook in late 2018 prompted policymakers to pivot from a policy of gradually raising interest rates to a pause as it waits for indications about the economy’s direction. The March forecasts now anticipates two more twenty-basis-point rate hikes instead of the four assumed in November (see Figure 1.6).

The forecast for the Fed Funds rate is lower

Figure 1.6: Federal Funds Rate



Source: Federal Reserve, ERFC March 2019 forecast; historical data through 2018 Q4

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

Downside risks exceed upside risks

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
- Weak employment growth continues
- 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
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	17,510.2	17,837.3	18,295.0	18,818.2	19,209.2	19,530.8	19,879.5	20,274.5
% Ch	1.8	1.9	2.6	2.9	2.1	1.7	1.8	2.0
Real Consumption	12,084.4	12,402.6	12,714.0	13,070.3	13,363.9	13,609.1	13,880.1	14,158.6
% Ch	3.0	2.6	2.5	2.8	2.2	1.8	2.0	2.0
Real Nonresidential Fixed Investment	2,396.1	2,469.5	2,624.8	2,773.9	2,867.2	2,966.4	3,075.2	3,201.7
% Ch	-0.1	3.1	6.3	5.7	3.4	3.5	3.7	4.1
Real Residential Fixed Investment	579.2	601.0	613.4	598.6	602.3	612.0	629.3	644.6
% Ch	9.4	3.8	2.1	-2.4	0.6	1.6	2.8	2.4
Real Personal Income	15,377.9	15,650.0	16,047.7	16,455.2	16,830.3	17,178.8	17,548.2	17,942.0
% Ch	2.9	1.8	2.5	2.5	2.3	2.1	2.2	2.2
Real Per Capita Income (\$/Person)	47,639	48,136	49,010	49,893	50,668	51,355	52,097	52,902
% Ch	2.1	1.0	1.8	1.8	1.6	1.4	1.4	1.5
Price and Wage Indexes								
PCE Price Index (2012=100)	103.6	105.2	107.2	109.1	111.3	113.6	115.9	118.2
% Ch	0.6	1.6	1.9	1.8	2.0	2.1	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.382	2.427	2.481	2.533	2.588	2.642	2.702	2.759
% Ch	0.7	1.9	2.2	2.1	2.2	2.1	2.2	2.1
Employment Cost Index (Dec. 2005=1.0)	1.248	1.278	1.314	1.352	1.392	1.440	1.490	1.542
% Ch	2.2	2.4	2.8	2.9	3.0	3.4	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,433.8	19,075.1	19,968.2	20,978.6	21,862.7	22,754.9	23,691.1	24,692.5
% Ch	2.8	3.5	4.7	5.1	4.2	4.1	4.1	4.2
Personal Income	15,925.8	16,462.0	17,196.0	17,956.0	18,729.4	19,510.0	20,339.4	21,201.4
% Ch	3.5	3.4	4.5	4.4	4.3	4.2	4.3	4.2
Employment (Millions)								
U.S. Civilian Labor Force	158.0	159.8	161.2	162.9	164.6	165.8	166.8	167.8
Total U.S. Employment	150.1	152.4	154.5	156.8	158.8	159.5	160.2	161.0
Unemployment Rate (%)	4.99	4.66	4.11	3.72	3.56	3.81	4.00	4.04
Nonfarm Payroll Employment	143.11	145.53	147.77	150.40	152.49	153.22	153.93	154.87
% Ch	1.9	1.7	1.5	1.8	1.4	0.5	0.5	0.6
Manufacturing	12.36	12.37	12.55	12.80	12.87	12.61	12.47	12.47
% Ch	0.6	0.1	1.5	2.0	0.5	-2.0	-1.2	0.0
Durable Manufacturing	7.75	7.70	7.83	8.04	8.09	7.89	7.76	7.78
% Ch	0.1	-0.6	1.7	2.7	0.7	-2.6	-1.6	0.2
Nondurable Manufacturing	4.61	4.67	4.72	4.76	4.77	4.73	4.70	4.68
% Ch	1.6	1.4	1.1	0.9	0.3	-1.0	-0.5	-0.4
Construction	6.61	6.84	7.12	7.43	7.53	7.70	7.97	8.27
% Ch	4.7	3.6	4.0	4.3	1.5	2.3	3.5	3.7
Service-Providing	123.42	125.66	127.39	129.42	131.34	132.14	132.72	133.36
% Ch	2.0	1.8	1.4	1.6	1.5	0.6	0.4	0.5
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	41.7	48.6	58.6	59.8	57.9	56.7	55.2	54.2
Personal Saving/Disposable Income (%)	7.3	6.6	6.7	6.6	6.5	6.7	6.8	6.9
Auto Sales (Millions)	7.2	6.5	5.7	5.1	4.9	4.8	4.8	4.9
% Ch	-5.8	-10.7	-11.6	-10.5	-4.5	-1.3	0.2	1.6
Housing Starts (Millions)	1.149	1.201	1.252	1.209	1.256	1.283	1.338	1.356
% Ch	9.1	4.5	4.3	-3.4	3.9	2.2	4.3	1.3
Federal Budget Surplus (Billions)	-614.8	-667.7	-856.9	-1,035.4	-1,121.9	-1,200.5	-1,262.0	-1,285.5
Net Exports (Billions)	-518.7	-553.1	-588.5	-656.0	-681.3	-673.7	-698.5	-686.6
3-Month Treasury Bill Rate (%)	0.18	0.55	1.41	2.33	2.62	2.70	2.67	2.66
10-Year Treasury Note Yield (%)	2.02	2.10	2.57	2.87	2.97	3.18	3.25	3.27
Bond Index of 20 G.O. Munis. (%)	3.51	3.51	3.67	4.15	4.27	4.49	4.61	4.67
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.57	4.68	4.87	4.92	4.92

Table 1.2

Forecast Analysis

Comparison of Forecasts for 2017-19

U.S.	Average Annual Rate of Growth (Percent) 2017:2-2019:2		Average Rate (Percent) 2017:3 to 2019:2	
	Real GDP	PCE Price Index	3 Month T-Bill Rate	Mortgage Rate
2014				
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
2015				
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
2016				
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
2017				
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
2018				
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
2019				
March	2.7	1.9	1.87	4.36

Table 1.3

Forecast Analysis

Comparison of Forecasts for 2019-21

U.S.	Average Annual Rate of Growth (Percent) 2019:2-2021:2		Average Rate (Percent) 2019:3 to 2021:2	
	Real GDP	PCE Price Index	3 Month T-Bill Rate	Mortgage Rate
2016				
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
2017				
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
2018				
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
2019				
March	1.8	2.1	2.66	4.77

Table 1.4
Forecast Comparison
 Forecast 2019 to 2023

Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
U.S.							
Real GDP							
March	17837.3	18295.0	18818.2	19209.2	19530.8	19879.5	20274.5
% Ch	1.9	2.6	2.9	2.1	1.7	1.8	2.0
November	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
PCE Price Index							
March	105.2	107.2	109.1	111.3	113.6	115.9	118.2
% Ch	1.6	1.9	1.8	2.0	2.1	2.1	2.0
November	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
Unemployment Rate							
March	4.66	4.11	3.72	3.56	3.81	4.00	4.04
November	4.66	4.11	3.61	3.48	3.68	3.77	3.77
Mortgage Rate							
March	3.85	4.16	4.57	4.68	4.87	4.92	4.92
November	3.85	4.16	4.82	5.09	5.24	5.23	5.18
3 Month T-Bill Rate							
March	0.55	1.41	2.33	2.62	2.70	2.67	2.66
November	0.55	1.41	2.42	2.99	3.21	3.17	3.15



Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid pace.**
- **Washington job growth remains strong and the unemployment rate remains near its all-time low.**
- **Washington annual personal income growth continued to lead the nation in 2018.**
- **Seattle home prices continue to weaken but Washington housing construction remains strong.**
- **Washington exports declined over the year due to a drop in agricultural exports.**
- **Seattle area consumer price inflation remains above the national average.**
- **The Washington economic forecast is very similar to the November forecast.**
- **As in November, 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 job growth remains strong and the unemployment rate remains near its all-time low. Washington annual personal income growth continued to lead the nation in 2018. Seattle home prices continue to weaken though housing construction remains strong. Washington manufacturing activity continues to expand but exports declined over the year. Seattle area consumer price inflation remains above the national average.

We have four months of new WA employment data

We have four months of new Washington employment data since the November forecast. Total nonfarm payroll employment rose 24,900 (seasonally adjusted) in November, December, January, and February, which was 1,800 more than the 23,100 expected in the November forecast. Manufacturing added 3,400 jobs, including 1,100 aerospace jobs. Construction added 300 jobs and

government payrolls added 800 jobs. Private services-providing sectors added 20,400 jobs in the four-month period.

New QCEW data lowered the estimated level of employment

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 October 2018 by 14,100 jobs (0.4%). As a result of the downward revision to history and stronger-than-expected growth, the combined effect is 12,300 (0.4%) fewer jobs in February 2019 than expected in the November forecast.

The unemployment rate remains low

Washington’s February unemployment rate was 4.5%, unchanged from November, December, and January. A year ago, in February 2018, the Washington unemployment rate stood at 4.6%. The current unemployment rate is just slightly higher than the all-time low of 4.4%.

Washington UI claims remain near the post-recession low

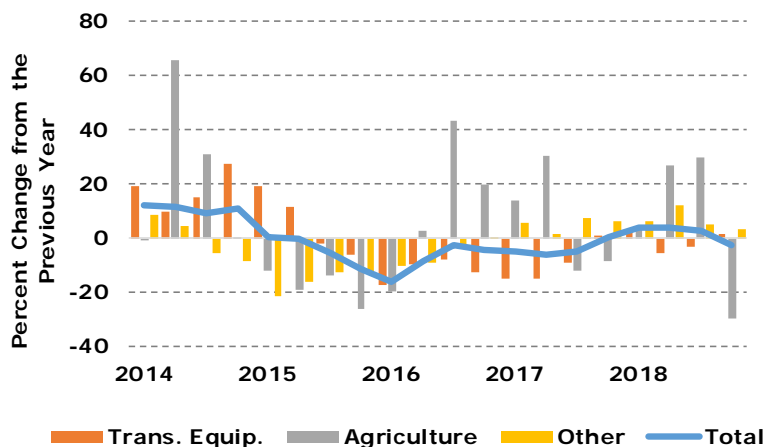
Washington initial claims for unemployment insurance remain near the post-recession low. The four-week moving average of seasonally adjusted claims declined to 6,400 in the week ending March 23, 2019 from 6,800 in the previous week. The current level of claims is close to the post-recession trough of 5,800. Claims have fallen 62% since the peak in early 2009.

Washington agricultural exports declined in the fourth quarter

A huge reduction in agricultural exports caused the first decline in overall Washington exports in more than a year. Washington exports decreased 2.7% in the fourth quarter of 2018 compared to the fourth quarter of 2017 (see Figure 2.1). Exports of agricultural products fell 29.5% over the year. Transportation

Figure 2.1: Washington Exports

Washington exports declined over the year



Source: Wiser Trade; data through Q4 2018

equipment exports (mostly Boeing planes) increased 1.8% and exports of all other commodities (mostly manufacturing) increased 3.6%.

Washington housing construction increased in the fourth quarter

Washington housing construction increased in the fourth quarter of 2018 and exceeded the November forecast. The number of housing units authorized by building permits increased to 48,600 units (SAAR) in the fourth quarter of 2018 from 42,400 units in the third quarter. The November forecast expected 42,800 units in the fourth quarter. The number of single-family units averaged 22,400 (SAAR) in the fourth quarter and the number of multi-family units averaged 26,200. Permits weakened in January 2019 to an annual rate of 41,400 units. The November forecast expected 42,900 units for the first quarter as a whole.

Seattle home price appreciation has clearly cooled

Despite an increase in January, Seattle home price appreciation has clearly cooled. Seasonally adjusted Seattle area home prices increased 0.3% in January according to the S&P/Case-Shiller Home Price Indices. This was the first monthly increase in the local index since June 2018. In January, the over-the-year growth was 4.0% in Seattle, barely above the 3.5% increase in the 20-City Composite Home Price Index. A year ago, Seattle's over-the-year growth was 12.8%. Seattle home prices are still up 89% since the December 2011 trough and exceed the May 2007 peak by 31%.

Manufacturing continues to expand

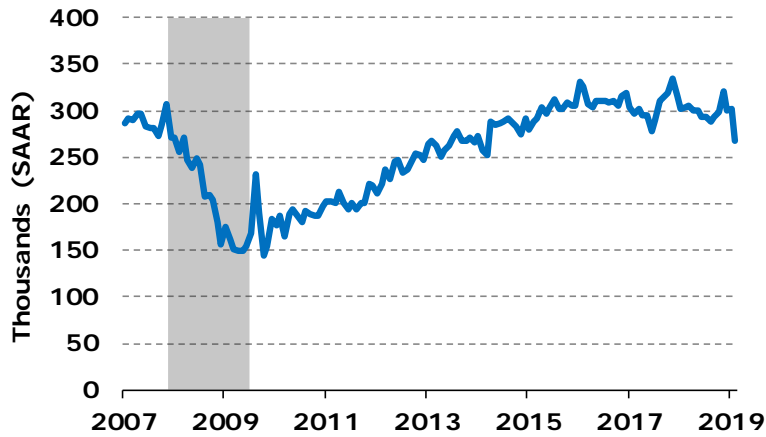
The Institute of Supply Management - Western Washington Index (ISM-WW) increased in February and remained in positive territory. The index, which measures conditions in the manufacturing sector, increased from 54.5 in January to 61.1 in February (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 19 months. The production, orders, employment, and inventory components all indicated expansion in February while the deliveries component indicated contraction.

February car and truck sales were the lowest in nearly five years

Car and truck sales plummeted in February to the lowest level in nearly five years but unusually severe winter weather may have held down sales (see Figure 2.2). Seasonally adjusted new vehicle registrations fell 11.0% to 268,200 (SAAR) in February. Sales are down 11.9% over the year and 19.9% since the November 2017 post-recession peak.

Figure 2.2: New Light Vehicle Registrations

Car and truck sales plummeted in February



Source: WA State Department of Licensing, ERFC; data through February 2019

Washington personal income grew 4.8% (SAAR) in the fourth quarter

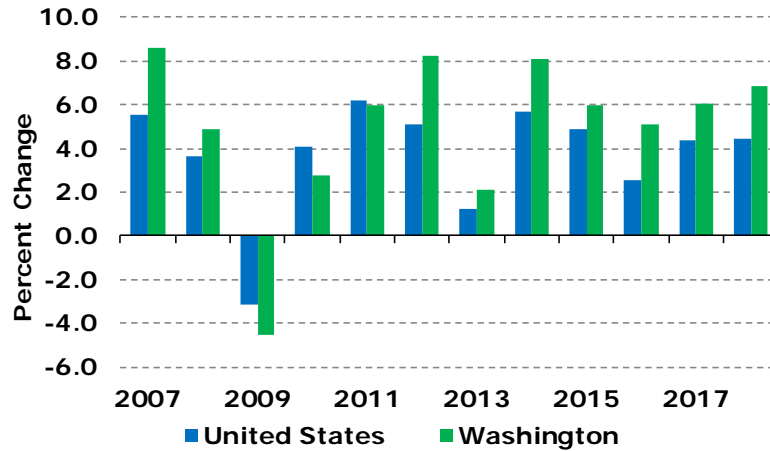
In March, after the forecast was complete, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the fourth quarter of 2018. According to these estimates, Washington personal income rose to \$467.1 billion (SAAR) in the fourth quarter of 2018 from \$461.7 billion in the third quarter. The reported 4.8% growth rate (SAAR) in Washington personal income was the 31st largest among the states and District of Columbia and lower than the 5.2% growth rate for the U.S. as a whole. However, the reported fourth quarter earnings growth was distorted by information earnings which have seasonal adjustment problems. Excluding earnings from the information sector, Washington personal income grew at a 5.4% rate in the fourth quarter, which ranked 20th among the states and District of Columbia and was above the national average rate of 5.0%.

2018 Washington personal income growth was the highest in the nation

The March personal income release also included preliminary estimates for 2018 as a whole. Washington personal income rose to \$458.0 billion (SAAR) in 2018 from \$428.8 billion in 2017. The 6.8% growth rate in Washington personal income was the largest among the states and District of Columbia and was much higher than the 4.5% growth rate for the U.S. as a whole (see Figure 2.3). The difference between Washington and U.S. personal income and GDP growth was mostly due to two sectors: retail trade (which includes electronic shopping) and information (which includes software publishing and other IT services such as internet publishing and web search portals).

Figure 2.3: Personal Income Growth

Washington personal income growth was much higher than the rate for the U.S. as a whole in 2018



Source: BEA; data through 2018

Seattle inflation remains above the national average

Seattle area consumer price inflation remains above the national average. Over the last year, from February 2018 to February 2019, consumer prices in the Seattle area rose 2.7% (seasonally adjusted) compared to 1.5% for the U.S. city average. Core prices, which exclude food and energy, increased 3.0% in Seattle compared to 2.1% for the nation.

Washington State Forecast

The Washington economic forecast is very similar to the November forecast

The Washington economic forecast is very similar to the November forecast. We expect 2.2% Washington employment growth this year, the same rate we expected in the November forecast. We expect employment growth to average 1.1% per year in 2020 through 2023, which is also the same rate as in the November forecast. Our forecast for nominal personal income growth this year is 4.6%, down from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, the same rate as in the November forecast. We expect 42,600 housing units authorized by building permits this year compared to 43,600 in the November forecast. We expect permits to average 42,200 in 2020 through 2023, compared to 42,000 in the November forecast. We expect Seattle inflation to fall from 3.2% last year to 2.8% in 2019. We expect inflation to remain moderate during the remainder of the forecast with rates of 2.3%, 2.2%, 2.2%, and 2.1% in 2020, 2021, 2022, and 2023.

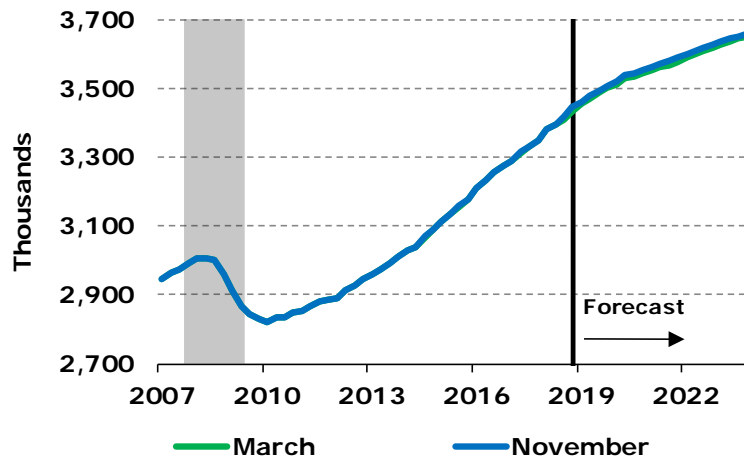
Washington Payroll Employment

Washington employment growth is similar to the November forecast

The Washington employment forecast is very similar to the November forecast. We expect 2.2% Washington employment growth this year, the same rate we expected in the November forecast. As in November, we expect growth to decelerate. We expect employment growth to average 1.1% per year in 2020 through 2023, the same rate as in the November forecast. While the growth rate is similar to the November forecast, the level is slightly lower due to a data revision (see Figure 2.4). On an annual basis, we expect 1.5% employment growth in 2020, 1.0% in 2021, 1.1% in 2022, and 1.0% in 2023.

Figure 2.4: Washington Employment

The level of Washington employment is slightly lower than assumed in November



Source: Employment Security Department, ERFC; historical data through Q4 2018

The aerospace employment forecast is higher than in November

Washington aerospace employment peaked in the first quarter of 2013. As of the fourth quarter of 2017, 15,100 jobs had been lost with most of the decline in 2016 and 2017. In November, we had assumed that aerospace employment would level off. However, revised and newly available employment data show recent employment growth. We still believe employment will be flat but the level will be 1,400 higher through 2023 than in the November forecast. On an annual average basis, we expect aerospace employment to increase 2.8% in 2019, and then remain unchanged through the rest of the forecast.

The software employment forecast is slightly higher than in November

We have slightly increased the software employment growth forecast in 2019 from 2.6% to 3.6% based on a revision to historical data and slightly stronger growth than expected. However, we also slightly lowered the forecasted growth rate for the next five years. The net result is that we now expect just 700 more software jobs in 2023 than assumed in November. On an

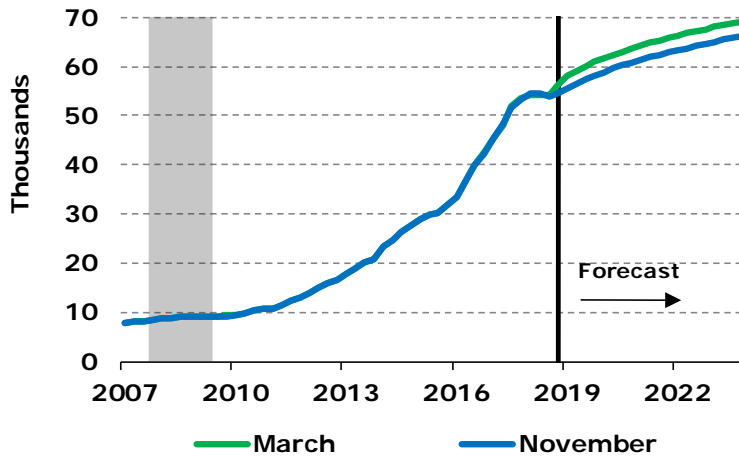
annual average basis, we expect growth rates of 0.7% in 2020, 1.3% in 2021, 1.6% in 2022, and 1.8% in 2023.

We have increased 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. After a dip in mid-2018, growth resumed in the fourth quarter. Our March forecast for this sector is higher than the forecast adopted in November based on faster than expected employment growth through February 2019. We expect employment to continue growing but at a decelerating rate (see Figure 2.5). On an annual basis, electronic shopping and mail order employment will grow 8.8% in 2019, 5.2% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

We expect electronic shopping employment growth to slow

Figure 2.5: Washington Electronic Shopping and Mail Order Employment



Source: Employment Security Department, ERFC; historical data through Q4 2018

Washington construction employment reached a new all-time high

Washington construction employment reached a new all-time high of 216,900 in the fourth quarter of 2018. Washington construction employment has grown by 81,800 (60.6%) since the trough in the first quarter of 2012 and exceeds its pre-recession peak by 6,900 (3.3%). The forecast calls for construction employment to peak at 217,700 in the first quarter of 2019 and remain near that level through 2023. On an annual average basis, we expect construction employment to grow 1.6% this year then declining 0.8% in 2020 and 0.3% in 2021. We expect employment growth to resume in the final two years with growth rates of 0.5% in 2022 and 0.8% in 2023.

Washington Personal Income

Washington personal income in the third quarter was close to our assumption

In December, the Bureau of Economic Analysis released estimates for state personal income through the third 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 third quarter of 2018 is \$0.1 billion (0.0%) lower than assumed in the November forecast. Wages were \$1.1 billion (-0.4%) lower than expected but nonwage income was \$0.9 billion (0.4%) above the forecast.

Personal income growth is very close to the November assumption

Our forecast for nominal personal income growth this year is 4.6%, down from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, the same rate as in the November forecast. On an annual basis, we expect personal income to grow 4.8% in 2020, 4.8% in 2021, 4.8% in 2022, and 4.7% in 2023.

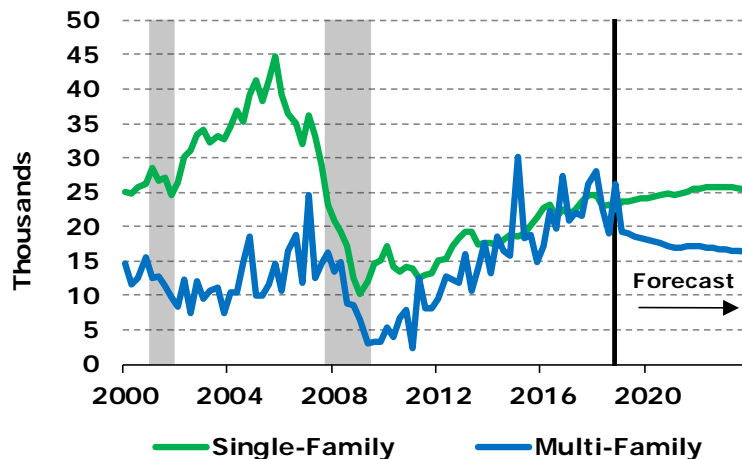
Washington Building Permits

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 24,000 in 2018. We believe 2018 was the peak in multi-family construction in this cycle and that permits will decline to 16,500 by 2023. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 23,400 in 2018. We expect single-family construction to continue to strengthen with the number of units rising to 25,600 in 2023.

Rising single-family construction will largely offset declining multi-family construction

Figure 2.6: Housing Units Authorized by Building Permits



Source: Census Bureau, ERFC; historical data through Q4 2018

Overall, the housing construction forecast is very close to the forecast adopted in November. We expect 42,600 housing units authorized by building permits this year compared to 43,600 in the November forecast. We expect permits to average 42,200 in 2020 through 2023, compared to 42,000 in the November forecast. On a calendar year basis, we expect 42,200 units in 2020, 42,100 in 2021, 42,600 in 2022, and 42,100 in 2023.

Seattle Consumer Price Index

We expect Seattle inflation to fall from 3.2% last year to 2.1% by 2023

After working to reduce overall inflation considerably in 2015 and 2016, rising energy costs added to headline inflation in 2017 and 2018. However, lower energy costs will moderate headline inflation in the future, especially in 2019. We expect Seattle inflation to fall from 3.2% last year to 2.8% in 2019. We expect inflation to remain moderate during the remainder of the forecast with rates of 2.3%, 2.2%, 2.2%, and 2.1% in 2020, 2021, 2022, and 2023.

Seattle shelter cost inflation is cooling

Core inflation (excluding food and energy) in Seattle was 2.9% in 2018 while national core inflation was 2.1%. The difference was mostly due to shelter costs, which were rising much faster in Seattle. Recent data indicate that Seattle shelter cost inflation is cooling while nationally it remains steady. As a result, we expect Seattle core inflation to move closer to the national average. Our forecast calls for core Seattle inflation to average 3.1% in 2019, 2.4% in 2020 and 2021, 2.3% in 2022, and 2.2% in 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 in addition to the baseline forecast.

Optimistic

The optimistic scenario assumes stronger productivity growth and less inflation.

The optimistic forecast assumes productivity rises at an annual average rate of 2.5%, 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 1.45 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 first quarter of 2019 as in the baseline. By the end of 2023, Washington nonfarm payroll employment is higher by 99,600 jobs (2.7%) than in the baseline forecast and Washington personal income is \$55.0 billion (9.4%) 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. 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. Negative wealth effects and employment declines lead households to curtail their spending sharply. Foreign growth also slows. The result is a three-quarter recession starting in the first quarter of 2020 during which real GDP declines 1.7%. The unemployment rate climbs through most of 2019 and 2020, reaching a high of 5.2% in the fourth quarter of 2020.

This scenario also assumes a weaker local economy

In addition to reflecting the impact of the weaker U.S. forecast on the state economy, aerospace employment resumes its decline rather than leveling off as in the baseline. Software employment also declines rather than growing moderately as in the baseline forecast. Construction employment peaks later than in the baseline and declines much more sharply. 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 191,000 (5.2%) lower than in the baseline forecast and Washington personal income is \$63.4 billion (10.8%) 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 forecast

The Governor’s Council of Economic Advisors’ national forecast is very close to the baseline forecast. The GCEA forecast for real GDP growth is close to the baseline forecast in each year of the forecast. The GCEA forecast averages 2.0% per year over the five-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 slightly higher than the baseline forecast of 2.1% growth. The GCEA members have the same a PCE inflation forecast at an average rate of 2.0%. The Council members’ mortgage rate forecast averages 4.9% compared to the baseline forecast of 4.8% and their oil price forecast averages \$64 per barrel compared to \$63 in the baseline forecast.

The GCEA members expect stronger Washington income growth

The GCEA scenario for Washington real personal income growth averages 2.9% per year in 2019 through 2023 compared to the baseline forecast of 2.7%. Their nominal personal income growth forecast averages 4.9% versus 4.7% in the baseline. The Council members forecast for total employment growth over the five-year period averages 1.3% per year, which is the same as in the baseline forecast. The GCEA forecasts for both manufacturing employment growth and construction employment growth are slightly more optimistic than the baseline forecast. The GCEA housing permit forecast is slightly higher than ours is, averaging 43,100 units per year through 2023 compared to 42,300 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 4,700 (0.1%) lower than in the baseline forecast but Washington personal income is \$5.2 billion (0.9%) 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
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	380.413	395.757	414.342	429.666	441.158	452.904	464.920	477.724
% Ch	4.5	4.0	4.7	3.7	2.7	2.7	2.7	2.8
Real Wage and Salary Disb.	190.408	199.860	213.068	222.282	228.345	233.984	239.976	247.194
% Ch	5.0	5.0	6.6	4.3	2.7	2.5	2.6	3.0
Real Nonwage Income	190.005	195.897	201.274	207.384	212.813	218.920	224.943	230.530
% Ch	4.0	3.1	2.7	3.0	2.6	2.9	2.8	2.5
Real Per Capita Income (\$/Person)	52,703	53,885	55,468	56,589	57,244	57,959	58,721	59,590
% Ch	2.8	2.2	2.9	2.0	1.2	1.3	1.3	1.5
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.036	1.052	1.071	1.091	1.113	1.136	1.159	1.182
% Ch	0.6	1.6	1.9	1.8	2.0	2.1	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.521	2.589	2.670	2.748	2.822	2.881	2.946	3.009
% Ch	1.9	2.7	3.1	2.9	2.7	2.1	2.2	2.1
Average Nonfarm Annual Wage	59,583	61,918	65,769	68,331	70,246	72,659	75,312	78,277
% Ch	2.7	3.9	6.2	3.9	2.8	3.4	3.7	3.9
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.00	26.81	27.93	28.97	29.84	30.81	31.83	32.89
% Ch	2.8	3.1	4.2	3.7	3.0	3.2	3.3	3.3
Current Dollar Income (Billions of Dollars)								
Personal Income	393.962	416.282	444.001	468.846	490.944	514.367	538.872	564.513
% Ch	5.1	5.7	6.7	5.6	4.7	4.8	4.8	4.8
Disposable Personal Income	345.944	365.885	391.178	414.406	434.107	455.183	476.732	498.662
% Ch	5.0	5.8	6.9	5.9	4.8	4.9	4.7	4.6
Per Capita Income (\$/Person)	54,580	56,679	59,437	61,748	63,702	65,823	68,061	70,415
% Ch	3.4	3.8	4.9	3.9	3.2	3.3	3.4	3.5
Employment (Thousands)								
Washington Civilian Labor Force	3,594.4	3,683.2	3,752.3	3,833.1	3,904.1	3,959.0	4,009.2	4,056.4
Total Washington Employment	3,396.1	3,501.1	3,579.5	3,663.0	3,732.8	3,776.0	3,816.8	3,859.3
Unemployment Rate (%)	5.52	4.94	4.61	4.44	4.39	4.62	4.80	4.86
Nonfarm Payroll Employment	3,193.3	3,283.8	3,363.9	3,441.5	3,508.4	3,547.9	3,583.5	3,621.9
% Ch	3.0	2.8	2.4	2.3	1.9	1.1	1.0	1.1
Manufacturing	292.7	287.1	284.0	291.1	293.9	292.1	292.2	294.9
% Ch	0.6	-1.9	-1.1	2.5	0.9	-0.6	0.0	0.9
Durable Manufacturing	210.6	203.8	199.5	205.4	207.5	206.0	205.7	207.9
% Ch	-0.1	-3.3	-2.1	3.0	1.0	-0.7	-0.1	1.0
Aerospace	93.2	87.7	82.5	85.8	86.3	86.3	86.3	86.3
% Ch	-1.1	-5.9	-5.9	3.9	0.6	0.0	0.0	0.0
Nondurable Manufacturing	82.0	83.3	84.5	85.7	86.4	86.1	86.5	87.0
% Ch	2.5	1.6	1.4	1.4	0.7	-0.3	0.4	0.6
Construction	178.9	193.5	206.6	216.3	215.3	214.2	214.3	215.8
% Ch	6.5	8.2	6.8	4.7	-0.5	-0.5	0.0	0.7
Service-Providing	2,715.4	2,796.9	2,867.0	2,927.7	2,993.0	3,035.3	3,070.8	3,104.9
% Ch	3.0	3.0	2.5	2.1	2.2	1.4	1.2	1.1
Software Publishers	57.3	60.2	63.1	66.9	67.8	68.5	69.6	70.8
% Ch	3.2	5.1	4.7	6.1	1.4	1.0	1.5	1.8
Electronic Shopping and Mail-Order	33.2	44.0	53.5	56.9	61.2	63.9	66.0	67.8
% Ch	17.7	32.5	21.7	6.4	7.6	4.4	3.3	2.7
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	40.153	44.515	48.601	44.167	42.367	41.909	42.557	42.413
% Ch	3.3	10.9	9.2	-9.1	-4.1	-1.1	1.5	-0.3
Single-Family	21.844	22.044	23.978	23.303	24.113	24.715	25.464	25.656
% Ch	17.0	0.9	8.8	-2.8	3.5	2.5	3.0	0.8
Multi-Family	18.310	22.471	24.623	20.864	18.254	17.194	17.092	16.757
% Ch	-9.4	22.7	9.6	-15.3	-12.5	-5.8	-0.6	-2.0
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.57	4.68	4.87	4.92	4.92

Table 2.2
Comparison of Alternative Forecasts

Fiscal Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP, Percent Change						
Optimistic	2.6	3.0	2.8	2.7	2.6	2.5
Baseline	2.6	2.9	2.1	1.7	1.8	2.0
Pessimistic	2.6	2.8	0.9	-0.7	2.0	1.6
PCE Price Index, Percent Change						
Optimistic	1.9	1.9	2.1	2.0	2.0	2.1
Baseline	1.9	1.8	2.0	2.1	2.1	2.0
Pessimistic	1.9	1.8	1.8	1.7	2.0	1.8
Mortgage Rate, Percent						
Optimistic	4.16	4.61	4.99	5.42	5.37	5.33
Baseline	4.16	4.57	4.68	4.87	4.92	4.92
Pessimistic	4.16	4.57	4.17	3.81	3.99	4.20
3 Month T-Bill Rate, Percent						
Optimistic	1.41	2.32	2.94	3.45	3.41	3.37
Baseline	1.41	2.33	2.62	2.70	2.67	2.66
Pessimistic	1.41	2.29	1.68	0.21	0.67	1.36
Washington						
Real Personal Income, Percent Change						
Optimistic	4.7	4.5	4.6	4.7	4.5	4.2
Baseline	4.7	3.7	2.7	2.7	2.7	2.8
Pessimistic	4.7	3.1	0.6	-1.2	0.9	1.4
Personal Income, Percent Change						
Optimistic	6.7	6.5	6.7	6.8	6.6	6.3
Baseline	6.7	5.6	4.7	4.8	4.8	4.8
Pessimistic	6.7	4.9	2.5	0.5	2.9	3.3
Employment, Percent Change						
Optimistic	2.4	2.4	2.2	1.8	1.8	1.6
Baseline	2.4	2.3	1.9	1.1	1.0	1.1
Pessimistic	2.4	2.2	0.8	-0.7	0.1	0.4
Housing Permits, Thousands of Authorized Units						
Optimistic	48.6	44.3	43.2	44.2	46.0	46.9
Baseline	48.6	44.2	42.4	41.9	42.6	42.4
Pessimistic	48.6	44.1	39.6	33.0	34.0	33.2

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

Calendar Years

	2019	2020	2021	2022	2023
U.S.					
Real GDP					
<i>Growth</i>					
ERFC	2.4	1.9	1.7	1.9	2.0
GCEA Average	2.5	2.0	1.9	1.9	2.0
Real Consumption					
<i>Growth</i>					
ERFC	2.5	2.0	1.9	2.0	2.0
GCEA Average	2.6	2.1	2.0	2.0	2.1
PCE Price Index					
<i>Growth</i>					
ERFC	1.8	2.1	2.1	2.0	1.9
GCEA Average	1.8	2.0	2.0	2.0	2.0
Mortgage Rate					
<i>Percent</i>					
ERFC	4.5	4.8	4.9	4.9	4.9
GCEA Average	4.7	4.9	4.9	4.9	5.0
Oil Price (Brent)					
<i>Dollars per barrel</i>					
ERFC	64.9	64.4	62.7	61.4	60.9
GCEA Average	65.1	64.7	63.6	62.9	62.7
Washington State					
Real Personal Income					
<i>Growth</i>					
ERFC	2.7	2.7	2.6	2.7	2.7
GCEA Average	3.2	2.9	2.7	2.8	2.9
Wage and Salary Employment					
<i>Growth</i>					
ERFC	2.2	1.5	1.0	1.1	1.0
GCEA Average	1.9	1.4	1.1	1.1	1.1
Manufacturing Employment					
<i>Growth</i>					
ERFC	2.1	-0.1	-0.5	0.6	1.0
GCEA Average	2.1	0.5	0.0	0.4	1.0
Construction Employment					
<i>Growth</i>					
ERFC	1.6	-0.8	-0.3	0.5	0.8
GCEA Average	2.7	0.5	0.1	0.1	0.0
Housing Permits					
<i>Thousands of authorized units</i>					
ERFC	42.6	42.2	42.1	42.6	42.1
GCEA Average	43.5	43.4	43.3	43.0	42.4
Washington Average Annual Wage					
<i>Growth</i>					
ERFC	2.4	3.2	3.6	3.8	4.0
GCEA Average	3.0	3.5	3.6	3.8	3.8

Table 2.4

Forecast Analysis

Comparison of Forecasts for 2017-19

Washington	Average Annual Rate of Growth (Percent) 2017:2-2019:2			Average Annual Rate (Thousands) 2017:3 to 2019:2
	Employment	Personal Income	Real Personal Income	Housing Units Authorized
2014				
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
2015				
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
2016				
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
2017				
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
2018				
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
2019				
March	2.3	5.9	3.9	46.4

Table 2.5

Forecast Analysis

Comparison of Forecasts for 2019-21

Washington	Average Annual Rate of Growth (Percent) 2019:2-2021:2			Average Annual Rate (Thousands) 2019:3 to 2021:2
	Employment	Personal Income	Real Personal Income	Housing Units Authorized
2016				
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
2017				
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
2018				
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
2019				
March	1.3	4.8	2.7	42.1

Table 2.6
Forecast Comparison
 Forecast 2019 to 2023

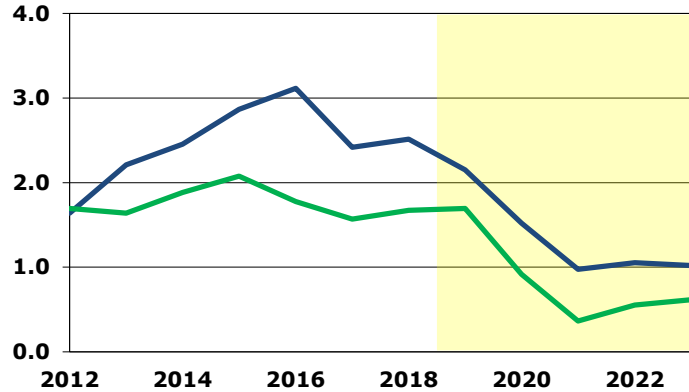
Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
Washington							
Real Personal Income							
March	395.757	414.342	429.666	441.158	452.904	464.920	477.724
% Ch	4.0	4.7	3.7	2.7	2.7	2.7	2.8
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
Personal Income							
March	416.282	444.001	468.846	490.944	514.367	538.872	564.513
% Ch	5.7	6.7	5.6	4.7	4.8	4.8	4.8
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
Employment							
March	3283.8	3363.9	3441.5	3508.4	3547.9	3583.5	3621.9
% Ch	2.8	2.4	2.3	1.9	1.1	1.0	1.1
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
Housing Permits							
March	44.515	48.601	44.167	42.367	41.909	42.557	42.413
% Ch	10.9	9.2	-9.1	-4.1	-1.1	1.5	-0.3
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

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

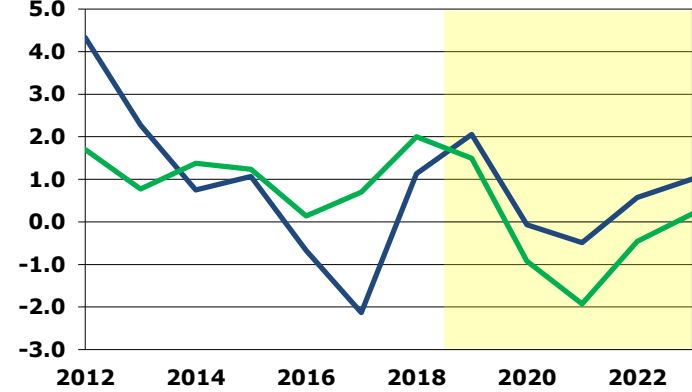
Forecast

Total Nonfarm Payroll Employment



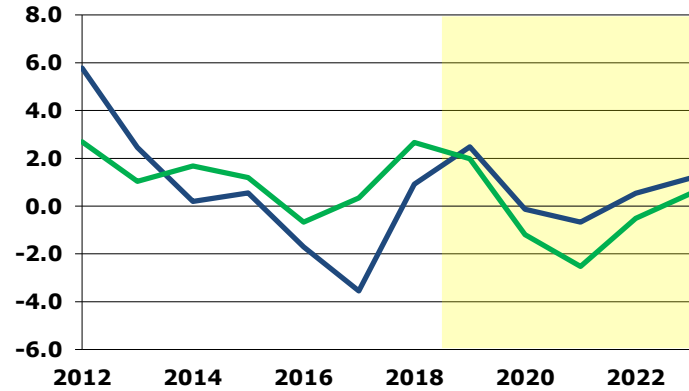
Source: WA State Employment Security Dept. 2018, ERFC 2023

Manufacturing Employment



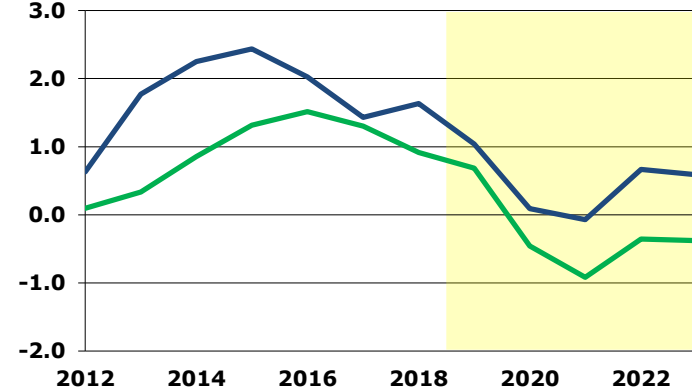
Source: WA State Employment Security Dept. 2018, ERFC 2023

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

Nondurable Manufacturing Employment



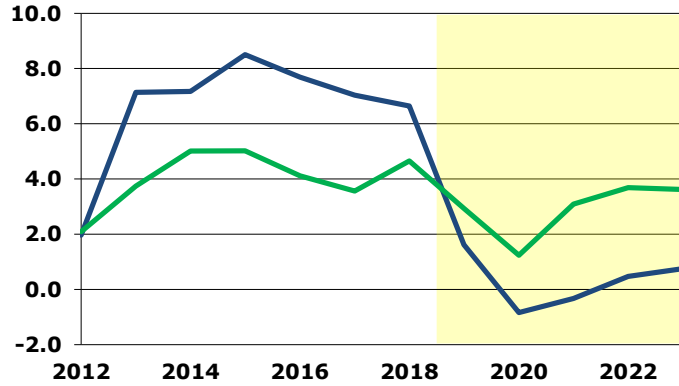
Source: WA State Employment Security Dept. 2018, ERFC 2023

■ Washington

■ U.S.

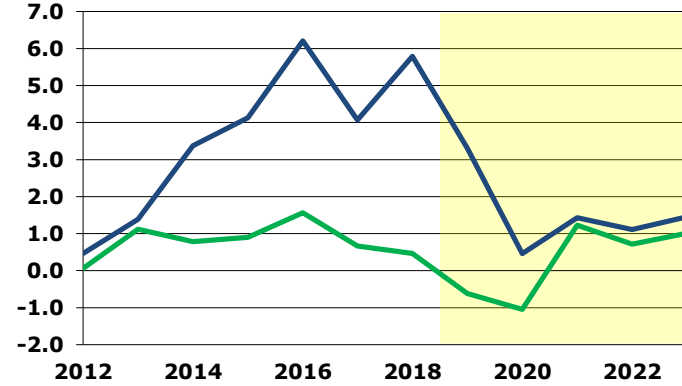
Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)
(Percent change)

Construction Employment



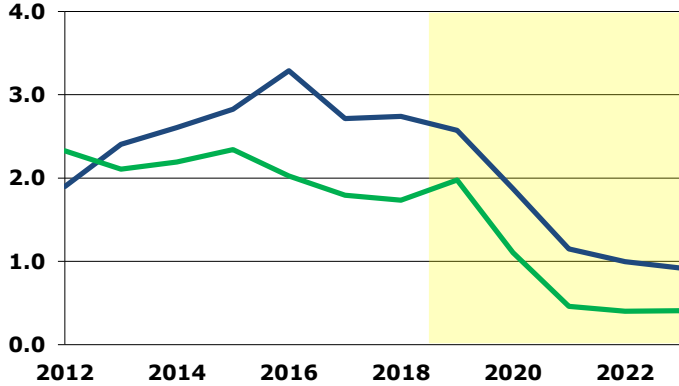
Source: WA State Employment Security Dept. 2018, ERFC 2023

Information Employment



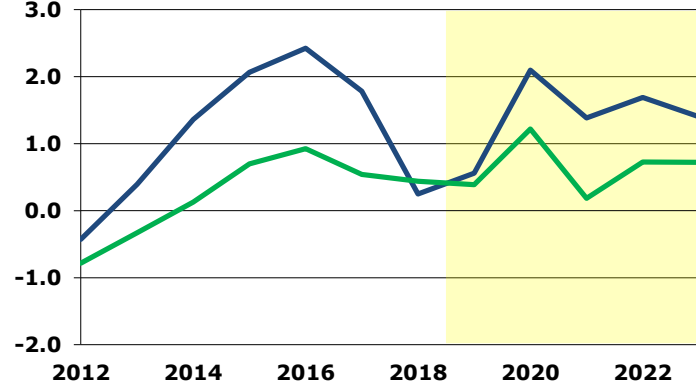
Source: WA State Employment Security Dept. 2018, ERFC 2023

Other Private Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

Government Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

■ Washington

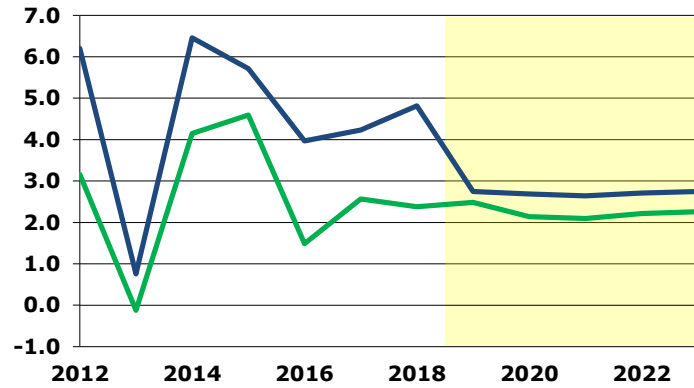
■ U.S.

□ Forecast

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

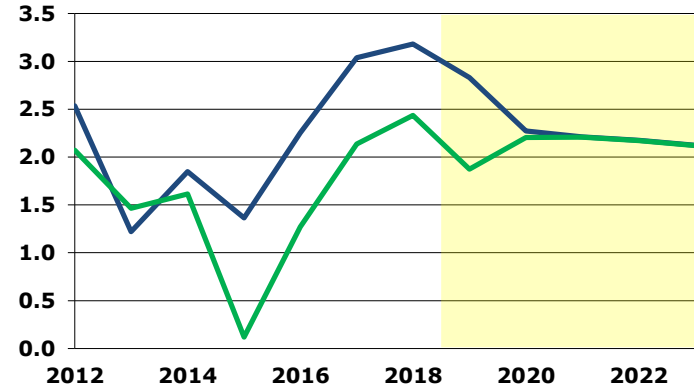
Forecast

Real Personal Income



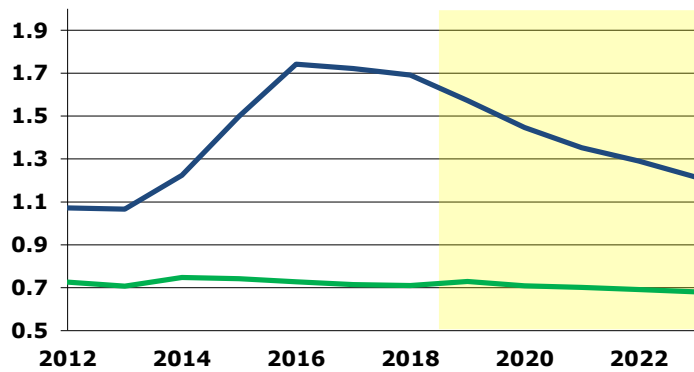
Source: Bureau of Economic Analysis 2017, ERFC 2023

Consumer Price Indices



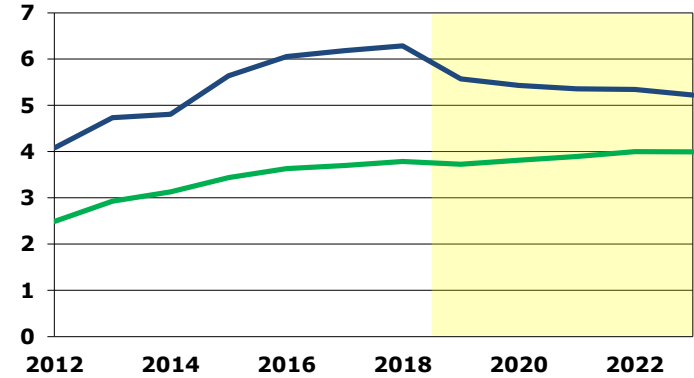
Source: Bureau of Labor Statistics 2018, ERFC 2023

Population



Source: Census Bureau 2018, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2018, ERFC 2023

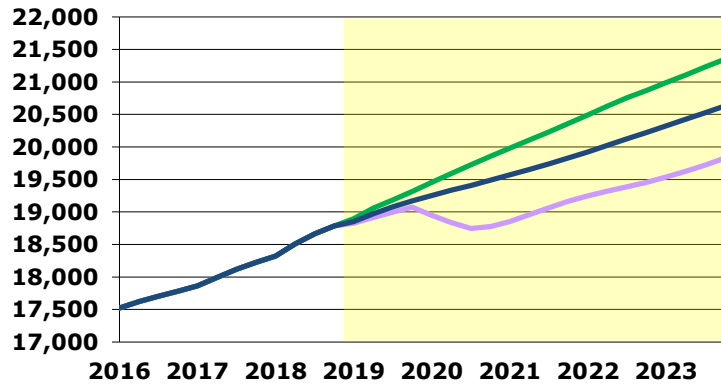
Washington

U.S.

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

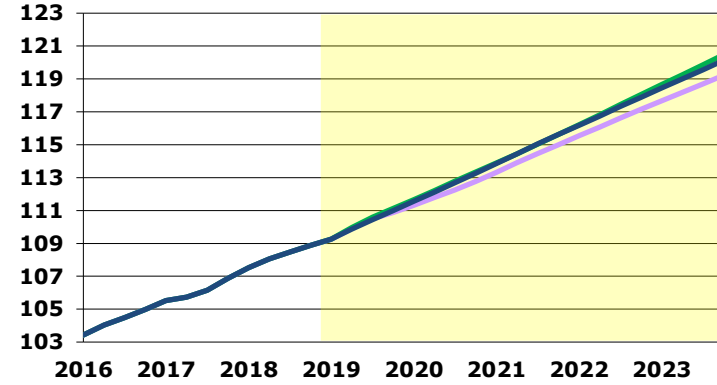
Forecast

Real GDP, Billions of 2012 Dollars



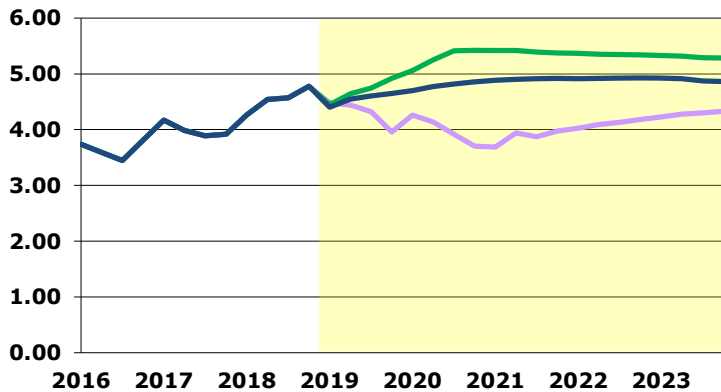
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

PCE Price Index, 2012 = 100



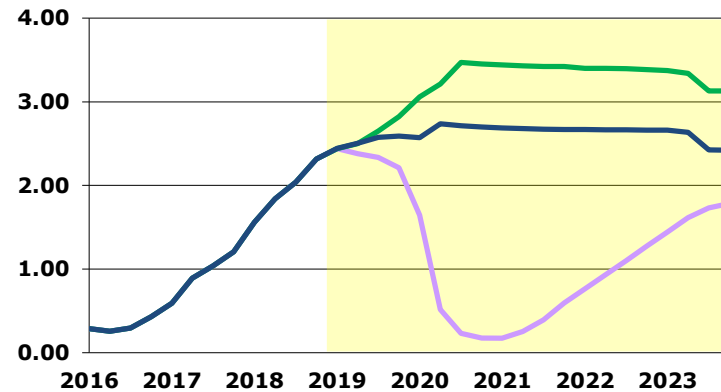
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2018 Q3, ERFC 2023

Three Month T-Bill Rate, Percent



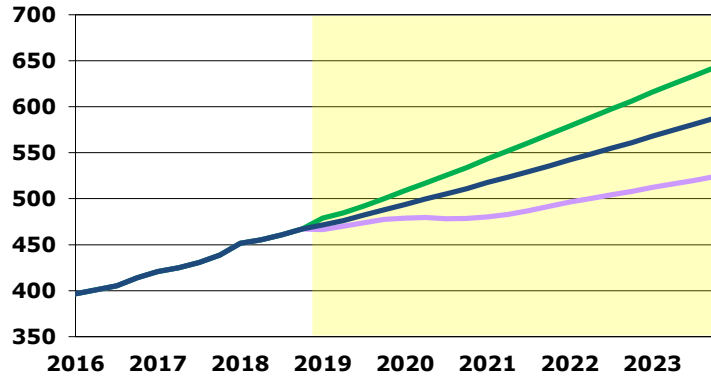
Source: Federal Reserve Board 2018 Q3, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

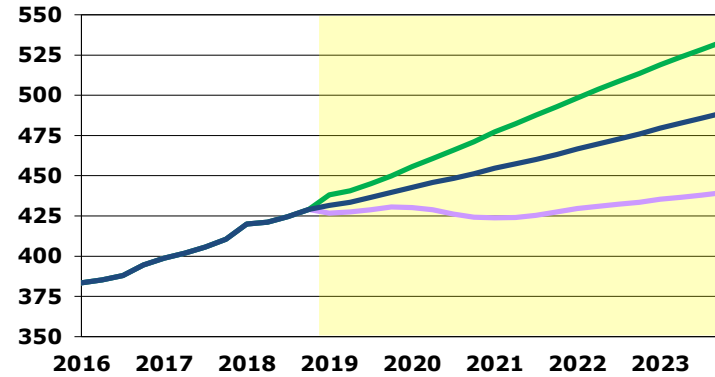
Forecast

Personal Income, Billions of Dollars



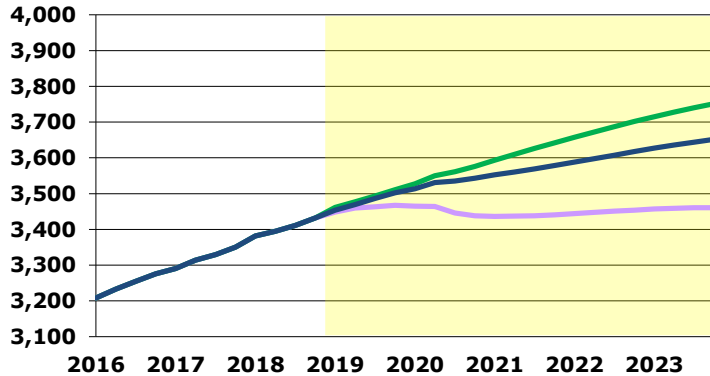
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Real Personal Income, Billions of 2012 Dollars



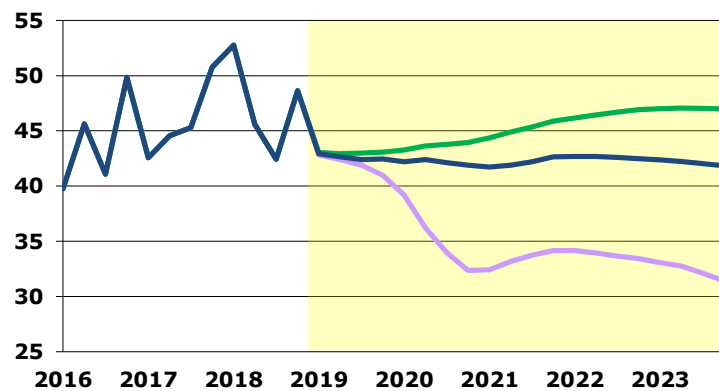
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2018 Q4, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2018 Q4, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic



Chapter 3: Washington State Revenue Forecast Summary

- **General Fund-State (GF-S) revenue collections since the November 2018 forecast have come in \$245 million over the forecasted amount, but \$37 million of that amount was revenue that arrived earlier than expected rather than a true surplus.**
- **Forecasted GF-S revenue has increased by \$256 million in the current biennium, \$545 million in the 2019-21 biennium and \$559 million in the 2021-23 biennium.**
- **Recently enacted legislation will increase forecasted Revenue Act tax receipts by \$115 million in the 2019-21 biennium and \$190 million in the 2021-23 biennium.**
- **Besides the legislative increase, forecasted Revenue Act taxes were further increased due to stronger-than-expected receipts since the November forecast.**
- **Forecasted property tax revenue was increased due to an increase in the expected value of existing property for the 2019 levy, which will carry forward into future levies.**
- **Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$307 million in the current biennium, \$553 million in the 2019-21 biennium and \$564 million in the 2021-23 biennium.**

Overview

The revenue forecast has increased due to legislative changes, strong Revenue Act receipts and increased property valuations

Since the November 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$245 million higher than forecasted. \$37 million of that amount, however, represented revenue that arrived earlier than expected rather than a true surplus in collections. Most of the actual surplus was from Revenue Act taxes, which came in much stronger than forecasted. Because of this strength, plus recently enacted legislation that will increase tax receipts in the 2019-21 and 2021-23 biennia, forecasted Revenue Act receipts have increased despite there being little change in the economic forecast. Forecasted property tax collections have also increased, due to an increase in the expected value of existing property for the 2019 property tax levy, which will carry forward into future levies. The other main forecast increase was in real estate excise taxes, which have also been coming in higher than forecasted.

GF-S forecast change by biennium (millions):

17-19: +\$256
 19-21: +\$545
 21-23: +\$559

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 \$255.7 million higher than forecasted in November. Changes to the economic forecast resulted in a \$10.7 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$255.7 million in the current 2017-19 biennium. Legislative changes added \$114.9 million to projected collections for the 2019-21 biennium and \$190.0 million for the 2021-23 biennium. Changes to the economic forecast resulted in increases of \$429.8 million to projected collections for the 2019-21 biennium and \$369.0 million for the 2021-23 biennium. The March 2019 forecast for GF-S revenue totals \$44,181.7 million in the 2017-19 biennium, \$49,608.6 million in the 2019-21 biennium and \$53,336.7 million in the 2021-23 biennium.

GF-S forecast (\$millions):

2017-19:
 \$44,182

2019-21:
 \$49,609

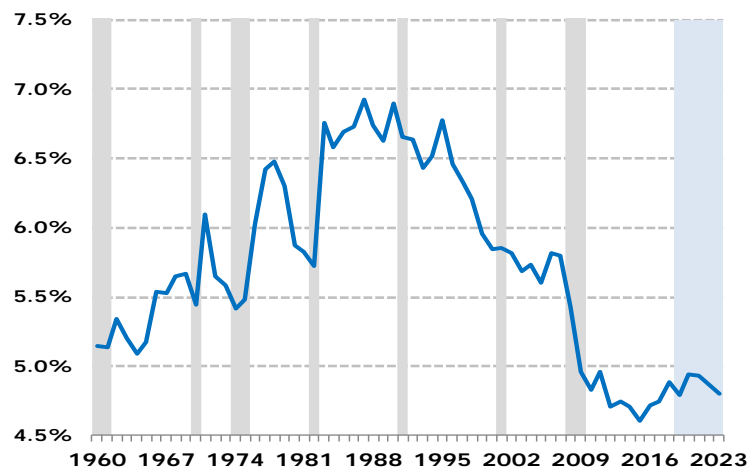
2021-23:
 \$53,337

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

	2017-19 Biennium	2019-21 Biennium	2021-23 Biennium
Collection Experience	\$245.0	NA	NA
Non-Economic Change	\$0.0	\$114.9	\$190.0
Forecast Change	\$10.7	\$429.8	\$369.0
Total Change	\$255.7	\$544.7	\$559.1

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.

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

As can be seen in Figure 3.1, the ratio of GF-S revenue collected relative to state personal income has been increasing after reaching a trough in FY 2015. The ratio of revenue to income had 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 FY 2018 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 is forecasted to 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 \$245 million (3.7%) more than the November 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 November 2018 forecast, total revenue from the above sources came in \$245.0 million (3.7%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$173.6 million (3.2%) higher than forecasted. Revenue from other DOR tax sources was \$70.4 million (6.6%) above the forecast.

Most of the non-Revenue Act forecast variance was due to early payments of public utility privilege taxes

Most of the positive variance in non-Revenue Act collections came from earlier-than-expected payment of Public Utility District privilege taxes. While the November forecast had expected the taxes to arrive in May and June, the due date of payments was changed to January 25, with a one-time extension to February 25. Because these payments, which totaled \$35.9 million, were expected to arrive later, their early arrival decreased forecasted revenue for the rest of the fiscal year. Real estate excise taxes (REET) were the second largest contributor to the variance, coming in \$30.2 million (11.2%) higher than forecasted. Property tax receipts came in \$6.3 million (1.2%) higher than forecasted. Liquor sales and liter tax receipts came in \$2.5 million (2.5%) higher than forecasted. Cigarette tax

receipts came in \$4.4 million (3.9%) lower than forecasted. Net transfers of unclaimed property into the GF-S came in \$8.3 million (37.8%) lower than forecasted. All other DOR revenue sources came in \$7.1 million (16.5%) higher than forecasted. Revenue from the Administrative Office of the Courts was \$1.0 million (4.4%) higher than forecasted.

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

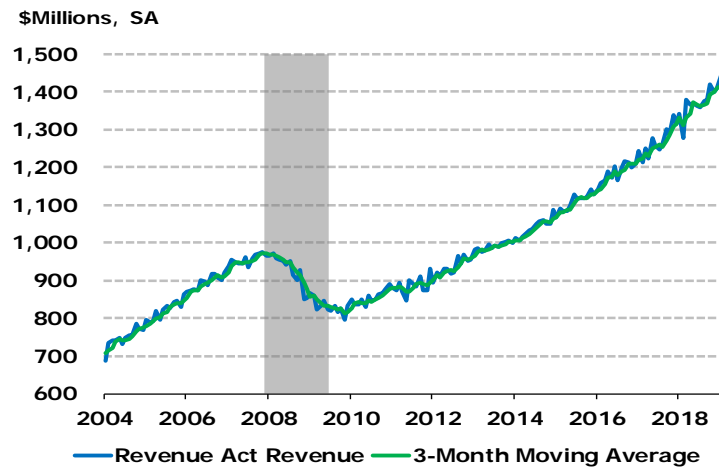
<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$173.6	3.2%
Non-Revenue Act	\$70.4	6.6%
Subtotal	\$244.0	3.7%
Administrative Office of the Courts		
	\$1.0	4.4%
Total*	\$245.0	3.7%

* Detail may not add to total due to rounding.

Source: ERFC; Period: November 11, 2018 - March 10, 2019

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 March 10, 2019 preliminary allocation

*Adjusted for large payments/refunds and payment pattern change

Adjusted Revenue Act collections were up 7.4% year over year for fourth 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 8.1% year over year in the February 11 – March 10, 2019 collections

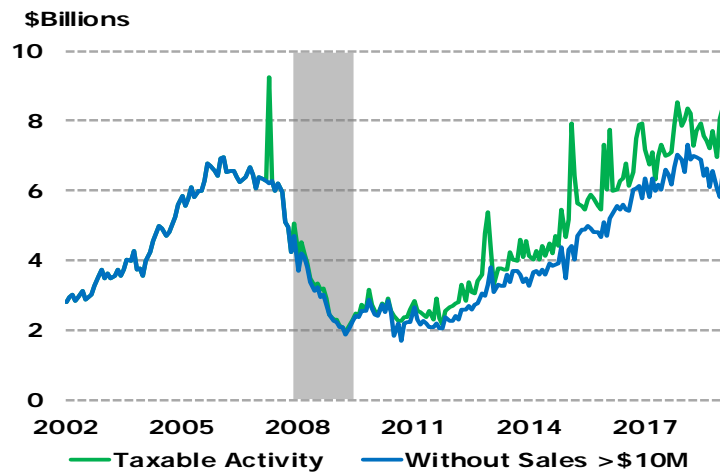
period and 6.5% in the previous period. Adjusted year-over-year growth in collections representing fourth quarter 2018 activity (November 11, 2018 – February 10, 2019 collections) was 7.4% after 7.6% growth for third quarter activity (August 11 – November 10, 2018 collections). Collections growth for second quarter activity was 8.8% and growth in first quarter activity was 8.2%.

Residential real estate activity has recovered somewhat while sales of large commercial properties remain strong

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 \$5.8 billion in the four months since the last forecast. These sales totaled \$3.5 billion in the third quarter of 2018 and \$4.2 billion in the fourth 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 also been stronger than expected since the November 2018 forecast.

Figure 3.3: Taxable Real Estate Excise Activity, SA

REET collections appear to have peaked in February 2018



Source: ERFC; data through February 2019

Legislative Changes to the Forecast

SSB 5581 will add a total of \$305 million to forecasted revenue in the 2019-21 and 2021-23 biennia

While the 2019 legislative session was still active at the time of this publication, one already enacted bill will affect forecasted GF-S revenue in the 2019-21 and 2021-23 biennia. The bill, Substitute Senate Bill 5581, makes changes to the state's collection of taxes on online sales originating out-of-state. The changes will add an estimated \$91.4 million in retail sales tax collections in the next biennium and \$132.4 million in the 2021-23 biennium. The bill is also expected to increase business and occupation tax receipts by \$23.5 million in the next biennium and \$57.6 million in the 2021-23 biennium.

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.

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, 33.8% 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 2017, 2018 and March 2019 that extends the tax to bottled water and online sales has caused the share to continue to increase. After FY 2019, 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:

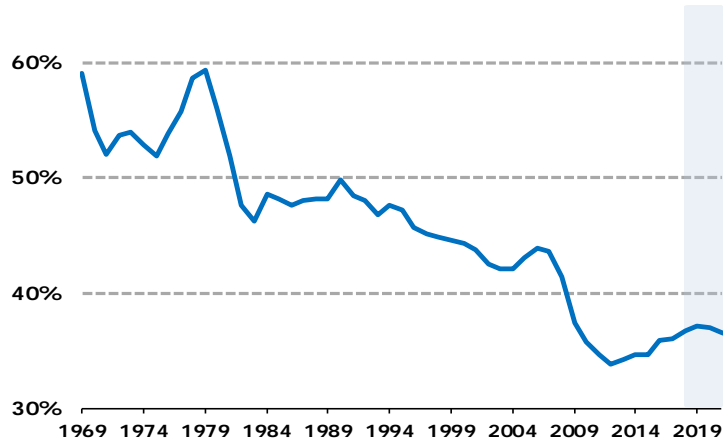
*FY19: 8.8%
FY20: 4.5%
FY21: 3.5%
FY22: 3.4%
FY23: 3.3%*

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 6.9% despite slowing auto sales and construction because of continuing increases in the volume of taxable online sales. Growth then declines to 4.5% in FY 2020 before declining to 3.3% in FY 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 8.8% in FY 2019, 4.5% in FY 2020, 3.5% in FY 2021, 3.4% in FY 2022 and 3.3% in FY 2023.

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

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: 6.6%
FY20: 3.6%
FY21: 4.3%
FY22: 4.6%
FY23: 4.7%*

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 6.6% in FY 2019 and then dips further to 3.6% in FY 2020. Growth then increases to 4.3% in FY 2021, 4.6% in FY 2022 and 4.7% 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 November 2018 property tax forecast assumed the assessed value of existing properties for the 2019 levy would increase by 10.9%. The actual growth in assessed value was 12.6%. The additional assessed value increased forecasted property tax receipts by \$33.9 million in the current biennium, \$147.5 million in the 2019-21 biennium and \$168.4 million in the 2021-23 biennium.

Property tax growth forecast:

*FY19: -12.9%
FY20: 53.4%
FY21: 10.3%
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 12.9% via a temporary reduction in the levy rate for calendar year 2019 and a \$935 million transfer of collections from the levy to the Education Legacy Trust Account. Growth rebounds to 53.4% 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 10.3% 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 in FY 2019 while residential sales also decrease, resulting in a 1.9% reduction in collections in FY 2019 and a 10.9% reduction in FY 2020. Growth then resumes slowly at 1.5% in FY 2021, 1.3% 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: 11.5%
FY20: -6.6%
FY21: 3.7%
FY22: 4.0%
FY23: 4.2%

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 11.5% in FY 2019. Collections for FY 2020 are expected to decrease by 6.6% due to FY 2019's elevated level and a reduction in forecasted used car sales. Growth then resumes at more normal levels of 3.7% in FY 2021, 4.0% in FY 2022 and 4.2% 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: 5.6%
FY20: 3.1%
FY21: 10.6%
FY22: 3.9%
FY23: 3.9%

Public utility tax receipts shrank by 1.1% in FY 2018 after 1.4% growth in FY 2017. The low level of FY 2018 collections contribute to expected growth of 5.6% in FY 2019. Collections are forecasted to grow by 3.1% in FY 2020 before increasing by 10.6% in FY 2021, due mainly to the expiration of a large tax credit. Growth is forecasted at 3.9% in FY 2022 and 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: -0.3%
FY20: -2.3%
FY21: -1.5%
FY22: -2.2%
FY23: -2.5%

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 FY 2017 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 decrease by only 0.3% in FY 2019 before continuing to decline at 2.3% in FY 2020, 1.5% in FY 2021, 2.2% in FY 2022 and 2.5% 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: \$0.02
19-21: \$1.7
21-23: -\$2.8

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, an increase of \$0.02 million from the November forecast, and \$272.1 million in the 2019-21 biennium, an increase of \$2.4 million. The forecast of GF-S distributions for the 2021-23 biennium is \$290.9 million, a decrease of \$2.8 million from the previous forecast. 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: \$5.9
19-21: \$11.2
21-23: \$9.3

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 increased \$5.9 million to \$339.7 million and the forecast for the 2019-21 biennium was increased \$11.2 million to \$176.0 million. The forecast for the 2021-23 biennium was increased \$9.3 million to \$162.6 million. Most of the increases stemmed from increases in the forecast for securities licenses, permits and fees collected by Department of Financial Institutions.

State Treasurer

*Forecast
change by
biennium
(millions):*

17-19: \$6.2
19-21: -\$9.0
21-23: -\$9.6

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 \$6.2 million to \$36.5 million due to an increase in actual earnings. The office's forecast for the 2019-21 biennium has been decreased \$9.0 million to \$41.0 million and the forecast for the 2021-23 biennium has been decreased \$9.6 million to \$42.0 million due to a decrease in forecasted interest rates.

Insurance Commissioner

*Forecast
change by
biennium
(millions):*

17-19: -\$31.0
19-21: -\$39.6
21-23: -\$34.5

The Office of the Insurance Commissioner collects premium taxes on most classes of insurance sold in Washington State. These 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 decreased \$31.0 million to \$1,193.8 million and the forecast for the 2019-21 biennium has been decreased \$39.6 million to \$1,282.4 million. The forecast of revenue for the 2021-23 biennium has been decreased \$34.5 million to \$1,392.7 million. The forecasted decreases were due to lower-than-expected actual health insurance premium tax collections in the current fiscal year.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

17-19: \$0.7
19-21: \$5.8
21-23: \$2.5

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 spirits 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 \$0.7 million to \$490.0 million and the forecast for the 2019-21 biennium has been increased \$5.8 million to \$550.9 million. The forecast of revenue for the 2021-23 biennium has been increased \$2.5 million to \$586.3 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

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

GF-S forecast change by biennium (millions):

17-19: \$7.3
19-21: -\$3.4
21-23: -\$0.9

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 increased \$7.3 million to \$69.1 million and forecasted transfers for the 2019-21 biennium have been decreased \$3.4 million to \$59.0 million. The forecast of GF-S transfers for the 2021-23 biennium has been decreased \$0.9 million to \$64.9 million.

OPA forecast change by biennium (millions):

17-19: \$0.2
19-21: \$7.9
21-23: \$4.7

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 \$0.2 million to \$282.4 million. The forecast for the 2019-21 biennium has been increased \$7.9 million to \$273.9 million and the forecast for the 2021-23 biennium has been increased \$4.7 million to \$307.2 million.

Administrative Office of the Courts

Forecast change by biennium (millions):

17-19: \$1.0
19-21: \$0.1
21-23: \$0.0

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 \$1.0 million to \$148.2 million. The forecast of transfers for the 2019-21 biennium has been increased \$0.1 million to \$137.6 million and the forecast of revenue for the 2021-23 biennium is unchanged at \$139.5 million.

Track Record for the 2017-19 Biennium

The March 2019 forecast is \$1.2 billion (2.8%) 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 March 2019 forecast is \$5.5 billion (14.1%) 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 \$4.2 billion (10.8%) 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 March forecast of biennial revenue is \$1,199.5 million (2.8%) higher than that sum.

Track Record for the 2019-21 Biennium

This forecast is \$6.2 billion (14.2%) higher than the

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 March

*...initial
February
2016
forecast,
due mainly
to legislative
changes*

2019 forecast is \$6.2 billion (14.2%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.2 billion (7.5%). Excluding non-economic changes, the current forecast is \$2.9 billion (6.7%) 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
\$2.81 billion
at the end of
the 2017-19
biennium
and \$3.75
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 March 2019 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$1,157.5 million at the end of the 2017-19 biennium and GF-S, ELTA and OPA reserves are projected to be \$2,097.6 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,648.4 million, bringing total projected GF-S reserves to \$2,805.9 million. Projected combined reserves for the ELTA and OPA are

\$940.1 million, for total projected reserves of \$3,746.0 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: +\$0.2
19-21: +\$2.2

Pessimistic scenario:
17-19: -\$0.2
19-21: -\$2.6

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 \$44,413.1 million in GF-S revenue, \$231.3 million (0.5%) more than the baseline scenario, while the pessimistic forecast produces \$43,938.5 million in revenue, \$243.2 million (0.6%) less than the baseline. For the 2019-21 biennium, the optimistic forecast generates \$51,784.4 million in GF-S revenue, \$2,175.8 million (4.4%) more than the baseline scenario, while the pessimistic forecast produces \$47,051.7 million in revenue, \$2,556.9 million (5.2%) less than the baseline.

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

Near General Fund Forecast (millions):

2017-19:
\$46,106.4

2019-21:
\$50,555.3

2021-23:
\$54,358.5

“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 \$46,106.4 million, \$307.0 million more than the November 2018 forecast, and the forecast for the 2019-21 biennium is \$50,555.3 million, \$553.5 million more than the November forecast. The forecast of Near General Fund revenue for the 2021-23 biennium is \$54,358.5 million, \$563.9 million more than the November forecast. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17.

Table 3.3
General Fund-State collections*
(millions of dollars, cash basis)

Biennium	Current Dollars	Percent Change	2012	
			Chained Dollars	Percent Change
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 ^F	44,181.7	15.3%	40,859.4	11.3%
2019-21 ^F	49,608.6	12.3%	44,126.7	8.0%
2021-23 ^F	53,336.7	7.5%	45,574.5	3.3%

^F March 2019

*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 March 2019 forecast.

Table 3.4
Taxable retail sales*
(millions of dollars)

<u>Fiscal Year</u>	<u>Amount</u>	<u>Percent Change</u>
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 ^F	174,133	6.9%
2020 ^F	181,924	4.5%
2021 ^F	188,310	3.5%
2022 ^F	194,716	3.4%
2023 ^F	201,195	3.3%

^F March 2019
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)

Forecast by Agency	Nov 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Mar 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,273.4	\$0.0	\$92.2	\$21,365.6	\$92.2
Business & Occupation	8,483.6	0.0	91.1	8,574.8	91.1
Use	1,424.3	0.0	42.2	1,466.5	42.2
Public Utility	863.6	0.0	(37.6)	826.0	(37.6)
Liquor Sales/Liter	555.0	0.0	2.5	557.5	2.5
Cigarette	718.4	0.0	(4.6)	713.8	(4.6)
Property (State Levy)	5,093.6	0.0	34.4	5,128.0	34.4
Real Estate Excise	2,105.8	0.0	51.9	2,157.7	51.9
Timber Excise	4.2	0.0	1.4	5.6	1.4
Other	1,117.0	0.0	(8.0)	1,109.0	(8.0)
Subtotal	41,639.0	0.0	265.5	41,904.5	265.5
Insurance Commissioner					
Insurance Premiums	1,224.8	0.0	(31.0)	1,193.8	(31.0)
Liquor Control Board					
Fees, Cannabis Excise Tax	431.6	0.0	0.8	432.5	0.8
Beer & Wine Surtax	57.6	0.0	(0.1)	57.5	(0.1)
Lottery Commission					
Lottery Revenue	61.8	0.0	7.3	69.1	7.3
State Treasurer					
Interest Earnings	30.3	0.0	6.2	36.5	6.2
Office of Financial Management**					
Other Agencies	333.8	0.0	5.9	339.7	5.9
Administrative Office of the Courts					
Fines and Forfeitures	147.2	0.0	1.0	148.2	1.0
Total General Fund-State *	\$43,926.1	\$0.0	\$255.7	\$44,181.7	\$255.7

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council November 20, 2018² Forecast for the 2017-19 biennium, adopted March 20, 2019

*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)

Forecast by Agency	Nov 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Mar 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,345.4	\$0.0	\$92.2	\$21,437.6	\$92.2
Business & Occupation	8,520.8	0.0	91.1	8,611.9	91.1
Use	1,432.7	0.0	42.2	1,474.9	42.2
Public Utility	862.9	0.0	(37.6)	825.3	(37.6)
Liquor Sales/Liter	555.6	0.0	2.5	558.2	2.5
Cigarette	727.3	0.0	(4.6)	722.7	(4.6)
Property (State Levy)	5,105.0	0.0	34.4	5,139.4	34.4
Real Estate Excise	2,106.4	0.0	51.9	2,158.4	51.9
Timber Excise	3.9	0.0	1.5	5.3	1.5
Other	1,173.0	0.0	2.3	1,175.3	2.3
Subtotal	41,833.0	0.0	276.0	42,109.0	276.0
Insurance Commissioner					
Insurance Premiums	1,224.8	0.0	(31.0)	1,193.8	(31.0)
Liquor Control Board					
Fees, Cannabis Excise Tax	431.6	0.0	0.8	432.5	0.8
Beer & Wine Surtax	57.6	0.0	(0.1)	57.5	(0.1)
Lottery Commission					
Lottery Revenue	57.7	0.0	3.8	61.4	3.8
State Treasurer					
Interest Earnings	29.3	0.0	6.1	35.4	6.1
Office of Financial Management**					
Other Agencies	333.8	0.0	5.9	339.7	5.9
Administrative Office of the Courts					
Fines and Forfeitures	147.2	0.0	1.0	148.2	1.0
Total General Fund-State *	\$44,114.9	\$0.0	\$262.4	\$44,377.4	\$262.4

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council November 20, 2018² Forecast for the 2017-19 biennium, adopted March 20, 2019

*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)

Forecast by Agency	Nov 2018 Forecast¹	Non-Economic Changes	Forecast Revision	Mar 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,397.2	\$91.4	\$173.1	\$23,661.7	\$264.5
Business & Occupation Use	9,187.2	23.5	154.5	9,365.1	177.9
Public Utility	1,496.7	0.0	(26.1)	1,470.7	(26.1)
Liquor Sales/Liter	930.0	0.0	(9.0)	921.0	(9.0)
Cigarette	579.0	0.0	3.8	582.8	3.8
Property (State Levy)	695.7	0.0	(4.5)	691.2	(4.5)
Real Estate Excise	7,553.3	0.0	147.5	7,700.8	147.5
Timber Excise	1,897.9	0.0	20.4	1,918.3	20.4
Other	4.7	0.0	0.3	5.0	0.3
Subtotal	1,040.4	0.0	4.6	1,045.0	4.6
Insurance Commissioner	46,782.1	114.9	464.8	47,361.7	579.6
Insurance Premiums	1,322.0	0.0	(39.6)	1,282.4	(39.6)
Liquor Control Board					
Fees, Cannabis Excise Tax	487.5	0.0	5.7	493.2	5.7
Beer & Wine Surtax	57.6	0.0	0.0	57.6	0.0
Lottery Commission					
Lottery Revenue	62.5	0.0	(3.4)	59.0	(3.4)
State Treasurer					
Interest Earnings	50.0	0.0	(9.0)	41.0	(9.0)
Office of Financial Management**					
Other Agencies	164.8	0.0	11.2	176.0	11.2
Administrative Office of the Courts					
Fines and Forfeitures	137.5	0.0	0.1	137.6	0.1
Total General Fund-State *	\$49,063.9	\$114.9	\$429.8	\$49,608.6	\$544.7

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2018

² Forecast for the 2019-21 biennium, adopted March 20, 2019

*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)

Forecast by Agency	Nov 2018 Forecast¹	Non-Economic Changes	Forecast Revision	Mar 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,397.2	\$91.4	\$173.1	\$23,661.7	\$264.5
Business & Occupation Use	9,187.2	23.5	154.5	9,365.1	177.9
Public Utility	1,496.7	0.0	(26.1)	1,470.7	(26.1)
Liquor Sales/Liter	930.0	0.0	(9.0)	921.0	(9.0)
Cigarette	579.0	0.0	3.8	582.8	3.8
Property (State Levy)	695.7	0.0	(4.5)	691.2	(4.5)
Real Estate Excise	7,553.3	0.0	147.5	7,700.8	147.5
Timber Excise	1,897.9	0.0	20.4	1,918.3	20.4
Other	4.7	0.0	0.3	5.0	0.3
Subtotal	1,040.4	0.0	4.6	1,045.0	4.6
Insurance Commissioner	46,782.1	114.9	464.8	47,361.8	579.6
Insurance Premiums	1,322.0	0.0	(39.6)	1,282.4	(39.6)
Liquor Control Board					
Fees, Cannabis Excise Tax	487.5	0.0	5.7	493.2	5.7
Beer & Wine Surtax	57.6	0.0	0.0	57.6	0.0
Lottery Commission					
Lottery Revenue	58.6	0.0	(0.3)	58.3	(0.3)
State Treasurer					
Interest Earnings	50.8	0.0	(10.0)	40.8	(10.0)
Office of Financial Management**					
Other Agencies	164.8	0.0	11.2	176.0	11.2
Administrative Office of the Courts					
Fines and Forfeitures	137.5	0.0	0.1	137.6	0.1
Total General Fund-State *	\$49,060.9	\$114.9	\$432.0	\$49,607.8	\$546.9

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2018

² Forecast for the 2019-21 biennium, adopted March 20, 2019

*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
March 2019 General Fund-State forecast detail
2017-19 to 2021-23 biennia; cash basis
(Millions of Dollars)

Forecast by Source	Fiscal 2018	Fiscal 2019	2017-19 Biennium	Fiscal 2020	Fiscal 2021	2019-21 Biennium	Fiscal 2022	Fiscal 2023	2021-23 Biennium
State Taxes									
Retail sales**	\$10,231.4	\$11,134.3	\$21,365.6	\$11,629.8	\$12,031.9	\$23,661.7	\$12,435.2	\$12,850.1	\$25,285.2
Business & occupation	4,151.0	4,423.8	8,574.8	4,583.5	4,781.6	9,365.1	4,999.2	5,236.0	10,235.2
Use**	693.4	773.1	1,466.5	721.8	748.8	1,470.7	778.9	811.5	1,590.5
Public Utility	401.7	424.3	826.0	437.3	483.7	921.0	502.6	522.2	1,024.8
Liquor sales/liter	273.8	283.7	557.5	288.5	294.3	582.8	300.6	306.4	607.0
Beer & wine surtax	28.9	28.6	57.5	28.7	28.9	57.6	29.0	29.0	58.0
Cigarette	366.7	365.6	732.3	357.7	352.4	710.1	344.8	336.5	681.3
Tobacco products	57.1	51.7	108.8	55.2	55.6	110.8	56.2	56.9	113.1
Cannabis Excise Taxes	112.0	125.0	237.0	129.6	132.9	262.5	137.0	143.8	280.8
Property (state school levy)	2,739.8	2,388.3	5,128.0	3,662.1	4,038.7	7,700.8	4,178.4	4,292.4	8,470.7
Leasehold Excise Tax	34.1	35.8	69.9	36.2	36.6	72.8	36.9	37.1	74.0
Public utility district	56.9	58.6	115.5	59.8	61.0	120.9	62.1	63.2	125.2
Brokered Natural Gas	19.3	22.2	41.5	21.5	21.8	43.3	22.3	22.7	45.0
Real estate excise***	1,089.0	1,068.7	2,157.7	952.2	966.1	1,918.3	978.4	1,002.4	1,980.8
Timber excise	2.7	3.0	5.6	2.5	2.5	5.0	2.6	2.6	5.2
Estate/inheritance	(5.6)	0.2	(5.4)	0.0	0.0	0.0	0.0	0.0	0.0
Boat excise	16.5	16.1	32.5	15.5	15.5	31.1	15.5	15.8	31.3
Insurance premiums	600.6	593.2	1,193.8	627.0	655.3	1,282.4	682.2	710.4	1,392.7
Penalties and interest on past due taxes	224.8	154.6	379.4	176.2	181.2	357.4	186.7	192.4	379.1
Other	113.7	29.9	143.7	54.5	55.1	109.5	55.6	56.1	111.7
Total Taxes	21,207.5	21,980.7	43,188.2	23,839.7	24,944.1	48,783.9	25,804.2	26,687.5	52,491.7
State Non-Tax Sources									
Licenses, permits, fees	135.5	139.4	274.9	140.7	142.9	283.6	145.2	147.3	292.5
Liquor & Cannabis fees	89.1	106.4	195.5	113.1	117.6	230.7	121.9	125.5	247.5
Earnings on investments	10.6	25.9	36.5	19.4	21.6	41.0	21.2	20.7	42.0
Administrative Office of the Courts	75.6	72.5	148.2	68.8	68.8	137.6	69.4	70.1	139.5
Transfers of unclaimed property	98.8	90.0	188.8	76.6	77.9	154.5	79.0	80.1	159.1
Other revenue & transfers	95.2	54.5	149.7	(11.7)	(11.1)	(22.8)	(12.7)	(22.8)	(35.6)
Total Non-Tax	504.8	488.7	993.6	407.0	417.7	824.7	424.0	421.0	844.9
Total General Fund-State *	\$21,712.3	\$22,469.4	\$44,181.7	\$24,246.8	\$25,361.9	\$49,608.6	\$26,228.2	\$27,108.4	\$53,336.7

* 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 March 2019

Cash Basis - Millions of Dollars

<u>Date of Forecast</u>	<u>Department of Revenue*</u>	<u>Other Agencies</u>	<u>Subtotal*</u>	<u>Non-Economic Changes**</u>	<u>Total Change</u>	<u>Total General Fund-State Cash Basis#</u>
February 2014##	\$36,887	\$1,823				\$38,710
Changes to Forecast						
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
March 2019	266	(10)	256	0	256	44,182
Total change***:						
From February 2014	3,931	236	4,167	1,304	5,472	
Percent change	10.7	13.0	10.8	3.4	14.1	

* 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 March 2019

Cash Basis - Millions of Dollars

<u>Date of Forecast</u>	<u>Department of Revenue*</u>	<u>Other Agencies</u>	<u>Subtotal*</u>	<u>Non-Economic Changes**</u>	<u>Total Change</u>	<u>Total General Fund-State Cash Basis</u>
February 2016 #	\$36,887	\$1,823				\$43,441
Changes to Forecast						
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
March 2019	465	(35)	430	115 #6	545	49,609
Total change***:						
From February 2016	3,029	(104)	2,925	3,242	6,168	
Percent change	8.2	(5.7)	6.7	7.5	14.2	

* 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.

#6 Effects of SSB 5581, passed in March of 2019 legislative session

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
RESOURCES			
Beginning Fund Balance	1,100.6	48.0	1,148.5
November 2018 Revenue Forecast	43,926.1	1,873.3	45,799.3
March 2019 Revenue Forecast change	255.7	51.4	307.0
Current Revenue Totals	44,181.7	1,924.6	46,106.4
Transfer to Budget Stabilization Account (1% of GSR)	(438.1)		(438.1)
Transfer to Budget Stabilization Account (EGSR)	(1,575.2)		(1,575.2)
Transfer from BSA (EGSR)	1,078.0		1,078.0
Enacted Fund Transfers	(92.3)	254.0	161.7
CAFR Adjustment	(39.5)	13.9	(25.6)
Actual/Assumed Prior Period Adjustments	111.2		111.2
Total Resources (including beginning fund balance)	44,326.3	2,240.6	46,566.9
EXPENDITURES			
Enacted Budgets			
2017-19 Biennium (includes 2018 Supplemental budget)	43,360.7	1,300.5	44,661.2
Actual/Assumed Reversions	(192.0)	-	(192.0)
Total Expenditures	43,168.8	1,300.5	44,469.3
RESERVES			
Projected Ending Balance (GFS + ELTA + OPA)	1,157.5	940.1	2,097.6
Budget Stabilization Account			
Budget Stabilization Account Beginning Balance	1,638.3		1,638.3
Transfers from General Fund (1% of GSR)	438.1		438.1
Actual/Assumed Interest Earnings and other	41.3		41.3
Transfers from GFS (EGSR)	1,575.2		1,575.2
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)
Projected Budget Stabilization Account Ending Balance	1,648.4		1,648.4
Total Reserves (Near General Fund plus Budget Stabilization)	2,805.9	940.1	3,746.0

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)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$21,470.4	\$21,365.6	\$21,244.9
Business & Occupation	8,617.1	8,574.8	8,527.1
Use	1,473.9	1,466.5	1,458.5
Public Utility	830.2	826.0	821.1
Property (school levy)	5,137.1	5,128.0	5,120.3
Real Estate Excise	2,187.9	2,157.7	2,114.4
Other	2,365.3	2,385.9	2,418.9
Subtotal	42,081.9	41,904.5	41,705.3
Insurance Commissioner¹	1,223.7	1,193.8	1,163.8
Lottery Commission	71.8	69.1	66.4
State Treasurer - Interest earnings	45.8	36.5	36.8
Liquor and Cannabis Surtaxes & Fees²	499.9	490.0	480.3
Office of Financial Management			
Other agencies	341.3	339.7	338.2
Administrative Office of the Courts			
Fines and Forfeitures	148.7	148.2	147.7
Total General Fund - State*	\$44,413.1	\$44,181.7	\$43,938.5
Difference from November 2018 Baseline	\$231.3		(\$243.2)

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)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$24,962.1	\$23,661.7	\$22,222.0
Business & Occupation Use	9,876.2	9,365.1	8,824.4
Public Utility	1,554.5	1,470.7	1,378.6
Property (school levy)	958.8	921.0	885.6
Real Estate Excise	7,741.5	7,700.8	7,662.5
Other	1,967.6	1,918.3	1,755.3
Subtotal	2,336.2	2,324.1	2,214.5
	49,396.9	47,361.7	44,942.9
Insurance Commissioner¹	1,347.1	1,282.4	1,217.6
Lottery Commission	62.0	59.0	56.1
State Treasurer - Interest earnings	79.3	41.0	9.2
Liquor and Cannabis Surtaxes & Fees²	575.0	550.9	524.1
Office of Financial Management			
Other agencies	181.3	176.0	170.7
Administrative Office of the Courts			
Fines and Forfeitures	142.8	137.6	131.2
Total General Fund - State*	\$51,784.4	\$49,608.6	\$47,051.7
Difference from November 2018 Baseline	\$2,175.8		(\$2,556.9)

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

March 2019 Forecast

(cash basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
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	203.3	30.6	0.0	13.1	0.0	0.0	0.4	5.3	153.9	0.0	0.0
2017-19 Biennium	386.9	69.1	0.0	25.8	0.0	0.0	0.7	8.8	282.4	0.0	0.0
2020	183.4	27.8	0.0	13.7	0.0	0.0	0.4	4.1	137.4	0.0	0.0
2021	186.5	31.2	0.0	14.2	0.0	0.0	0.4	4.2	136.5	0.0	0.0
2019-21 Biennium	369.9	59.0	0.0	27.9	0.0	0.0	0.8	8.3	273.9	0.0	0.0
2022	189.3	35.2	0.0	0.0	0.0	0.0	0.4	4.2	149.5	0.0	0.0
2023	192.0	29.7	0.0	0.0	0.0	0.0	0.4	4.2	157.7	0.0	0.0
2021-23 Biennium	381.3	64.9	0.0	0.0	0.0	0.0	0.8	8.4	307.2	0.0	0.0

Table 3.16

Lottery transfers by fund

March 2019 Forecast

(GAAP basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
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	198.2	30.3	0.0	13.1	0.0	0.0	0.4	4.2	150.2	0.0	0.0
2017-19 Biennium	381.1	61.4	0.0	25.8	0.0	0.0	0.8	8.8	284.3	0.0	0.0
2020	183.8	29.1	0.0	13.7	0.0	0.0	0.4	4.2	136.4	0.0	0.0
2021	186.8	29.2	0.0	14.2	0.0	0.0	0.4	4.2	138.8	0.0	0.0
2019-21 Biennium	370.6	58.3	0.0	27.9	0.0	0.0	0.8	8.4	275.2	0.0	0.0
2022	189.5	29.3	0.0	0.0	0.0	0.0	0.4	4.2	155.6	0.0	0.0
2023	192.2	29.4	0.0	0.0	0.0	0.0	0.4	4.2	158.3	0.0	0.0
2021-23 Biennium	381.7	58.7	0.0	0.0	0.0	0.0	0.8	8.4	313.9	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)

March 2019 - 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	\$22,469	3.5%	\$1,340	344.1%	\$23,810	8.2%	\$154	19.7%	\$23,964	8.2%
FY 2020	\$24,247	7.9%	\$331	-75.3%	\$24,578	3.2%	\$137	-10.7%	\$24,715	3.1%
FY 2021	\$25,362	4.6%	\$342	3.2%	\$25,704	4.6%	\$137	-0.6%	\$25,840	4.6%
FY 2022	\$26,228	3.4%	\$352	3.0%	\$26,580	3.4%	\$149	9.5%	\$26,730	3.4%
FY 2023	\$27,108	3.4%	\$363	3.1%	\$27,471	3.4%	\$158	5.5%	\$27,629	3.4%
Biennial Totals										
05-07 Biennium	\$29,785	17.3%	\$381	NA	\$30,166	18.8%	\$0	NA	\$30,166	18.8%
07-09 Biennium	\$29,817	0.1%	\$437	14.8%	\$30,254	0.3%	\$0	NA	\$30,254	0.3%
09-11 Biennium	\$28,218	-5.4%	\$269	-38.5%	\$28,487	-5.8%	\$99	NA	\$28,586	-5.5%
11-13 Biennium	\$30,657	8.6%	\$215	-19.9%	\$30,872	8.4%	\$244	145.2%	\$31,116	8.8%
13-15 Biennium	\$33,666	9.8%	\$405	88.0%	\$34,071	10.4%	\$234	-4.1%	\$34,305	10.2%
15-17 Biennium	\$38,317	13.8%	\$467	15.4%	\$38,785	13.8%	\$266	13.6%	\$39,050	13.8%
17-19 Biennium	\$44,182	15.3%	\$1,642	251.5%	\$45,824	18.1%	\$282	6.3%	\$46,106	18.1%
19-21 Biennium	\$49,609	12.3%	\$673	-59.0%	\$50,281	9.7%	\$274	-3.0%	\$50,555	9.6%
21-23 Biennium	\$53,337	7.5%	\$715	6.2%	\$54,051	7.5%	\$307	12.1%	\$54,358	7.5%

*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
 March 2019
 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						
				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	General Fund-State*
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	\$388,098	\$14,558	\$373,540	\$0	\$9,764	\$365	\$186,770	\$46,191	\$515	\$129,935
2020	\$395,920	\$13,548	\$382,372	\$0	\$9,764	\$365	\$191,186	\$46,191	\$515	\$134,351
2021	\$402,789	\$13,548	\$389,241	\$0	\$9,764	\$365	\$194,620	\$46,191	\$515	\$137,785
2022	\$411,427	\$13,548	\$397,879	\$0	\$9,764	\$365	\$198,940	\$46,191	\$515	\$142,105
2023	\$424,758	\$13,548	\$411,210	\$0	\$9,764	\$365	\$205,605	\$46,191	\$515	\$148,770
Biennial totals										
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	\$748,705	\$28,330	\$720,375	\$27,786	\$19,525	\$730	\$360,188	\$63,807	\$1,028	\$247,312
2019-21	\$798,708	\$27,096	\$771,612	\$0	\$19,528	\$730	\$385,806	\$92,382	\$1,030	\$272,136
2021-23	\$836,185	\$27,096	\$809,089	\$0	\$19,528	\$730	\$404,545	\$92,382	\$1,030	\$290,875

*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 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	17,659.2	18,050.7	18,571.3	19,018.4	19,370.5	19,699.8	20,074.0	20,475.5
% Ch	1.6	2.2	2.9	2.4	1.9	1.7	1.9	2.0
Real Consumption	12,248.2	12,558.7	12,890.6	13,219.1	13,487.3	13,743.6	14,018.5	14,298.8
% Ch	2.7	2.5	2.6	2.5	2.0	1.9	2.0	2.0
Real Nonresidential Fixed Investment	2,411.2	2,538.1	2,714.8	2,823.8	2,914.6	3,017.5	3,138.7	3,260.1
% Ch	0.5	5.3	7.0	4.0	3.2	3.5	4.0	3.9
Real Residential Fixed Investment	591.3	611.1	609.6	596.2	606.7	619.1	638.8	649.1
% Ch	6.5	3.3	-0.2	-2.2	1.8	2.0	3.2	1.6
Real Personal Income	15,469.7	15,866.8	16,244.0	16,647.9	17,004.1	17,359.7	17,743.5	18,143.9
% Ch	1.5	2.6	2.4	2.5	2.1	2.1	2.2	2.3
Real Per Capita Income (\$/Person)	47,752	48,630	49,435	50,297	51,012	51,716	52,496	53,317
% Ch	0.8	1.8	1.7	1.7	1.4	1.4	1.5	1.6
Price and Wage Indexes								
PCE Price Index (2012=100)	104.2	106.1	108.2	110.1	112.4	114.7	117.0	119.3
% Ch	1.1	1.8	2.0	1.8	2.1	2.1	2.0	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.400	2.451	2.511	2.558	2.614	2.672	2.730	2.788
% Ch	1.3	2.1	2.4	1.9	2.2	2.2	2.2	2.1
Employment Cost Index (Dec. 2005=1.0)	1.262	1.295	1.334	1.370	1.416	1.464	1.516	1.568
% Ch	2.4	2.6	3.0	2.8	3.3	3.4	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,707.2	19,485.4	20,500.6	21,411.0	22,307.5	23,214.0	24,188.0	25,199.9
% Ch	2.7	4.2	5.2	4.4	4.2	4.1	4.2	4.2
Personal Income	16,125.1	16,830.9	17,581.4	18,336.8	19,114.7	19,920.5	20,766.3	21,643.7
% Ch	2.6	4.4	4.5	4.3	4.2	4.2	4.2	4.2
Employment (Millions)								
U.S. Civilian Labor Force	159.2	160.3	162.1	163.8	165.3	166.3	167.3	168.3
Total U.S. Employment	151.4	153.3	155.8	157.9	159.2	159.8	160.6	161.4
Unemployment Rate (%)	4.87	4.35	3.89	3.59	3.68	3.93	4.02	4.06
Nonfarm Payroll Employment	144.35	146.61	149.06	151.59	152.98	153.53	154.38	155.34
% Ch	1.8	1.6	1.7	1.7	0.9	0.4	0.6	0.6
Manufacturing	12.35	12.44	12.69	12.88	12.76	12.51	12.46	12.48
% Ch	0.1	0.7	2.0	1.5	-0.9	-1.9	-0.5	0.2
Durable Manufacturing	7.71	7.74	7.95	8.10	8.01	7.80	7.76	7.80
% Ch	-0.7	0.3	2.7	2.0	-1.2	-2.5	-0.5	0.5
Nondurable Manufacturing	4.64	4.70	4.74	4.78	4.75	4.71	4.69	4.68
% Ch	1.5	1.3	0.9	0.7	-0.5	-0.9	-0.4	-0.4
Construction	6.73	6.97	7.29	7.50	7.60	7.83	8.12	8.41
% Ch	4.1	3.6	4.7	2.9	1.2	3.1	3.7	3.6
Service-Providing	124.60	126.53	128.35	130.46	131.87	132.42	133.03	133.67
% Ch	1.9	1.5	1.4	1.6	1.1	0.4	0.5	0.5
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	43.2	51.0	64.9	56.6	57.6	55.9	54.6	54.0
Personal Saving/Disposable Income (%)	6.7	6.7	6.8	6.5	6.6	6.8	6.9	6.9
Auto Sales (Millions)	6.9	6.1	5.3	4.9	4.8	4.8	4.9	5.0
% Ch	-8.6	-11.5	-12.8	-6.7	-2.2	-0.6	0.9	2.3
Housing Starts (Millions)	1.177	1.208	1.245	1.233	1.272	1.307	1.352	1.359
% Ch	6.4	2.6	3.0	-0.9	3.1	2.8	3.4	0.5
Federal Budget Surplus (Billions)	-665.1	-695.4	-981.8	-1,094.5	-1,159.6	-1,236.2	-1,278.4	-1,289.6
Net Exports (Billions)	-520.6	-578.4	-625.6	-667.3	-675.5	-688.2	-697.7	-667.5
3-Month Treasury Bill Rate (%)	0.32	0.93	1.94	2.53	2.68	2.68	2.66	2.54
10-Year Treasury Note Yield (%)	1.84	2.33	2.91	2.83	3.09	3.23	3.26	3.25
Bond Index of 20 G.O. Munis. (%)	3.27	3.67	3.96	4.21	4.39	4.56	4.65	4.66
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.54	4.55	4.79	4.91	4.92	4.89

Table A1.2
U.S. Economic Forecast Summary
Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	18,324.0	18,511.6	18,665.0	18,784.6	18,852.0	18,971.4	19,078.2	19,172.1
% Ch , Annual Rate	2.2	4.2	3.4	2.6	1.4	2.6	2.3	2.0
Real Consumption	12,722.8	12,842.0	12,953.3	13,044.2	13,100.5	13,183.0	13,259.5	13,333.3
% Ch , Annual Rate	0.5	3.8	3.5	2.8	1.7	2.5	2.3	2.2
Real Nonresidential Fixed Investment	2,654.0	2,710.1	2,727.0	2,768.0	2,788.1	2,812.6	2,836.1	2,858.2
% Ch , Annual Rate	11.5	8.7	2.5	6.2	2.9	3.6	3.4	3.2
Real Residential Fixed Investment	615.3	613.2	607.7	602.3	590.0	594.2	597.9	602.5
% Ch , Annual Rate	-3.4	-1.3	-3.6	-3.5	-7.9	2.9	2.5	3.1
Real Personal Income	16,107.2	16,165.1	16,277.9	16,425.6	16,519.9	16,597.5	16,690.9	16,783.4
% Ch , Annual Rate	2.6	1.4	2.8	3.7	2.3	1.9	2.3	2.2
Real Per Capita Income (\$/Person)	49,157	49,246	49,488	49,848	50,044	50,190	50,383	50,572
% Ch , Annual Rate	2.0	0.7	2.0	2.9	1.6	1.2	1.5	1.5
Price and Wage Indexes								
PCE Price Index (2012=100)	107.5	108.1	108.5	108.9	109.3	109.9	110.4	111.0
% Ch , Annual Rate	2.5	2.0	1.6	1.5	1.4	2.2	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.493	2.506	2.518	2.528	2.534	2.551	2.567	2.581
% Ch , Annual Rate	3.2	2.1	2.0	1.5	0.9	2.8	2.5	2.2
Employment Cost Index (Dec. 2005=1.0)	1.320	1.328	1.339	1.348	1.356	1.365	1.375	1.386
% Ch , Annual Rate	4.0	2.4	3.4	2.7	2.4	2.6	2.9	3.3
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	20,041.0	20,411.9	20,658.2	20,891.4	21,065.8	21,299.2	21,526.4	21,752.6
% Ch , Annual Rate	4.3	7.6	4.9	4.6	3.4	4.5	4.3	4.3
Personal Income	17,319.2	17,466.7	17,657.3	17,882.4	18,049.8	18,234.6	18,433.6	18,629.2
% Ch , Annual Rate	5.2	3.5	4.4	5.2	3.8	4.2	4.4	4.3
Employment (Millions)								
U.S. Civilian Labor Force	161.6	161.8	162.0	162.9	163.2	163.5	163.9	164.4
Total U.S. Employment	155.0	155.4	155.9	156.8	157.0	157.7	158.2	158.6
Unemployment Rate (%)	4.09	3.91	3.79	3.77	3.77	3.55	3.50	3.53
Nonfarm Payroll Employment	148.05	148.74	149.41	150.06	150.78	151.35	151.90	152.33
% Ch , Annual Rate	1.8	1.9	1.8	1.7	1.9	1.5	1.4	1.1
Manufacturing	12.59	12.66	12.72	12.79	12.84	12.87	12.88	12.92
% Ch , Annual Rate	2.3	2.3	1.9	2.2	1.7	1.0	0.2	1.2
Durable Manufacturing	7.86	7.92	7.97	8.02	8.07	8.10	8.10	8.13
% Ch , Annual Rate	3.4	3.0	2.7	2.5	2.6	1.3	0.2	1.6
Nondurable Manufacturing	4.73	4.74	4.74	4.76	4.77	4.77	4.78	4.78
% Ch , Annual Rate	0.5	1.0	0.6	1.7	0.2	0.7	0.1	0.6
Construction	7.18	7.26	7.33	7.39	7.48	7.50	7.51	7.52
% Ch , Annual Rate	6.7	4.8	4.0	3.3	4.7	1.3	0.5	0.7
Service-Providing	127.58	128.09	128.62	129.13	129.70	130.24	130.77	131.15
% Ch , Annual Rate	1.4	1.6	1.6	1.6	1.8	1.7	1.6	1.2
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	62.9	68.0	69.8	58.9	54.1	56.5	57.6	58.2
Personal Saving/Disposable Income (%)	7.2	6.7	6.4	6.7	6.7	6.5	6.5	6.4
Auto Sales (Millions)	5.4	5.3	5.1	5.3	5.0	4.9	4.9	4.9
% Ch , Annual Rate	-32.1	-8.8	-13.4	16.4	-20.0	-7.6	-2.9	0.6
Housing Starts (Millions)	1.317	1.261	1.234	1.167	1.201	1.235	1.238	1.259
% Ch , Annual Rate	19.6	-16.0	-8.3	-19.9	12.2	11.7	1.1	7.0
Federal Budget Surplus (Billions)	-969.9	-993.7	-960.6	-1,003.0	-1,080.4	-1,097.7	-1,097.6	-1,102.3
Net Exports (Billions)	-639.2	-549.8	-653.5	-659.8	-646.7	-663.9	-676.7	-681.7
3-Month Treasury Bill Rate (%)	1.56	1.84	2.04	2.32	2.44	2.50	2.57	2.59
10-Year Treasury Note Yield (%)	2.76	2.92	2.93	3.03	2.71	2.79	2.88	2.94
Bond Index of 20 G.O. Munis. (%)	3.73	3.89	3.97	4.25	4.21	4.17	4.20	4.25
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.78	4.40	4.55	4.60	4.65

Table A1.2 (continued)
U.S. Economic Forecast Summary
 Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	19,253.0	19,333.3	19,408.2	19,487.3	19,573.1	19,654.8	19,739.5	19,831.7
% Ch , Annual Rate	1.7	1.7	1.6	1.6	1.8	1.7	1.7	1.9
Real Consumption	13,401.0	13,462.0	13,516.2	13,570.2	13,640.9	13,709.2	13,777.4	13,847.0
% Ch , Annual Rate	2.0	1.8	1.6	1.6	2.1	2.0	2.0	2.0
Real Nonresidential Fixed Investment	2,877.7	2,896.9	2,927.5	2,956.2	2,979.1	3,002.8	3,029.2	3,058.9
% Ch , Annual Rate	2.8	2.7	4.3	4.0	3.1	3.2	3.6	4.0
Real Residential Fixed Investment	604.2	604.5	606.6	611.7	614.1	615.6	619.8	626.9
% Ch , Annual Rate	1.1	0.2	1.4	3.4	1.6	1.0	2.8	4.7
Real Personal Income	16,878.1	16,968.6	17,045.5	17,124.1	17,230.6	17,315.2	17,400.5	17,492.4
% Ch , Annual Rate	2.3	2.2	1.8	1.9	2.5	2.0	2.0	2.1
Real Per Capita Income (\$/Person)	50,768	50,950	51,091	51,237	51,465	51,628	51,793	51,976
% Ch , Annual Rate	1.6	1.4	1.1	1.1	1.8	1.3	1.3	1.4
Price and Wage Indexes								
PCE Price Index (2012=100)	111.6	112.1	112.7	113.3	113.9	114.5	115.0	115.6
% Ch , Annual Rate	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.595	2.608	2.621	2.634	2.649	2.665	2.680	2.695
% Ch , Annual Rate	2.2	2.0	2.1	1.9	2.4	2.4	2.3	2.2
Employment Cost Index (Dec. 2005=1.0)	1.397	1.410	1.421	1.433	1.446	1.458	1.470	1.483
% Ch , Annual Rate	3.4	3.6	3.3	3.4	3.5	3.4	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	21,974.7	22,197.2	22,414.3	22,643.8	22,870.1	23,091.6	23,325.4	23,569.0
% Ch , Annual Rate	4.1	4.1	4.0	4.2	4.1	3.9	4.1	4.2
Personal Income	18,829.9	19,025.2	19,208.9	19,395.0	19,618.4	19,817.7	20,019.0	20,226.9
% Ch , Annual Rate	4.4	4.2	3.9	3.9	4.7	4.1	4.1	4.2
Employment (Millions)								
U.S. Civilian Labor Force	164.8	165.4	165.4	165.6	165.9	166.2	166.5	166.7
Total U.S. Employment	158.9	159.4	159.3	159.4	159.5	159.7	159.9	160.0
Unemployment Rate (%)	3.58	3.62	3.72	3.79	3.84	3.91	3.96	3.99
Nonfarm Payroll Employment	152.64	153.10	153.05	153.11	153.28	153.44	153.61	153.81
% Ch , Annual Rate	0.8	1.2	-0.1	0.2	0.4	0.4	0.5	0.5
Manufacturing	12.88	12.80	12.71	12.65	12.58	12.52	12.49	12.47
% Ch , Annual Rate	-1.2	-2.4	-2.8	-2.1	-2.1	-1.8	-1.1	-0.7
Durable Manufacturing	8.11	8.04	7.97	7.92	7.86	7.81	7.78	7.76
% Ch , Annual Rate	-1.4	-3.4	-3.4	-2.4	-2.8	-2.6	-1.5	-0.9
Nondurable Manufacturing	4.77	4.77	4.75	4.73	4.72	4.71	4.71	4.70
% Ch , Annual Rate	-0.9	-0.6	-1.6	-1.4	-0.9	-0.6	-0.4	-0.4
Construction	7.54	7.56	7.61	7.68	7.74	7.80	7.86	7.93
% Ch , Annual Rate	0.7	1.3	2.5	3.5	3.3	3.0	3.3	3.8
Service-Providing	131.48	131.99	131.98	132.04	132.20	132.36	132.50	132.64
% Ch , Annual Rate	1.0	1.6	0.0	0.2	0.5	0.5	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	58.1	57.8	57.4	57.0	56.5	56.1	55.7	55.4
Personal Saving/Disposable Income (%)	6.5	6.6	6.6	6.7	6.8	6.8	6.8	6.8
Auto Sales (Millions)	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
% Ch , Annual Rate	-3.8	-2.0	-0.5	-1.5	-0.7	-0.1	0.6	0.4
Housing Starts (Millions)	1.256	1.271	1.276	1.283	1.281	1.293	1.316	1.339
% Ch , Annual Rate	-0.8	4.8	1.4	2.3	-0.5	3.8	7.0	7.3
Federal Budget Surplus (Billions)	-1,129.4	-1,158.3	-1,168.6	-1,182.0	-1,220.1	-1,231.3	-1,241.1	-1,252.3
Net Exports (Billions)	-684.2	-682.5	-673.4	-661.9	-672.9	-686.6	-694.6	-698.9
3-Month Treasury Bill Rate (%)	2.57	2.74	2.71	2.70	2.69	2.68	2.67	2.67
10-Year Treasury Note Yield (%)	2.99	3.07	3.12	3.17	3.20	3.22	3.24	3.25
Bond Index of 20 G.O. Munis. (%)	4.29	4.35	4.42	4.47	4.51	4.55	4.58	4.60
30-Year Fixed Mortgage Rate (%)	4.70	4.77	4.82	4.86	4.89	4.90	4.91	4.92

Table A1.2 (continued)
U.S. Economic Forecast Summary
 Forecast 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	19,924.0	20,022.7	20,125.2	20,224.3	20,324.3	20,424.4	20,524.6	20,628.8
% Ch , Annual Rate	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.0
Real Consumption	13,913.3	13,982.8	14,053.0	14,124.7	14,193.5	14,263.1	14,333.4	14,405.3
% Ch , Annual Rate	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0
Real Nonresidential Fixed Investment	3,090.4	3,122.4	3,155.3	3,186.8	3,217.8	3,246.9	3,274.5	3,301.1
% Ch , Annual Rate	4.2	4.2	4.3	4.1	3.9	3.7	3.4	3.3
Real Residential Fixed Investment	633.0	637.3	641.4	643.6	645.4	648.1	650.3	652.6
% Ch , Annual Rate	4.0	2.8	2.5	1.4	1.1	1.7	1.3	1.5
Real Personal Income	17,602.2	17,697.8	17,790.0	17,884.2	17,998.9	18,094.7	18,191.7	18,290.3
% Ch , Annual Rate	2.5	2.2	2.1	2.1	2.6	2.1	2.2	2.2
Real Per Capita Income (\$/Person)	52,212	52,406	52,589	52,777	53,026	53,218	53,413	53,613
% Ch , Annual Rate	1.8	1.5	1.4	1.4	1.9	1.5	1.5	1.5
Price and Wage Indexes								
PCE Price Index (2012=100)	116.2	116.7	117.3	117.9	118.4	119.0	119.6	120.1
% Ch , Annual Rate	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.709	2.722	2.738	2.752	2.767	2.781	2.795	2.810
% Ch , Annual Rate	2.1	2.0	2.3	2.1	2.1	2.0	2.1	2.1
Employment Cost Index (Dec. 2005=1.0)	1.496	1.509	1.522	1.535	1.548	1.562	1.575	1.589
% Ch , Annual Rate	3.6	3.5	3.4	3.5	3.5	3.5	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	23,811.0	24,059.0	24,315.6	24,566.5	24,817.5	25,070.5	25,325.3	25,586.4
% Ch , Annual Rate	4.2	4.2	4.3	4.2	4.1	4.1	4.1	4.2
Personal Income	20,452.1	20,659.4	20,870.8	21,082.9	21,318.9	21,532.8	21,750.6	21,972.7
% Ch , Annual Rate	4.5	4.1	4.2	4.1	4.6	4.1	4.1	4.1
Employment (Millions)								
U.S. Civilian Labor Force	166.9	167.2	167.4	167.7	167.9	168.1	168.4	168.6
Total U.S. Employment	160.3	160.5	160.7	160.9	161.1	161.3	161.5	161.7
Unemployment Rate (%)	4.01	4.02	4.03	4.03	4.04	4.05	4.07	4.08
Nonfarm Payroll Employment	154.03	154.26	154.50	154.75	155.00	155.23	155.45	155.67
% Ch, Annual Rate	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Manufacturing	12.46	12.45	12.45	12.46	12.47	12.48	12.48	12.49
% Ch, Annual Rate	-0.2	-0.3	0.1	0.3	0.2	0.2	0.3	0.3
Durable Manufacturing	7.76	7.75	7.76	7.78	7.79	7.80	7.81	7.82
% Ch, Annual Rate	-0.1	-0.3	0.4	0.7	0.6	0.6	0.7	0.6
Nondurable Manufacturing	4.70	4.70	4.69	4.69	4.68	4.68	4.67	4.67
% Ch, Annual Rate	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3
Construction	8.01	8.08	8.16	8.23	8.31	8.38	8.45	8.52
% Ch, Annual Rate	3.9	3.7	3.7	3.7	3.6	3.6	3.5	3.3
Service-Providing	132.79	132.95	133.12	133.28	133.45	133.60	133.74	133.88
% Ch, Annual Rate	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	55.0	54.7	54.4	54.3	54.1	54.0	54.0	54.0
Personal Saving/Disposable Income (%)	6.9	6.9	6.9	6.8	6.9	6.9	6.9	6.9
Auto Sales (Millions)	4.8	4.8	4.9	4.9	4.9	4.9	5.0	5.0
% Ch, Annual Rate	1.0	0.6	1.4	3.0	2.2	2.0	3.4	2.4
Housing Starts (Millions)	1.347	1.352	1.354	1.355	1.357	1.359	1.360	1.360
% Ch, Annual Rate	2.3	1.7	0.4	0.5	0.5	0.5	0.2	0.1
Federal Budget Surplus (Billions)	-1,275.4	-1,279.1	-1,280.4	-1,278.6	-1,292.2	-1,290.6	-1,287.7	-1,288.0
Net Exports (Billions)	-700.9	-699.5	-697.5	-693.1	-683.5	-672.5	-661.6	-652.4
3-Month Treasury Bill Rate (%)	2.67	2.66	2.66	2.66	2.66	2.64	2.42	2.42
10-Year Treasury Note Yield (%)	3.25	3.26	3.27	3.27	3.27	3.26	3.24	3.23
Bond Index of 20 G.O. Munis. (%)	4.62	4.64	4.66	4.67	4.67	4.67	4.66	4.65
30-Year Fixed Mortgage Rate (%)	4.92	4.92	4.93	4.93	4.92	4.91	4.88	4.86

Table A1.3
Washington Economic Forecast Summary
Forecast 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	387.805	404.211	423.665	435.308	447.015	458.840	471.267	484.217
% Ch	4.0	4.2	4.8	2.7	2.7	2.6	2.7	2.7
Real Wage and Salary Disb.	195.037	205.585	219.215	225.333	231.226	236.851	243.479	250.981
% Ch	5.0	5.4	6.6	2.8	2.6	2.4	2.8	3.1
Real Nonwage Income	192.768	198.625	204.450	209.974	215.790	221.990	227.788	233.236
% Ch	3.0	3.0	2.9	2.7	2.8	2.9	2.6	2.4
Real Per Capita Income (\$/Person)	53,259	54,572	56,249	56,900	57,597	58,331	59,148	60,043
% Ch	2.2	2.5	3.1	1.2	1.2	1.3	1.4	1.5
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.042	1.061	1.082	1.101	1.124	1.147	1.170	1.193
% Ch	1.1	1.8	2.0	1.8	2.1	2.1	2.0	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.550	2.628	2.711	2.788	2.851	2.914	2.978	3.041
% Ch	2.3	3.0	3.2	2.8	2.3	2.2	2.2	2.1
Average Nonfarm Annual Wage	60,530	63,583	67,561	69,199	71,406	73,960	76,756	79,855
% Ch	3.0	5.0	6.3	2.4	3.2	3.6	3.8	4.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.42	27.37	28.44	29.41	30.32	31.31	32.36	33.44
% Ch	3.5	3.6	3.9	3.4	3.1	3.3	3.3	3.3
Current Dollar Income (Billions of Dollars)								
Personal Income	404.232	428.765	458.532	479.470	502.506	526.530	551.555	577.623
% Ch	5.1	6.1	6.9	4.6	4.8	4.8	4.8	4.7
Disposable Personal Income	355.241	376.933	405.058	423.929	444.469	465.995	487.630	509.755
% Ch	5.3	6.1	7.5	4.7	4.8	4.8	4.6	4.5
Per Capita Income (\$/Person)	55,513	57,886	60,876	62,671	64,745	66,935	69,223	71,624
% Ch	3.3	4.3	5.2	2.9	3.3	3.4	3.4	3.5
Employment (Thousands)								
Washington Civilian Labor Force	3,643.9	3,719.3	3,790.5	3,870.2	3,933.6	3,984.5	4,033.2	4,078.6
Total Washington Employment	3,451.3	3,543.9	3,620.3	3,700.2	3,756.7	3,796.1	3,838.3	3,879.0
Unemployment Rate (%)	5.29	4.72	4.49	4.39	4.50	4.73	4.83	4.89
Nonfarm Payroll Employment	3,242.8	3,321.2	3,404.7	3,477.9	3,530.8	3,565.3	3,602.8	3,639.6
% Ch	3.1	2.4	2.5	2.2	1.5	1.0	1.1	1.0
Manufacturing	290.4	284.2	287.4	293.3	293.1	291.7	293.4	296.3
% Ch	-0.7	-2.1	1.1	2.1	-0.1	-0.5	0.6	1.0
Durable Manufacturing	207.7	200.3	202.2	207.2	206.9	205.5	206.6	209.1
% Ch	-1.7	-3.5	0.9	2.5	-0.1	-0.7	0.5	1.2
Aerospace	91.0	84.2	83.9	86.3	86.3	86.3	86.3	86.3
% Ch	-3.2	-7.5	-0.3	2.8	0.0	0.0	0.0	0.0
Nondurable Manufacturing	82.7	83.9	85.3	86.2	86.2	86.2	86.7	87.3
% Ch	2.0	1.4	1.6	1.0	0.1	-0.1	0.7	0.6
Construction	186.6	199.8	213.0	216.5	214.7	214.0	215.0	216.6
% Ch	7.7	7.0	6.6	1.6	-0.8	-0.3	0.5	0.8
Service-Providing	2,759.5	2,831.0	2,897.9	2,961.7	3,016.7	3,053.3	3,088.1	3,120.3
% Ch	3.2	2.6	2.4	2.2	1.9	1.2	1.1	1.0
Software Publishers	58.9	61.4	65.3	67.6	68.1	69.0	70.1	71.4
% Ch	5.3	4.2	6.3	3.6	0.7	1.3	1.6	1.8
Electronic Shopping and Mail-Order	38.2	49.7	54.8	59.6	62.7	65.0	67.0	68.7
% Ch	26.6	30.1	10.2	8.8	5.2	3.8	3.0	2.5
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	44.077	45.794	47.356	42.613	42.154	42.125	42.606	42.115
% Ch	9.2	3.9	3.4	-10.0	-1.1	-0.1	1.1	-1.2
Single-Family	22.463	23.115	23.356	23.846	24.467	25.045	25.639	25.636
% Ch	13.5	2.9	1.0	2.1	2.6	2.4	2.4	0.0
Multi-Family	21.614	22.679	24.000	18.767	17.686	17.080	16.968	16.479
% Ch	5.0	4.9	5.8	-21.8	-5.8	-3.4	-0.7	-2.9
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.54	4.55	4.79	4.91	4.92	4.89

Table A1.4
Washington Economic Forecast Summary
Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	419.938	421.181	424.553	428.989	431.635	433.485	436.516	439.594
% Ch, Annual Rate	9.5	1.2	3.2	4.2	2.5	1.7	2.8	2.9
Real Wage and Salary Disb.	217.877	217.657	219.651	221.676	223.347	224.454	226.000	227.533
% Ch, Annual Rate	17.8	-0.4	3.7	3.7	3.0	2.0	2.8	2.7
Real Nonwage Income	202.061	203.525	204.902	207.313	208.288	209.031	210.516	212.062
% Ch, Annual Rate	1.5	2.9	2.7	4.8	1.9	1.4	2.9	3.0
Real Per Capita Income (\$/Person)	56,103	56,040	56,242	56,609	56,740	56,767	56,951	57,143
% Ch, Annual Rate	7.8	-0.4	1.4	2.6	0.9	0.2	1.3	1.4
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.075	1.080	1.085	1.089	1.093	1.099	1.104	1.110
% Ch, Annual Rate	2.5	2.0	1.6	1.5	1.5	2.2	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.687	2.703	2.715	2.740	2.758	2.780	2.798	2.815
% Ch, Annual Rate	3.8	2.4	1.9	3.6	2.8	3.1	2.7	2.4
Average Nonfarm Annual Wage	67,182	67,169	67,713	68,181	68,507	68,921	69,422	69,945
% Ch, Annual Rate	16.8	-0.1	3.3	2.8	1.9	2.4	2.9	3.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.95	28.36	28.52	28.93	29.12	29.30	29.49	29.72
% Ch, Annual Rate	1.8	5.9	2.3	5.9	2.6	2.4	2.7	3.1
Current Dollar Income (Billions of Dollars)								
Personal Income	451.517	455.080	460.513	467.020	471.608	476.242	482.092	487.939
% Ch, Annual Rate	12.2	3.2	4.9	5.8	4.0	4.0	5.0	4.9
Disposable Personal Income	398.594	402.053	406.660	412.926	416.949	421.091	426.269	431.405
% Ch, Annual Rate	14.2	3.5	4.7	6.3	4.0	4.0	5.0	4.9
Per Capita Income (\$/Person)	60,322	60,551	61,006	61,627	61,994	62,366	62,897	63,427
% Ch, Annual Rate	10.4	1.5	3.0	4.1	2.4	2.4	3.4	3.4
Employment (Thousands)								
Washington Civilian Labor Force	3,759.0	3,777.4	3,802.5	3,823.0	3,846.3	3,860.6	3,878.0	3,895.9
Total Washington Employment	3,585.7	3,607.7	3,634.8	3,652.9	3,672.2	3,692.4	3,710.3	3,726.1
Unemployment Rate (%)	4.61	4.49	4.41	4.45	4.53	4.36	4.32	4.36
Nonfarm Payroll Employment	3,381.6	3,394.3	3,411.1	3,431.8	3,453.7	3,469.3	3,486.6	3,502.1
% Ch, Annual Rate	3.8	1.5	2.0	2.4	2.6	1.8	2.0	1.8
Manufacturing	284.8	285.9	288.0	291.0	292.6	293.0	293.5	294.3
% Ch, Annual Rate	3.2	1.5	3.0	4.3	2.1	0.5	0.7	1.2
Durable Manufacturing	199.6	200.9	202.8	205.4	206.7	206.9	207.3	207.9
% Ch, Annual Rate	2.8	2.5	3.8	5.2	2.6	0.4	0.7	1.2
Aerospace	82.3	83.0	84.6	85.9	86.3	86.3	86.3	86.3
% Ch, Annual Rate	2.3	3.6	8.0	6.1	2.1	0.0	0.0	0.0
Nondurable Manufacturing	85.2	85.0	85.2	85.7	85.9	86.1	86.2	86.5
% Ch, Annual Rate	4.0	-0.8	1.2	2.0	0.9	0.9	0.6	1.2
Construction	209.7	211.9	213.7	216.9	217.7	216.8	215.8	215.6
% Ch, Annual Rate	10.5	4.4	3.5	6.1	1.6	-1.6	-1.9	-0.3
Service-Providing	2,880.8	2,890.2	2,903.0	2,917.5	2,937.0	2,953.2	2,971.0	2,985.8
% Ch, Annual Rate	3.4	1.3	1.8	2.0	2.7	2.2	2.4	2.0
Software Publishers	63.5	64.7	66.0	66.8	67.3	67.6	67.7	67.8
% Ch, Annual Rate	7.0	7.9	8.0	4.9	3.3	1.7	0.7	0.2
Electronic Shopping and Mail-Order	54.3	54.3	54.2	56.2	58.2	59.2	60.1	60.9
% Ch, Annual Rate	6.8	0.1	-0.8	14.9	15.2	6.9	6.2	5.6
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	52.763	45.589	42.426	48.646	42.940	42.654	42.411	42.448
% Ch, Annual Rate	16.7	-44.3	-25.0	72.9	-39.3	-2.6	-2.3	0.3
Single-Family	24.680	23.029	23.288	22.427	23.772	23.723	23.790	24.101
% Ch, Annual Rate	1.9	-24.2	4.6	-14.0	26.2	-0.8	1.1	5.3
Multi-Family	28.083	22.560	19.137	26.219	19.168	18.932	18.622	18.347
% Ch, Annual Rate	32.0	-58.4	-48.2	252.3	-71.4	-4.8	-6.4	-5.8
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.78	4.40	4.55	4.60	4.65

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	442.675	445.845	448.341	451.201	454.668	457.406	460.150	463.136
% Ch, Annual Rate	2.8	2.9	2.3	2.6	3.1	2.4	2.4	2.6
Real Wage and Salary Disb.	229.031	230.814	231.796	233.262	234.780	236.098	237.482	239.043
% Ch, Annual Rate	2.7	3.1	1.7	2.6	2.6	2.3	2.4	2.7
Real Nonwage Income	213.644	215.031	216.545	217.939	219.889	221.309	222.669	224.093
% Ch, Annual Rate	3.0	2.6	2.8	2.6	3.6	2.6	2.5	2.6
Real Per Capita Income (\$/Person)	57,337	57,544	57,667	57,838	58,088	58,245	58,402	58,590
% Ch, Annual Rate	1.4	1.5	0.9	1.2	1.7	1.1	1.1	1.3
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.116	1.121	1.127	1.133	1.139	1.145	1.150	1.156
% Ch, Annual Rate	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.830	2.844	2.859	2.872	2.889	2.906	2.923	2.939
% Ch, Annual Rate	2.2	2.0	2.1	1.9	2.4	2.4	2.3	2.2
Average Nonfarm Annual Wage	70,529	71,086	71,675	72,335	73,001	73,625	74,267	74,946
% Ch, Annual Rate	3.4	3.2	3.4	3.7	3.7	3.5	3.5	3.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.95	30.21	30.44	30.68	30.94	31.18	31.44	31.70
% Ch, Annual Rate	3.2	3.4	3.1	3.2	3.3	3.2	3.3	3.3
Current Dollar Income (Billions of Dollars)								
Personal Income	493.865	499.881	505.243	511.036	517.676	523.513	529.394	535.537
% Ch, Annual Rate	4.9	5.0	4.4	4.7	5.3	4.6	4.6	4.7
Disposable Personal Income	436.660	442.093	446.948	452.176	458.253	463.356	468.504	473.868
% Ch, Annual Rate	5.0	5.1	4.5	4.8	5.5	4.5	4.5	4.7
Per Capita Income (\$/Person)	63,967	64,519	64,986	65,508	66,137	66,662	67,190	67,749
% Ch, Annual Rate	3.5	3.5	2.9	3.3	3.9	3.2	3.2	3.4
Employment (Thousands)								
Washington Civilian Labor Force	3,911.4	3,931.0	3,939.8	3,952.2	3,965.5	3,978.3	3,990.8	4,003.3
Total Washington Employment	3,738.7	3,756.1	3,761.0	3,770.7	3,781.3	3,790.9	3,800.8	3,811.4
Unemployment Rate (%)	4.41	4.45	4.54	4.59	4.65	4.71	4.76	4.79
Nonfarm Payroll Employment	3,513.8	3,531.2	3,535.1	3,543.2	3,552.3	3,560.7	3,569.3	3,578.7
% Ch, Annual Rate	1.3	2.0	0.4	0.9	1.0	1.0	1.0	1.1
Manufacturing	294.1	293.5	292.7	292.3	291.9	291.6	291.6	291.8
% Ch, Annual Rate	-0.3	-0.9	-1.0	-0.7	-0.5	-0.4	0.0	0.3
Durable Manufacturing	207.8	207.1	206.6	206.2	205.9	205.5	205.4	205.4
% Ch, Annual Rate	-0.2	-1.3	-1.0	-0.6	-0.7	-0.7	-0.3	0.2
Aerospace	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.4	86.4	86.2	86.0	86.0	86.1	86.2	86.4
% Ch, Annual Rate	-0.4	0.1	-1.0	-0.7	0.0	0.3	0.7	0.6
Construction	214.8	214.8	214.6	214.5	214.1	213.8	213.8	214.3
% Ch, Annual Rate	-1.6	0.1	-0.3	-0.3	-0.7	-0.6	0.2	0.8
Service-Providing	2,998.6	3,016.6	3,021.5	3,030.3	3,040.1	3,049.2	3,057.6	3,066.4
% Ch, Annual Rate	1.7	2.4	0.7	1.2	1.3	1.2	1.1	1.1
Software Publishers	67.9	68.0	68.2	68.4	68.6	68.9	69.1	69.4
% Ch, Annual Rate	0.6	0.8	1.2	1.2	1.4	1.4	1.5	1.5
Electronic Shopping and Mail-Order	61.7	62.4	63.0	63.7	64.2	64.8	65.3	65.8
% Ch, Annual Rate	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	42.215	42.394	42.115	41.892	41.725	41.906	42.208	42.659
% Ch, Annual Rate	-2.2	1.7	-2.6	-2.1	-1.6	1.7	2.9	4.3
Single-Family	24.129	24.432	24.588	24.721	24.704	24.848	25.142	25.485
% Ch, Annual Rate	0.5	5.1	2.6	2.2	-0.3	2.3	4.8	5.6
Multi-Family	18.086	17.962	17.527	17.171	17.021	17.058	17.067	17.174
% Ch, Annual Rate	-5.6	-2.7	-9.3	-7.9	-3.4	0.9	0.2	2.5
30-Year Fixed Mortgage Rate (%)	4.70	4.77	4.82	4.86	4.89	4.90	4.91	4.92

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	466.632	469.760	472.784	475.891	479.559	482.662	485.773	488.874
% Ch, Annual Rate	3.1	2.7	2.6	2.7	3.1	2.6	2.6	2.6
Real Wage and Salary Disb.	240.805	242.576	244.347	246.188	248.179	250.061	251.927	253.757
% Ch, Annual Rate	3.0	3.0	3.0	3.0	3.3	3.1	3.0	2.9
Real Nonwage Income	225.828	227.184	228.437	229.703	231.380	232.601	233.846	235.117
% Ch, Annual Rate	3.1	2.4	2.2	2.2	3.0	2.1	2.2	2.2
Real Per Capita Income (\$/Person)	58,843	59,050	59,245	59,451	59,728	59,937	60,148	60,359
% Ch, Annual Rate	1.7	1.4	1.3	1.4	1.9	1.4	1.4	1.4
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.162	1.167	1.173	1.179	1.184	1.190	1.196	1.201
% Ch, Annual Rate	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.954	2.969	2.986	3.002	3.017	3.033	3.049	3.065
% Ch, Annual Rate	2.1	2.0	2.3	2.1	2.1	2.1	2.1	2.1
Average Nonfarm Annual Wage	75,662	76,375	77,114	77,873	78,669	79,450	80,249	81,052
% Ch, Annual Rate	3.9	3.8	3.9	4.0	4.2	4.0	4.1	4.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	31.96	32.23	32.49	32.76	33.03	33.30	33.57	33.85
% Ch, Annual Rate	3.4	3.4	3.2	3.4	3.3	3.3	3.4	3.4
Current Dollar Income (Billions of Dollars)								
Personal Income	542.183	548.373	554.659	561.007	568.017	574.369	580.808	587.297
% Ch, Annual Rate	5.1	4.6	4.7	4.7	5.1	4.5	4.6	4.5
Disposable Personal Income	479.631	484.927	490.284	495.678	501.670	507.017	512.444	517.890
% Ch, Annual Rate	5.0	4.5	4.5	4.5	4.9	4.3	4.4	4.3
Per Capita Income (\$/Person)	68,371	68,932	69,505	70,084	70,746	71,325	71,915	72,511
% Ch, Annual Rate	3.7	3.3	3.4	3.4	3.8	3.3	3.4	3.4
Employment (Thousands)								
Washington Civilian Labor Force	4,015.4	4,027.4	4,039.2	4,050.8	4,062.3	4,073.4	4,084.1	4,094.5
Total Washington Employment	3,822.1	3,832.9	3,843.7	3,854.3	3,864.7	3,874.6	3,883.8	3,892.9
Unemployment Rate (%)	4.81	4.83	4.84	4.85	4.86	4.88	4.90	4.92
Nonfarm Payroll Employment	3,588.2	3,598.0	3,607.7	3,617.4	3,626.9	3,635.8	3,643.9	3,651.8
% Ch, Annual Rate	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.9
Manufacturing	292.4	293.0	293.7	294.5	295.3	296.0	296.7	297.3
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.1	1.0	0.9	0.9
Durable Manufacturing	205.9	206.3	206.9	207.6	208.2	208.8	209.4	209.9
% Ch, Annual Rate	0.8	0.8	1.2	1.3	1.3	1.2	1.0	1.0
Aerospace	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.5	86.7	86.8	86.9	87.1	87.2	87.3	87.5
% Ch, Annual Rate	0.8	0.7	0.7	0.6	0.5	0.6	0.6	0.6
Construction	214.4	214.8	215.2	215.6	216.1	216.5	216.8	217.2
% Ch, Annual Rate	0.2	0.8	0.8	0.8	0.8	0.8	0.7	0.6
Service-Providing	3,075.2	3,083.9	3,092.5	3,100.9	3,109.3	3,117.0	3,124.0	3,130.9
% Ch, Annual Rate	1.2	1.1	1.1	1.1	1.1	1.0	0.9	0.9
Software Publishers	69.7	70.0	70.3	70.6	70.9	71.3	71.6	71.9
% Ch, Annual Rate	1.7	1.7	1.7	1.8	1.9	1.8	1.8	1.8
Electronic Shopping and Mail-Order	66.3	66.8	67.2	67.6	68.1	68.5	68.9	69.3
% Ch, Annual Rate	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	42.688	42.672	42.581	42.483	42.364	42.223	42.043	41.828
% Ch, Annual Rate	0.3	-0.1	-0.9	-0.9	-1.1	-1.3	-1.7	-2.0
Single-Family	25.572	25.659	25.662	25.661	25.655	25.646	25.631	25.611
% Ch, Annual Rate	1.4	1.4	0.1	0.0	-0.1	-0.1	-0.2	-0.3
Multi-Family	17.116	17.014	16.919	16.822	16.710	16.577	16.412	16.217
% Ch, Annual Rate	-1.4	-2.4	-2.2	-2.3	-2.6	-3.1	-3.9	-4.7
30-Year Fixed Mortgage Rate (%)	4.92	4.92	4.93	4.93	4.92	4.91	4.88	4.86

Table A2.1

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	144.35	146.61	149.06	151.59	152.98	153.53	154.38	155.34
% Ch	1.8	1.6	1.7	1.7	0.9	0.4	0.6	0.6
Manufacturing	12.35	12.44	12.69	12.88	12.76	12.51	12.46	12.48
% Ch	0.1	0.7	2.0	1.5	-0.9	-1.9	-0.5	0.2
Durable Manufacturing	7.71	7.74	7.95	8.10	8.01	7.80	7.76	7.80
% Ch	-0.7	0.3	2.7	2.0	-1.2	-2.5	-0.5	0.5
Wood Products	0.39	0.40	0.41	0.41	0.41	0.41	0.43	0.45
% Ch	2.7	1.1	2.4	0.7	0.0	1.2	4.0	3.9
Primary and Fabricated Metals	1.80	1.80	1.84	1.89	1.88	1.80	1.79	1.82
% Ch	-3.0	0.0	2.7	2.3	-0.6	-4.1	-0.8	2.2
Computer and Electronic Products	1.05	1.04	1.06	1.07	1.07	1.07	1.08	1.09
% Ch	-0.5	-0.9	1.6	1.6	-0.7	0.4	1.1	1.0
Machinery and Electrical Equipment	1.46	1.47	1.52	1.55	1.55	1.53	1.54	1.56
% Ch	-3.0	0.4	3.7	2.3	0.0	-1.4	0.6	1.5
Transportation Equipment	1.63	1.64	1.70	1.74	1.67	1.60	1.54	1.48
% Ch	1.6	0.8	3.6	2.1	-3.8	-4.5	-3.5	-4.0
Other Durables	1.39	1.40	1.42	1.44	1.43	1.39	1.39	1.40
% Ch	1.3	0.9	1.3	1.8	-0.8	-2.7	-0.5	1.0
Nondurable Manufacturing	4.64	4.70	4.74	4.78	4.75	4.71	4.69	4.68
% Ch	1.5	1.3	0.9	0.7	-0.5	-0.9	-0.4	-0.4
Food Manufacturing	1.56	1.60	1.62	1.64	1.66	1.67	1.69	1.70
% Ch	3.0	2.7	1.3	1.2	1.2	0.6	1.2	0.8
Paper and Paper Products	0.37	0.37	0.37	0.36	0.36	0.35	0.35	0.34
% Ch	-0.5	-1.2	0.2	-0.8	-1.8	-2.0	-1.1	-0.7
Other Nondurables	2.71	2.73	2.76	2.77	2.74	2.69	2.66	2.63
% Ch	1.0	0.9	0.8	0.6	-1.3	-1.7	-1.2	-1.1
Natural Resources and Mining	0.67	0.68	0.73	0.75	0.75	0.77	0.77	0.77
% Ch	-17.8	1.1	8.3	1.9	0.9	1.8	0.9	0.3
Construction	6.73	6.97	7.29	7.50	7.60	7.83	8.12	8.41
% Ch	4.1	3.6	4.7	2.9	1.2	3.1	3.7	3.6
Trade, Transportation, and Utilities	27.20	27.40	27.65	27.97	27.92	27.76	27.50	27.29
% Ch	1.4	0.7	0.9	1.1	-0.2	-0.6	-0.9	-0.8
Wholesale Trade	5.79	5.81	5.85	5.95	5.99	6.01	6.01	6.01
% Ch	0.1	0.5	0.7	1.7	0.5	0.4	0.0	0.0
Retail Trade	15.84	15.84	15.82	15.87	15.81	15.65	15.43	15.27
% Ch	1.4	0.0	-0.1	0.3	-0.4	-1.0	-1.4	-1.1
Trans., Warehousing, and Utilities	5.57	5.75	5.97	6.14	6.12	6.10	6.05	6.00
% Ch	2.6	3.1	3.9	2.7	-0.3	-0.4	-0.8	-0.7
Information	2.79	2.81	2.83	2.81	2.78	2.81	2.83	2.86
% Ch	1.6	0.7	0.5	-0.6	-1.0	1.2	0.7	1.0
Publishing Industries	0.73	0.73	0.73	0.72	0.68	0.66	0.64	0.64
% Ch	0.5	-0.2	0.5	-1.9	-5.3	-3.3	-2.0	-1.1
Other Information	2.06	2.08	2.09	2.09	2.10	2.16	2.19	2.22
% Ch	1.9	1.0	0.4	-0.1	0.4	2.7	1.5	1.6
Financial Activities	8.29	8.45	8.57	8.71	8.87	8.92	8.92	8.89
% Ch	2.0	2.0	1.4	1.7	1.7	0.7	0.0	-0.3
Professional and Business Services	20.11	20.51	21.00	21.59	22.30	22.77	23.29	23.88
% Ch	2.1	2.0	2.4	2.8	3.3	2.1	2.3	2.5
Education and Health Services	22.64	23.19	23.67	24.15	24.25	24.42	24.46	24.50
% Ch	2.8	2.4	2.1	2.0	0.4	0.7	0.2	0.1
Leisure and Hospitality	15.66	16.05	16.35	16.80	17.12	17.10	17.29	17.40
% Ch	3.3	2.5	1.9	2.7	1.9	-0.1	1.1	0.6
Other Services	5.69	5.77	5.84	5.90	5.82	5.78	5.72	5.66
% Ch	1.2	1.4	1.3	0.9	-1.3	-0.7	-1.1	-1.1
Federal Government	2.79	2.80	2.80	2.80	2.93	2.80	2.80	2.80
% Ch	1.4	0.4	-0.3	0.2	4.5	-4.3	0.0	0.0
State and Local Government	19.44	19.55	19.65	19.74	19.89	20.05	20.22	20.38
% Ch	0.9	0.6	0.5	0.4	0.8	0.8	0.8	0.8

Table A2.2

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	148.05	148.74	149.41	150.06	150.78	151.35	151.90	152.33
% Ch, Annual Rate	1.8	1.9	1.8	1.7	1.9	1.5	1.4	1.1
Manufacturing	12.59	12.66	12.72	12.79	12.84	12.87	12.88	12.92
% Ch, Annual Rate	2.3	2.3	1.9	2.2	1.7	1.0	0.2	1.2
Durable Manufacturing	7.86	7.92	7.97	8.02	8.07	8.10	8.10	8.13
% Ch, Annual Rate	3.4	3.0	2.7	2.5	2.6	1.3	0.2	1.6
Wood Products	0.40	0.41	0.41	0.41	0.41	0.41	0.41	0.41
% Ch, Annual Rate	6.1	2.4	1.6	0.2	4.1	-3.8	-1.5	3.4
Primary and Fabricated Metals	1.83	1.84	1.85	1.86	1.87	1.88	1.89	1.90
% Ch, Annual Rate	3.5	3.1	2.7	1.3	2.6	2.5	1.6	3.3
Computer and Electronic Products	1.05	1.05	1.06	1.06	1.07	1.08	1.07	1.07
% Ch, Annual Rate	1.2	1.9	1.9	2.2	3.2	2.2	-2.3	-1.1
Machinery and Electrical Equipment	1.49	1.51	1.53	1.54	1.55	1.55	1.55	1.57
% Ch, Annual Rate	3.8	5.3	3.6	3.0	3.2	-1.3	1.6	3.9
Transportation Equipment	1.68	1.69	1.71	1.73	1.74	1.74	1.74	1.73
% Ch, Annual Rate	4.9	3.3	4.0	4.5	1.6	2.2	-1.8	-0.6
Other Durables	1.41	1.41	1.42	1.43	1.43	1.44	1.45	1.45
% Ch, Annual Rate	2.2	1.1	1.0	1.9	2.3	2.1	1.8	1.0
Nondurable Manufacturing	4.73	4.74	4.74	4.76	4.77	4.77	4.78	4.78
% Ch, Annual Rate	0.5	1.0	0.6	1.7	0.2	0.7	0.1	0.6
Food Manufacturing	1.61	1.62	1.62	1.63	1.63	1.63	1.64	1.65
% Ch, Annual Rate	1.1	1.5	0.6	2.4	-0.1	0.7	2.4	2.9
Paper and Paper Products	0.36	0.37	0.37	0.37	0.37	0.36	0.36	0.36
% Ch, Annual Rate	-0.1	1.8	2.5	1.8	-3.1	-2.9	-2.0	-0.3
Other Nondurables	2.75	2.75	2.76	2.76	2.77	2.78	2.77	2.77
% Ch, Annual Rate	0.3	0.7	0.3	1.2	0.8	1.2	-1.0	-0.6
Natural Resources and Mining	0.71	0.73	0.74	0.75	0.76	0.74	0.74	0.74
% Ch, Annual Rate	9.6	13.3	6.6	5.7	5.4	-10.2	-0.2	0.4
Construction	7.18	7.26	7.33	7.39	7.48	7.50	7.51	7.52
% Ch, Annual Rate	6.7	4.8	4.0	3.3	4.7	1.3	0.5	0.7
Trade, Transportation, and Utilities	27.55	27.61	27.68	27.76	27.85	27.97	28.03	28.02
% Ch, Annual Rate	1.2	0.9	0.9	1.2	1.4	1.6	0.8	-0.1
Wholesale Trade	5.83	5.83	5.86	5.89	5.91	5.95	5.98	5.98
% Ch, Annual Rate	0.5	-0.1	2.4	1.8	1.5	2.6	1.9	0.4
Retail Trade	15.83	15.84	15.82	15.81	15.84	15.87	15.89	15.89
% Ch, Annual Rate	0.2	0.3	-0.5	-0.2	0.8	0.7	0.6	-0.2
Trans., Warehousing, and Utilities	5.90	5.95	5.99	6.06	6.10	6.15	6.15	6.15
% Ch, Annual Rate	4.4	3.5	3.2	4.3	2.9	3.1	0.5	-0.5
Information	2.82	2.83	2.83	2.83	2.81	2.79	2.82	2.81
% Ch, Annual Rate	-0.1	2.1	-0.5	0.3	-2.7	-2.1	3.6	-1.4
Publishing Industries	0.73	0.73	0.73	0.73	0.73	0.73	0.72	0.70
% Ch, Annual Rate	0.8	0.4	0.6	0.1	-2.3	-1.8	-5.3	-7.3
Other Information	2.08	2.10	2.09	2.10	2.08	2.07	2.10	2.11
% Ch, Annual Rate	-0.4	2.6	-0.9	0.4	-2.8	-2.2	6.9	0.7
Financial Activities	8.52	8.55	8.58	8.61	8.65	8.69	8.73	8.79
% Ch, Annual Rate	1.4	1.5	1.4	1.4	1.6	1.9	2.1	2.5
Professional and Business Services	20.77	20.93	21.07	21.22	21.31	21.42	21.69	21.93
% Ch, Annual Rate	2.2	3.0	2.8	2.7	1.8	2.1	5.1	4.6
Education and Health Services	23.48	23.59	23.74	23.86	24.02	24.16	24.21	24.21
% Ch, Annual Rate	2.3	1.9	2.6	2.0	2.8	2.3	0.8	0.0
Leisure and Hospitality	16.23	16.30	16.38	16.49	16.66	16.77	16.84	16.93
% Ch, Annual Rate	1.5	1.8	2.0	2.8	4.1	2.6	1.7	2.2
Other Services	5.81	5.84	5.85	5.87	5.89	5.92	5.91	5.87
% Ch, Annual Rate	0.8	2.2	0.8	1.2	1.3	2.3	-1.0	-2.5
Federal Government	2.79	2.79	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	-0.8	0.1	0.4	0.6	0.1	0.0	0.0	0.0
State and Local Government	19.60	19.64	19.69	19.69	19.71	19.71	19.74	19.78
% Ch, Annual Rate	0.4	0.8	0.9	0.1	0.4	0.1	0.5	0.9

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	152.64	153.10	153.05	153.11	153.28	153.44	153.61	153.81
% Ch, Annual Rate	0.8	1.2	-0.1	0.2	0.4	0.4	0.5	0.5
Manufacturing	12.88	12.80	12.71	12.65	12.58	12.52	12.49	12.47
% Ch, Annual Rate	-1.2	-2.4	-2.8	-2.1	-2.1	-1.8	-1.1	-0.7
Durable Manufacturing	8.11	8.04	7.97	7.92	7.86	7.81	7.78	7.76
% Ch, Annual Rate	-1.4	-3.4	-3.4	-2.4	-2.8	-2.6	-1.5	-0.9
Wood Products	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.42
% Ch, Annual Rate	-0.4	-0.8	-0.2	1.5	2.1	1.0	1.3	2.7
Primary and Fabricated Metals	1.90	1.89	1.87	1.85	1.83	1.80	1.79	1.78
% Ch, Annual Rate	-0.3	-3.1	-4.4	-4.4	-4.4	-4.7	-3.2	-1.8
Computer and Electronic Products	1.07	1.06	1.06	1.07	1.07	1.07	1.07	1.07
% Ch, Annual Rate	-0.9	-0.8	0.0	0.6	0.6	0.5	0.6	0.8
Machinery and Electrical Equipment	1.57	1.55	1.55	1.54	1.54	1.53	1.53	1.53
% Ch, Annual Rate	0.2	-3.2	-1.8	-1.0	-1.6	-1.8	-0.7	0.1
Transportation Equipment	1.71	1.68	1.65	1.63	1.61	1.60	1.59	1.58
% Ch, Annual Rate	-4.7	-6.7	-7.1	-4.5	-5.3	-3.1	-1.9	-2.9
Other Durables	1.45	1.44	1.43	1.42	1.41	1.39	1.39	1.38
% Ch, Annual Rate	-1.1	-2.9	-3.0	-2.4	-2.9	-3.3	-2.2	-0.8
Nondurable Manufacturing	4.77	4.77	4.75	4.73	4.72	4.71	4.71	4.70
% Ch, Annual Rate	-0.9	-0.6	-1.6	-1.4	-0.9	-0.6	-0.4	-0.4
Food Manufacturing	1.66	1.66	1.66	1.66	1.66	1.67	1.67	1.68
% Ch, Annual Rate	0.9	1.6	-0.9	-0.8	0.9	1.3	1.7	1.2
Paper and Paper Products	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.35
% Ch, Annual Rate	-2.2	-1.8	-2.4	-2.0	-2.3	-1.8	-1.6	-1.3
Other Nondurables	2.76	2.74	2.73	2.72	2.71	2.70	2.69	2.68
% Ch, Annual Rate	-1.8	-1.8	-2.0	-1.7	-1.8	-1.6	-1.5	-1.4
Natural Resources and Mining	0.75	0.75	0.75	0.76	0.76	0.76	0.77	0.77
% Ch, Annual Rate	4.6	1.2	0.5	1.6	2.5	2.6	1.6	1.1
Construction	7.54	7.56	7.61	7.68	7.74	7.80	7.86	7.93
% Ch, Annual Rate	0.7	1.3	2.5	3.5	3.3	3.0	3.3	3.8
Trade, Transportation, and Utilities	27.96	27.93	27.91	27.87	27.85	27.81	27.73	27.65
% Ch, Annual Rate	-0.8	-0.5	-0.2	-0.7	-0.3	-0.6	-1.1	-1.2
Wholesale Trade	5.98	5.98	5.99	6.00	6.01	6.01	6.01	6.01
% Ch, Annual Rate	-0.2	0.0	0.7	0.4	0.6	0.3	0.2	-0.1
Retail Trade	15.85	15.83	15.81	15.76	15.73	15.69	15.62	15.55
% Ch, Annual Rate	-1.0	-0.6	-0.5	-1.1	-0.7	-1.0	-1.8	-1.7
Trans., Warehousing, and Utilities	6.13	6.12	6.12	6.11	6.11	6.10	6.09	6.08
% Ch, Annual Rate	-0.9	-0.8	-0.3	-0.4	-0.1	-0.3	-0.6	-0.9
Information	2.80	2.76	2.76	2.79	2.82	2.81	2.81	2.81
% Ch, Annual Rate	-1.8	-4.6	-0.7	5.2	3.1	-0.3	-0.9	0.9
Publishing Industries	0.69	0.68	0.68	0.67	0.66	0.66	0.66	0.65
% Ch, Annual Rate	-5.9	-5.3	-3.7	-3.9	-3.0	-2.8	-2.6	-2.4
Other Information	2.11	2.08	2.08	2.13	2.15	2.15	2.15	2.16
% Ch, Annual Rate	-0.4	-4.4	0.3	8.3	5.1	0.5	-0.4	1.9
Financial Activities	8.83	8.86	8.88	8.89	8.91	8.92	8.93	8.93
% Ch, Annual Rate	2.2	1.1	0.9	0.6	0.9	0.4	0.4	0.2
Professional and Business Services	22.14	22.25	22.35	22.48	22.63	22.73	22.82	22.92
% Ch, Annual Rate	3.8	2.0	1.8	2.5	2.6	1.7	1.6	1.9
Education and Health Services	24.20	24.23	24.27	24.30	24.37	24.42	24.45	24.45
% Ch, Annual Rate	-0.3	0.6	0.7	0.4	1.2	0.8	0.5	0.1
Leisure and Hospitality	17.03	17.11	17.19	17.15	17.03	17.05	17.11	17.19
% Ch, Annual Rate	2.3	2.0	1.8	-1.0	-2.6	0.3	1.5	1.9
Other Services	5.85	5.83	5.82	5.80	5.80	5.79	5.78	5.76
% Ch, Annual Rate	-1.6	-1.4	-0.7	-0.9	-0.3	-0.5	-0.9	-1.2
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	19.82	19.86	19.91	19.95	19.99	20.03	20.07	20.11
% 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 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	154.03	154.26	154.50	154.75	155.00	155.23	155.45	155.67
% Ch, Annual Rate	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Manufacturing	12.46	12.45	12.45	12.46	12.47	12.48	12.48	12.49
% Ch, Annual Rate	-0.2	-0.3	0.1	0.3	0.2	0.2	0.3	0.3
Durable Manufacturing	7.76	7.75	7.76	7.78	7.79	7.80	7.81	7.82
% Ch, Annual Rate	-0.1	-0.3	0.4	0.7	0.6	0.6	0.7	0.6
Wood Products	0.42	0.43	0.43	0.44	0.44	0.45	0.45	0.45
% Ch, Annual Rate	5.3	5.2	5.4	5.2	3.3	2.9	2.7	2.8
Primary and Fabricated Metals	1.78	1.78	1.79	1.80	1.81	1.82	1.83	1.84
% Ch, Annual Rate	-0.3	0.2	1.4	2.2	2.5	2.7	2.4	2.0
Computer and Electronic Products	1.08	1.08	1.08	1.09	1.09	1.09	1.09	1.09
% Ch, Annual Rate	1.4	1.1	1.3	1.3	1.0	0.7	0.5	0.4
Machinery and Electrical Equipment	1.53	1.54	1.54	1.55	1.56	1.56	1.57	1.57
% Ch, Annual Rate	1.2	1.0	1.5	1.8	1.8	1.5	1.0	0.8
Transportation Equipment	1.56	1.55	1.53	1.51	1.50	1.48	1.47	1.46
% Ch, Annual Rate	-3.7	-4.7	-4.0	-4.1	-4.7	-4.5	-2.4	-2.1
Other Durables	1.38	1.38	1.39	1.39	1.39	1.40	1.40	1.41
% Ch, Annual Rate	0.1	-0.2	0.6	1.2	1.3	1.4	1.1	0.8
Nondurable Manufacturing	4.70	4.70	4.69	4.69	4.68	4.68	4.67	4.67
% Ch, Annual Rate	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3
Food Manufacturing	1.68	1.69	1.69	1.69	1.70	1.70	1.70	1.71
% Ch, Annual Rate	1.3	1.1	0.7	0.6	0.7	0.8	0.9	0.9
Paper and Paper Products	0.35	0.35	0.35	0.35	0.34	0.34	0.34	0.34
% Ch, Annual Rate	-0.9	-0.9	-0.8	-0.8	-0.7	-0.7	-0.6	-0.5
Other Nondurables	2.67	2.66	2.65	2.65	2.64	2.63	2.63	2.62
% Ch, Annual Rate	-1.1	-1.1	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1
Natural Resources and Mining	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.78
% Ch, Annual Rate	0.3	0.9	0.6	0.2	0.3	-0.5	0.5	0.5
Construction	8.01	8.08	8.16	8.23	8.31	8.38	8.45	8.52
% Ch, Annual Rate	3.9	3.7	3.7	3.7	3.6	3.6	3.5	3.3
Trade, Transportation, and Utilities	27.57	27.52	27.47	27.42	27.36	27.31	27.27	27.23
% Ch, Annual Rate	-1.0	-0.8	-0.7	-0.7	-0.9	-0.7	-0.7	-0.6
Wholesale Trade	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01
% Ch, Annual Rate	0.1	-0.1	0.0	-0.1	0.1	-0.1	0.0	0.1
Retail Trade	15.49	15.45	15.42	15.38	15.32	15.29	15.25	15.22
% Ch, Annual Rate	-1.6	-1.0	-1.0	-1.0	-1.5	-0.8	-0.9	-0.8
Trans., Warehousing, and Utilities	6.07	6.06	6.04	6.03	6.02	6.01	6.00	5.99
% Ch, Annual Rate	-0.7	-0.9	-0.8	-0.8	-0.6	-0.8	-0.7	-0.7
Information	2.83	2.83	2.83	2.84	2.85	2.86	2.87	2.87
% Ch, Annual Rate	2.0	0.7	0.2	0.5	1.9	1.0	1.4	0.6
Publishing Industries	0.65	0.65	0.64	0.64	0.64	0.64	0.64	0.64
% Ch, Annual Rate	-1.8	-1.6	-1.5	-1.3	-0.8	-1.0	-0.9	-0.9
Other Information	2.18	2.19	2.19	2.20	2.21	2.22	2.23	2.24
% Ch, Annual Rate	3.2	1.4	0.7	1.0	2.6	1.5	2.0	1.0
Financial Activities	8.93	8.92	8.92	8.91	8.91	8.90	8.89	8.88
% Ch, Annual Rate	0.0	-0.4	-0.4	-0.3	-0.1	-0.5	-0.3	-0.2
Professional and Business Services	23.07	23.21	23.36	23.52	23.70	23.83	23.94	24.05
% Ch, Annual Rate	2.5	2.5	2.7	2.7	3.1	2.2	1.9	1.9
Education and Health Services	24.46	24.46	24.46	24.47	24.49	24.49	24.50	24.51
% Ch, Annual Rate	0.1	0.0	0.1	0.1	0.3	0.1	0.1	0.2
Leisure and Hospitality	17.22	17.28	17.32	17.35	17.35	17.38	17.42	17.45
% Ch, Annual Rate	0.7	1.3	0.9	0.8	-0.1	0.9	0.8	0.7
Other Services	5.75	5.73	5.71	5.70	5.68	5.67	5.65	5.64
% Ch, Annual Rate	-1.1	-1.1	-1.1	-1.2	-0.9	-1.1	-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	20.16	20.20	20.24	20.28	20.32	20.36	20.40	20.45
% 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 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	3,242.8	3,321.2	3,404.7	3,477.9	3,530.8	3,565.3	3,602.8	3,639.6
% Ch	3.1	2.4	2.5	2.2	1.5	1.0	1.1	1.0
Manufacturing	290.4	284.2	287.4	293.3	293.1	291.7	293.4	296.3
% Ch	-0.7	-2.1	1.1	2.1	-0.1	-0.5	0.6	1.0
Durable Manufacturing	207.7	200.3	202.2	207.2	206.9	205.5	206.6	209.1
% Ch	-1.7	-3.5	0.9	2.5	-0.1	-0.7	0.5	1.2
Wood Products	13.1	12.9	13.0	12.9	12.6	12.5	12.6	12.8
% Ch	-1.6	-1.7	1.0	-1.1	-2.1	-1.1	1.3	1.2
Primary and Fabricated Metals	25.2	25.1	26.1	27.2	27.0	25.9	25.6	26.2
% Ch	-2.0	-0.6	4.3	4.1	-0.6	-4.3	-0.9	2.3
Computer and Electronic Products	20.1	19.6	19.8	20.1	20.1	20.5	21.0	21.6
% Ch	0.7	-2.3	0.7	1.6	0.0	1.8	2.9	2.7
Machinery and Electrical Equipment	20.5	20.7	21.3	22.1	22.6	22.8	23.6	24.7
% Ch	-1.2	1.0	2.7	3.7	2.6	0.7	3.5	4.8
Aerospace	91.0	84.2	83.9	86.3	86.3	86.3	86.3	86.3
% Ch	-3.2	-7.5	-0.3	2.8	0.0	0.0	0.0	0.0
Other Transportation Equip.	10.2	10.2	9.8	9.7	9.2	8.8	8.6	8.4
% Ch	-0.9	0.1	-3.4	-0.9	-5.9	-3.6	-2.5	-2.9
Other Durables	27.6	27.7	28.2	28.9	29.1	28.8	28.8	29.1
% Ch	1.2	0.2	2.1	2.5	0.6	-0.9	0.0	1.0
Nondurable Manufacturing	82.7	83.9	85.3	86.2	86.2	86.2	86.7	87.3
% Ch	2.0	1.4	1.6	1.0	0.1	-0.1	0.7	0.6
Food Manufacturing	37.6	38.0	38.8	39.6	39.8	39.7	39.8	39.8
% Ch	1.9	1.3	2.1	2.1	0.4	-0.2	0.3	0.0
Paper and Paper Products	7.8	7.7	7.6	7.3	7.1	6.9	6.7	6.6
% Ch	-3.5	-0.2	-2.1	-3.3	-2.9	-3.2	-2.2	-1.8
Other Nondurables	37.4	38.1	38.9	39.2	39.3	39.6	40.2	40.8
% Ch	3.4	1.9	2.0	0.8	0.3	0.7	1.5	1.6
Natural Resources and Mining	6.3	6.2	6.3	6.3	6.3	6.2	6.3	6.3
% Ch	-0.8	-1.0	1.7	0.2	-1.1	-0.2	0.7	0.8
Construction	186.6	199.8	213.0	216.5	214.7	214.0	215.0	216.6
% Ch	7.7	7.0	6.6	1.6	-0.8	-0.3	0.5	0.8
Trade, Transportation, and Utilities	605.7	624.6	638.1	651.8	657.5	659.3	658.4	657.8
% Ch	3.1	3.1	2.2	2.1	0.9	0.3	-0.1	-0.1
Wholesale Trade	132.1	133.3	136.3	139.2	140.7	141.5	141.9	142.2
% Ch	0.6	0.9	2.3	2.1	1.0	0.6	0.3	0.2
Retail Trade	365.2	378.7	386.6	394.8	399.0	399.9	399.0	398.7
% Ch	3.2	3.7	2.1	2.1	1.0	0.2	-0.2	-0.1
Electronic Shopping and Mail-Order	38.2	49.7	54.8	59.6	62.7	65.0	67.0	68.7
% Ch	26.6	30.1	10.2	8.8	5.2	3.8	3.0	2.5
Other Retail Trade	327.0	329.0	331.9	335.3	336.3	334.9	332.1	330.1
% Ch	1.0	0.6	0.9	1.0	0.3	-0.4	-0.8	-0.6
Trans., Warehousing, and Utilities	108.4	112.6	115.2	117.8	117.9	117.9	117.4	116.8
% Ch	6.0	3.8	2.3	2.3	0.1	0.0	-0.4	-0.5
Information	121.4	126.3	133.6	138.0	138.6	140.6	142.2	144.3
% Ch	6.2	4.1	5.8	3.3	0.5	1.4	1.1	1.5
Software Publishers	58.9	61.4	65.3	67.6	68.1	69.0	70.1	71.4
% Ch	5.3	4.2	6.3	3.6	0.7	1.3	1.6	1.8
Other Publishing Industries	5.9	5.5	5.1	4.4	3.7	3.2	2.8	2.5
% Ch	-4.0	-6.8	-8.1	-12.4	-16.2	-13.8	-12.3	-11.4
Other Information	56.5	59.4	63.3	66.0	66.8	68.4	69.2	70.4
% Ch	8.4	5.0	6.5	4.2	1.3	2.4	1.2	1.6
Financial Activities	151.0	154.0	157.5	159.1	161.6	161.8	160.6	159.1
% Ch	2.1	2.0	2.3	1.0	1.6	0.1	-0.7	-1.0
Professional and Business Services	401.5	413.4	425.8	438.1	455.0	467.4	480.4	494.3
% Ch	3.5	3.0	3.0	2.9	3.8	2.7	2.8	2.9
Education and Health Services	463.5	475.6	491.6	507.7	514.7	522.5	527.7	532.4
% Ch	3.4	2.6	3.4	3.3	1.4	1.5	1.0	0.9
Leisure and Hospitality	323.3	331.5	342.0	351.5	359.6	361.8	367.1	370.5
% Ch	4.3	2.6	3.2	2.8	2.3	0.6	1.5	0.9
Other Services	117.6	119.7	121.9	124.9	126.8	128.6	130.1	131.5
% Ch	2.3	1.8	1.9	2.4	1.5	1.4	1.2	1.1
Federal Government	74.5	74.8	74.5	74.5	77.3	75.3	75.6	75.9
% Ch	1.9	0.4	-0.4	0.0	3.8	-2.6	0.5	0.4
State and Local Government	501.1	511.0	512.8	516.1	525.7	536.1	546.0	554.5
% Ch	2.5	2.0	0.3	0.6	1.9	2.0	1.9	1.5

Table A2.4

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,381.6	3,394.3	3,411.1	3,431.8	3,453.7	3,469.3	3,486.6	3,502.1
% Ch, Annual Rate	3.8	1.5	2.0	2.4	2.6	1.8	2.0	1.8
Manufacturing	284.8	285.9	288.0	291.0	292.6	293.0	293.5	294.3
% Ch, Annual Rate	3.2	1.5	3.0	4.3	2.1	0.5	0.7	1.2
Durable Manufacturing	199.6	200.9	202.8	205.4	206.7	206.9	207.3	207.9
% Ch, Annual Rate	2.8	2.5	3.8	5.2	2.6	0.4	0.7	1.2
Wood Products	13.1	13.0	12.9	13.0	13.1	12.9	12.8	12.8
% Ch, Annual Rate	4.0	-1.5	-3.1	3.9	0.4	-5.3	-3.4	0.8
Primary and Fabricated Metals	25.7	26.1	26.2	26.6	27.0	27.1	27.2	27.5
% Ch, Annual Rate	9.7	5.4	1.8	6.2	6.0	2.5	1.5	3.5
Computer and Electronic Products	19.7	19.7	19.9	19.7	20.0	20.2	20.1	20.1
% Ch, Annual Rate	1.7	0.0	2.5	-2.3	5.0	4.6	-2.5	-0.6
Machinery and Electrical Equipment	21.1	21.2	21.3	21.5	21.8	21.8	22.1	22.5
% Ch, Annual Rate	1.3	2.3	1.5	3.2	6.3	0.5	4.9	8.0
Aerospace	82.3	83.0	84.6	85.9	86.3	86.3	86.3	86.3
% Ch, Annual Rate	2.3	3.6	8.0	6.1	2.1	0.0	0.0	0.0
Other Transportation Equip.	9.8	9.8	9.9	9.9	9.8	9.8	9.7	9.6
% Ch, Annual Rate	-6.5	0.2	2.7	0.8	-1.4	-1.9	-2.2	-5.7
Other Durables	28.0	28.1	28.1	28.8	28.8	28.8	29.1	29.2
% Ch, Annual Rate	3.0	1.6	-0.2	10.8	-0.6	0.1	4.0	1.5
Nondurable Manufacturing	85.2	85.0	85.2	85.7	85.9	86.1	86.2	86.5
% Ch, Annual Rate	4.0	-0.8	1.2	2.0	0.9	0.9	0.6	1.2
Food Manufacturing	39.0	38.6	38.7	39.1	39.5	39.5	39.7	39.8
% Ch, Annual Rate	8.3	-4.4	1.0	4.4	4.6	-0.2	1.5	2.0
Paper and Paper Products	7.6	7.6	7.6	7.5	7.4	7.3	7.3	7.3
% Ch, Annual Rate	-1.9	0.4	-2.8	-4.4	-3.7	-4.1	-3.1	-1.2
Other Nondurables	38.5	38.8	39.0	39.1	38.9	39.2	39.3	39.3
% Ch, Annual Rate	1.1	2.6	2.3	0.9	-1.7	3.1	0.3	0.9
Natural Resources and Mining	6.3	6.3	6.3	6.3	6.4	6.3	6.3	6.3
% Ch, Annual Rate	5.8	0.5	0.5	-1.9	4.8	-3.2	0.4	-2.6
Construction	209.7	211.9	213.7	216.9	217.7	216.8	215.8	215.6
% Ch, Annual Rate	10.5	4.4	3.5	6.1	1.6	-1.6	-1.9	-0.3
Trade, Transportation, and Utilities	636.8	636.2	637.8	641.7	647.1	650.9	653.9	655.5
% Ch, Annual Rate	4.0	-0.4	1.0	2.5	3.4	2.4	1.8	1.0
Wholesale Trade	135.6	136.2	136.7	136.9	138.1	139.0	139.7	140.1
% Ch, Annual Rate	5.0	1.8	1.5	0.7	3.4	2.6	2.2	1.1
Retail Trade	386.8	385.4	386.4	387.9	391.8	394.1	396.1	397.4
% Ch, Annual Rate	5.0	-1.4	1.0	1.5	4.2	2.3	2.1	1.3
Electronic Shopping and Mail-Order	54.3	54.3	54.2	56.2	58.2	59.2	60.1	60.9
% Ch	6.8	0.1	-0.8	14.9	15.2	6.9	6.2	5.6
Other Retail Trade	332.5	331.1	332.2	331.7	333.7	334.9	336.0	336.5
% Ch	4.8	-1.6	1.3	-0.6	2.4	1.5	1.3	0.6
Trans., Warehousing, and Utilities	114.4	114.5	114.7	117.0	117.2	117.9	118.1	118.1
% Ch, Annual Rate	-0.3	0.3	0.6	8.1	0.7	2.5	0.7	-0.1
Information	129.9	132.4	135.0	137.0	137.4	137.3	138.7	138.8
% Ch, Annual Rate	5.5	8.1	8.2	6.1	0.9	-0.2	4.1	0.4
Software Publishers	63.5	64.7	66.0	66.8	67.3	67.6	67.7	67.8
% Ch, Annual Rate	7.0	7.9	8.0	4.9	3.3	1.7	0.7	0.2
Other Publishing Industries	5.2	5.2	5.1	4.9	4.7	4.6	4.4	4.2
% Ch, Annual Rate	-7.9	-4.7	-6.0	-16.2	-14.5	-8.3	-15.1	-19.3
Other Information	61.2	62.5	64.0	65.4	65.3	65.1	66.5	66.9
% Ch, Annual Rate	5.2	9.4	9.5	9.2	-0.4	-1.6	9.2	2.0
Financial Activities	156.8	157.8	157.9	157.6	157.9	158.6	159.4	160.4
% Ch, Annual Rate	4.5	2.5	0.1	-0.8	1.0	1.7	2.0	2.6
Professional and Business Services	422.1	424.1	427.4	429.6	431.6	434.7	440.4	445.7
% Ch, Annual Rate	5.5	2.0	3.2	2.1	1.8	2.9	5.4	4.9
Education and Health Services	486.5	489.2	492.8	497.7	503.5	507.1	509.4	510.8
% Ch, Annual Rate	3.3	2.2	3.0	4.0	4.7	2.9	1.8	1.1
Leisure and Hospitality	339.7	341.1	342.5	344.7	348.1	350.6	352.5	354.8
% Ch, Annual Rate	6.0	1.7	1.5	2.7	4.0	2.9	2.2	2.6
Other Services	120.8	121.3	122.3	123.3	123.9	124.7	125.2	125.6
% Ch, Annual Rate	1.4	1.8	3.1	3.5	2.0	2.5	1.7	1.3
Federal Government	74.7	74.7	74.4	74.2	74.3	74.5	74.6	74.7
% Ch, Annual Rate	-0.7	-0.2	-1.2	-1.3	0.7	0.6	0.6	0.6
State and Local Government	513.5	513.4	512.9	511.6	513.2	514.9	516.9	519.4
% Ch, Annual Rate	-0.4	-0.1	-0.4	-1.0	1.3	1.3	1.6	1.9

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,513.8	3,531.2	3,535.1	3,543.2	3,552.3	3,560.7	3,569.3	3,578.7
% Ch, Annual Rate	1.3	2.0	0.4	0.9	1.0	1.0	1.0	1.1
Manufacturing	294.1	293.5	292.7	292.3	291.9	291.6	291.6	291.8
% Ch, Annual Rate	-0.3	-0.9	-1.0	-0.7	-0.5	-0.4	0.0	0.3
Durable Manufacturing	207.8	207.1	206.6	206.2	205.9	205.5	205.4	205.4
% Ch, Annual Rate	-0.2	-1.3	-1.0	-0.6	-0.7	-0.7	-0.3	0.2
Wood Products	12.7	12.6	12.5	12.5	12.5	12.5	12.4	12.4
% Ch, Annual Rate	-2.4	-2.8	-2.3	-0.8	-0.4	-1.3	-1.0	0.2
Primary and Fabricated Metals	27.4	27.2	26.9	26.6	26.2	25.9	25.7	25.6
% Ch, Annual Rate	-0.4	-3.2	-4.7	-4.7	-4.7	-5.0	-3.4	-1.9
Computer and Electronic Products	20.0	20.0	20.1	20.2	20.3	20.4	20.5	20.6
% Ch, Annual Rate	-0.3	-0.2	1.1	2.1	2.1	1.9	2.1	2.5
Machinery and Electrical Equipment	22.7	22.6	22.6	22.7	22.7	22.7	22.8	23.0
% Ch, Annual Rate	3.0	-1.7	0.3	1.4	0.5	0.2	1.8	2.8
Aerospace	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.4	9.2	9.1	9.0	8.9	8.9	8.8	8.8
% Ch, Annual Rate	-7.7	-8.0	-6.0	-4.0	-4.9	0.0	-1.1	-2.6
Other Durables	29.2	29.1	29.1	29.0	28.9	28.8	28.8	28.8
% Ch, Annual Rate	0.3	-0.6	-0.9	-0.9	-1.0	-1.2	-1.0	-0.2
Nondurable Manufacturing	86.4	86.4	86.2	86.0	86.0	86.1	86.2	86.4
% Ch, Annual Rate	-0.4	0.1	-1.0	-0.7	0.0	0.3	0.7	0.6
Food Manufacturing	39.9	39.9	39.8	39.6	39.6	39.7	39.7	39.8
% Ch, Annual Rate	0.1	0.7	-1.7	-1.5	0.0	0.4	0.8	0.4
Paper and Paper Products	7.2	7.2	7.1	7.0	7.0	6.9	6.9	6.8
% Ch, Annual Rate	-3.4	-2.9	-3.6	-3.3	-3.5	-2.9	-2.7	-2.4
Other Nondurables	39.3	39.3	39.3	39.4	39.4	39.5	39.6	39.8
% Ch, Annual Rate	-0.4	0.0	0.2	0.6	0.6	0.8	1.1	1.4
Natural Resources and Mining	6.3	6.3	6.2	6.2	6.2	6.2	6.2	6.3
% Ch, Annual Rate	-1.4	0.5	-1.7	-0.4	-0.1	-0.1	0.2	0.8
Construction	214.8	214.8	214.6	214.5	214.1	213.8	213.8	214.3
% Ch, Annual Rate	-1.6	0.1	-0.3	-0.3	-0.7	-0.6	0.2	0.8
Trade, Transportation, and Utilities	656.1	657.1	658.2	658.6	659.4	659.8	659.4	658.8
% Ch, Annual Rate	0.3	0.6	0.7	0.3	0.5	0.2	-0.3	-0.3
Wholesale Trade	140.3	140.5	140.8	141.1	141.3	141.5	141.6	141.7
% Ch, Annual Rate	0.4	0.7	1.0	0.6	0.6	0.5	0.5	0.3
Retail Trade	397.9	398.7	399.5	399.7	400.2	400.4	399.9	399.4
% Ch, Annual Rate	0.5	0.8	0.8	0.2	0.5	0.2	-0.5	-0.5
Electronic Shopping and Mail-Order	61.7	62.4	63.0	63.7	64.2	64.8	65.3	65.8
% Ch	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Other Retail Trade	336.3	336.4	336.5	336.0	335.9	335.6	334.6	333.6
% Ch	-0.3	0.1	0.1	-0.5	-0.1	-0.4	-1.2	-1.2
Trans., Warehousing, and Utilities	117.9	117.8	117.8	117.9	117.9	117.9	117.9	117.7
% Ch, Annual Rate	-0.5	-0.2	0.0	0.1	0.2	0.0	-0.3	-0.5
Information	138.8	138.1	138.1	139.5	140.5	140.6	140.5	140.9
% Ch, Annual Rate	0.1	-2.0	-0.1	4.2	2.8	0.3	-0.2	1.2
Software Publishers	67.9	68.0	68.2	68.4	68.6	68.9	69.1	69.4
% Ch, Annual Rate	0.6	0.8	1.2	1.2	1.4	1.4	1.5	1.5
Other Publishing Industries	4.0	3.8	3.6	3.5	3.4	3.3	3.1	3.0
% Ch, Annual Rate	-17.4	-16.6	-13.9	-14.9	-13.2	-13.2	-13.1	-13.0
Other Information	67.0	66.4	66.2	67.6	68.5	68.4	68.2	68.5
% Ch, Annual Rate	0.8	-3.8	-0.7	8.6	5.1	-0.2	-1.2	1.6
Financial Activities	161.2	161.6	161.8	161.8	161.9	161.8	161.8	161.6
% Ch, Annual Rate	2.1	1.0	0.5	0.0	0.2	-0.2	-0.2	-0.4
Professional and Business Services	450.3	453.4	456.3	459.7	463.3	466.0	468.7	471.6
% Ch, Annual Rate	4.2	2.8	2.5	3.1	3.1	2.4	2.3	2.5
Education and Health Services	511.9	513.8	515.7	517.4	519.8	521.8	523.5	524.7
% Ch, Annual Rate	0.8	1.5	1.5	1.3	1.9	1.6	1.3	1.0
Leisure and Hospitality	357.0	359.1	361.0	361.1	359.9	360.7	362.3	364.2
% Ch, Annual Rate	2.6	2.4	2.1	0.0	-1.2	0.9	1.8	2.1
Other Services	126.1	126.5	127.0	127.4	127.9	128.4	128.8	129.2
% Ch, Annual Rate	1.4	1.4	1.5	1.4	1.5	1.4	1.3	1.2
Federal Government	75.3	82.5	76.4	75.1	75.2	75.3	75.3	75.4
% Ch, Annual Rate	3.3	44.5	-26.4	-7.0	0.5	0.5	0.5	0.5
State and Local Government	521.8	524.3	527.0	529.6	532.2	534.8	537.4	539.9
% Ch, Annual Rate	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	3,588.2	3,598.0	3,607.7	3,617.4	3,626.9	3,635.8	3,643.9	3,651.8
% Ch, Annual Rate	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.9
Manufacturing	292.4	293.0	293.7	294.5	295.3	296.0	296.7	297.3
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.1	1.0	0.9	0.9
Durable Manufacturing	205.9	206.3	206.9	207.6	208.2	208.8	209.4	209.9
% Ch, Annual Rate	0.8	0.8	1.2	1.3	1.3	1.2	1.0	1.0
Wood Products	12.5	12.6	12.7	12.7	12.8	12.8	12.8	12.8
% Ch, Annual Rate	2.4	2.3	2.5	2.3	0.7	0.4	0.1	0.3
Primary and Fabricated Metals	25.5	25.6	25.6	25.8	26.0	26.1	26.3	26.4
% Ch, Annual Rate	-0.4	0.2	1.4	2.3	2.7	2.9	2.5	2.1
Computer and Electronic Products	20.8	20.9	21.1	21.3	21.4	21.6	21.7	21.8
% Ch, Annual Rate	3.4	2.9	3.3	3.2	2.9	2.3	2.0	1.8
Machinery and Electrical Equipment	23.2	23.4	23.7	24.0	24.3	24.6	24.9	25.1
% Ch, Annual Rate	4.3	4.1	4.8	5.2	5.1	4.8	4.1	3.9
Aerospace	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.7	8.6	8.6	8.5	8.5	8.4	8.3	8.3
% Ch, Annual Rate	-3.2	-3.1	-2.8	-2.8	-3.0	-3.0	-2.9	-2.8
Other Durables	28.8	28.8	28.8	28.9	29.0	29.1	29.2	29.2
% Ch, Annual Rate	0.2	0.2	0.7	1.0	1.1	1.2	1.1	1.1
Nondurable Manufacturing	86.5	86.7	86.8	86.9	87.1	87.2	87.3	87.5
% Ch, Annual Rate	0.8	0.7	0.7	0.6	0.5	0.6	0.6	0.6
Food Manufacturing	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8
% Ch, Annual Rate	0.4	0.3	-0.1	-0.2	-0.1	0.0	0.1	0.1
Paper and Paper Products	6.8	6.8	6.7	6.7	6.7	6.6	6.6	6.6
% Ch, Annual Rate	-1.9	-1.9	-1.8	-1.9	-1.8	-1.8	-1.7	-1.6
Other Nondurables	39.9	40.1	40.3	40.4	40.6	40.7	40.9	41.0
% Ch, Annual Rate	1.6	1.6	1.8	1.7	1.6	1.5	1.5	1.5
Natural Resources and Mining	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.4
% Ch, Annual Rate	1.0	0.9	0.7	0.7	0.8	1.0	0.7	0.8
Construction	214.4	214.8	215.2	215.6	216.1	216.5	216.8	217.2
% Ch, Annual Rate	0.2	0.8	0.8	0.8	0.8	0.8	0.7	0.6
Trade, Transportation, and Utilities	658.4	658.4	658.4	658.3	657.9	657.9	657.8	657.7
% Ch, Annual Rate	-0.3	0.0	0.0	0.0	-0.2	0.0	-0.1	0.0
Wholesale Trade	141.8	141.9	142.0	142.0	142.2	142.2	142.3	142.3
% Ch, Annual Rate	0.3	0.2	0.3	0.1	0.3	0.1	0.2	0.2
Retail Trade	399.0	399.0	399.1	399.1	398.7	398.7	398.7	398.8
% Ch, Annual Rate	-0.4	0.1	0.0	0.0	-0.4	0.1	0.0	0.0
Electronic Shopping and Mail-Order	66.3	66.8	67.2	67.6	68.1	68.5	68.9	69.3
% Ch	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Other Retail Trade	332.7	332.3	331.9	331.5	330.6	330.3	329.9	329.5
% Ch	-1.1	-0.5	-0.5	-0.5	-1.0	-0.4	-0.5	-0.5
Trans., Warehousing, and Utilities	117.6	117.5	117.3	117.2	117.1	116.9	116.8	116.6
% Ch, Annual Rate	-0.4	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.5
Information	141.7	142.1	142.3	142.7	143.4	144.0	144.6	145.1
% Ch, Annual Rate	2.1	1.1	0.8	1.1	2.1	1.5	1.8	1.2
Software Publishers	69.7	70.0	70.3	70.6	70.9	71.3	71.6	71.9
% Ch, Annual Rate	1.7	1.7	1.7	1.8	1.9	1.8	1.8	1.8
Other Publishing Industries	2.9	2.9	2.8	2.7	2.6	2.5	2.5	2.4
% Ch, Annual Rate	-11.9	-11.9	-12.0	-11.6	-10.7	-11.5	-11.7	-11.9
Other Information	69.0	69.2	69.3	69.4	69.9	70.2	70.6	70.8
% Ch, Annual Rate	3.1	1.1	0.4	0.8	2.8	1.6	2.2	1.1
Financial Activities	161.3	160.9	160.4	160.0	159.7	159.3	158.8	158.5
% Ch, Annual Rate	-0.8	-1.1	-1.1	-0.9	-0.8	-1.2	-1.0	-0.9
Professional and Business Services	475.0	478.5	482.2	485.8	489.8	493.0	495.8	498.6
% Ch, Annual Rate	3.0	3.0	3.1	3.1	3.3	2.6	2.3	2.3
Education and Health Services	526.0	527.1	528.3	529.4	530.8	531.9	533.0	534.1
% Ch, Annual Rate	0.9	0.8	0.9	0.9	1.0	0.9	0.8	0.8
Leisure and Hospitality	365.2	366.6	367.7	368.7	369.1	370.1	371.0	371.9
% Ch, Annual Rate	1.1	1.5	1.2	1.1	0.4	1.1	1.0	0.9
Other Services	129.6	129.9	130.3	130.6	131.0	131.3	131.6	131.9
% Ch, Annual Rate	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9
Federal Government	75.5	75.6	75.7	75.8	75.8	75.9	76.0	76.1
% Ch, Annual Rate	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
State and Local Government	542.5	544.9	547.2	549.5	551.7	553.6	555.4	557.1
% Ch, Annual Rate	1.9	1.8	1.7	1.7	1.6	1.4	1.3	1.2

Table A3.1

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

Forecast 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	16,125.1	16,830.9	17,581.4	18,336.8	19,114.7	19,920.5	20,766.3	21,643.7
% Ch	2.6	4.4	4.5	4.3	4.2	4.2	4.2	4.2
Total Wage and Salary Disbursements	8,080.7	8,453.8	8,834.7	9,227.4	9,618.1	10,007.8	10,453.7	10,936.9
% Ch	2.9	4.6	4.5	4.4	4.2	4.1	4.5	4.6
Nonwage Personal Income	8,044.5	8,377.1	8,746.6	9,109.4	9,496.7	9,912.6	10,312.6	10,706.9
% Ch	2.3	4.1	4.4	4.1	4.3	4.4	4.0	3.8
Supplements to Wages and Salaries	1,875.6	1,953.4	2,021.0	2,086.9	2,174.0	2,264.4	2,362.8	2,461.8
% Ch	1.8	4.1	3.5	3.3	4.2	4.2	4.3	4.2
Proprietor's Income	1,419.3	1,500.9	1,579.8	1,633.7	1,636.5	1,655.3	1,666.3	1,682.2
% Ch	-0.2	5.8	5.3	3.4	0.2	1.1	0.7	1.0
Farm	37.5	38.9	37.5	50.8	57.9	70.1	74.8	74.5
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,381.8	1,462.0	1,542.2	1,582.9	1,578.6	1,585.2	1,591.5	1,607.7
% Ch	1.2	5.8	5.5	2.6	-0.3	0.4	0.4	1.0
Less: Contribution For Govt. Soc. Ins.	1,239.9	1,298.6	1,361.1	1,414.6	1,468.8	1,525.0	1,590.5	1,662.2
% Ch	2.9	4.7	4.8	3.9	3.8	3.8	4.3	4.5
Dividends/Int./Rent	3,211.4	3,361.8	3,526.1	3,629.6	3,824.4	4,020.5	4,209.4	4,378.9
% Ch	2.8	4.7	4.9	2.9	5.4	5.1	4.7	4.0
Transfer Payments	2,778.1	2,859.7	2,980.9	3,173.8	3,330.6	3,497.4	3,664.6	3,846.1
% Ch	3.5	2.9	4.2	6.5	4.9	5.0	4.8	5.0

Table A3.2

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

Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	17,319.2	17,466.7	17,657.3	17,882.4	18,049.8	18,234.6	18,433.6	18,629.2
% Ch, Annual Rate	5.2	3.5	4.4	5.2	3.8	4.2	4.4	4.3
Total Wage and Salary Disbursements	8,710.6	8,770.8	8,879.2	8,978.3	9,073.1	9,176.8	9,280.2	9,379.4
% Ch, Annual Rate	5.8	2.8	5.0	4.5	4.3	4.7	4.6	4.3
Nonwage Personal Income	8,608.5	8,695.9	8,778.1	8,904.1	8,976.7	9,057.8	9,153.3	9,249.8
% Ch, Annual Rate	4.5	4.1	3.8	5.9	3.3	3.7	4.3	4.3
Supplements to Wages and Salaries	1,999.4	2,012.0	2,028.7	2,043.8	2,059.6	2,074.2	2,096.1	2,117.6
% Ch, Annual Rate	3.9	2.5	3.3	3.0	3.1	2.9	4.3	4.2
Proprietor's Income	1,549.9	1,568.5	1,580.0	1,620.7	1,626.8	1,644.4	1,633.9	1,629.8
% Ch, Annual Rate	6.4	4.9	3.0	10.7	1.5	4.4	-2.5	-1.0
Farm	35.2	37.0	27.9	50.0	49.2	50.6	51.2	52.3
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,514.7	1,531.5	1,552.0	1,570.7	1,577.7	1,593.8	1,582.6	1,577.5
% Ch, Annual Rate	6.6	4.5	5.5	4.9	1.8	4.1	-2.8	-1.3
Less: Contribution For Govt. Soc. Ins.	1,343.6	1,352.4	1,367.4	1,381.1	1,395.7	1,408.4	1,421.0	1,433.1
% Ch, Annual Rate	8.2	2.7	4.5	4.1	4.3	3.7	3.6	3.4
Dividends/Int./Rent	3,468.8	3,502.0	3,539.6	3,594.0	3,563.0	3,588.9	3,654.0	3,712.5
% Ch, Annual Rate	3.6	3.9	4.4	6.3	-3.4	2.9	7.5	6.6
Transfer Payments	2,933.9	2,965.8	2,997.2	3,026.7	3,123.0	3,158.8	3,190.5	3,223.0
% Ch, Annual Rate	6.6	4.4	4.3	4.0	13.3	4.7	4.1	4.1

Table A3.2 (continued)

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

Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,829.9	19,025.2	19,208.9	19,395.0	19,618.4	19,817.7	20,019.0	20,226.9
% Ch, Annual Rate	4.4	4.2	3.9	3.9	4.7	4.1	4.1	4.2
Total Wage and Salary Disbursements	9,476.1	9,579.2	9,663.0	9,753.9	9,853.0	9,953.5	10,058.0	10,166.9
% Ch, Annual Rate	4.2	4.4	3.5	3.8	4.1	4.1	4.3	4.4
Nonwage Personal Income	9,353.8	9,445.9	9,545.9	9,641.1	9,765.4	9,864.2	9,961.0	10,060.0
% Ch, Annual Rate	4.6	4.0	4.3	4.0	5.3	4.1	4.0	4.0
Supplements to Wages and Salaries	2,142.1	2,165.3	2,184.2	2,204.6	2,230.1	2,252.5	2,275.6	2,299.4
% Ch, Annual Rate	4.7	4.4	3.5	3.8	4.7	4.1	4.2	4.3
Proprietor's Income	1,630.8	1,632.2	1,638.7	1,644.3	1,650.7	1,653.8	1,656.3	1,660.3
% Ch, Annual Rate	0.2	0.3	1.6	1.4	1.6	0.8	0.6	1.0
Farm	53.9	56.5	59.4	61.9	65.9	69.3	71.8	73.4
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,576.9	1,575.7	1,579.3	1,582.4	1,584.8	1,584.5	1,584.6	1,586.9
% Ch, Annual Rate	-0.2	-0.3	0.9	0.8	0.6	-0.1	0.0	0.6
Less: Contribution For Govt. Soc. Ins.	1,451.2	1,463.9	1,474.3	1,485.8	1,505.0	1,517.9	1,531.4	1,545.6
% Ch, Annual Rate	5.2	3.5	2.9	3.1	5.3	3.5	3.6	3.8
Dividends/Int./Rent	3,754.6	3,800.2	3,849.3	3,893.4	3,945.9	3,996.7	4,045.2	4,094.4
% Ch, Annual Rate	4.6	4.9	5.3	4.7	5.5	5.3	4.9	5.0
Transfer Payments	3,277.5	3,312.3	3,348.0	3,384.5	3,443.8	3,479.1	3,515.3	3,551.4
% Ch, Annual Rate	6.9	4.3	4.4	4.4	7.2	4.2	4.2	4.2

Table A3.2 (continued)

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

Forecast 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	20,452.1	20,659.4	20,870.8	21,082.9	21,318.9	21,532.8	21,750.6	21,972.7
% Ch, Annual Rate	4.5	4.1	4.2	4.1	4.6	4.1	4.1	4.1
Total Wage and Salary Disbursements	10,278.8	10,392.9	10,511.4	10,631.6	10,753.0	10,874.8	10,997.6	11,122.1
% Ch, Annual Rate	4.5	4.5	4.6	4.7	4.6	4.6	4.6	4.6
Nonwage Personal Income	10,173.3	10,266.5	10,359.3	10,451.3	10,565.9	10,658.0	10,753.0	10,850.6
% Ch, Annual Rate	4.6	3.7	3.7	3.6	4.5	3.5	3.6	3.7
Supplements to Wages and Salaries	2,326.6	2,350.6	2,374.9	2,399.0	2,426.3	2,449.9	2,473.6	2,497.5
% Ch, Annual Rate	4.8	4.2	4.2	4.1	4.6	4.0	3.9	3.9
Proprietor's Income	1,660.6	1,663.8	1,668.8	1,672.0	1,673.5	1,678.0	1,684.3	1,693.0
% Ch, Annual Rate	0.1	0.8	1.2	0.8	0.4	1.1	1.5	2.1
Farm	74.4	74.9	75.0	74.9	74.6	74.5	74.5	74.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,586.2	1,588.9	1,593.8	1,597.2	1,598.9	1,603.5	1,609.8	1,618.4
% Ch, Annual Rate	-0.2	0.7	1.3	0.8	0.4	1.2	1.6	2.1
Less: Contribution For Govt. Soc. Ins.	1,567.3	1,582.4	1,598.1	1,614.1	1,637.5	1,653.9	1,670.3	1,687.0
% Ch, Annual Rate	5.7	3.9	4.0	4.1	5.9	4.0	4.0	4.1
Dividends/Int./Rent	4,140.7	4,187.3	4,231.9	4,277.8	4,319.2	4,358.5	4,398.8	4,439.1
% Ch, Annual Rate	4.6	4.6	4.3	4.4	3.9	3.7	3.7	3.7
Transfer Payments	3,612.7	3,647.3	3,681.8	3,716.5	3,784.4	3,825.4	3,866.6	3,908.1
% Ch, Annual Rate	7.1	3.9	3.8	3.8	7.5	4.4	4.4	4.4

Table A3.3

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	404.232	428.765	458.532	479.470	502.506	526.530	551.555	577.623
% Ch	5.1	6.1	6.9	4.6	4.8	4.8	4.8	4.7
Total Wage and Salary Disbursements	203.300	218.077	237.255	248.194	259.929	271.791	284.961	299.397
% Ch	6.1	7.3	8.8	4.6	4.7	4.6	4.8	5.1
Manufacturing	21.729	21.691	22.746	23.792	24.559	25.326	26.413	27.679
% Ch	-0.3	-0.2	4.9	4.6	3.2	3.1	4.3	4.8
Durable Manufacturing	17.316	17.080	17.901	18.766	19.363	19.950	20.794	21.804
% Ch	-1.6	-1.4	4.8	4.8	3.2	3.0	4.2	4.9
Nondurable Manufacturing	4.413	4.611	4.845	5.026	5.196	5.376	5.619	5.875
% Ch	4.8	4.5	5.1	3.7	3.4	3.5	4.5	4.6
Nonmanufacturing	174.575	189.496	207.287	216.886	227.572	238.367	250.132	262.970
% Ch	7.1	8.5	9.4	4.6	4.9	4.7	4.9	5.1
Other Private Wages	1.193	1.232	1.387	1.451	1.509	1.567	1.630	1.698
% Ch	4.1	3.3	12.5	4.6	4.0	3.8	4.0	4.1
Farm Wages	1.700	1.467	1.508	1.604	1.706	1.808	1.921	2.042
% Ch	11.5	-13.7	2.8	6.3	6.4	6.0	6.2	6.3
Military Wages	4.103	4.190	4.327	4.462	4.583	4.723	4.865	5.009
% Ch	0.1	2.1	3.3	3.1	2.7	3.1	3.0	3.0
Nonwage Personal Income	200.932	210.688	221.278	231.276	242.577	254.739	266.594	278.226
% Ch	4.1	4.9	5.0	4.5	4.9	5.0	4.7	4.4
Supplements to Wages and Salaries	46.393	48.687	51.744	53.825	56.258	58.793	61.526	64.346
% Ch	5.6	4.9	6.3	4.0	4.5	4.5	4.6	4.6
Proprietor's Income	32.419	35.590	37.347	38.277	38.074	38.415	38.615	38.944
% Ch	-0.2	9.8	4.9	2.5	-0.5	0.9	0.5	0.9
Farm	2.016	1.922	1.657	1.533	1.455	1.652	1.731	1.727
% Ch	...	...	...	...	...	...	...	...
Nonfarm	30.403	33.667	35.689	36.744	36.619	36.763	36.885	37.217
% Ch	3.1	10.7	6.0	3.0	-0.3	0.4	0.3	0.9
Less: Contribution For Govt. Soc. Ins.	33.509	36.007	39.162	40.927	42.569	44.274	46.216	48.371
% Ch	4.4	7.5	8.8	4.5	4.0	4.0	4.4	4.7
Plus: Residence Adjustment	4.190	4.301	4.395	4.599	4.828	5.056	5.317	5.600
% Ch	7.8	2.7	2.2	4.6	5.0	4.7	5.2	5.3
Dividends/Int./Rent	91.551	96.125	101.849	105.710	112.200	118.724	125.049	130.784
% Ch	3.8	5.0	6.0	3.8	6.1	5.8	5.3	4.6
Transfer Payments	59.888	61.992	65.104	69.792	73.787	78.025	82.304	86.923
% Ch	5.8	3.5	5.0	7.2	5.7	5.7	5.5	5.6
State U.I. Benefits	0.982	0.975	0.963	0.793	0.925	1.200	1.360	1.481
% Ch	1.2	-0.7	-1.3	-17.7	16.7	29.7	13.3	8.9
Other Transfers	58.906	61.016	64.142	68.999	72.862	76.825	80.944	85.442
% Ch	5.9	3.6	5.1	7.6	5.6	5.4	5.4	5.6

Table A3.4

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	451.517	455.080	460.513	467.020	471.608	476.242	482.092	487.939
% Ch, Annual Rate	12.2	3.2	4.9	5.8	4.0	4.0	5.0	4.9
Total Wage and Salary Disbursements	234.262	235.175	238.256	241.328	244.030	246.593	249.596	252.556
% Ch, Annual Rate	20.7	1.6	5.3	5.3	4.6	4.3	5.0	4.8
Manufacturing	23.403	22.058	22.316	23.205	23.468	23.675	23.890	24.136
% Ch, Annual Rate	32.0	-21.1	4.8	16.9	4.6	3.6	3.7	4.2
Durable Manufacturing	18.596	17.253	17.461	18.294	18.516	18.673	18.842	19.033
% Ch, Annual Rate	37.5	-25.9	4.9	20.5	5.0	3.4	3.7	4.1
Nondurable Manufacturing	4.807	4.805	4.855	4.911	4.952	5.002	5.048	5.103
% Ch, Annual Rate	13.2	-0.2	4.2	4.7	3.4	4.1	3.7	4.5
Nonmanufacturing	203.779	205.935	208.658	210.776	213.136	215.434	218.155	220.817
% Ch, Annual Rate	20.0	4.3	5.4	4.1	4.6	4.4	5.1	5.0
Other Private Wages	1.331	1.408	1.395	1.414	1.429	1.443	1.459	1.474
% Ch, Annual Rate	14.9	25.1	-3.6	5.6	4.2	4.0	4.6	4.2
Farm Wages	1.487	1.497	1.508	1.540	1.565	1.589	1.617	1.643
% Ch, Annual Rate	3.4	3.0	2.9	8.6	6.7	6.4	7.1	6.6
Military Wages	4.261	4.277	4.379	4.393	4.432	4.452	4.476	4.486
% Ch, Annual Rate	3.4	1.5	9.9	1.3	3.7	1.8	2.1	0.9
Nonwage Personal Income	217.256	219.905	222.258	225.692	227.578	229.649	232.495	235.383
% Ch, Annual Rate	3.9	5.0	4.3	6.3	3.4	3.7	5.1	5.1
Supplements to Wages and Salaries	50.883	51.394	52.105	52.597	53.104	53.470	54.065	54.659
% Ch, Annual Rate	11.1	4.1	5.6	3.8	3.9	2.8	4.5	4.5
Proprietor's Income	36.539	37.101	37.474	38.273	38.422	38.527	38.158	38.000
% Ch, Annual Rate	3.4	6.3	4.1	8.8	1.6	1.1	-3.8	-1.6
Farm	1.565	1.656	1.559	1.849	1.763	1.539	1.434	1.397
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	34.975	35.445	35.915	36.424	36.660	36.988	36.725	36.603
% Ch, Annual Rate	6.4	5.5	5.4	5.8	2.6	3.6	-2.8	-1.3
Less: Contribution For Govt. Soc. Ins.	38.442	38.809	39.465	39.931	40.416	40.724	41.100	41.467
% Ch, Annual Rate	17.7	3.9	6.9	4.8	5.0	3.1	3.7	3.6
Plus: Residence Adjustment	4.355	4.376	4.396	4.453	4.509	4.570	4.630	4.688
% Ch, Annual Rate	-2.7	1.9	1.8	5.4	5.1	5.5	5.4	5.1
Dividends/Int./Rent	99.822	101.074	102.352	104.147	103.459	104.422	106.524	108.436
% Ch, Annual Rate	4.7	5.1	5.2	7.2	-2.6	3.8	8.3	7.4
Transfer Payments	64.099	64.770	65.396	66.153	68.499	69.384	70.218	71.066
% Ch, Annual Rate	5.7	4.3	3.9	4.7	15.0	5.3	4.9	4.9
State U.I. Benefits	1.022	0.979	0.932	0.917	0.917	0.756	0.728	0.769
% Ch, Annual Rate	22.0	-15.7	-17.9	-6.3	0.0	-53.7	-14.1	24.2
Other Transfers	63.077	63.790	64.464	65.236	67.582	68.627	69.490	70.298
% Ch, Annual Rate	5.5	4.6	4.3	4.9	15.2	6.3	5.1	4.7

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	493.865	499.881	505.243	511.036	517.676	523.513	529.394	535.537
% Ch, Annual Rate	4.9	5.0	4.4	4.7	5.3	4.6	4.6	4.7
Total Wage and Salary Disbursements	255.516	258.788	261.214	264.196	267.315	270.220	273.218	276.412
% Ch, Annual Rate	4.8	5.2	3.8	4.6	4.8	4.4	4.5	4.8
Manufacturing	24.319	24.484	24.627	24.804	24.996	25.198	25.428	25.682
% Ch, Annual Rate	3.1	2.7	2.4	2.9	3.1	3.3	3.7	4.1
Durable Manufacturing	19.180	19.300	19.415	19.557	19.703	19.853	20.025	20.219
% Ch, Annual Rate	3.1	2.5	2.4	3.0	3.0	3.1	3.5	3.9
Nondurable Manufacturing	5.139	5.185	5.212	5.247	5.294	5.346	5.403	5.463
% Ch, Annual Rate	2.9	3.6	2.2	2.7	3.6	4.0	4.4	4.4
Nonmanufacturing	223.502	226.535	228.753	231.497	234.327	236.959	239.653	242.529
% Ch, Annual Rate	5.0	5.5	4.0	4.9	5.0	4.6	4.6	4.9
Other Private Wages	1.488	1.504	1.515	1.530	1.545	1.559	1.574	1.589
% Ch, Annual Rate	4.0	4.4	2.9	3.9	4.1	3.7	3.8	4.0
Farm Wages	1.668	1.696	1.716	1.742	1.769	1.794	1.820	1.848
% Ch, Annual Rate	6.3	6.8	4.9	6.1	6.4	5.9	5.9	6.2
Military Wages	4.539	4.569	4.603	4.624	4.677	4.709	4.743	4.764
% Ch, Annual Rate	4.8	2.7	3.0	1.8	4.7	2.7	3.0	1.8
Nonwage Personal Income	238.349	241.093	244.028	246.840	250.361	253.294	256.176	259.125
% Ch, Annual Rate	5.1	4.7	5.0	4.7	5.8	4.8	4.6	4.7
Supplements to Wages and Salaries	55.355	56.021	56.526	57.129	57.869	58.471	59.090	59.742
% Ch, Annual Rate	5.2	4.9	3.7	4.3	5.3	4.2	4.3	4.5
Proprietor's Income	37.978	37.987	38.108	38.223	38.342	38.388	38.425	38.504
% Ch, Annual Rate	-0.2	0.1	1.3	1.2	1.2	0.5	0.4	0.8
Farm	1.399	1.431	1.476	1.515	1.581	1.639	1.680	1.708
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.578	36.556	36.632	36.709	36.760	36.749	36.745	36.796
% Ch, Annual Rate	-0.3	-0.2	0.8	0.8	0.6	-0.1	0.0	0.6
Less: Contribution For Govt. Soc. Ins.	42.019	42.434	42.723	43.101	43.700	44.069	44.455	44.872
% Ch, Annual Rate	5.4	4.0	2.7	3.6	5.7	3.4	3.5	3.8
Plus: Residence Adjustment	4.745	4.805	4.854	4.907	4.965	5.024	5.085	5.149
% Ch, Annual Rate	4.9	5.2	4.1	4.5	4.8	4.8	5.0	5.1
Dividends/Int./Rent	109.866	111.395	113.028	114.511	116.244	117.926	119.544	121.184
% Ch, Annual Rate	5.4	5.7	6.0	5.4	6.2	5.9	5.6	5.6
Transfer Payments	72.425	73.318	74.234	75.170	76.641	77.554	78.486	79.419
% Ch, Annual Rate	7.9	5.0	5.1	5.1	8.1	4.8	4.9	4.8
State U.I. Benefits	0.828	0.870	0.968	1.032	1.097	1.176	1.240	1.286
% Ch, Annual Rate	34.7	22.0	53.3	29.0	27.6	32.0	23.7	15.9
Other Transfers	71.596	72.448	73.266	74.138	75.544	76.378	77.246	78.132
% Ch, Annual Rate	7.6	4.8	4.6	4.8	7.8	4.5	4.6	4.7

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	542.183	548.373	554.659	561.007	568.017	574.369	580.808	587.297
% Ch, Annual Rate	5.1	4.6	4.7	4.7	5.1	4.5	4.6	4.5
Total Wage and Salary Disbursements	279.792	283.171	286.662	290.221	293.957	297.573	301.213	304.845
% Ch, Annual Rate	5.0	4.9	5.0	5.1	5.3	5.0	5.0	4.9
Manufacturing	25.965	26.251	26.559	26.877	27.197	27.518	27.839	28.160
% Ch, Annual Rate	4.5	4.5	4.8	4.9	4.8	4.8	4.7	4.7
Durable Manufacturing	20.440	20.664	20.909	21.164	21.420	21.677	21.932	22.186
% Ch, Annual Rate	4.4	4.4	4.8	5.0	4.9	4.9	4.8	4.7
Nondurable Manufacturing	5.525	5.587	5.650	5.713	5.777	5.841	5.907	5.974
% Ch, Annual Rate	4.6	4.6	4.6	4.5	4.5	4.5	4.6	4.6
Nonmanufacturing	245.526	248.542	251.645	254.816	258.130	261.345	264.582	267.823
% Ch, Annual Rate	5.0	5.0	5.1	5.1	5.3	5.1	5.0	5.0
Other Private Wages	1.606	1.622	1.638	1.655	1.673	1.689	1.706	1.723
% Ch, Annual Rate	4.2	4.1	4.1	4.1	4.3	4.1	4.0	4.0
Farm Wages	1.877	1.906	1.935	1.965	1.996	2.027	2.057	2.087
% Ch, Annual Rate	6.4	6.3	6.3	6.3	6.5	6.2	6.1	6.0
Military Wages	4.818	4.850	4.885	4.907	4.961	4.994	5.029	5.052
% Ch, Annual Rate	4.6	2.7	2.9	1.8	4.5	2.6	2.9	1.8
Nonwage Personal Income	262.391	265.203	267.997	270.786	274.060	276.795	279.595	282.452
% Ch, Annual Rate	5.1	4.4	4.3	4.2	4.9	4.1	4.1	4.2
Supplements to Wages and Salaries	60.519	61.185	61.861	62.539	63.342	64.012	64.681	65.349
% Ch, Annual Rate	5.3	4.5	4.5	4.5	5.2	4.3	4.2	4.2
Proprietor's Income	38.498	38.562	38.667	38.733	38.762	38.855	38.987	39.171
% Ch, Annual Rate	-0.1	0.7	1.1	0.7	0.3	1.0	1.4	1.9
Farm	1.724	1.732	1.734	1.732	1.728	1.725	1.725	1.727
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.774	36.830	36.933	37.001	37.033	37.130	37.262	37.444
% Ch, Annual Rate	-0.2	0.6	1.1	0.7	0.4	1.0	1.4	2.0
Less: Contribution For Govt. Soc. Ins.	45.526	45.975	46.443	46.920	47.640	48.127	48.615	49.102
% Ch, Annual Rate	6.0	4.0	4.1	4.2	6.3	4.1	4.1	4.1
Plus: Residence Adjustment	5.214	5.281	5.351	5.421	5.492	5.563	5.635	5.708
% Ch, Annual Rate	5.2	5.2	5.4	5.4	5.3	5.3	5.3	5.3
Dividends/Int./Rent	122.738	124.301	125.807	127.349	128.755	130.096	131.462	132.824
% Ch, Annual Rate	5.2	5.2	4.9	5.0	4.5	4.2	4.3	4.2
Transfer Payments	80.947	81.849	82.754	83.665	85.349	86.395	87.445	88.502
% Ch, Annual Rate	7.9	4.5	4.5	4.5	8.3	5.0	4.9	4.9
State U.I. Benefits	1.321	1.349	1.372	1.397	1.426	1.461	1.501	1.536
% Ch, Annual Rate	11.1	8.7	7.2	7.4	8.6	10.1	11.4	9.7
Other Transfers	79.626	80.501	81.382	82.268	83.923	84.935	85.944	86.966
% Ch, Annual Rate	7.9	4.5	4.5	4.4	8.3	4.9	4.8	4.8

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	2.387	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	2.628	3.0
2018	108.2	2.0	2.511	2.4	2.711	3.2
Forecast						
2019	110.1	1.8	2.558	1.9	2.788	2.8
2020	112.4	2.1	2.614	2.2	2.851	2.3
2021	114.7	2.1	2.672	2.2	2.914	2.2
2022	117.0	2.0	2.730	2.2	2.978	2.2
2023	119.3	1.9	2.788	2.1	3.041	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
2018	115.0	2.7	103.4	0.5	81.1	21.2	77.9	13.1
Forecast								
2019	117.9	2.6	104.7	1.3	83.3	2.7	74.7	-4.2
2020	121.1	2.7	106.8	2.0	82.8	-0.6	76.4	2.3
2021	124.3	2.7	108.9	2.0	84.3	1.8	75.6	-1.0
2022	127.6	2.6	110.7	1.7	86.3	2.3	75.5	-0.1
2023	130.7	2.5	112.6	1.7	88.4	2.5	75.6	0.1

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
Forecast						
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)

	2014	2015	Actual 2016	2017	2018	2019	2020	Forecast 2021	2022	2023
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

Indicator	Latest Data	Indication*
U.S. Leading Index	February 2019	+
U.S. Real GDP Growth	4th quarter 2018	-
U.S. ISM Index	February 2019	-
U.S. Employment YOY%Δ	February 2019	-
U.S. Unemployment Rate	February 2019	+
U.S. Consumer Confidence	March 2019	-
U.S. Consumer Sentiment	March 2019	+
U.S. Light Vehicle Sales	February 2019	-
U.S. CPI YOY%Δ	February 2019	unchanged
U.S. Home Prices YOY%Δ	January 2019	-
S&P 500 Index	March 2019	+
WA Leading Index	February 2019	-
WA ISM-WW Index	February 2019	+
WA Employment YOY%Δ	February 2019	-
WA Aerospace Empl. YOY%Δ	February 2019	-
WA Unemployment Rate	February 2019	unchanged
WA Help Wanted Index	January 2019	+
WA Business Cycle Indicator	February 2019	-
WA Initial Unemploy. Claims	February 2019	-
WA Housing Permits	February 2019	-
WA Weekly Hours in Mfg.	February 2019	-
WA New Vehicle Registration	February 2019	-
WA In-Migration	February 2019	-
WA Exports-Total YOY%Δ	4th quarter 2018	-
WA Exports- w/o Trans. Equip. YOY%Δ	4th quarter 2018	-
Seattle CPI YOY%Δ	February 2019	+
Seattle Home Prices YOY%Δ	January 2019	-
WA Construction Activity Index	February 2019	-

*Change from the previous reading

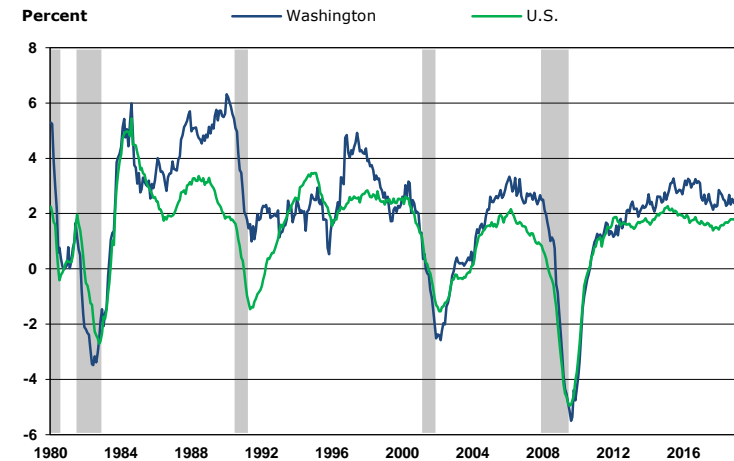
Table A6.2
Washington Business Indicators
 Historical Data

	WA Index of Leading Indicators	U.S. Index of Leading Indicators	WA State Business Cycle Indicator	WA State Construction Index	WA State Help Wanted Index	WA Purchasing Management Index	U.S. Purchasing Management Index
2014:01	113.8	92.0	44.2	95.4	118.2	63.5	51.8
2014:02	113.7	92.5	43.0	93.5	118.5	68.7	54.3
2014:03	114.3	93.4	43.5	94.3	118.6	63.6	54.4
2014:04	115.0	93.5	46.1	96.8	120.6	53.7	55.3
2014:05	115.2	94.0	46.6	96.2	118.7	59.6	55.6
2014:06	116.3	94.7	47.2	97.4	121.0	67.0	55.7
2014:07	116.5	95.2	48.6	97.4	121.3	50.1	56.4
2014:08	116.6	95.5	48.9	97.7	121.6	62.9	58.1
2014:09	116.5	96.1	49.1	99.4	114.3	60.3	56.1
2014:10	117.0	96.4	49.0	100.8	119.0	57.6	57.9
2014:11	117.7	96.8	51.2	101.9	128.0	63.1	57.6
2014:12	117.4	97.3	51.7	103.2	122.0	53.3	55.1
2015:01	117.3	97.4	52.7	99.8	127.6	66.6	53.5
2015:02	118.4	97.4	57.9	109.0	137.2	65.9	52.9
2015:03	117.8	97.9	57.5	100.8	138.8	64.1	51.5
2015:04	118.0	98.4	58.4	98.9	135.7	60.4	51.5
2015:05	118.4	98.8	58.7	98.5	139.0	60.3	52.8
2015:06	118.8	99.3	58.9	99.8	136.0	51.4	53.5
2015:07	118.6	99.1	60.0	100.0	141.0	53.6	52.7
2015:08	118.2	99.1	59.2	99.4	139.1	48.0	51.1
2015:09	117.0	99.0	58.2	95.7	126.6	48.0	50.2
2015:10	118.0	99.4	59.7	99.5	132.4	46.1	50.1
2015:11	118.3	99.8	60.1	100.8	134.3	50.0	48.6
2015:12	117.9	99.6	62.7	98.7	130.7	54.5	48.0
2016:01	117.8	99.3	64.7	101.8	128.7	57.2	48.2
2016:02	118.0	99.2	66.5	102.3	124.9	55.4	49.7
2016:03	118.8	99.2	64.2	105.2	128.9	55.7	51.7
2016:04	119.4	99.7	65.3	102.4	130.9	50.8	50.7
2016:05	120.4	99.5	67.7	106.3	148.2	49.2	51.0
2016:06	120.4	99.8	68.1	104.1	151.3	49.1	52.8
2016:07	120.8	100.2	69.0	103.0	156.3	50.8	52.3
2016:08	120.8	100.2	67.9	102.2	153.1	47.7	49.4
2016:09	121.1	100.4	68.2	107.5	143.4	51.4	51.7
2016:10	120.8	100.5	69.5	102.3	152.3	53.1	52.0
2016:11	120.6	100.7	71.0	104.1	148.8	53.3	53.5
2016:12	120.2	101.2	72.0	103.0	149.2	47.3	54.5
2017:01	121.2	101.8	71.3	103.5	152.5	54.2	56.0
2017:02	120.6	102.1	70.5	104.3	140.1	48.6	57.7
2017:03	121.3	102.6	72.3	102.6	143.4	59.2	57.2
2017:04	122.1	102.8	71.6	107.9	143.3	59.2	54.8
2017:05	122.3	103.2	73.4	103.1	149.2	45.0	54.9
2017:06	123.0	103.8	73.1	106.1	145.4	50.0	57.8
2017:07	123.2	104.1	73.8	106.1	139.5	47.0	56.3
2017:08	123.5	104.5	75.5	106.2	135.1	58.2	58.8
2017:09	123.7	104.5	77.4	102.9	140.4	57.5	60.8
2017:10	124.4	105.9	78.4	108.0	132.7	51.8	58.7
2017:11	123.8	106.3	81.1	100.2	134.7	65.0	58.2
2017:12	125.2	107.1	80.2	107.2	138.6	65.8	59.7
2018:01	125.1	107.8	79.9	102.9	136.8	60.8	59.1
2018:02	125.7	108.5	81.0	104.5	133.3	68.3	60.8
2018:03	126.6	108.8	82.3	110.5	137.4	68.0	59.3
2018:04	126.7	109.3	81.9	106.7	133.7	55.8	57.3
2018:05	125.7	109.4	83.0	104.9	128.0	61.7	58.7
2018:06	125.3	110.0	82.9	104.8	123.1	56.0	60.2
2018:07	125.6	110.4	82.8	105.0	124.8	60.0	58.1
2018:08	125.2	110.9	82.3	102.9	123.4	61.1	61.3
2018:09	126.3	111.5	83.5	104.7	131.5	62.7	59.8
2018:10	126.4	111.4	84.7	105.3	129.3	55.0	57.7
2018:11	126.3	111.4	86.1	107.2	127.8	60.0	59.3
2018:12	126.7	111.3	86.6	107.6	131.2	52.7	54.1
2019:01	126.7	111.3	87.8	103.4	133.0	54.5	56.6
2019:02	124.1	111.5	84.1	95.3		61.1	54.2

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

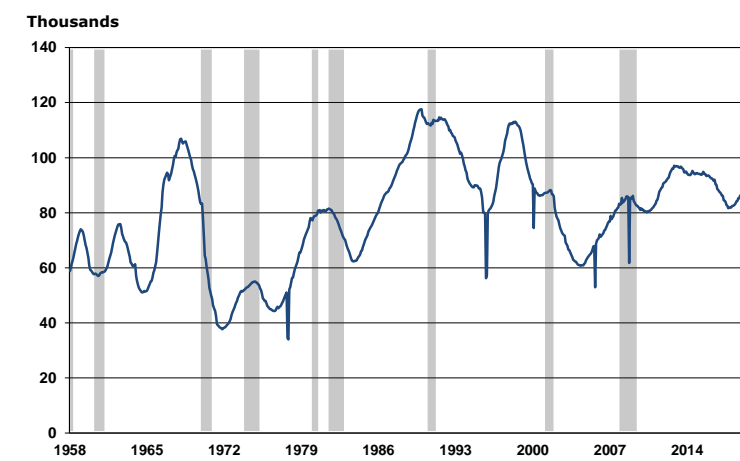
January 1980 to February 2019



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

Washington Aircraft and Parts Employment

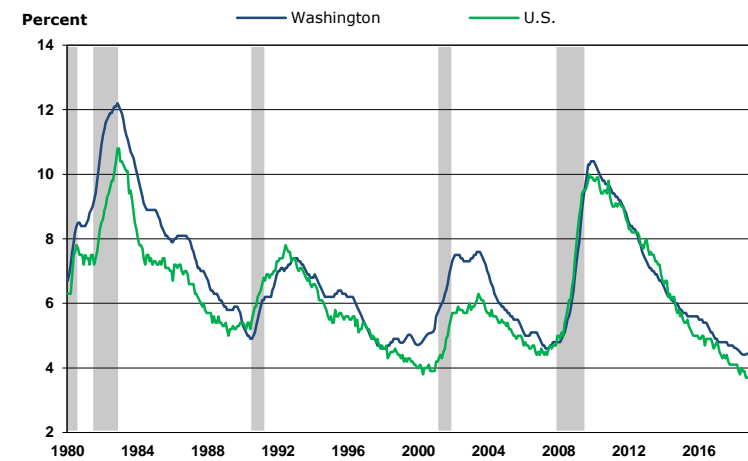
January 1958 to February 2019



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

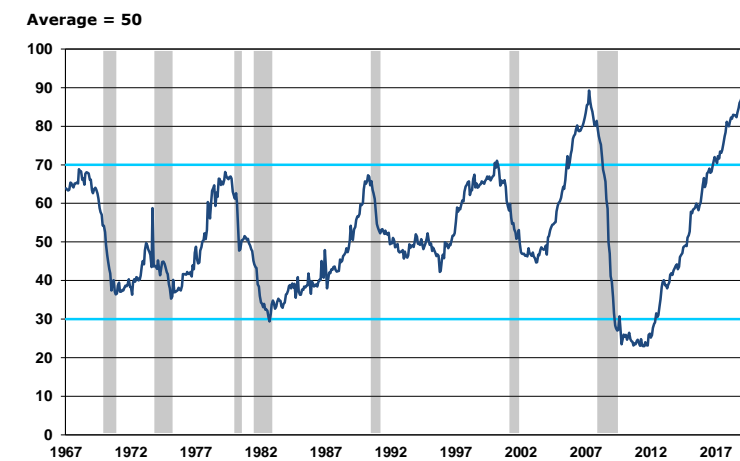
January 1980 to February 2019



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to February 2019



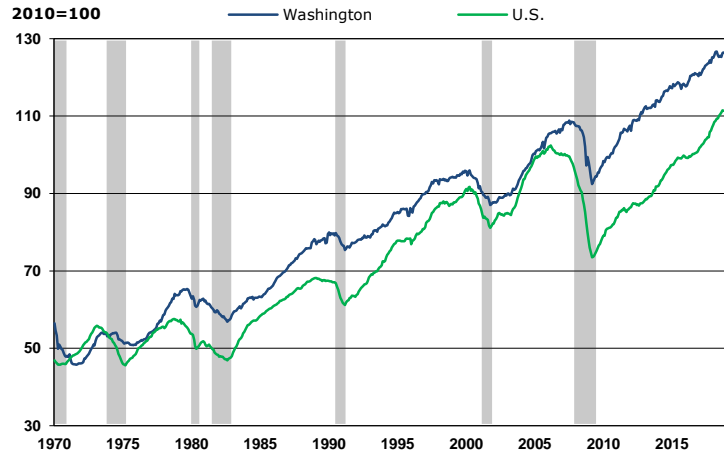
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

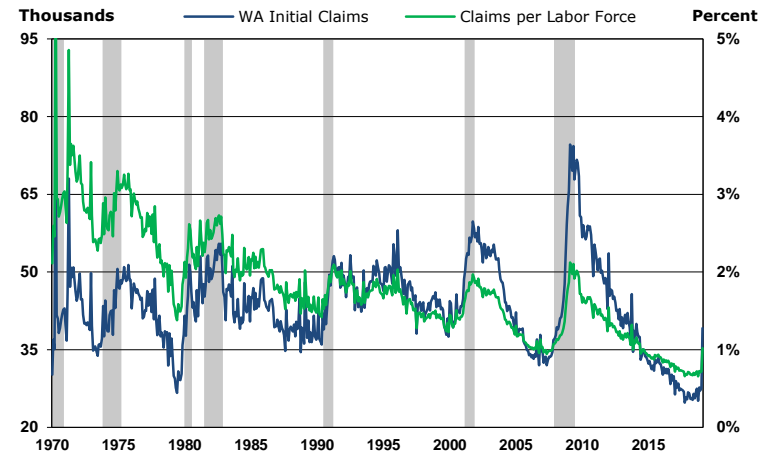
January 1970 to February 2019



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

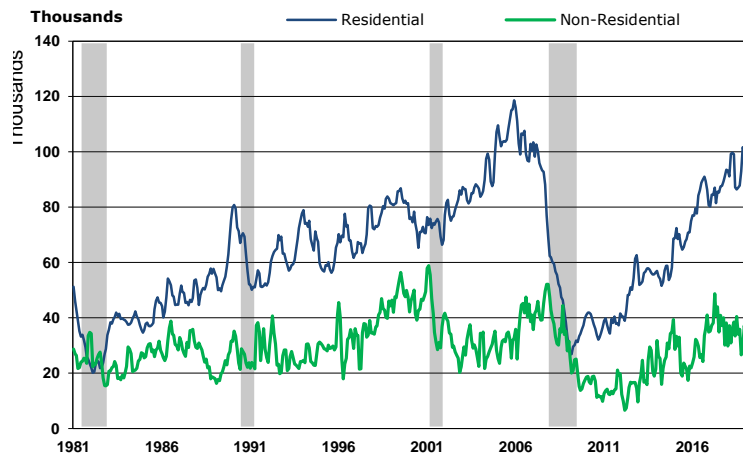
January 1970 to February 2019, S.A.



* Source: WA State Employment Security, ERFC

Square Footage of Construction Projects in WA State

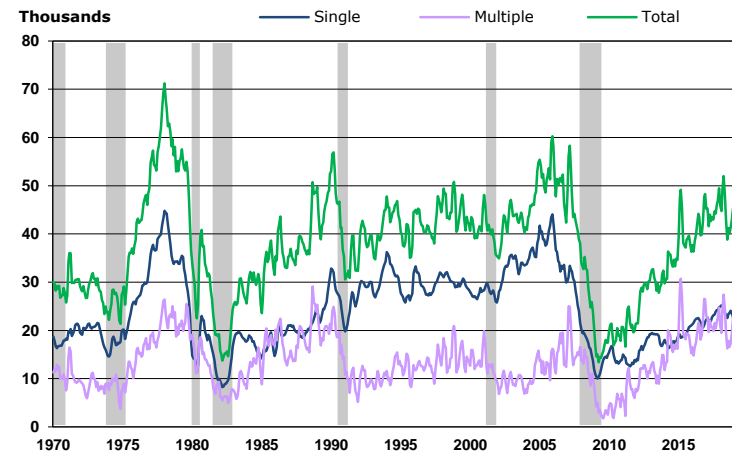
January 1981 to February 2019, 3mma, SAAR



* Source: McGraw-Hill Construction, ERFC

Housing Units Authorized in Washington State

January 1970 to February 2019, 3mma, SAAR



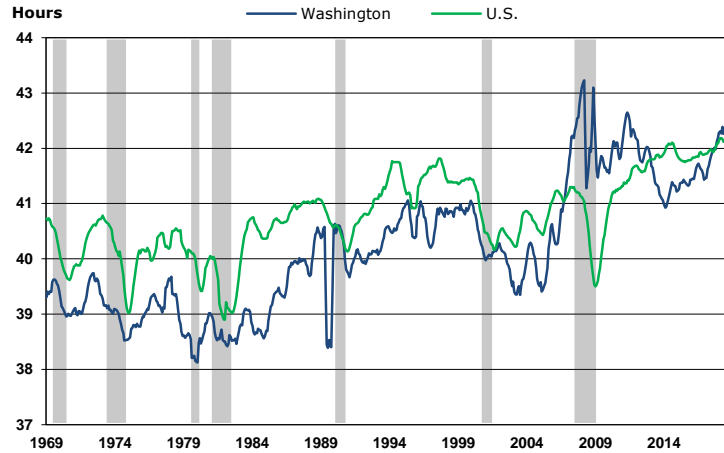
* Source: Census Bureau, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

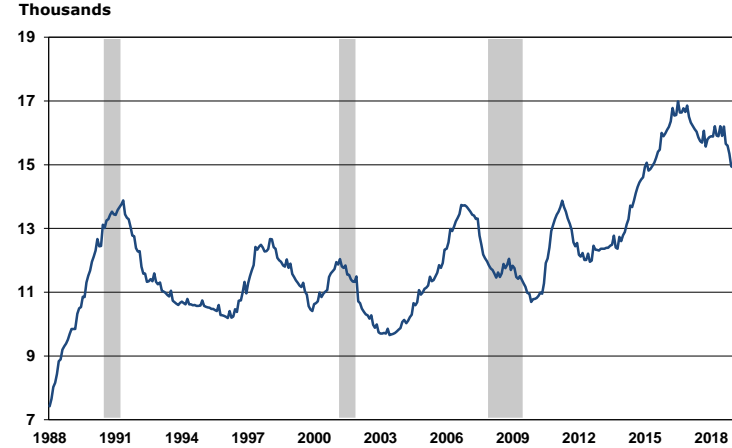
June 1969 to February 2019, 6-Mo. Moving Average, S.A.



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

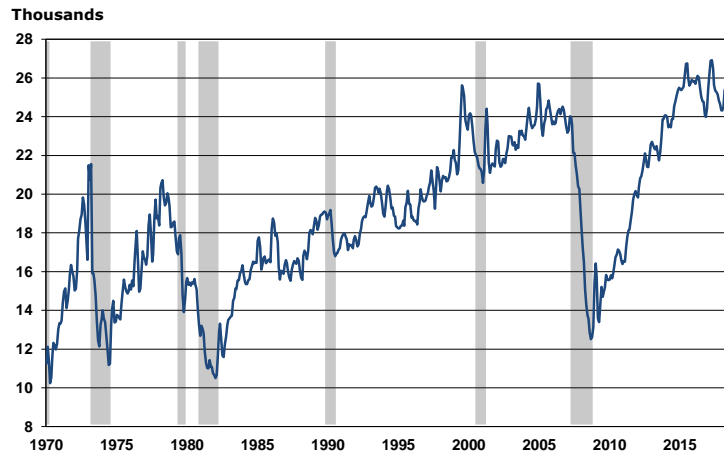
January 1988 to February 2019, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

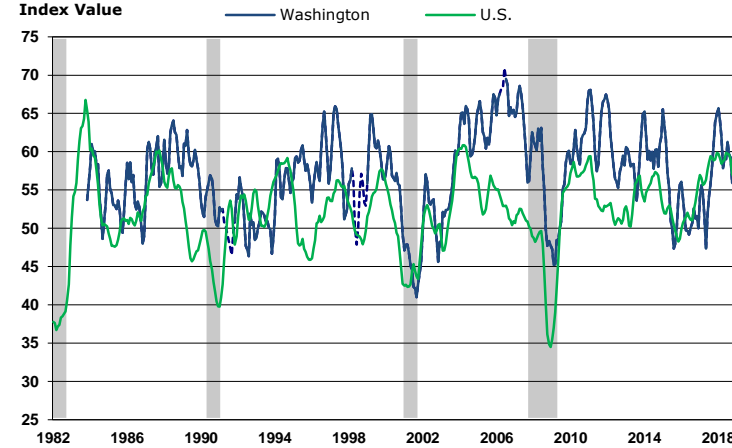
September 1970 to February 2019, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

March 1982 to February 2019, 3-Month Moving Average, S.A.



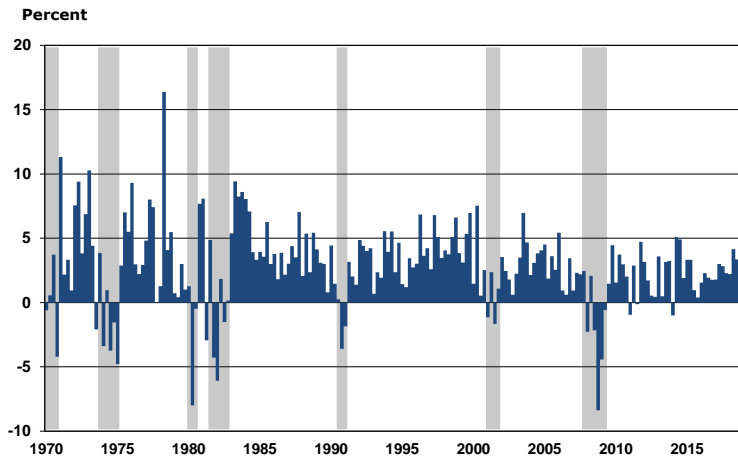
* Source: Institute for Supply Management, ISM-WW, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

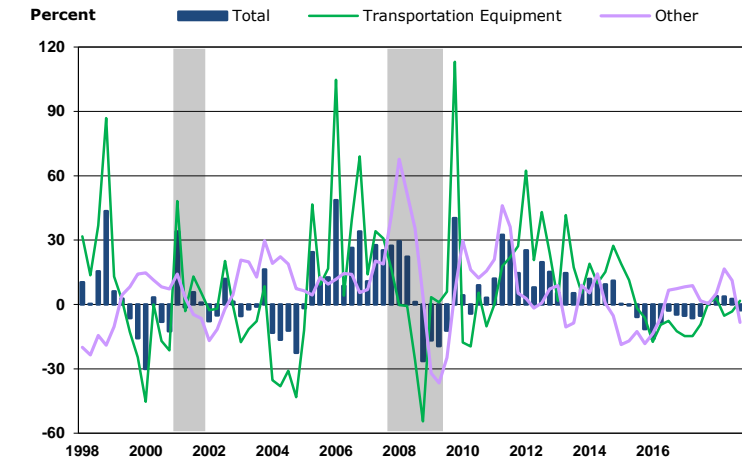
1970Q1 to 2018Q4, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

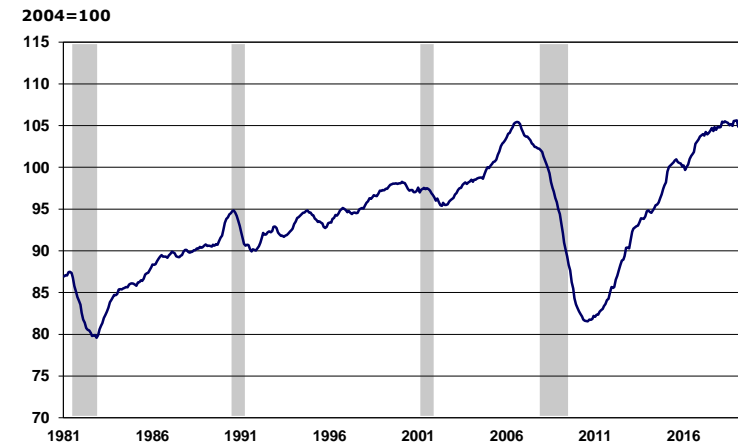
1998Q1 to 2018Q4, Year-over-year percent change



* Source: WISER

Washington Construction Index

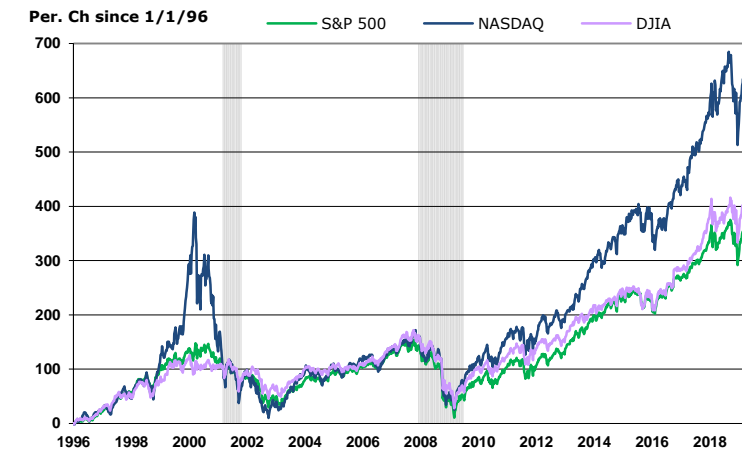
January 1981 to February 2019, 12mma



* Source: ERFC

National Stock Indexes

January 1, 1996 to March 25, 2019



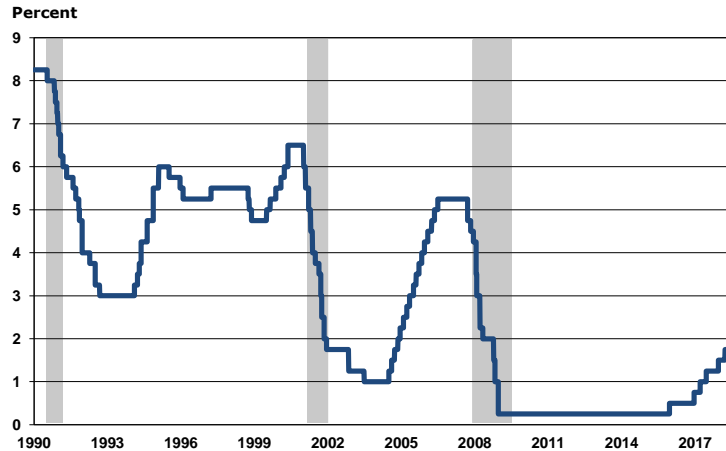
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

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

Federal Funds Target Rate

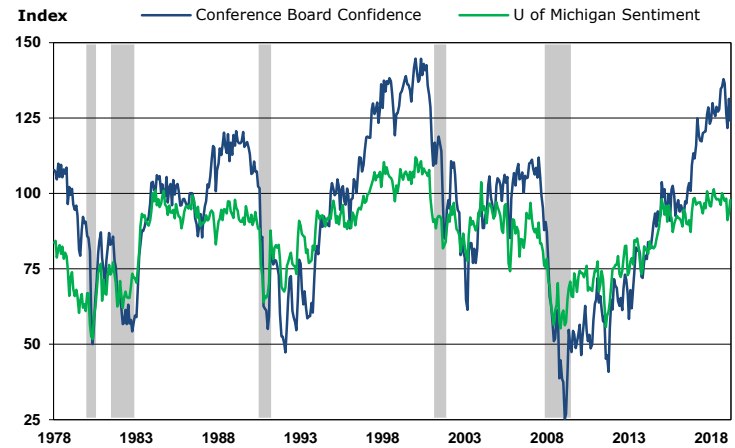
January 1, 1990 to March 28, 2019



* Federal Reserve

Consumer Confidence

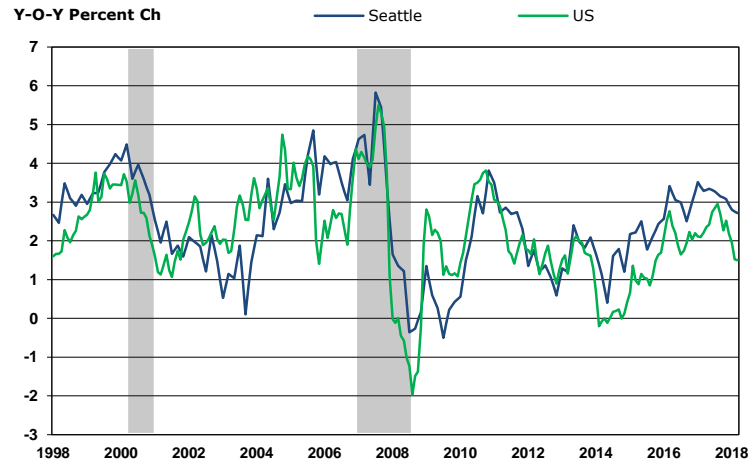
March 1978 to March 2019



* Source: The Conference Board, University of Michigan

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

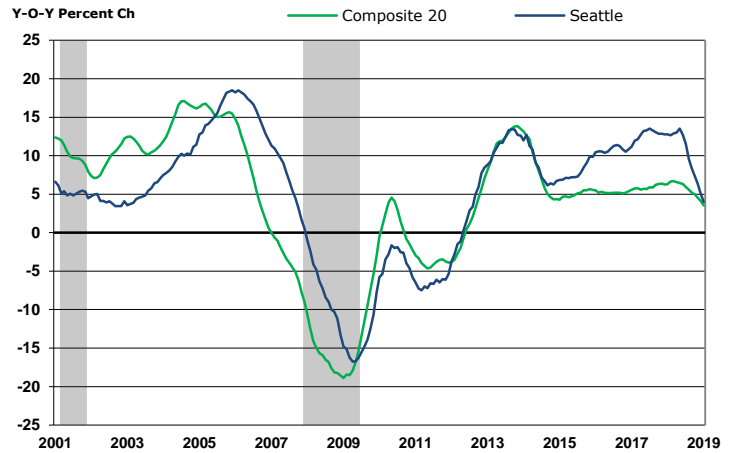
December 1998 to February 2019



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to January 2019, 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.