

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

Washington State Economic and Revenue Forecast

**September 2019
Volume XLII, No. 3**



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

September 2019
Volume XLII, No. 3

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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 October 1, 2019.

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Executive Summary

- The national economy is expanding at a moderate pace. Real GDP rose 2.0% (SAAR) in the second quarter after growing 3.1% (SAAR) in the first quarter.
- The forecast for real GDP growth in 2019 is 2.3%, down from 2.5% in June. For 2020 through 2023, the forecast of real GDP growth remain unchanged at 1.8%, 1.7%, 1.9% and 2.0%.
- The September forecast includes previously enacted U.S. tariffs on \$250 billion of goods imported from China, as well as tariffs announced in August 2019.
- Washington personal income growth was the highest in the U.S. in 2018.
- Washington exports declined sharply over the year.
- Compared to June, the Washington economic forecast has slightly higher personal income and housing construction and slightly lower employment.
- General Fund-State (GF-S) revenue collections since the June 2019 forecast have come in \$160 million (3.2%) over the forecasted amount.
- An \$84 million transfer of property tax revenue from the GF-S to the Education Legacy Trust Account (ELTA) that was expected to occur in FY 2019 instead occurred in FY 2020. While this changed the relative balances of the GF-S and ELTA, it did not affect total near GF-S revenue.
- The preliminary total of GF-S revenue for the recently ended 2017-19 biennium is \$102 million higher than forecasted in June. The GF-S forecast was increased by \$226 million in the 2019-21 biennium but decreased by \$79 million in the 2021-23 biennium.
- Preliminary near GF-S revenue for the 2017-19 biennium, which includes all state revenue subject to the budget outlook process, is \$27 million higher than forecasted in June. Forecasted near GF-S revenue has increased by \$447 million in the 2019-21 biennium but decreased by \$63 million in the 2021-23 biennium.

U.S. Economic Forecast

The national economy is expanding at a moderate pace

The national economy is expanding at a moderate pace. Real GDP rose 2.0% (SAAR) in the second quarter after growing 3.1% in the first quarter. Job gains were moderate in the latest report, but the trend remains solid. The unemployment rate has fallen to below 4%. Consumer and business confidence have fallen but remain near cyclical highs. Oil prices remain low despite

international turmoil. Monetary policy has shifted to a more dovish stance. The housing market may be finally showing some signs of life after years of stagnation. On the downside, the manufacturing sector is now declining. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

Our forecast was based on the September IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's September 2019 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. The economic outlook is similar to the June forecast. The September Blue Chip forecast for real GDP growth in 2019 is 2.3%, down from 2.5% in June. For 2020 through 2023, the forecast of real GDP growth remain unchanged at 1.8%, 1.7%, 1.9% and 2.0%.

The forecast includes recently enacted tariffs

The September forecast includes previously enacted U.S. tariffs on \$250 billion of goods imported from China, as well as tariffs announced in August 2019. This includes a 15% tariff on all remaining imported goods from China. Some of these tariffs took effect on September 1st, while the rest will go into effect on December 15th. The forecast also includes a step-up in the tariff rate already imposed from 25% to 30% on October 1st. This forecast reflects all retaliatory tariffs from China that were in effect or planned at the time the September forecast was released. However, trade tensions have eased somewhat since the forecast was released. Most notably, the U.S. has postponed the increase in the tariff rate from October 1st to October 15th while China announced it would exclude certain U.S. agricultural goods from planned tariffs on U.S. exports.

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 personal income growth was the highest in the U.S. in 2018. Seattle home prices declined over the year but Washington housing construction remains strong. Washington exports declined sharply over the year. Washington manufacturing activity continues to expand. Seattle consumer price inflation remains above the national average.

Compared to June, the Washington economic forecast has slightly higher personal income and housing construction

Compared to June, the Washington economic forecast has slightly higher personal income and housing construction and slightly lower employment. We expect 1.9% Washington employment growth this year, down from 2.2% in the June forecast. As in June, we expect growth to decelerate. We expect employment growth to average 1.2% per year in 2020 through 2023, which is the same rate expected in the June forecast. Our forecast for nominal personal income growth this year is 5.6%, up from 4.9% in the June forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8%

... and
slightly lower
employment

per year, down slightly from the 4.9% rate expected in the June forecast. We expect 45,200 housing units authorized by building permits this year, up from 43,700 units in the June forecast. The increase is due to higher than previously expected multi-family permits. We expect permits to average 42,500 in 2020 through 2023, compared to 41,900 in the June forecast. We expect the Seattle inflation rate will be 2.6% in 2019, down from 2.8% in the June forecast. We expect inflation to average of 2.2% per year in 2020 through 2023, up slightly from 2.1% in the June forecast.

Revenue Forecast

*Forecasted
GF-S revenue
is higher in the
near term but
lower in the
next biennium
due to slower
growth*

Since the June 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted. While much of the forecast variance came from higher-than-expected current economic activity, a large amount came from remittances of past-due taxes from prior periods. The September economic forecast was similar to the June forecast but resulted in slower forecasted revenue growth in the next biennium. Reflecting the current strength and forecasted slowing, the GF-S forecast has been increased in the current biennium but decreased in the next. In addition to these changes, preliminary total collections for the recently ended 2017-19 biennium were increased and forecasted collections for the current biennium were decreased by an \$84 million transfer of property tax revenue from the GF-S to the Education Legacy Trust Account that was forecasted to occur in June on a cash basis but instead occurred in July.

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

17-19: +\$102
19-21: +\$226
21-23: -\$79

In the 2017-19 biennium, collections came in \$101.6 million higher than forecasted in June. \$83.8 million of the change, however, was from the delayed transfer of property tax. Absent the delay, collections would have been \$17.8 million higher than forecasted. In the current biennium, revenue collections that are tracked monthly came in \$142.0 million higher than forecasted. While the delayed property tax transfer subtracted \$83.8 million, forecasted growth from economic changes added \$168.1 million, resulting in a total forecast change of \$226 million. The forecast was reduced by \$79.4 million in the 2021-23 biennium. The September 2019 forecast for GF-S revenue totals \$44,143.6 million in the 2017-19 biennium, \$50,030.3 million in the 2019-21 biennium and \$53,604.0 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 moderate pace. Real GDP rose 2.0% (SAAR) in the second quarter after growing 3.1% (SAAR) in the first quarter.
- The trend in employment growth may be slowing, although the unemployment rate is low.
- Consumer confidence is weakening but remains high.
- The construction sector is showing signs of life while manufacturing is now declining.
- U.S. oil production is near an all-time high; oil prices remain low.
- Inflation remains low.
- The forecast for real GDP growth in 2019 is 2.3%, down from 2.5% in June. For 2020 through 2023, the forecast of real GDP growth remain unchanged at 1.8%, 1.7%, 1.9% and 2.0%.
- The September forecast includes previously enacted U.S. tariffs on \$250 billion of goods imported from China, as well as tariffs announced in August 2019.
- 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 moderate pace

The national economy is expanding at a moderate pace. Real GDP rose 2.0% (SAAR) in the second quarter after growing 3.1% in the first quarter. Job gains were moderate in the latest report, but the trend remains solid. The unemployment rate has fallen to below 4%. Consumer and business confidence have fallen but remain near cyclical highs. Oil prices remain low despite international turmoil. Monetary policy has shifted to a more dovish stance. The housing market may be finally showing some signs of life after years of stagnation. On the downside, the manufacturing sector is now declining. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

U.S. real GDP rose 2.0% (SAAR) in the second quarter

U.S. real GDP growth slowed to 2.0% (SAAR) in the second quarter after growing 3.1% (SAAR) in the first quarter. Final sales increased 3.0% (SAAR) after growing 2.6% (SAAR) the quarter before. Consumer spending was strong, growing 4.6% (SAAR) after first quarter growth of 1.1% (SAAR). The pickup in growth was due to a 13.0% (SAAR) increase in durable goods spending. Consumer spending contributed 3.0 points to top line GDP growth. Fixed investment declined 1.4% (SAAR) in the second quarter, due to an 11.1% drop in nonresidential construction. Government spending increased 4.8% (SAAR) led by federal nondefense spending. Exports declined 5.7% (SAAR) due to ongoing trade tensions, weak foreign growth, and a strong dollar; imports were flat.

Employment growth appears to be slowing

The trend in employment growth may be slowing. Nonfarm payrolls increased 130,000 in August. In the past three months, the U.S. economy averaged 156,000 net new jobs per month. In 2018, the U.S. economy averaged 223,000 net new jobs each month, up from 179,000 in 2017. In August, the goods-producing sector added 12,000 jobs, led by an 8,800 job increase in building construction. Private service-providing industries added 84,000 jobs in August. Sectors with the highest job gains were health care (+23,900), temporary help services (+15,400), professional and technical services (+14,800), and social assistance (+12,900). General merchandise stores had the largest employment decline (-14,800). Government hiring was up, led by temporary census workers (+25,000). The unemployment rate held steady at 3.6%. Average hourly earnings increased by \$0.11 or 0.4% and are up 3.2% since last year.

Consumer attitudes have declined

Consumer confidence has been on a downward trend the past few months but remains relatively high. The Conference Board measure of consumer confidence fell 9.1 points to 125.1 in September. Confidence is down 10.2 points from a year ago. The present situation component declined from 176.0 to 169.0. Business conditions were rated less favorably with fewer respondents saying the current business climate is good. The expectations index fell as well. The University of Michigan Consumer Sentiment index increased 3.4 points in September, but remains down 6.9 points from last year.

Oil prices have remained stable

Oil prices have remained in the \$50-\$60 range the past few months. The recent attack on Saudi Arabian oil production had little impact on prices. This is in large part due to recent increases in the U.S. production. West Texas Intermediate (WTI) increased to \$59 per barrel for the week of September 20th, up from \$56 the week before. Brent crude oil has followed a similar path, increasing to \$66 from \$63 the previous week. Oil production in the U.S. was at 11.806 million barrels per day (bpd), in July, just off the all-time high of 12.123 million barrels per day reached in April. A year ago, production was at 10.891 million bpd (see figure 1.2). The number of drilling structures

has fallen recently despite the increase in production. The Baker Hughes rig count fell to 860 in the fourth week of September, a decline of 194 since last year. U.S.-China trade tensions have led to expectations for lower energy demand.

Figure 1.1: U.S. Field Production of Crude Oil

U.S. oil production is near an all-time high



Source: U.S. Energy Information Administration; data through July 2019

Inflation remains tame

Headline inflation remains tame. The Consumer Price Index (CPI) was up 1.8% over the year in August, unchanged from the month before. A year ago, headline inflation was 2.7%. Much of the recent decline was due to a drop in energy prices. Energy prices fell 1.9% in August, and are down 4.4% since last year. Food prices were flat in August after creeping up in the beginning of the year. Shelter costs continue to be a steady driver of overall price inflation as rents continue to rise. Shelter costs increased 0.2% in August and are now up 3.4% over the year. Core consumer prices, which exclude food and energy, were up 0.3% in August and 2.4% over the year.

Home price appreciation has slowed

Home price appreciation has slowed. The seasonally adjusted Case-Shiller 20-city Home Price Index was essentially flat in July, increasing just 0.02%. Home prices are now 2.0% higher than a year ago. Prices have increased 53.4% since the trough, and are now 4.6% 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 3.64% in the fourth week of September 2019, down from the recent peak of 4.94% in November 2018.

The housing market is showing signs of life

The housing market may be starting to show some signs of life. The sharp decline in mortgage rates may be finally starting to help new construction. Housing starts increased 12.3% in August after three consecutive months of decline. Starts are now up

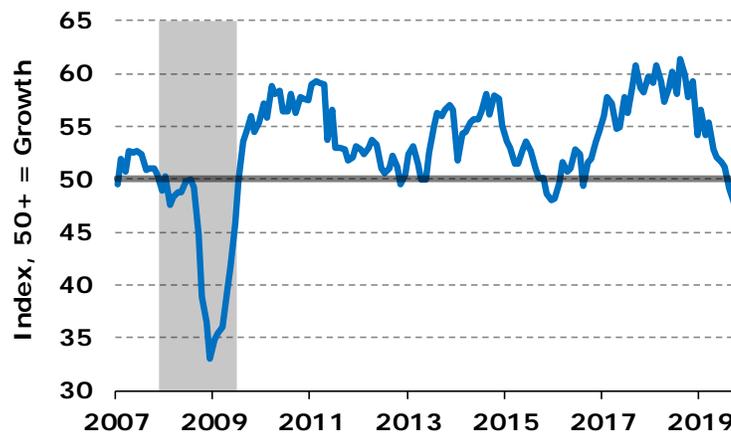
6.6% since last year. Single-family starts increased 4.4% and are up 3.4% from a year ago. Housing starts for the volatile multi-family sector increased 32.8% in August and are up 14.1% since August 2018. Housing permits increased 8.2% in August and are up 12.5% from a year ago. Single-family permits are up 5.5% while multi-family permits are up 25.6% since last year. New home sales increased 7.1% over the month in August, and are up 18.0% from a year ago.

The manufacturing sector is declining

The manufacturing sector is now declining. The Institute for Supply Management (ISM) Report on Business indicates the manufacturing sector contracted in September for the second consecutive month. The index declined to 47.1 (index values below 50 indicate contraction) in September from 49.1 in August (see Figure 1.1). The new orders, production, and employment components all indicated declining activity. The new orders component increased 0.1 points to 47.3. Production declined 2.2 points to 47.3. Employment declined 1.1 points to 46.3. The latest G-17 report from the Federal Reserve indicates manufacturing output increased 0.5% in August after declining 0.4% in July. Manufacturing output is now 0.4% lower than last year. New orders for core capital goods (nondefense capital goods excluding aircraft) declined 0.2% in August. New orders are now 1.1% above year-ago levels.

Figure 1.2: The Institute for Supply Management (ISM) Report on Business

Manufacturing is declining



Source: Institute for Supply Management; data through September 2019

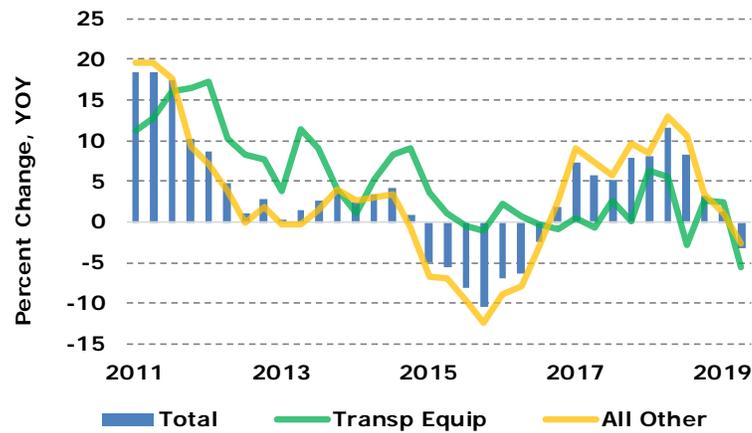
U.S. exports are declining

Ongoing trade tensions and the grounding of the 737 max are contributing to declining U.S. exports. Total exports in the second quarter declined 3.1% year over year after posting a 1.3% year-over-year gain in the first quarter (see Figure 1.3). Transportation equipment exports fell 5.5% after increasing 2.5% in the first quarter. Exports excluding transportation equipment were down 2.6% in the second quarter. Petroleum and coal exports also fell, declining 14.7% from last year. Oil and gas exports continue to surge, up 30.5% since last year. Global

economic growth appears to be slowing. The U.S. dollar has strengthened recently, which could hinder exports further. The trade war with China has caused exports there to decline in four consecutive quarters. In the second quarter, exports to China were down 18.2%. Exports to the rest of North America are declining as well. Exports in the second quarter to Canada declined 4.1% while exports to Mexico were down 3.5% from a year ago.

Figure 1.3: U.S. Exports

Exports are declining



Source: Wisser Trade; data through 2019 Q2

Forecast

Our forecast was based on the September IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's September 2019 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. The economic outlook is similar to the June forecast. The September Blue Chip forecast for real GDP growth in 2019 is 2.3%, down from 2.5% in June. For 2020 through 2023, the forecast of real GDP growth remain unchanged at 1.8%, 1.7%, 1.9% and 2.0%.

The forecast includes recently enacted tariffs

The September forecast includes previously enacted U.S. tariffs on \$250 billion of goods imported from China, as well as tariffs announced in August 2019. This includes a 15% tariff on all remaining imported goods from China. Some of these tariffs took effect on September 1st, while the rest will go into effect on December 15th. The forecast also includes a step-up in the tariff rate already imposed from 25% to 30% on October 1st. This forecast reflects all retaliatory tariffs from China that were in effect or planned at the time the September forecast was released. However, trade tensions have eased somewhat since the forecast was released. Most notably, the U.S. has postponed the increase in the tariff rate from October 1st to October 15th

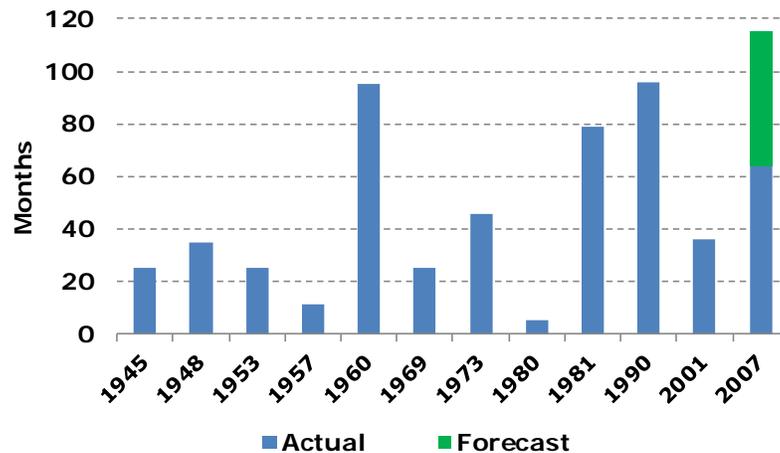
while China announced it would exclude certain U.S. agricultural goods from planned tariffs on U.S. exports.

This recovery will be the longest on record

The current economic recovery is now the longest on record. This recovery has already lasted 122 months from the 2007-09 recession through September, surpassing the 120 months from the 1990 recession. From June 2009 through the end of our forecast in 2023, the recovery will be at least 174 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.

Figure 1.4: Months of Recovery after Reaching Previous Peak in Employment

The recovery is forecasted to be the longest on record



Source: BLS, September 2019 ERFC forecast; historical data August 2019

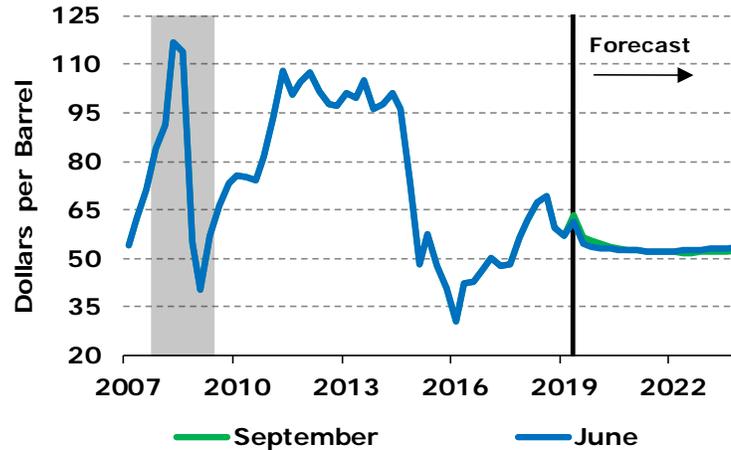
Oil prices are expected to level off

Oil prices are slightly higher this year and in 2020 compared to the prices used in the June forecast; for 2021 – 2023 they are slightly lower than in the June forecast. The refiner acquisition price of crude oil in 2019 is now expected to average \$58 per barrel, dropping to \$52 in 2021 - 2023 (see Figure 1.4). The September 14th attack on two Saudi Arabian oil facilities is unlikely to have a lasting impact on oil prices. The attack wiped out half of Saudi Arabia’s production capabilities, but production is expected to return to normal in the coming weeks. Venezuela’s oil industry has collapsed due to the failing economy. Iran’s oil output is also down due to renewed sanctions. However, 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.

Figure 1.4: Average Price of Crude Oil

The oil price forecast hasn't been significantly changed



Source: DOE, ERFC September 2019 forecast; historical data through 2019Q2

Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) is expected to be slightly higher than in the June forecast. The forecast reflects the new and upwardly revised tariffs on imported goods from China, which raise near-term inflation. We expect inflation to be 1.5% this year, unchanged from the previous forecast, before increasing to 2.1% in 2020. The June forecast called for inflation of 1.8% in 2020. Going forward, inflation will remain in check thanks to slowing global growth, restrained commodity prices, a strong dollar and steady inflation expectations. We expect inflation to range from 2.0% to 1.9% each year from 2021 through 2023. Core inflation (minus food and energy) is expected to be 1.7% this year and 2.3% next year. The forecast calls for core inflation to trend down to 1.9% by 2023.

Consumer spending growth is expected to slow

Real consumer spending growth is expected to slow. We expect real consumer spending to grow 2.6% this year, down from 3.0% in 2018. The June forecast expected consumption growth to slow to 2.4% this year. Consumer optimism remains high but has been trending downward. Wages are slowly increasing but home price growth has slowed. 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. Real disposable personal income is expected to grow 3.2% this year, down from 4.0% growth in 2018. Growth in real disposable income is expected to slow further next year and average 2.2% for the remainder of the forecast. The forecast calls for real consumption growth to average 2.0% from 2020 through 2023.

The employment forecast is mostly unchanged

The employment forecast is mostly unchanged from the June forecast. We still expect slowing job gains. Growth in payrolls is anticipated to be 1.5% this year, down from 1.7% in previous forecast. We then expect growth of 1.1% in 2020, the same rate assumed in June. Employment growth is expected to be 0.5% per year in 2021, 2022, and 2023. By 2023, the forecast expects 500,000 fewer jobs than in June, a difference of 0.3%. Due to the steady job growth, we expect the unemployment rate to decline from 3.9% in 2018 to 3.7% in 2019. We expect the unemployment rate to increase slowly to 4.1% by 2023. The June forecast expected the unemployment rate to reach 4.0% in 2023.

Business investment is expected to strengthen gradually

Real nonresidential fixed investment is expected to grow 2.9% this year after growing 6.4% in 2018. 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 may be rebounding, however. The U.S. office vacancy rate dropped to the lowest level in 18 years after trending upward the last few years. Although we expect real nonresidential construction to decline 3.0% this year, the forecast calls for a gradual ramp up to 3.3% growth by 2023. Real equipment investment is expected to grow 1.8% this year. We expect growth to accelerate throughout the forecast as businesses expand and improve productivity. The forecast calls for growth to reach 5.7% in 2023. We expect real nonresidential fixed investment growth to average 3.8% from 2020 to 2023, unchanged from the June forecast.

Growth in construction will be weak

The housing market is somewhat stronger than in the June forecast. Construction activity rebounded in August and new home sales were strong. Homebuilder confidence has improved recently. The forecast calls for housing starts to decline 1.6% this year, compared to a 3.0% decline in the previous forecast. We expect single-family housing starts to decline 1.6% and multi-family segment to decline 1.7% this year. We expect growth to be weak throughout the remainder of the forecast. The forecast calls for growth of 1.6% in 2020 before declining 1.7% in 2021. We then expect growth of 3.1%, and 1.5% in 2022 and 2023.

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 June forecast. After growing 2.5% in 2018, we expect U.S. major trading partner growth of 1.6% this year. In June, the forecast expected growth of 1.9% this year. The forecast then expects growth to accelerate throughout the forecast and to reach 2.4% in 2023. Weaker foreign growth, a strengthening dollar, and international trade wars have all caused U.S. exports to weaken. Real U.S. exports are forecasted to be flat this year after increasing 3.0% in 2018. We then expect real export growth to average 3.3% through 2023.

The federal budget deficit will increase this year

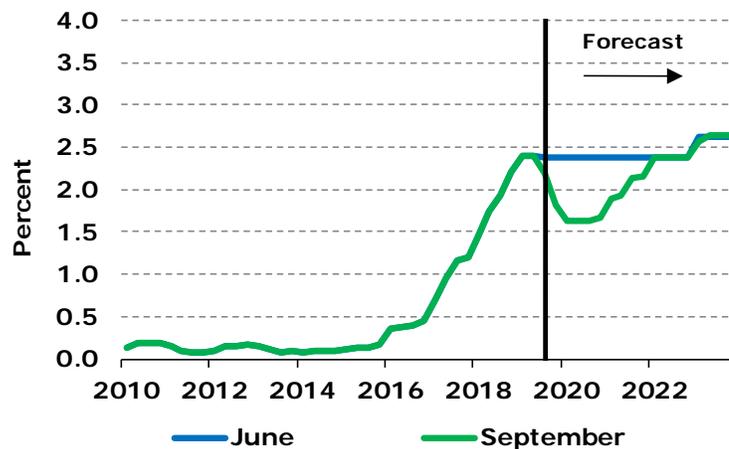
The federal budget deficit is expected to increase this federal fiscal year to \$1,043 billion from \$779 billion in 2018. Much of the increase in the deficit is due to the passage of the Tax Cuts and Jobs Act (TCJA) which lowered federal tax receipts. We expect the federal budget deficit to remain over \$1 trillion throughout the forecast, reaching a high point of \$1,234 billion in federal FY 2022. The June forecast expected the deficit to reach \$1,135 billion in federal FY 2022. The September forecast expects federal tax receipts to total \$3,445 billion this federal fiscal year, up 3.5% from the prior federal fiscal year and up from \$3,352 billion in the June forecast. The forecast expects growth in tax receipts to average 3.9% each federal fiscal year from 2020 through 2023, reaching \$4,016 billion.

The Fed is lowering rates

The Federal Reserve lowered the federal funds rate by 0.25% in September after a 0.25% rate cut in July. The threat of escalating tariffs and broad worries over the fallout from trade policies have increased uncertainty. Growth appears to be slowing and financial markets have been turbulent. One more 0.25% rate cut is expected in December. Federal Reserve chairman Jerome Powell indicated that they would consider additional policy action as appropriate to help sustain the expansion. Starting in 2021, the forecast calls for the Federal Reserve to gradually reverse these rate cuts (See Figure 1.6).

The forecast for the Fed Funds rate is lower

Figure 1.6: Federal Funds Rate



Source: Federal Reserve, ERFC September 2019 forecast; historical data through 2019 Q2

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

The level of uncertainty in the baseline forecast remains elevated, and downside risks once again outweigh upside risks.

Downside Risks

- Iran escalates its military attacks.
- 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 2020 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	17,532.1	17,876.4	18,380.6	18,866.6	19,244.7	19,568.8	19,917.3	20,312.3
% Ch	1.8	2.0	2.8	2.6	2.0	1.7	1.8	2.0
Real Consumption	12,085.6	12,401.5	12,752.0	13,110.7	13,441.4	13,689.3	13,961.8	14,240.0
% Ch	3.0	2.6	2.8	2.8	2.5	1.8	2.0	2.0
Real Nonresidential Fixed Investment	2,404.3	2,476.5	2,611.6	2,741.6	2,804.2	2,891.3	2,996.1	3,135.8
% Ch	-0.2	3.0	5.5	5.0	2.3	3.1	3.6	4.7
Real Residential Fixed Investment	580.0	600.8	611.2	592.9	593.4	584.1	583.4	591.6
% Ch	9.6	3.6	1.7	-3.0	0.1	-1.6	-0.1	1.4
Real Personal Income	15,387.6	15,679.1	16,214.2	16,752.0	17,224.0	17,581.8	17,958.2	18,391.1
% Ch	2.8	1.9	3.4	3.3	2.8	2.1	2.1	2.4
Real Per Capita Income (\$/Person)	47,717	48,295	49,633	50,937	52,000	52,707	53,462	54,377
% Ch	2.1	1.2	2.8	2.6	2.1	1.4	1.4	1.7
Price and Wage Indexes								
PCE Price Index (2012=100)	103.4	105.0	107.0	108.9	110.9	113.2	115.4	117.7
% Ch	0.5	1.5	1.9	1.7	1.8	2.1	2.0	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.382	2.427	2.481	2.533	2.584	2.640	2.697	2.756
% Ch	0.7	1.9	2.2	2.1	2.0	2.2	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.248	1.278	1.314	1.354	1.396	1.444	1.496	1.551
% Ch	2.2	2.4	2.8	3.0	3.1	3.4	3.6	3.7
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,439.3	19,086.4	20,051.0	21,021.4	21,931.6	22,865.7	23,826.4	24,864.4
% Ch	2.8	3.5	5.1	4.8	4.3	4.3	4.2	4.4
Personal Income	15,918.5	16,467.9	17,356.7	18,241.9	19,095.7	19,899.7	20,732.3	21,644.0
% Ch	3.4	3.5	5.4	5.1	4.7	4.2	4.2	4.4
Employment (Millions)								
U.S. Civilian Labor Force	158.0	159.8	161.2	162.7	164.1	165.6	166.8	167.8
Total U.S. Employment	150.1	152.4	154.5	156.6	158.2	159.4	160.3	161.0
Unemployment Rate (%)	4.99	4.66	4.11	3.77	3.58	3.70	3.87	4.02
Nonfarm Payroll Employment	143.11	145.53	147.77	150.32	152.34	153.48	154.25	155.00
% Ch	1.9	1.7	1.5	1.7	1.3	0.7	0.5	0.5
Manufacturing	12.36	12.37	12.55	12.79	12.84	12.55	12.46	12.49
% Ch	0.6	0.1	1.5	1.9	0.4	-2.3	-0.7	0.2
Durable Manufacturing	7.75	7.70	7.83	8.03	8.07	7.90	7.85	7.91
% Ch	0.1	-0.6	1.7	2.5	0.6	-2.2	-0.6	0.7
Nondurable Manufacturing	4.61	4.67	4.72	4.77	4.77	4.65	4.61	4.58
% Ch	1.6	1.4	1.1	0.9	0.0	-2.4	-0.9	-0.6
Construction	6.61	6.84	7.12	7.41	7.52	7.54	7.65	7.80
% Ch	4.7	3.6	4.0	4.1	1.4	0.3	1.5	1.9
Service-Providing	123.42	125.66	127.39	129.36	131.24	132.65	133.39	133.94
% Ch	2.0	1.8	1.4	1.5	1.5	1.1	0.6	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	41.7	48.6	58.6	60.8	55.1	52.3	51.3	51.2
Personal Saving/Disposable Income (%)	7.3	6.8	7.3	8.0	8.0	8.2	8.4	8.6
Auto Sales (Millions)	7.2	6.5	5.7	5.1	4.6	4.5	4.4	4.4
% Ch	-5.8	-10.7	-11.6	-11.3	-8.5	-3.2	-1.2	-0.2
Housing Starts (Millions)	1.149	1.201	1.254	1.222	1.236	1.233	1.251	1.273
% Ch	9.0	4.5	4.4	-2.5	1.1	-0.2	1.4	1.8
Federal Budget Surplus (Billions)	-620.1	-693.3	-876.2	-1,085.7	-1,173.8	-1,177.6	-1,236.8	-1,271.7
Net Exports (Billions)	-516.3	-553.1	-586.0	-663.3	-596.2	-579.6	-547.2	-492.3
3-Month Treasury Bill Rate (%)	0.18	0.55	1.41	2.26	1.76	1.64	2.05	2.27
10-Year Treasury Note Yield (%)	2.02	2.10	2.57	2.74	1.78	2.40	2.95	3.27
Bond Index of 20 G.O. Munis. (%)	3.51	3.51	3.67	4.01	3.58	4.05	4.48	4.75
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.43	3.63	4.09	4.52	4.78

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
June	2.7	1.8	1.85	4.30
September	2.7	1.8	1.84	4.29

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
June	1.8	1.8	2.23	4.26
September	1.7	2.1	1.70	3.86

Table 1.4

Fiscal Years

Forecast Comparison

Forecast 2019 to 2023

	2017	2018	2019	2020	2021	2022	2023
U.S.							
Real GDP							
September	17876.4	18380.6	18866.6	19244.7	19568.8	19917.3	20312.3
% Ch	2.0	2.8	2.6	2.0	1.7	1.8	2.0
June	17837.3	18295.0	18830.3	19209.3	19537.8	19885.3	20280.6
% Ch	1.9	2.6	2.9	2.0	1.7	1.8	2.0
PCE Price Index							
September	105.0	107.0	108.9	110.9	113.2	115.4	117.7
% Ch	1.5	1.9	1.7	1.8	2.1	2.0	1.9
June	105.2	107.2	109.0	110.8	112.9	115.1	117.3
% Ch	1.6	1.9	1.7	1.7	1.9	1.9	1.9
Unemployment Rate							
September	4.66	4.11	3.77	3.58	3.70	3.87	4.02
June	4.66	4.11	3.76	3.50	3.70	3.86	3.95
Mortgage Rate							
September	3.85	4.16	4.43	3.63	4.09	4.52	4.78
June	3.85	4.16	4.45	4.10	4.42	4.65	4.79
3 Month T-Bill Rate							
September	0.55	1.41	2.26	1.76	1.64	2.05	2.27
June	0.55	1.41	2.28	2.29	2.17	2.15	2.26



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 personal income growth was the highest in the U.S. in 2018.**
- **Seattle home prices declined over the year but Washington housing construction remains strong.**
- **Washington exports declined sharply over the year.**
- **Washington manufacturing activity continues to expand.**
- **Seattle consumer price inflation remains above the national average.**
- **Compared to June, the Washington economic forecast has slightly higher personal income and housing construction and slightly lower employment.**
- **As in June, 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 personal income growth was the highest in the U.S. in 2018. Seattle home prices declined over the year but Washington housing construction remains strong. Washington exports declined sharply over the year. Washington manufacturing activity continues to expand. Seattle consumer price inflation remains above the national average.

Job growth has been stronger than expected

We have three months of new Washington employment data since the June forecast was released. Total nonfarm payroll employment rose 20,800 (seasonally adjusted) in June, July, and August, which was 5,200 more than expected in the June forecast. Private services-providing sectors added 15,100 jobs in

the three-month period. The manufacturing sector added 2,300 jobs of which 1,200 were aerospace jobs. The construction sector lost 300 jobs in June, July, and August but government added 3,900 jobs.

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 May 2019 by 12,300 jobs (0.4%). As a result of the downward revision to history and stronger-than-expected growth, the combined effect is 7,000 (0.2%) fewer jobs in August 2019 than expected in the June forecast.

The unemployment rate remains low

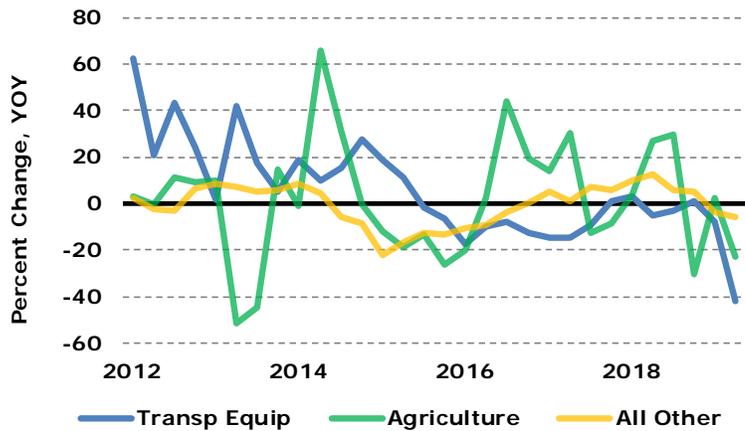
Washington’s unemployment rate remained at 4.6% in August for a fourth consecutive month. The state’s unemployment rate remains near its all-time low of 4.4% last reached in October 2018.

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 inched up to 6,200 in the week ending September 21, 2019 from 6,100 in the previous week. The current level of claims is close to the post-recession trough of 5,800. Claims have fallen 63% since the peak in early 2009.

Figure 2.1: Washington Export Growth

Transportation equipment exports led the decline



Source: Wiser Trade; data through Q2 2019

Washington exports declined sharply over the year

Washington exports declined sharply over the year in the second quarter of 2019. Exports decreased 27.6% in the second quarter of 2019 compared to the second quarter of 2018 due largely to a 41.9% drop in transportation equipment exports (mostly Boeing planes). Boeing suspended deliveries of the 737 Max in March which clearly affected second quarter exports. However exports

of agricultural products also declined 22.4% over the year and exports of all other commodities (mostly manufacturing) declined 5.6% (see Figure 2.1).

Washington housing construction was slightly higher than expected in the second quarter

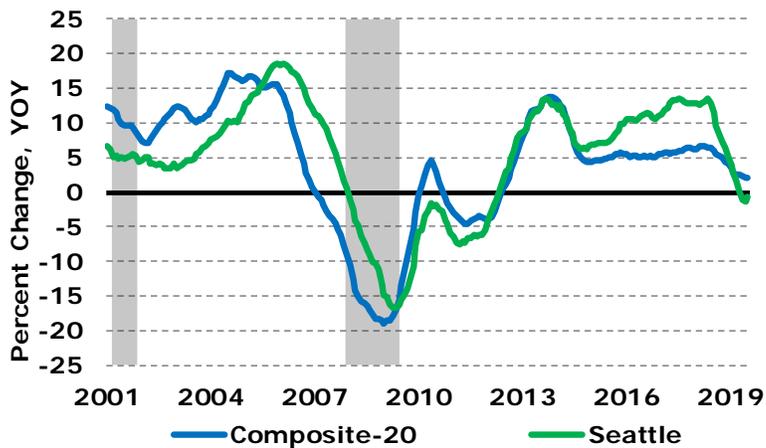
Washington housing construction increased in the second quarter of 2019 and slightly exceeded the June forecast. The number of housing units authorized by building permits increased to 48,600 units (SAAR) in the second quarter of 2019 from 43,800 units in the first quarter. Second quarter permits were made up of 22,100 single-family units and 26,500 multi-family units. The June forecast assumed 48,000 units (SAAR) in the second quarter, consisting of 22,400 single-family units and 25,600 multi-family units. Washington housing construction got off to a very strong start in the third quarter of 2019, mostly because of stronger-than-expected multi-family permits. In July and August, 48,200 units (SAAR) were permitted consisting of 23,800 single-family units and 24,400 multi-family units. The June forecast assumed an average rate of 41,600 (SAAR) units for the third quarter as a whole, consisting of 22,200 single-family units and 19,400 multi-family units.

Monthly Seattle home prices have been trending down since June 2018r

Seattle area home prices increased in July but were down over the year. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices increased 0.5% from June to July while the composite-20 index was unchanged. Monthly Seattle home prices have, on average, been trending down since June 2018. As of July 2019, Seattle home prices were down 0.7% over the year compared to a 2.0% increase in the composite-20 index (see Figure 2.2). Seattle home prices are still up 89% since the December 2011 trough and exceed the May 2007 peak by 32%.

Figure 2.2: Home Price Indices

Seattle home prices declined over the year



Source: S&P/Case-Shiller Home Price Indices; data through July 2019

Manufacturing continues to expand

The Institute of Supply Management - Western Washington Index (ISM-WW) declined in August but remained in positive territory. The index, which measures conditions in the manufacturing sector, decreased from 57.0 in July to 56.0 in August (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 25 months. The production, orders, and deliveries components indicated expansion in August while the inventory component indicated contraction. The employment component was neutral at 50 in August.

Car and truck sales increased in August

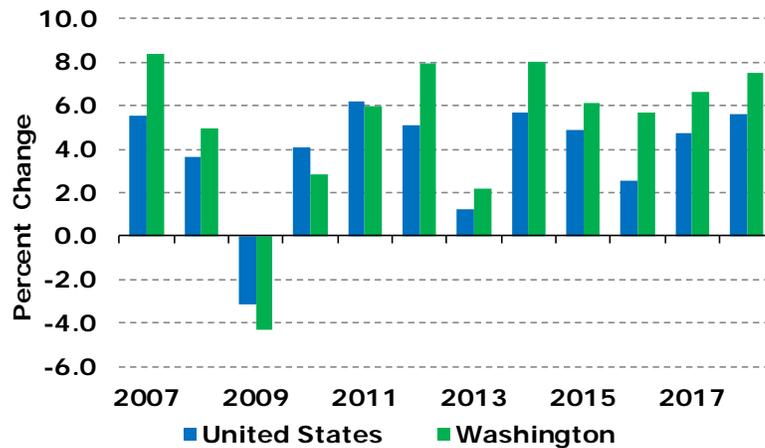
Washington car and truck sales increased in August after three consecutive declines. Seasonally adjusted new vehicle registrations increased 3.2% in August but sales were down 2.3% over the year and 15.7% since the November 2017 post-recession peak. Monthly sales are erratic but have been trending down since mid-2016.

Washington personal income grew 7.0% (SAAR) in the second quarter

In September, after the forecast was complete, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the second quarter of 2019. According to these estimates, Washington personal income rose from \$485.9 billion (SAAR) in the first quarter to \$494.2 billion in the second quarter. The reported 7.0% growth rate (SAAR) in Washington personal income was the third largest among the states and District of Columbia and exceeded the 5.4% growth rate for the U.S. as a whole.

Figure 2.3: Annual Personal Income Growth

Washington personal income growth has exceeded the national average growth rate for the last seven years



Source: BEA; data through 2018

Washington personal income growth was the highest in the nation in 2018

The September state personal income release also incorporated the results of the BEA's annual update of state personal income. The update revised annual estimates of state personal income for 1998 to 2018. The BEA revised its 2018 personal income

estimate up \$9.9 billion (2.2%). Our revision was less, \$8.6 billion (1.9%) because we had already benchmarked our estimate for wages and salaries to the Quarterly Census of Employment and Wages (QCEW). We use the published BEA estimates for all other components of personal income. The \$8.6 billion revision in our estimate was mostly due to a \$7.8 billion revision to property income (dividends, interest, and rent). Washington personal income growth was the fastest among the states and District of Columbia in 2018 and has exceeded the national average growth rate for the last seven years (see Figure 2.3).

Seattle area consumer price inflation remains above the national average

Seattle area consumer price inflation continued to outpace the national average in August. From August 2018 to August 2019, the Seattle CPI rose 3.2% compared to the 1.8% increase in the U.S. City Average. Core prices, which exclude food and energy, increased 3.7% over the year in Seattle compared to 2.4% for the U.S. City Average. In part, the above-average Seattle inflation was due to higher shelter cost inflation. Over-the-year shelter cost inflation in Seattle was 4.8% compared to the national rate of 3.4%. However, Seattle inflation excluding shelter still exceeded the national average at 2.2% compared to 1.0%.

Washington State Forecast

Compared to June, the Washington economic forecast has slightly higher personal income and housing construction and slightly lower employment

Compared to June, the Washington economic forecast has slightly higher personal income and housing construction and slightly lower employment. We expect 1.9% Washington employment growth this year, down from 2.2% in the June forecast. As in June, we expect growth to decelerate. We expect employment growth to average 1.2% per year in 2020 through 2023, which is the same rate expected in the June forecast. Our forecast for nominal personal income growth this year is 5.6%, up from 4.9% in the June forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, down slightly from the 4.9% rate expected in the June forecast. We expect 45,200 housing units authorized by building permits this year, up from 43,700 units in the June forecast. The increase is due to higher than previously expected multi-family permits. We expect permits to average 42,500 in 2020 through 2023, compared to 41,900 in the June forecast. We expect the Seattle inflation rate will be 2.6% in 2019, down from 2.8% in the June forecast. We expect inflation to average of 2.2% per year in 2020 through 2023, up slightly from 2.1% in the June forecast.

Washington Payroll Employment

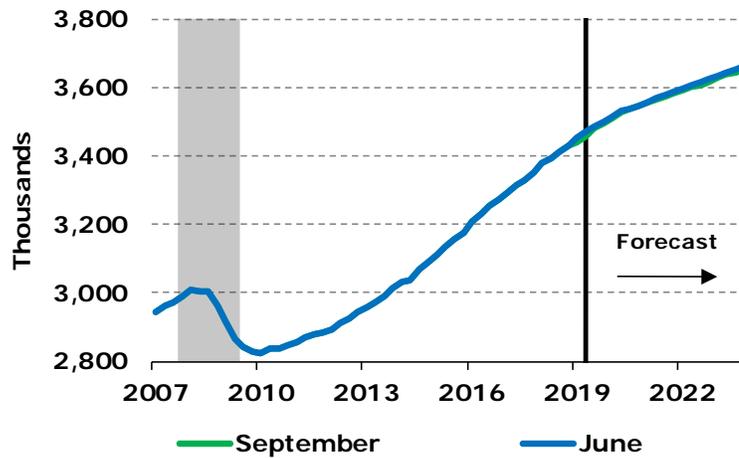
Washington employment growth is slightly lower than in June

The Washington employment forecast is slightly lower than the June forecast because of a downward revision to historical data in early 2019 (see Figure 2.4). We expect 1.9% Washington

employment growth this year, down from 2.2% in the June forecast. As in June, we expect growth to decelerate. We expect employment growth to average 1.2% per year in 2020 through 2023, which is the same rate expected in the June forecast. On an annual basis, we expect 1.7% employment growth in 2020, 1.1% in 2021, 1.0% in 2022, and 1.0% in 2023.

Figure 2.4: Washington Payroll Employment

The level of employment is lower throughout because of less growth in 2019



Source: Employment Security Department, ERFC; historical data through Q2 2019

The aerospace employment forecast is higher than in June

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. Since then, the aerospace sector has added 6,800 jobs. While Boeing has suspended deliveries of the 737 Max, production continues though at a reduced rate. We do not have any information on the impact on employment or hours worked but do not believe they are large at this point. Boeing has issued no worker adjustment and retraining notifications (WARNs) since the grounding of the 737 Max and overall aerospace employment is actually up. We still believe employment will be flat but the level will be 2,100 higher through 2023 than in the June forecast. On an annual average basis, we expect aerospace employment to increase 5.9% in 2019, 1.1% in 2020, and then remain unchanged through the rest of the forecast.

The software employment forecast is higher than in June

We have increased the software employment growth forecast for 2019 and 2020 from 4.5% and 0.9% to 7.3% and 2.3% based on stronger-than-expected job growth in recent months. Growth during the remainder of the forecast is similar to the June assumption. On an annual average basis, we expect growth rates 0.9% in 2021, 1.3% in 2022, and 1.6% in 2023.

Electronic shopping and mail order employment is lower

In Washington, the electronic shopping and mail order sector consists almost entirely of electronic shopping employment. We have reduced our forecast for employment growth this year from 9.6% in the June forecast to a still strong 8.7% based on slower than expected employment growth through August 2019. We expect employment in this sector to continue growing but at a decelerating rate. On an annual basis, electronic shopping and mail order employment will grow 5.1% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

Washington construction employment has probably peaked

Washington construction employment increased in the second quarter but first quarter employment was depressed by unusually severe winter weather. Second quarter employment was slightly lower than in the fourth quarter of 2018 which we now believe was a cyclical peak. Washington construction employment is still 8,100 (3.9%) above the pre-recession peak. We expect construction employment will rise 1.9% this year, down from 4.1% in the June forecast because of a revision to the level of employment early this year. We expect construction employment to decline gradually through the remainder of the forecast. On a calendar year basis, we expect employment to decline 1.2% in 2020, 1.4% in 2021, 0.6% in 2022 and 0.3% in 2023.

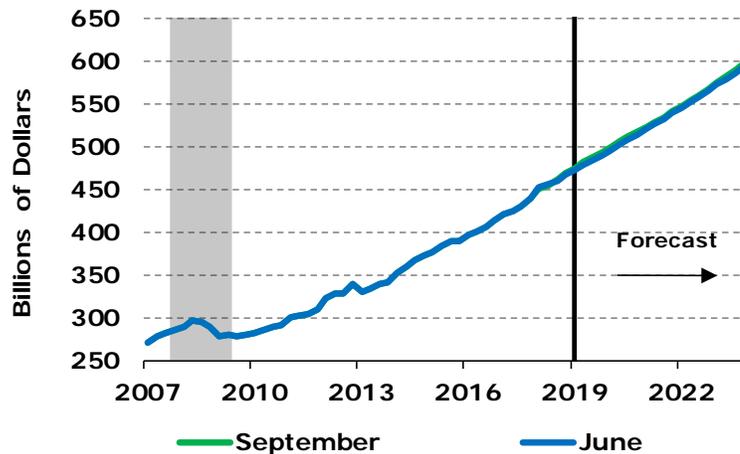
Washington Personal Income

Washington personal income in the first quarter was above our June forecast

In June, the Bureau of Economic Analysis released estimates for state personal income through the first quarter of 2019. We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) data. Our current estimate of Washington personal income in the first quarter of 2019 is \$1.8 billion (0.4%) higher than assumed in the June forecast. Wages were \$1.0 billion (0.4%) above the forecast and nonwage income was \$0.7 billion (0.3%) above the forecast.

Figure 2.5: Washington Personal Income

Washington personal income is higher than in the June forecast



Source: Bureau of Economic Analysis, ERFC; historical data through Q1 2019

Washington personal income growth is higher in 2019

Our forecast for nominal personal income growth this year is 5.6%, up from 4.9% in the June forecast (see Figure 2.5). Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, down slightly from the 4.9% rate expected in the June forecast. On an annual basis, we expect personal income to grow 4.8% in 2020, 4.7% in 2021, 4.7% in 2022, and 5.1% in 2023.

Washington Building Permits

Washington housing construction has peaked

We believe Washington housing construction has peaked. The number of housing units authorized by building permits rose from just 17,000 in 2009 to 47,700 in 2018. We expect single-family construction to remain fairly steady but multi-family construction to trend down as population growth slows.

We expect 45,200 housing units this year

The housing construction forecast is higher than the forecast adopted in June, particularly in the near term (see Figure 2.6). We expect 45,200 housing units authorized by building permits this year, up from 43,700 units in the June forecast. The increase is due to higher than previously expected multi-family permits. We expect permits to average 42,500 in 2020 through 2023, compared to 41,900 in the June forecast. On a calendar year basis, we expect 43,300 units in 2020, 42,500 in 2021, 42,400 in 2022, and 41,700 in 2023.

The housing construction forecast is higher than the forecast adopted in June

Figure 2.6: Housing Units Authorized by Building Permits



Source: Census Bureau, ERFC; historical data through Q2 2019

Seattle Consumer Price Index

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, 3.0% in 2020, and 2.3% in 2021, and 2.2% per year in 2022 and 2023.

We expect Seattle inflation to fall from 3.2% last year to 2.2% by 2021

Rising energy costs added to headline inflation in 2017 and 2018. However, lower energy costs will reduce headline inflation in 2019 through 2023. The headline Seattle forecast for 2019 is 2.6% compared to 2.8% in the June forecast based on actual data through August. The forecast for 2020 is higher than in June at 2.4% versus 2.0% due to higher expected tariffs. The impact of tariffs is expected to be transitory, though. On a calendar year basis, we expect inflation rates of 2.2% per year in 2021 through 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 2.6%, rebounding from a lackluster post-recession pace that averaged just 0.8% over 2011–18. 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 healthy rise in housing starts, which peak at 1.38 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 U.S.

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 continues to grow through 2023 rather than level off as in the baseline. Software employment growth is also much stronger than in the baseline

forecast. In the optimistic scenario, the stronger regional economy drives Seattle consumer price inflation above the baseline. Washington average wage growth is also higher in the optimistic scenario than in the baseline. Construction employment continues to rise throughout the forecast rather than peaking in the fourth quarter of 2018 as in the baseline. By the end of 2023, Washington nonfarm payroll employment is higher by 96,900 jobs (2.7%) than in the baseline forecast and Washington personal income is \$46.6 billion (7.8%) 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 lead 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 sharply curtail their spending in early 2020. Foreign growth also slows. The result is a three-quarter recession starting in the third quarter of 2020 during which real GDP declines 1.9%. The unemployment rate climbs through 2020 and 2021, peaking at 5.8% in the fourth quarter of 2021.

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 earlier decline rather than leveling off as in the baseline. Software employment also declines rather than growing moderately as in the baseline forecast. Construction employment declines much more sharply than in the baseline. The relatively weak local economy also puts downward pressure on Washington wages and the Seattle CPI. By the end of 2023, Washington nonfarm payroll employment is 163,300 (4.5%) lower than in the baseline forecast and Washington personal income is \$56.7 billion (9.5%) 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 GCEA 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 1.9% per year over the five-year interval through 2023, which is the same rate as in the baseline forecast. The GCEA forecast of 2.1% average real consumer spending growth is also the same as the average

consumer spending growth in the baseline forecast. The GCEA members average PCE inflation forecast averages 1.8% compared to 1.9% in the baseline forecast. The Council members' mortgage rate forecast averages 4.3% over the forecast horizon, which is the same as the average mortgage rate in the baseline forecast but their oil price forecast averages \$61 per barrel compared to \$59 in the baseline forecast.

The Governor's Council of Economic Advisors' Washington forecast is also very close to the baseline forecast

The Governor's Council of Economic Advisors' Washington forecast is also very close to the baseline forecast. The GCEA scenario for Washington real personal income growth averages 3.1% per year in 2019 through 2023, which is slightly higher than the 3.0% average rate in the baseline forecast. Their average nominal personal income growth forecast is the same as the 5.0% in the baseline forecast because of their slightly lower inflation forecast. The Council members' forecast for total employment growth over the five-year period averages 1.3% per year compared to 1.4% in the baseline forecast. The GCEA forecast for manufacturing employment growth is the same as the baseline forecast at 0.8% per year but their construction employment growth forecast is higher at an average of 0.1% per year compared to -0.3% in the baseline forecast. The GCEA housing permit forecast is also slightly higher, averaging 43,400 units per year compared to 43,000 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 3,800 (0.1%) lower than in the baseline forecast and Washington personal income is \$0.1 billion (0.0%) lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1
Washington Economic Forecast Summary
 Forecast 2020 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	380.828	396.352	414.526	433.272	447.713	459.319	471.061	484.790
% Ch	4.6	4.1	4.6	4.5	3.3	2.6	2.6	2.9
Real Wage and Salary Disb.	190.616	200.160	213.018	224.748	233.908	241.291	248.044	256.027
% Ch	5.1	5.0	6.4	5.5	4.1	3.2	2.8	3.2
Real Nonwage Income	190.212	196.191	201.508	208.525	213.806	218.027	223.017	228.763
% Ch	4.0	3.1	2.7	3.5	2.5	2.0	2.3	2.6
Real Per Capita Income (\$/Person)	52,672	53,841	55,407	57,067	58,114	58,794	59,498	60,461
% Ch	2.8	2.2	2.9	3.0	1.8	1.2	1.2	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.034	1.050	1.070	1.089	1.109	1.132	1.154	1.177
% Ch	0.5	1.5	1.9	1.7	1.8	2.1	2.0	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.521	2.589	2.670	2.745	2.820	2.881	2.944	3.008
% Ch	1.9	2.7	3.1	2.8	2.7	2.2	2.2	2.2
Average Nonfarm Annual Wage	59,583	61,918	65,682	69,093	71,850	74,688	77,516	80,777
% Ch	2.7	3.9	6.1	5.2	4.0	3.9	3.8	4.2
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.00	26.81	27.93	28.91	30.09	31.07	32.15	33.29
% Ch	2.8	3.1	4.2	3.5	4.1	3.2	3.5	3.6
Current Dollar Income (Billions of Dollars)								
Personal Income	393.962	416.282	443.729	471.792	496.369	519.878	543.833	570.542
% Ch	5.1	5.7	6.6	6.3	5.2	4.7	4.6	4.9
Disposable Personal Income	345.868	365.887	390.607	416.630	437.733	458.573	480.013	502.942
% Ch	5.0	5.8	6.8	6.7	5.1	4.8	4.7	4.8
Per Capita Income (\$/Person)	54,488	56,548	59,309	62,140	64,428	66,544	68,688	71,154
% Ch	3.3	3.8	4.9	4.8	3.7	3.3	3.2	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,594.4	3,683.2	3,752.3	3,837.3	3,919.0	3,980.2	4,034.1	4,082.5
Total Washington Employment	3,396.1	3,501.1	3,579.5	3,664.0	3,739.1	3,793.7	3,839.3	3,880.0
Unemployment Rate (%)	5.52	4.94	4.61	4.52	4.59	4.69	4.83	4.96
Nonfarm Payroll Employment	3,193.3	3,283.8	3,363.9	3,435.7	3,503.0	3,550.0	3,587.3	3,623.2
% Ch	3.0	2.8	2.4	2.1	2.0	1.3	1.0	1.0
Manufacturing	292.7	287.1	284.0	291.9	296.4	293.0	293.8	296.9
% Ch	0.6	-1.9	-1.1	2.8	1.6	-1.1	0.3	1.0
Durable Manufacturing	210.6	203.8	199.5	205.4	208.6	206.7	207.5	210.3
% Ch	-0.1	-3.3	-2.1	2.9	1.6	-0.9	0.4	1.3
Aerospace	93.2	87.7	82.5	86.6	89.9	89.9	89.9	89.9
% Ch	-1.1	-5.9	-5.9	4.9	3.8	0.0	0.0	0.0
Nondurable Manufacturing	82.0	83.3	84.5	86.5	87.8	86.4	86.3	86.6
% Ch	2.5	1.6	1.4	2.4	1.5	-1.6	-0.1	0.3
Construction	178.9	193.5	206.6	216.5	216.6	213.2	211.0	210.0
% Ch	6.5	8.2	6.8	4.8	0.0	-1.6	-1.0	-0.5
Service-Providing	2,715.4	2,796.9	2,867.0	2,921.1	2,984.0	3,037.7	3,076.4	3,110.2
% Ch	3.0	3.0	2.5	1.9	2.2	1.8	1.3	1.1
Software Publishers	57.3	60.2	63.1	67.7	71.4	72.0	72.8	73.9
% Ch	3.2	5.1	4.7	7.4	5.3	0.9	1.1	1.5
Electronic Shopping and Mail-Order	33.2	44.0	53.5	57.0	61.1	63.8	65.9	67.7
% Ch	17.7	32.5	21.7	6.5	7.3	4.4	3.3	2.7
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	40.153	44.515	48.801	46.048	43.833	42.862	42.550	41.976
% Ch	3.3	10.9	9.6	-5.6	-4.8	-2.2	-0.7	-1.3
Single-Family	21.844	22.044	24.141	22.386	22.633	22.901	23.132	23.416
% Ch	17.0	0.9	9.5	-7.3	1.1	1.2	1.0	1.2
Multi-Family	18.310	22.471	24.660	23.662	21.200	19.961	19.418	18.561
% Ch	-9.4	22.7	9.7	-4.0	-10.4	-5.8	-2.7	-4.4
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.43	3.63	4.09	4.52	4.78

Table 2.2
Comparison of Alternative Forecasts

Fiscal Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP, Percent Change						
Optimistic	2.8	2.6	2.4	3.1	3.0	2.8
Baseline	2.8	2.6	2.0	1.7	1.8	2.0
Pessimistic	2.8	2.6	1.8	-1.1	2.0	2.2
PCE Price Index, Percent Change						
Optimistic	1.9	1.7	1.8	2.0	2.0	2.0
Baseline	1.9	1.7	1.8	2.1	2.0	1.9
Pessimistic	1.9	1.7	1.8	2.0	1.6	1.5
Mortgage Rate, Percent						
Optimistic	4.16	4.43	4.01	4.56	5.11	5.62
Baseline	4.16	4.43	3.63	4.09	4.52	4.78
Pessimistic	4.16	4.43	3.60	3.49	3.80	4.22
3 Month T-Bill Rate, Percent						
Optimistic	1.41	2.26	2.21	2.57	3.03	3.28
Baseline	1.41	2.26	1.76	1.64	2.05	2.27
Pessimistic	1.41	2.26	1.67	0.29	0.16	0.63
Washington						
Real Personal Income, Percent Change						
Optimistic	4.6	4.5	5.1	4.3	4.3	4.3
Baseline	4.6	4.5	3.3	2.6	2.6	2.9
Pessimistic	4.6	4.5	1.6	-0.8	0.3	2.4
Personal Income, Percent Change						
Optimistic	6.6	6.3	7.0	6.4	6.4	6.4
Baseline	6.6	6.3	5.2	4.7	4.6	4.9
Pessimistic	6.6	6.3	3.5	1.2	1.9	3.9
Employment, Percent Change						
Optimistic	2.4	2.1	2.2	2.1	1.9	1.5
Baseline	2.4	2.1	2.0	1.3	1.0	1.0
Pessimistic	2.4	2.1	1.6	-0.1	-0.8	0.5
Housing Permits, Thousands of Authorized Units						
Optimistic	48.8	46.0	44.7	44.6	45.2	45.1
Baseline	48.8	46.0	43.8	42.9	42.5	42.0
Pessimistic	48.8	46.0	41.8	34.8	34.6	33.1

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	2.3	1.8	1.7	1.9	2.0
GCEA Average	2.3	1.6	1.9	1.9	1.9
Real Consumption					
<i>Growth</i>					
ERFC	2.6	2.2	1.9	2.0	2.0
GCEA Average	2.5	2.1	2.0	2.1	2.0
PCE Price Index					
<i>Growth</i>					
ERFC	1.5	2.1	2.0	2.0	1.9
GCEA Average	1.7	1.9	1.9	1.9	1.8
Mortgage Rate					
<i>Percent</i>					
ERFC	3.9	3.8	4.3	4.7	4.8
GCEA Average	4.1	4.0	4.2	4.4	4.7
Oil Price (Brent)					
<i>Dollars per barrel</i>					
ERFC	63.5	58.3	57.1	56.9	57.3
GCEA Average	64.3	60.1	60.1	60.5	61.6
Washington State					
Real Personal Income					
<i>Growth</i>					
ERFC	4.1	2.7	2.6	2.7	3.1
GCEA Average	3.9	3.0	3.0	2.8	2.9
Wage and Salary Employment					
<i>Growth</i>					
ERFC	1.9	1.7	1.1	1.0	1.0
GCEA Average	1.9	1.5	1.2	1.1	1.0
Manufacturing Employment					
<i>Growth</i>					
ERFC	2.7	-0.2	-0.6	0.7	1.2
GCEA Average	2.7	0.1	0.0	0.4	0.9
Construction Employment					
<i>Growth</i>					
ERFC	1.9	-1.2	-1.4	-0.6	-0.3
GCEA Average	1.8	-0.5	-0.5	-0.2	0.0
Housing Permits					
<i>Thousands of authorized units</i>					
ERFC	45.2	43.3	42.5	42.4	41.7
GCEA Average	45.6	43.0	42.8	42.9	42.8
Washington Average Annual Wage					
<i>Growth</i>					
ERFC	4.5	3.8	3.8	3.9	4.5
GCEA Average	4.1	3.5	3.6	3.8	3.9

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
June	2.4	6.1	4.2	47.2
September	2.2	6.5	4.6	47.4

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
June	1.4	4.9	3.0	41.8
September	1.5	4.7	2.6	43.3

Table 2.6
Forecast Comparison
 Forecast 2019 to 2023

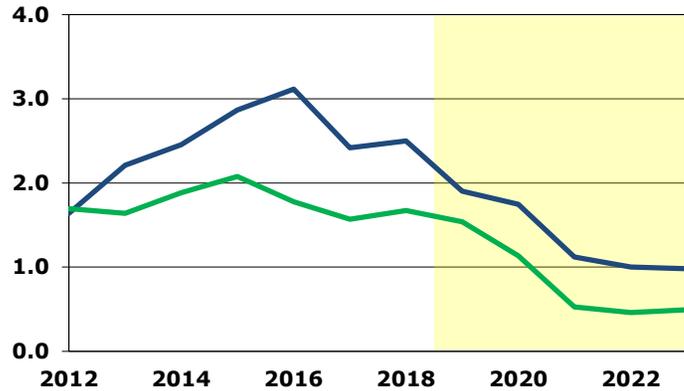
Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
Washington							
Real Personal Income							
September	396.352	414.526	433.272	447.713	459.319	471.061	484.790
% Ch	4.1	4.6	4.5	3.3	2.6	2.6	2.9
June	395.757	414.344	431.259	444.400	458.073	470.976	484.633
% Ch	4.0	4.7	4.1	3.0	3.1	2.8	2.9
Personal Income							
September	416.282	443.729	471.792	496.369	519.878	543.833	570.542
% Ch	5.7	6.6	6.3	5.2	4.7	4.6	4.9
June	416.282	444.004	470.042	492.527	517.081	541.978	568.456
% Ch	5.7	6.7	5.9	4.8	5.0	4.8	4.9
Employment							
September	3283.8	3363.9	3435.7	3503.0	3550.0	3587.3	3623.2
% Ch	2.8	2.4	2.1	2.0	1.3	1.0	1.0
June	3283.8	3363.9	3442.0	3508.5	3552.7	3592.6	3631.1
% Ch	2.8	2.4	2.3	1.9	1.3	1.1	1.1
Housing Permits							
September	44.515	48.801	46.048	43.833	42.862	42.550	41.976
% Ch	10.9	9.6	-5.6	-4.8	-2.2	-0.7	-1.3
June	44.515	48.601	45.701	41.706	41.960	42.037	41.954
% Ch	10.9	9.2	-6.0	-8.7	0.6	0.2	-0.2

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

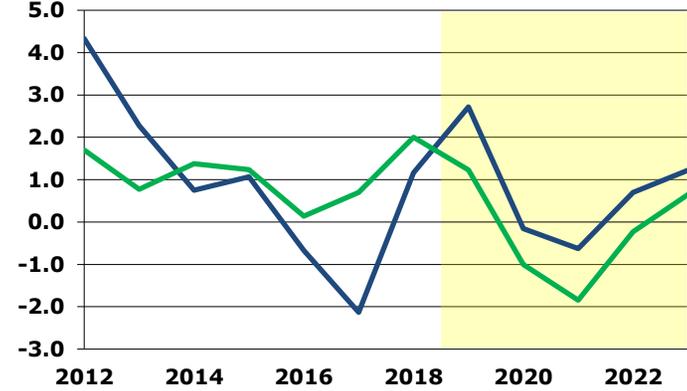
Forecast

Total Nonfarm Payroll Employment



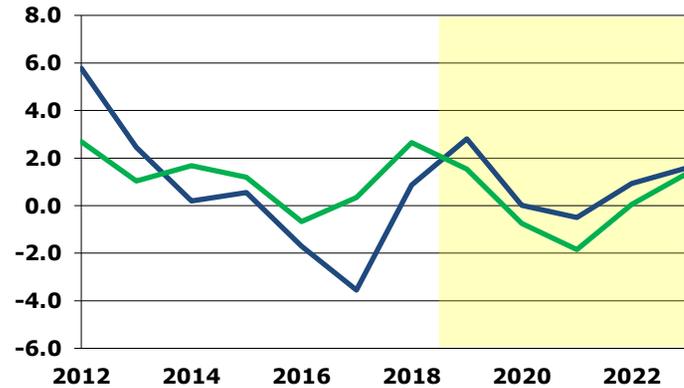
Source: WA State Employment Security Dept. 2018, ERFC 2023

Manufacturing Employment



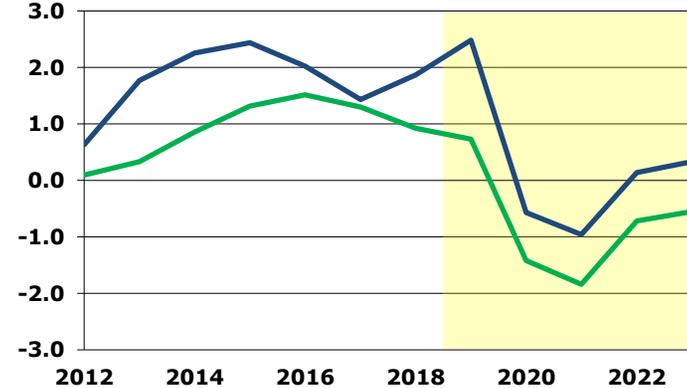
Source: WA State Employment Security Dept. 2018, ERFC 2023

Durable Manufacturing Employment



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

Nondurable Manufacturing Employment



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

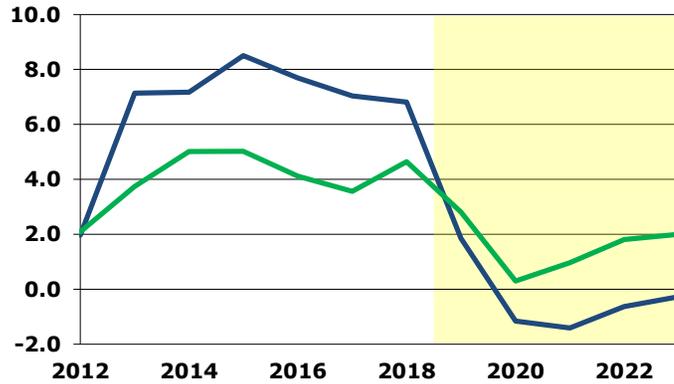
■ Washington

■ U.S.

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

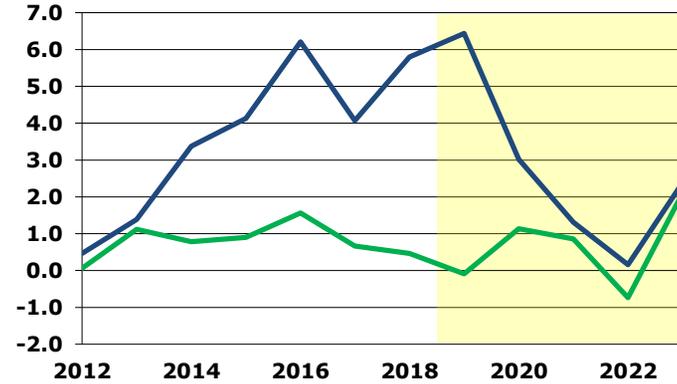
Forecast

Construction Employment



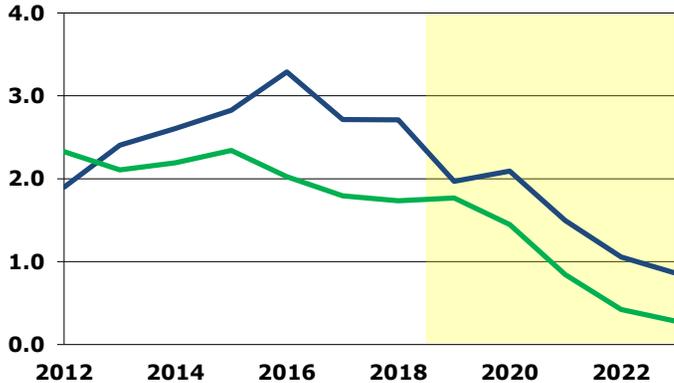
Source: WA State Employment Security Dept. 2018, ERFC 2023

Information Employment



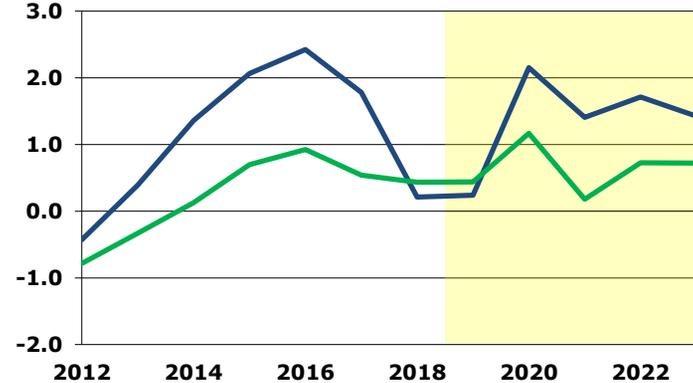
Source: WA State Employment Security Dept. 2018, ERFC 2023

Other Private Employment



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

Government Employment



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

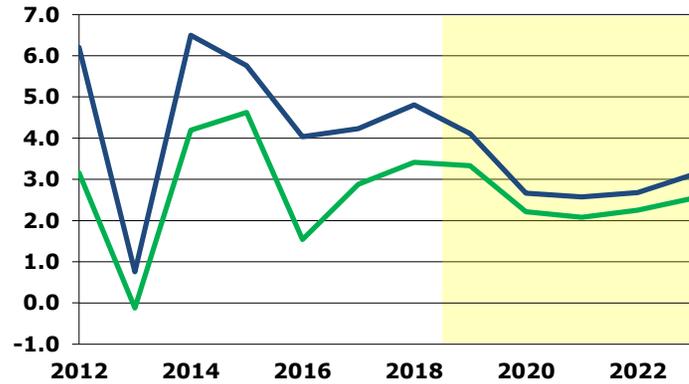
Washington

U.S.

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

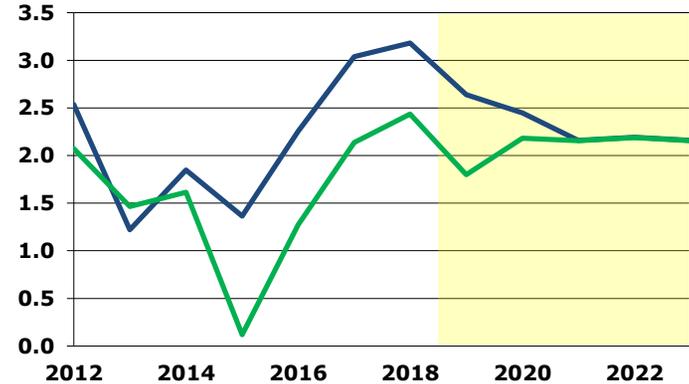
Forecast

Real Personal Income



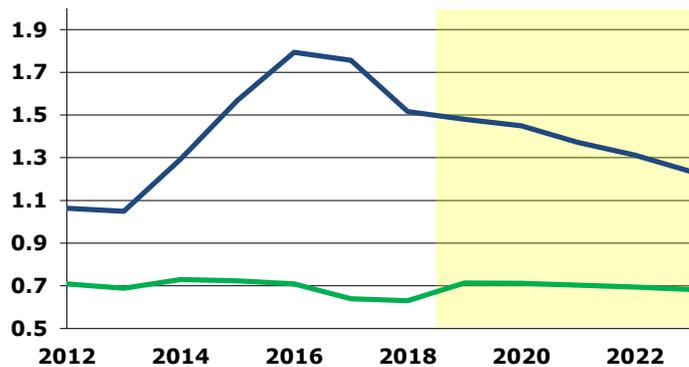
Source: Bureau of Economic Analysis 2017, ERFC 2023

Consumer Price Indices



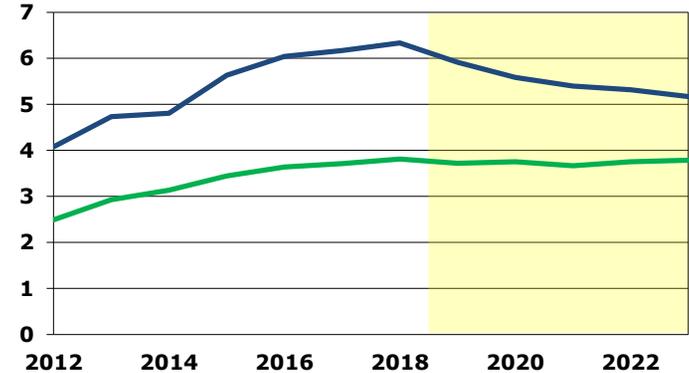
Source: Bureau of Labor Statistics 2018, ERFC 2023

Population



Source: Census Bureau 2018, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2018, ERFC 2023

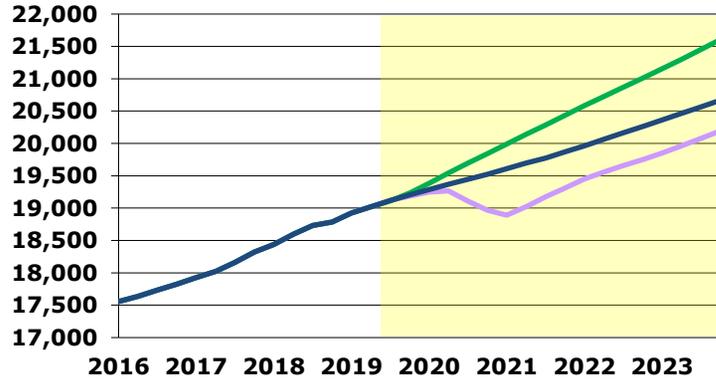
Washington

U.S.

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

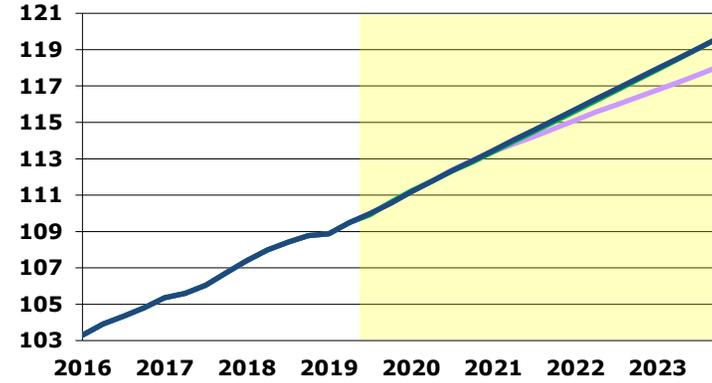
Forecast

Real GDP, Billions of 2012 Dollars



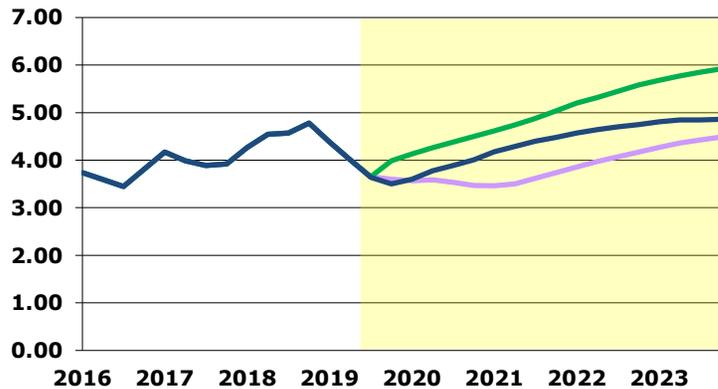
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

PCE Price Index, 2012 = 100



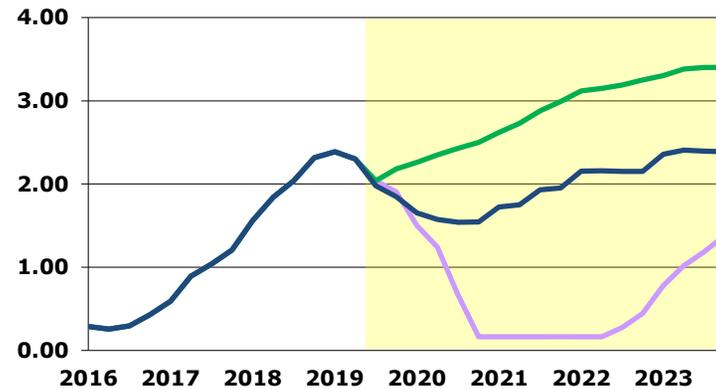
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2018 Q3, ERFC 2023

Three Month T-Bill Rate, Percent



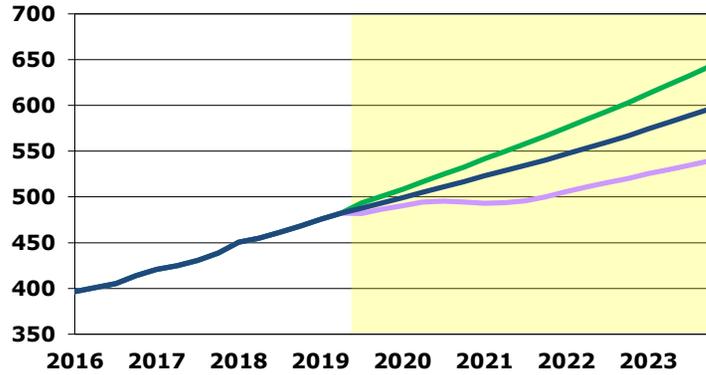
Source: Federal Reserve Board 2018 Q3, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

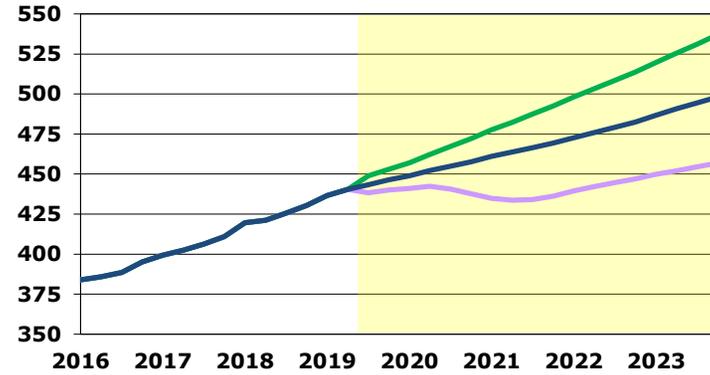
Forecast

Personal Income, Billions of Dollars



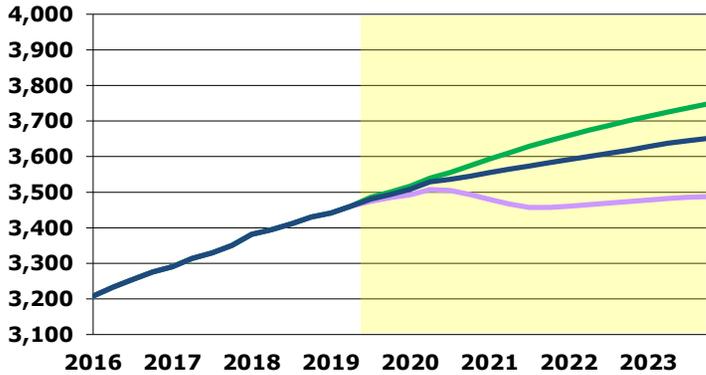
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Real Personal Income, Billions of 2012 Dollars



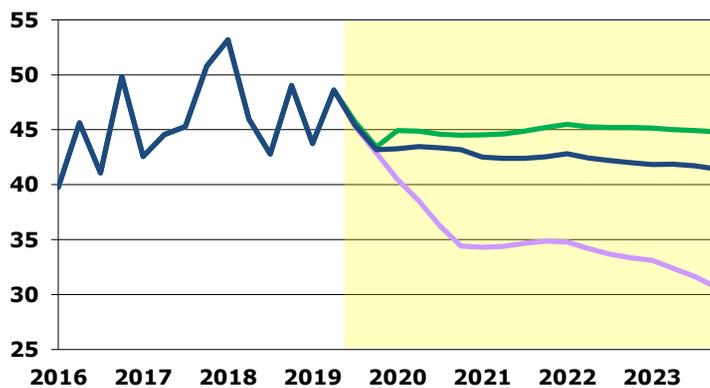
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

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 June 2019 forecast have come in \$160 million (3.2%) over the forecasted amount.**
- **An \$84 million transfer of property tax revenue from the GF-S to the Education Legacy Trust Account (ELTA) that was expected to occur in FY 2019 instead occurred in FY 2020. While this changed the relative balances of the GF-S and ELTA, it did not affect total near GF-S revenue.**
- **The preliminary total of GF-S revenue for the recently ended 2017-19 biennium is \$102 million higher than forecasted in June. The GF-S forecast was increased by \$226 million in the 2019-21 biennium but decreased by \$79 million in the 2021-23 biennium.**
- **Preliminary near GF-S revenue for the 2017-19 biennium, which includes all state revenue subject to the budget outlook process, is \$27 million higher than forecasted in June. Forecasted near GF-S revenue has increased by \$447 million in the 2019-21 biennium but decreased by \$63 million in the 2021-23 biennium.**

Overview

Forecasted GF-S revenue is higher in the near term but lower in the next biennium due to slower growth

Since the June 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted. While much of the forecast variance came from higher-than-expected current economic activity, a large amount came from remittances of past-due taxes from prior periods. The September economic forecast was similar to the June forecast but resulted in slower forecasted revenue growth in the next biennium. Reflecting the current strength and forecasted slowing, the GF-S forecast has been increased in the current biennium but decreased in the next. In addition to these changes, preliminary total collections for the recently ended 2017-19 biennium were increased and forecasted collections for the current biennium were decreased by an \$84 million transfer of property tax revenue from the GF-S to the Education Legacy Trust Account that was forecasted to occur in June on a cash basis but instead occurred in July.

GF-S forecast change by biennium (millions):

17-19: +\$102
 19-21: +\$226
 21-23: -\$79

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2017-19 through 2021-23 biennia. For the 2017-19 biennium, collections came in \$101.6 million higher than forecasted in June. However, \$83.8 million of the change was from the delayed transfer of property tax. Absent the delay, collections would have been \$17.8 million higher than forecasted. For the current biennium, revenue collections that are tracked monthly came in \$142.0 million higher than forecasted. While the delayed property tax transfer subtracted \$83.8 million, forecasted growth from economic changes added \$168.1 million, resulting in a total forecast change of \$226 million. The forecast was reduced by \$79.4 million in the 2021-23 biennium. The September 2019 forecast for GF-S revenue totals \$44,143.6 million in the 2017-19 biennium, \$50,030.3 million in the 2019-21 biennium and \$53,604.0 million in the 2021-23 biennium.

GF-S forecast (\$millions):

2017-19:
 \$44,144

2019-21:
 \$50,030

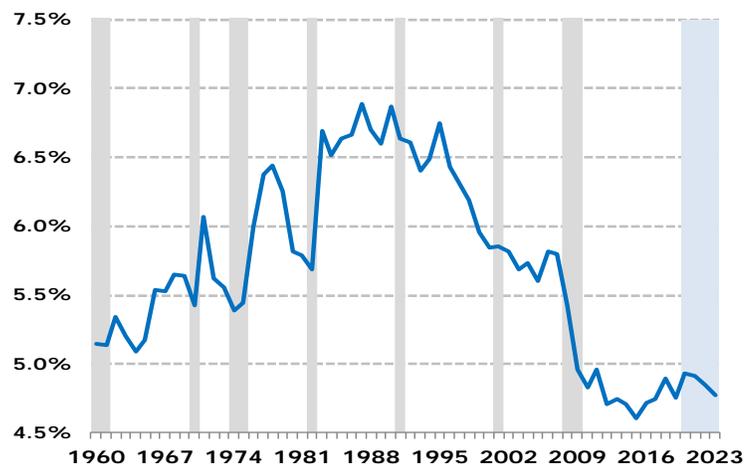
2021-23:
 \$53,604

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	\$17.8	\$142.0	NA
Non-Economic Change	\$83.8	(\$83.8)	\$0.0
Forecast Change	\$0.0	\$168.1	(\$79.4)
Total Change	\$101.6	\$226.3	(\$79.4)

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 2019 (preliminary). 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 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 \$160 million (3.2%) more than the June forecast

Revenue collections from the Department of Revenue (DOR) and Administrative Office of the Courts are tracked monthly. In the period since the June forecast, total revenue from the above sources came in \$159.8 million (3.2%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$130.5 million (3.0%) higher than forecasted. Revenue from other DOR tax sources was \$28.2 million (4.0%) above the forecast.

Most of the non-Revenue Act forecast variance came from real estate excise taxes

Most of the positive variance in non-Revenue Act collections came from real estate excise taxes (REET), which came in \$35.8 million (11.9%) higher than forecasted. Property tax collections came in \$0.9 million (0.5%) higher than forecasted. Liquor sales and liter tax receipts came in \$2.8 million (3.7%) higher than forecasted. Cigarette tax receipts came in \$9.8 million (3.4%) lower than forecasted, partially due to a refund of \$2.3 million. Net refunds of unclaimed property out of the GF-S were \$3.9 million higher than forecasted. All other DOR revenue sources came in \$2.3 million (6.4%) higher than forecasted. Revenue from the Administrative Office of the Courts was \$1.2 million (6.7%) higher than forecasted.

Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the June 2019 forecast, cash basis, millions of dollars)

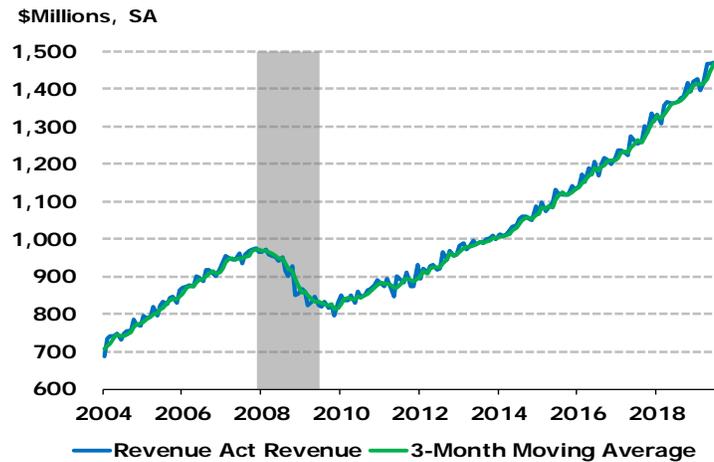
<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$130.5	3.0%
Non-Revenue Act	\$28.2	4.0%
Subtotal	\$158.7	3.2%
Administrative Office of the Courts	\$1.2	6.7%
Total*	\$159.8	3.2%

* Detail may not add to total due to rounding.

Source: ERFC; Period: June 11 - September 10, 2019

Figure 3.2: Revenue Act Collections*

Year-over-year growth in adjusted Revenue Act collections accelerated in the second quarter of 2019



Source: ERFC; Data through September 10, 2019

*Adjusted for large payments/refunds and payment pattern change

Adjusted Revenue Act collections were up 8.1% year over year for second quarter 2019 activity after 5.6% growth in the previous quarter

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 7.0% year over year in the August 11 – September 10, 2019 collections period after growth of 6.9% in the previous period. Adjusted year-over-year growth in collections representing second quarter 2019 activity (May 11 – August 10, 2019 collections) was 8.1%, but much of the growth was due to year-over-year growth in remittances of taxes for past-due activity rather than economic activity during the quarter. If remittances had remained at last year’s levels, year-over-year growth for

second quarter collections would have been 6.3%. Adjusted year-over-year growth in collections representing first quarter activity (February 11 – May 10, 2019 collections) was 5.6%. Collections growth for fourth quarter 2018 activity was 7.4% and growth in third quarter activity was 7.6%.

Residential real estate activity has leveled off while sales of large commercial properties remain strong

Much of the positive variance in REET collections was due to stronger-than-expected sales of commercial property. Sales of property worth \$10 million or more totaled \$3.9 billion in the three months since the last forecast, up from \$3 billion in the prior three months. 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).

Figure 3.3: Taxable Real Estate Excise Activity, SA

REET collections are down only slightly from their peak levels



Source: ERFC; data through August 2019

Non-Economic Changes to the Forecast

On a cash basis, a transfer of GF-S property tax revenue to ELTA occurred in FY20 instead of as expected in FY19

There was a single non-economic change to the forecast. One of the legislative changes to the June forecast was a transfer of property tax revenue from the GF-S to the Education Legacy Trust Account (ELTA), estimated at \$84.7 million. The transfer was expected to occur in June 2019, the last month of FY 2019. While some of the transfer occurred in June, the bulk of the transfer, \$83.8 million, occurred in July, the first month of FY 2020. On a cash basis, the delay increased the preliminary total of GF-S revenue for the 2017-19 biennium by \$83.8 million and decreased forecasted cash revenue for the 2019-21 biennium by the same amount. On a GAAP basis, however, the transfer still occurred in FY 2019, so the GAAP non-economic change was just the difference between the final and expected amount. The change affected the biennial totals for the GF-S and ELTA but did

not affect the near GF-S totals for the biennia since the transfer was merely made from one part of near GF-S to another.

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:

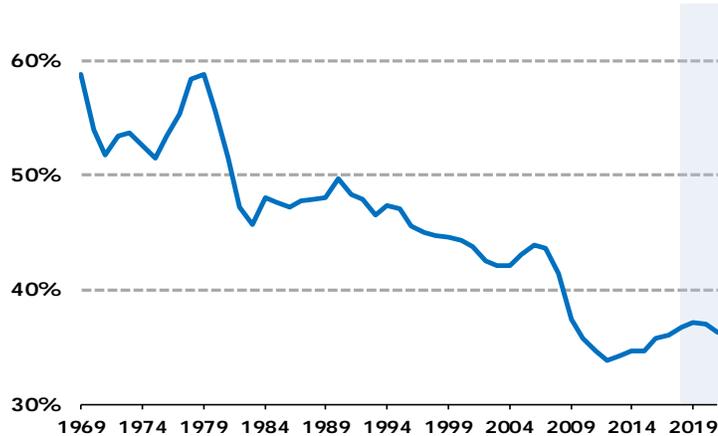
*FY19: 8.6%
FY20: 6.1%
FY21: 2.7%
FY22: 3.0%
FY23: 3.3%*

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 7.4% despite slowing auto sales and construction because of continuing increases in the volume of taxable online sales. Growth then declines to 4.9% in FY 2020, 2.9% in FY 2021, 3.1% in FY 2022 and 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 2019 was 8.6%. Collections growth is forecasted 6.1% in FY 2020, 2.7% in FY 2021, 3.0% 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: 6.9%
FY20: 4.8%
FY21: 6.0%
FY22: 4.5%
FY23: 4.8%*

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. Growth slowed to a still-strong 6.9% in FY 2019. Forecasted growth declines to 4.4% in FY 2020. Growth then increases to 6.0% in FY 2021, boosted by a newly adopted tax on financial institutions that takes effect on January 1, 2020. Growth then continues at 4.5% in FY 2022 and 4.8% 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.

Property tax growth forecast:

*FY19: -12.4%
FY20: 49.0%
FY21: 12.5%
FY22: 3.4%
FY23: 2.8%*

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. Preliminary collections fell by 12.4% in FY 2019 due to a temporary reduction in the levy rate for calendar year 2019 and a \$936 million transfer of collections from the levy to the Education Legacy Trust Account (ELTA). Collections then rebounded by 49.0% in FY 2020 with a smaller \$83.8 million transfer to ELTA and the end of the temporary levy reduction in the second half of the year. Growth remains high at 12.5% in FY 2021, due to a full year at the unreduced levy rate, before falling to 3.4% in FY 2022 and 2.8% in FY 2023.

REET rates and distributions are changing on January 1, 2020, which will result in additional revenue

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 tax is applied to both residential and commercial real estate, including purchases of vacant land. Currently, the state portion of REET is 1.28% of the sales price and 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 ELTA (4.1%). These rates and distributions will be changed starting January 1, 2020 under Engrossed Substitute Senate Bill 5998, passed in the 2019 legislative session. Under the new law, rates are 1.1% for the portion of the selling price less than or equal to \$500 thousand, 1.28% for the portion greater than \$500 thousand and less than or equal to \$1.5 million, 2.75% for the portion greater than \$1.5 million and less than or equal to \$3.0 million and 3.0% for the portion greater than \$3.0 million. The distributions of the tax are also changed: 79.4% is deposited in the GF-S, 1.7% in the public works assistance account, 1.4% in the city-county assistance account and the remainder (17.5%) in ELTA. Beginning July 1, 2023, distributions to the city-county assistance account increase to 5.2% and distributions to the Education Legacy Trust Account decrease to 14%. The new rates and distributions are forecasted to result in higher collections for both the GF-S and ELTA than the previous rates.

GF-S REET growth forecast:

*FY19: 0.5%
FY20: -6.2%
FY21: -5.1%
FY22: 0.0%
FY23: 2.2%*

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 declined in FY 2019 while residential sales increased,

resulting in a 0.5% increase in collections in FY 2019. Both commercial and residential sales are now forecasted to retreat from the record high levels of FY 2019, with a 6.2% reduction in FY 2020 and a 5.1% decline in FY 2021. Collections are then flat at 0.0% growth in FY 2022, with growth resuming at 2.2% 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: 9.0%
FY20: -1.2%
FY21: -1.3%
FY22: 3.9%
FY23: 4.0%*

Use tax collections grew 2.8% in FY 2018 after 6.0% growth in FY 2017. Growth then rebounded to 9.0% in FY 2019, boosted by several large one-time purchases. Strong collections so far for FY 2020 resulted in a forecasted decrease of only 1.2% from FY 2019's elevated level, with a further decline of 1.3% in FY 2020 as activity returns to a more normal level. Growth then resumes at 3.9% in FY 2022 and 4.0% 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: -0.3%
FY20: 10.7%
FY21: 5.6%
FY22: 3.2%
FY23: 4.0%*

Public utility tax receipts shrank by 1.1% in FY 2018 after 1.4% growth in FY 2017. Growth shrank by a further 0.3% in FY 2019. The low level of FY 2019 collections, coupled with actual collections so far, result in forecasted 10.7% growth in FY 2020. The expiration of a large tax credit boosts collections a further 5.6% in FY 2021. Growth is then forecasted at 3.2% in FY 2022 and 4.0% in FY 2023.

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

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

Cigarette tax growth forecast:

FY19: -3.3%
FY20: -4.9%
FY21: -1.8%
FY22: -2.5%
FY23: -2.7%

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. Collections decreased by 3.3% in FY 2019 after decreasing by 5.4% in FY 2018. The decrease in collections is forecasted to accelerate to 4.9% in FY 2020, due to tax stamp sales so far plus a state increase in the legal age to buy cigarettes from 18 to 21 on January 1, 2020. The decline then continues at a rate of 1.8% in FY 2021, 2.5% in FY 2022 and 2.7% 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: \$0.0
19-21: \$12.4
21-23: \$10.1

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 were \$248.9 million in the 2017-19 biennium, the same as forecasted in June. Distributions are forecasted at \$279.4 million in the 2019-21 biennium, an increase of \$12.4 million from the previous forecast, and \$294.4 million in the 2021-23 biennium, an increase of \$10.1 million. 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: \$1.5
19-21: -\$2.0
21-23: -\$1.8

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. The office's preliminary tally of final revenue for the 2017-19 biennium is \$326.5 million, \$1.5 million more than the June forecast. The

forecast for the 2019-21 biennium was decreased \$2.0 million to \$215.2 million and the forecast for the 2021-23 biennium was decreased \$1.8 million to \$187.5 million.

State Treasurer

*Forecast
change by
biennium
(millions):*

17-19: *-\$0.1*
19-21: *-\$7.3*
21-23: *-\$5.6*

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's preliminary tally of final revenue for the 2017-19 biennium is \$35.7 million, \$0.1 million less than the June forecast. The office's forecast for the 2019-21 biennium has been decreased \$7.3 million to \$39.1 million and the forecast for the 2021-23 biennium has been decreased \$5.6 million to \$37.0 million. The forecasted decreases were mainly due to a decrease in expected interest rates.

Insurance Commissioner

*Forecast
change by
biennium
(millions):*

17-19: *\$0.0*
19-21: *\$6.0*
21-23: *\$6.9*

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 preliminary tally of final GF-S revenue for the 2017-19 biennium is \$1,200.5 million, the same as forecasted in June. The forecast for the 2019-21 biennium has been increased \$6.0 million to \$1,303.3 million and the forecast of revenue for the 2021-23 biennium has been increased \$6.9 million to \$1,415.2 million.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

17-19: *-\$6.8*
19-21: *\$6.2*
21-23: *\$7.8*

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The preliminary tally of final revenue for the 2017-19 biennium is \$486.1 million, \$6.8 million less than the June forecast. The forecast for the 2019-21 biennium has been increased \$6.2 million to \$549.8 million and the forecast of revenue for the 2021-23 biennium has been increased \$7.8 million to \$592.3 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

GF-S forecast change by biennium (millions):

17-19: *-\$0.4*
19-21: *-\$2.2*
21-23: *\$1.7*

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. The preliminary tally of transfers of lottery revenue into the GF-S for the 2017-19 biennium is \$77.3 million, \$0.4 million less than forecasted in June. Forecasted transfers for the 2019-21 biennium have been decreased \$2.2 million to \$51.6 million and the forecast of GF-S transfers for the 2021-23 biennium has been increased \$1.7 million to \$66.8 million.

OPA forecast change by biennium (millions):

17-19: *\$4.5*
19-21: *\$1.6*
21-23: *-\$5.3*

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The preliminary tally of OPA revenue for the 2017-19 biennium is \$287.9 million, \$4.5 million more than the June forecast. The forecast for the 2019-21 biennium has been increased \$1.6 million to \$286.3 million and the forecast for the 2021-23 biennium has been decreased \$5.3 million to \$305.2 million.

Administrative Office of the Courts

Forecast change by biennium (millions):

17-19: *\$1.5*
19-21: *\$2.1*
21-23: *\$0.9*

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 preliminary tally of final revenue for the 2017-19 biennium is \$149.1 million, \$1.5 million more than the June forecast. The forecast of transfers for the 2019-21 biennium has been increased \$2.1 million to \$137.8 million and the forecast of revenue for the 2021-23 biennium has been increased \$0.9 million to \$138.0 million.

Track Record for the 2017-19 Biennium

The September 2019 forecast is \$1.2 billion (2.7%) 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 September 2019 forecast is \$5.4 billion (14.0%) higher than the initial forecast. Non-economic changes have increased the forecast by \$1.2 billion (3.2%). Excluding non-economic changes, the current forecast is \$4.2 billion (10.9%) 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 September forecast of biennial revenue is \$1.2 billion (2.7%) higher than that sum.

Track Record for the 2019-21 Biennium

The current forecast is \$312 million (0.6%) higher than the forecasted revenue at the time of the initial 2019-21 budget

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 September 2019 forecast is \$6.6 billion (15.2%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.3 billion (7.5%). Excluding non-economic changes, the current forecast is \$3.3 billion (7.6%) higher than the initial forecast. The March 2019 forecast, coupled with \$109 million in legislative and budget-driven revenue changes passed in the 2019 legislative session subsequent to the March forecast, was the basis for the initial budget for the 2019-21 biennium. The September forecast of biennial revenue is \$312 million (0.6%) higher than that sum.

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 and 2019-21 Biennia

Table 3.12 shows the budgetary balance sheets for the 2017-19 and 2019-21 biennia 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

The forecast implies total GF-S reserves of \$2.71 billion at the end of the 2019-21 biennium and \$3.13 billion in reserves for GF-S, ELTA and OPA

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 preliminary GF-S beginning fund balance for the 2019-21 biennium is \$951.7 million and the total beginning balance for GF-S, ELTA and OPA is \$1,909.9 million. Based on the September 2019 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$532.3 million at the end of the 2019-21 biennium and GF-S, ELTA and OPA reserves are projected to be \$951.6 million. In addition, the Budget Stabilization Account is projected to have a balance of \$2,176.8 million, bringing total projected GF-S reserves to \$2,709.1 million. Projected combined reserves for the ELTA and OPA are \$419.3 million, for total projected reserves of \$3,128.4 million for GF-S, ELTA and OPA at the end of the 2019-21 biennium.

Alternative Forecasts for the 2019-21 and 2021-23 Biennia

*Optimistic scenario (billions):
19-21: +\$1.68
21-23: +\$4.03*

*Pessimistic scenario:
19-21: -\$1.99
21-23: -\$4.98*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 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 2019-21 biennium are shown in Table 3.13 and those of the 2021-23 biennium are shown in Table 3.14. For the 2019-21 biennium, the optimistic forecast generates \$51.708 billion in GF-S revenue, \$1.678 billion (3.4%) more than the baseline scenario, while the pessimistic forecast produces \$48.037 billion in revenue, \$1.994 billion (0.1%) less than the baseline. For the 2021-23 biennium, the optimistic forecast generates \$57.634 billion in GF-S revenue, \$4.030 billion (7.5%) more than the baseline scenario, while the pessimistic forecast produces \$48.625 billion in revenue, \$4.979 billion (9.3%) less than the baseline.

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

Near General Fund Forecast (billions):

*2017-19:
\$46.086*

*2019-21:
\$51.435*

*2021-23:
\$54.973*

“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 \$46,085.6 million, \$26.6 million more than the June forecast. The forecast for the 2019-21 biennium is \$51,434.6 million, \$447.0 million more than the June forecast, and the forecast of Near General Fund revenue for the 2021-23 biennium is \$54,972.6 million, \$63.4 million less than the June 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)

<u>Biennium</u>	<u>Current Dollars</u>	<u>Percent Change</u>	2012	
			<u>Chained Dollars</u>	<u>Percent Change</u>
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%	32,835.5	7.0%
2015-17	38,317.4	13.8%	36,760.8	12.0%
2017-19 ^F	44,143.6	15.2%	40,888.8	11.2%
2019-21 ^F	50,030.3	13.3%	44,661.4	9.2%
2021-23 ^F	53,604.0	7.1%	45,987.0	3.0%

^F September 2019 forecast

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

Source: Department of Revenue, the Office of Financial Management and the Economic and Revenue Forecast Council 's June 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	175,080	7.4%
2020 ^F	183,700	4.9%
2021 ^F	188,999	2.9%
2022 ^F	194,942	3.1%
2023 ^F	201,352	3.3%

^F September 2019 forecast

Source: ERFC

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

Table 3.5

Comparison of the General Fund-State forecast by agency

2017-19 biennium; cash basis

(millions of dollars)

Forecast by Agency	June 2019 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,342.4	\$0.0	(\$3.3)	\$21,339.1	(\$3.3)
Business & Occupation	8,592.5	0.0	(5.7)	8,586.8	(5.7)
Use	1,448.9	0.0	0.5	1,449.4	0.5
Public Utility	819.9	0.0	(17.8)	802.1	(17.8)
Liquor Sales/Liter	561.7	0.0	0.2	561.9	0.2
Cigarette	706.3	0.0	(3.3)	703.0	(3.3)
Property (State Levy)	5,057.7	83.8	1.0	5,142.5	84.8
Real Estate Excise	2,171.0	0.0	11.9	2,182.9	11.9
Timber Excise	4.2	0.0	0.0	4.2	0.0
Other	1,057.9	0.0	38.7	1,096.6	38.7
Subtotal	41,762.6	83.8	22.0	41,868.4	105.8
Insurance Commissioner					
Insurance Premiums	1,200.5	0.0	0.0	1,200.5	0.0
Liquor Control Board					
Fees, Cannabis Excise Tax	435.5	0.0	(7.3)	428.2	(7.3)
Beer & Wine Surtax	57.4	0.0	0.5	57.9	0.5
Lottery Commission					
Lottery Revenue	77.6	0.0	(0.4)	77.3	(0.4)
State Treasurer					
Interest Earnings	35.8	0.0	(0.1)	35.7	(0.1)
Office of Financial Management					
Other Agencies	325.0	0.0	1.5	326.5	1.5
Administrative Office of the Courts					
Fines and Forfeitures	147.6	0.0	1.5	149.1	1.5
Total General Fund-State *	\$44,042.0	\$83.8	\$17.8	\$44,143.6	\$101.6

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council June 25, 2019² Forecast for the 2017-19 biennium, adopted September 25, 2019

*Detail may not add to totals because of rounding.

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	June 2019 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,414.4	\$0.0	\$79.1	\$21,493.5	\$79.1
Business & Occupation Use	8,629.6	0.0	6.1	8,635.8	6.1
Public Utility	1,457.3	0.0	5.0	1,462.2	5.0
Liquor Sales/Liter	819.2	0.0	(15.8)	803.3	(15.8)
Cigarette	562.3	0.0	1.4	563.7	1.4
Property (State Levy)	715.2	0.0	(20.4)	694.8	(20.4)
Real Estate Excise	5,069.0	(0.9)	2.0	5,070.1	1.1
Timber Excise	2,171.7	0.0	11.8	2,183.5	11.8
Other	3.9	0.0	(0.2)	3.7	(0.2)
Subtotal	1,113.9	0.0	(12.5)	1,101.4	(12.5)
	41,956.5	(0.9)	56.5	42,012.1	55.6
Insurance Commissioner					
Insurance Premiums	1,200.5	0.0	0.0	1,200.5	0.0
Liquor Control Board					
Fees, Cannabis Excise Tax	435.5	0.0	(7.3)	428.2	(7.3)
Beer & Wine Surtax	57.4	0.0	0.5	57.9	0.5
Lottery Commission					
Lottery Revenue	62.8	0.0	(0.8)	62.1	(0.8)
State Treasurer					
Interest Earnings	36.3	0.0	0.1	36.4	0.1
Office of Financial Management					
Other Agencies	325.0	0.0	1.5	326.5	1.5
Administrative Office of the Courts					
Fines and Forfeitures	147.6	0.0	1.5	149.1	1.5
Total General Fund-State *	\$44,221.7	(\$0.9)	\$52.1	\$44,272.8	\$51.1

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council June 25, 2019² Forecast for the 2017-19 biennium, adopted September 25, 2019

*Detail may not add to totals because of rounding.

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	June 2019 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,663.8	\$0.0	\$225.9	\$23,889.7	\$225.9
Business & Occupation Use	9,560.1	0.0	20.2	9,580.3	20.2
Public Utility	1,456.3	0.0	28.2	1,484.5	28.2
Liquor Sales/Liter	897.8	0.0	13.8	911.6	13.8
Cigarette	587.8	0.0	3.7	591.6	3.7
Property (State Levy)	675.5	0.0	(24.0)	651.6	(24.0)
Real Estate Excise	7,679.1	(83.8)	8.3	7,603.6	(75.5)
Timber Excise	1,956.0	0.0	45.1	2,001.0	45.1
Other	4.7	0.0	(0.3)	4.4	(0.3)
Subtotal	1,029.1	0.0	(13.7)	1,015.4	(13.7)
	47,510.2	(83.8)	307.2	47,733.6	223.4
Insurance Commissioner					
Insurance Premiums	1,297.3	0.0	6.0	1,303.3	6.0
Liquor Control Board					
Fees, Cannabis Excise Tax	486.2	0.0	5.7	491.8	5.7
Beer & Wine Surtax	57.4	0.0	0.5	57.9	0.5
Lottery Commission					
Lottery Revenue	53.7	0.0	(2.2)	51.6	(2.2)
State Treasurer					
Interest Earnings	46.5	0.0	(7.3)	39.1	(7.3)
Office of Financial Management					
Other Agencies	217.1	0.0	(2.0)	215.2	(2.0)
Administrative Office of the Courts					
Fines and Forfeitures	135.6	0.0	2.1	137.8	2.1
Total General Fund-State *	\$49,804.1	(\$83.8)	\$310.1	\$50,030.3	\$226.3

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council June 25, 2019² Forecast for the 2019-21 biennium, adopted September 25, 2019

*Detail may not add to totals because of rounding.

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	June 2019 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,663.8	\$0.0	\$225.9	\$23,889.7	\$225.9
Business & Occupation Use	9,560.1	0.0	20.2	9,580.3	20.2
Public Utility	1,456.3	0.0	28.2	1,484.5	28.2
Liquor Sales/Liter	897.8	0.0	13.8	911.6	13.8
Cigarette	587.8	0.0	3.7	591.6	3.7
Property (State Levy)	675.5	0.0	(24.0)	651.6	(24.0)
Real Estate Excise	7,679.1	0.0	10.1	7,689.3	10.1
Timber Excise	1,956.0	0.0	45.1	2,001.0	45.1
Other	4.7	0.0	(0.2)	4.6	(0.2)
Subtotal	1,029.1	0.0	(13.7)	1,015.4	(13.7)
	47,510.3	0.0	309.1	47,819.4	309.1
Insurance Commissioner					
Insurance Premiums	1,297.3	0.0	6.0	1,303.3	6.0
Liquor Control Board					
Fees, Cannabis Excise Tax	486.2	0.0	5.7	491.8	5.7
Beer & Wine Surtax	57.4	0.0	0.5	57.9	0.5
Lottery Commission					
Lottery Revenue	59.3	0.0	(0.0)	59.3	(0.0)
State Treasurer					
Interest Earnings	46.3	0.0	(8.2)	38.1	(8.2)
Office of Financial Management					
Other Agencies	217.1	0.0	(2.0)	215.2	(2.0)
Administrative Office of the Courts					
Fines and Forfeitures	135.6	0.0	2.1	137.8	2.1
Total General Fund-State *	\$49,809.5	\$0.0	\$313.3	\$50,122.8	\$313.3

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council June 25, 2019² Forecast for the 2019-21 biennium, adopted September 25, 2019

*Detail may not add to totals because of rounding.

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

Table 3.9
September 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	\$11,107.7	\$21,339.1	\$11,783.8	\$12,105.9	\$23,889.7	\$12,473.1	\$12,881.9	\$25,355.0
Business & occupation Use**	4,151.0	4,435.8	8,586.8	4,650.6	4,929.7	9,580.3	5,153.3	5,398.8	10,552.1
Public Utility	693.4	756.0	1,449.4	747.2	737.3	1,484.5	766.3	796.8	1,563.1
Liquor sales/liter	401.7	400.4	802.1	443.4	468.2	911.6	483.0	502.3	985.2
Beer & wine surtax	273.8	288.1	561.9	293.3	298.2	591.6	304.4	310.5	614.8
Cigarette	28.9	29.0	57.9	28.9	29.0	57.9	29.2	29.3	58.4
Tobacco products	366.7	354.4	721.1	337.6	332.0	669.6	324.1	315.7	639.8
Cannabis Excise Taxes	57.1	61.0	118.1	57.0	56.8	113.8	57.5	58.2	115.6
Property (state school levy)	112.0	126.5	238.5	134.6	134.9	269.4	138.6	145.4	284.0
Leasehold Excise Tax	2,739.8	2,402.7	5,142.5	3,577.9	4,025.7	7,603.6	4,162.0	4,276.7	8,438.7
Public utility district	34.1	36.2	70.3	37.0	37.4	74.4	37.8	38.0	75.8
Brokered Natural Gas	56.9	58.6	115.5	59.9	61.2	121.1	62.3	63.4	125.6
Real estate excise***	19.3	30.1	49.4	22.1	22.4	44.5	22.8	23.2	46.0
Timber excise	1,089.0	1,093.9	2,182.9	1,026.5	974.5	2,001.0	974.6	996.5	1,971.1
Estate/inheritance	2.7	1.6	4.2	2.2	2.3	4.4	2.3	2.4	4.7
Boat excise	(5.6)	0.2	(5.4)	0.0	0.0	0.0	0.0	0.0	0.0
Insurance premiums	15.8	16.0	31.8	16.0	15.4	31.4	15.3	15.2	30.5
Penalties and interest on past due taxes	600.6	599.9	1,200.5	637.1	666.2	1,303.3	693.5	721.7	1,415.2
Other	224.8	93.3	318.1	161.1	166.0	327.1	171.4	180.5	351.9
Total Taxes	113.7	74.0	187.7	56.1	55.4	111.4	55.9	56.7	112.5
State Non-Tax Sources									
Licenses, permits, fees	136.2	141.2	277.3	142.8	145.5	288.2	148.1	150.7	298.8
Liquor & Cannabis fees	89.1	100.6	189.7	106.7	115.7	222.4	123.0	126.8	249.9
Earnings on investments	10.6	25.1	35.7	22.2	16.9	39.1	17.2	19.8	37.0
Administrative Office of the Courts	75.6	73.5	149.1	69.2	68.6	137.8	68.9	69.1	138.0
Transfers of unclaimed property	98.8	77.4	176.2	72.1	73.6	145.7	75.1	76.6	151.7
Other revenue & transfers	95.2	48.0	143.2	6.0	0.4	6.4	(1.5)	(10.1)	(11.7)
Total Non-Tax	505.5	465.7	971.2	419.0	420.7	839.7	430.8	432.9	863.7
Total General Fund-State *	\$21,712.3	\$22,431.2	\$44,143.6	\$24,491.1	\$25,539.2	\$50,030.3	\$26,358.1	\$27,245.9	\$53,604.0

* 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 September 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
June 2019	15	2	17	(157) ^{#8}	(140)	44,042
September 2019	22	(4)	18	84 ^{#9}	102	44,144
Total change***:						
From February 2014	3,968	234	4,202	1,231	5,434	
Percent change	10.8	12.8	10.9	3.2	14.0	

* 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

#8 Sum of legislative and budget driven revenue changes from the 2019 legislative session plus large expected refund

#9 Later-than-forecasted cash transfer of Property Tax out of GF-S into ELTA

Table 3.11

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

February 2016 through September 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
June 2019	57	29	86	109 ^{#7}	195	49,804
September 2019	307	3	310	(84) ^{#8}	226	50,030
Total change***:						
From February 2016	3,393	(72)	3,322	3,268	6,589	
Percent change	9.2	(3.9)	7.6	7.5	15.2	

* 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^{#7} Sum of legislative and budget driven revenue changes from the 2018 legislative session subsequent to the March 2019 forecast^{#8} Later-than-forecasted cash transfer of Property Tax out of GF-S into ELTA

2017-19 with Enacted Supplementals and 2019-21 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			2019-21		
	GFS	ELTA and OPA	TOTAL	GFS	ELTA and OPA	TOTAL
RESOURCES						
Beginning Fund Balance	1,100.6	48.0	1,148.5	951.7	958.2	1,909.9
June 2019 Revenue Forecast	44,042.0	2,017.1	46,059.1	49,804.1	1,183.6	50,987.6
September 2019 Revenue Forecast change	101.6	(75.0)	26.6	226.3	220.7	447.0
Current Revenue Totals	44,143.6	1,942.1	46,085.6	50,030.3	1,404.2	51,434.6
Transfer to Budget Stabilization Account (1% of GSR)	(439.1)		(439.1)	(497.8)		(497.8)
Transfer to Budget Stabilization Account (EGSR)	(1,648.1)		(1,648.1)	-		-
Transfer from BSA (EGSR)	1,136.4		1,136.4	-		-
Enacted Fund Transfers	(57.3)	254.0	196.7	49.0	160.0	209.0
CAFR Adjustment	(39.5)	13.9	(25.6)	-	-	-
Actual/Assumed Prior Period Adjustments	111.2		111.2	40.8		40.8
Total Resources (including beginning fund balance)	44,307.7	2,258.0	46,565.7	50,574.0	2,522.5	53,096.5
EXPENDITURES						
Enacted Budgets						
2017-19 Biennium	43,550.9	1,299.8	44,850.7	-	-	-
2019-21 Biennium			-	50,395.5	2,103.2	52,498.6
Actual/Assumed Reversions	(194.9)	-	(194.9)	(353.7)	-	(353.7)
Total Expenditures	43,356.0	1,299.8	44,655.8	50,041.8	2,103.2	52,144.9
RESERVES						
Projected Ending Balance (GFS + ELTA + OPA)	951.7	958.2	1,909.9	532.3	419.3	951.6
Budget Stabilization Account						
Budget Stabilization Account Beginning Balance	1,638.3		1,638.3	1,622.1		1,622.1
Transfers from General Fund (1% of GSR)	439.1		439.1	497.8		497.8
Transfers from GFS (EGSR)	1,648.1		1,648.1	-		-
Actual/Assumed Interest Earnings and other	42.0		42.0	56.9		56.9
Less 17-19 Appropriations from BSA	(83.8)		(83.8)	-		-
Less 17-19 Transfers to Pension Stabilization Account	(925.2)		(925.2)	-		-
Less Transfers out to GFS (EGSR)	(1,136.4)		(1,136.4)	-		-
Projected Budget Stabilization Account Ending Balance	1,622.1		1,622.1	2,176.8		2,176.8
Total Reserves (Near General Fund plus Budget Stabilization)	2,573.8	958.2	3,532.1	2,709.1	419.3	3,128.4

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
2019-21 biennium**

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$24,873.8	\$23,889.7	\$22,739.4
Business & Occupation Use	9,981.1	9,580.3	9,168.9
Public Utility	1,543.6	1,484.5	1,405.5
Property (school levy)	939.1	911.6	873.2
Real Estate Excise	7,643.1	7,603.6	7,562.6
Other	2,014.3	2,001.0	1,894.5
Subtotal	2,319.7	2,262.9	2,188.5
	49,314.7	47,733.6	45,832.7
Insurance Commissioner¹	1,335.9	1,303.3	1,270.7
Lottery Commission	54.1	51.6	49.0
State Treasurer - Interest earnings	70.5	39.1	15.3
Liquor and Cannabis Surtaxes & Fees²	570.3	549.8	527.1
Office of Financial Management			
Other agencies	221.6	215.2	208.7
Administrative Office of the Courts			
Fines and Forfeitures	141.2	137.8	133.2
Total General Fund - State*	\$51,708.4	\$50,030.3	\$48,036.7
Difference from Sept 2019 Baseline	\$1,678.1		(\$1,993.6)

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
2021-23 biennium**

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$27,837.8	\$25,355.0	\$22,410.1
Business & Occupation	11,570.2	10,552.1	9,515.6
Use	1,708.5	1,563.1	1,389.6
Public Utility	1,046.0	985.2	897.4
Property (school levy)	8,485.8	8,438.7	8,375.7
Real Estate Excise	1,987.0	1,971.1	1,606.1
Other	2,435.7	2,302.0	2,119.7
Subtotal	55,071.1	51,167.2	46,314.3
Insurance Commissioner¹	1,450.6	1,415.2	1,379.8
Lottery Commission	70.1	66.8	63.4
State Treasurer - Interest earnings	74.7	37.0	8.2
Liquor and Cannabis Surtaxes & Fees²	624.4	592.3	554.1
Office of Financial Management			
Other agencies	196.9	187.5	178.1
Administrative Office of the Courts			
Fines and Forfeitures	146.0	138.0	127.1
Total General Fund - State*	\$57,633.8	\$53,604.0	\$48,625.1
Difference from Sept 2019 Baseline	\$4,029.8		(\$4,978.9)

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
September 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	217.5	38.7	0.0	13.1	0.0	0.0	0.4	5.8	159.4	0.0	0.0
2017-19 Biennium	401.1	77.3	0.0	25.8	0.0	0.0	0.8	9.3	287.9	0.0	0.0
2020	187.8	20.5	0.0	13.7	0.0	0.0	0.4	4.1	149.1	0.0	0.0
2021	187.2	31.0	0.0	14.2	0.0	0.0	0.4	4.3	137.2	0.0	0.0
2019-21 Biennium	374.9	51.6	0.0	27.9	0.0	0.0	0.8	8.4	286.3	0.0	0.0
2022	189.4	36.6	0.0	0.0	0.0	0.0	0.4	4.3	148.2	0.0	0.0
2023	191.9	30.2	0.0	0.0	0.0	0.0	0.4	4.3	157.0	0.0	0.0
2021-23 Biennium	381.3	66.8	0.0	0.0	0.0	0.0	0.8	8.6	305.2	0.0	0.0

Table 3.16

Lottery transfers by fund
September 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	215.8	30.9	0.0	13.1	0.0	0.0	0.4	4.6	166.7	0.0	0.0
2017-19 Biennium	398.8	62.1	0.0	25.8	0.0	0.0	0.8	9.2	300.9	0.0	0.0
2020	184.9	29.6	0.0	13.7	0.0	0.0	0.4	4.3	136.9	0.0	0.0
2021	187.2	29.7	0.0	14.2	0.0	0.0	0.4	4.3	138.6	0.0	0.0
2019-21 Biennium	372.1	59.3	0.0	27.9	0.0	0.0	0.8	8.6	275.6	0.0	0.0
2022	189.7	29.8	0.0	0.0	0.0	0.0	0.4	4.3	155.3	0.0	0.0
2023	192.2	29.8	0.0	0.0	0.0	0.0	0.4	4.3	157.7	0.0	0.0
2021-23 Biennium	381.9	59.6	0.0	0.0	0.0	0.0	0.8	8.6	313.0	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)

September 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	\$22,431	3.3%	\$1,352	348.1%	\$23,784	8.0%	\$159	24.0%	\$23,943	8.1%
FY 2020	\$24,491	9.2%	\$603	-55.4%	\$25,094	5.5%	\$149	-6.4%	\$25,243	5.4%
FY 2021	\$25,539	4.3%	\$515	-14.5%	\$26,054	3.8%	\$137	-8.0%	\$26,192	3.8%
FY 2022	\$26,358	3.2%	\$525	1.8%	\$26,883	3.2%	\$148	8.0%	\$27,031	3.2%
FY 2023	\$27,246	3.4%	\$539	2.7%	\$27,785	3.4%	\$157	6.0%	\$27,942	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	\$44,144	15.2%	\$1,654	254.1%	\$45,798	18.1%	\$288	8.4%	\$46,086	18.0%
19-21 Biennium	\$50,030	13.3%	\$1,118	-32.4%	\$51,148	11.7%	\$286	-0.6%	\$51,435	11.6%
21-23 Biennium	\$53,604	7.1%	\$1,063	-4.9%	\$54,667	6.9%	\$305	6.6%	\$54,973	6.9%

*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

September 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	\$391,191	\$14,558	\$376,633	\$0	\$9,764	\$365	\$188,317	\$46,191	\$515	\$131,482
2020	\$412,835	\$16,906	\$395,929	\$0	\$10,786	\$377	\$197,964	\$46,741	\$522	\$139,538
2021	\$413,059	\$15,967	\$397,092	\$0	\$10,616	\$387	\$198,546	\$47,134	\$530	\$139,879
2022	\$421,958	\$15,695	\$406,263	\$0	\$10,616	\$387	\$203,132	\$47,834	\$530	\$143,765
2023	\$435,616	\$15,696	\$419,920	\$0	\$10,616	\$387	\$209,960	\$47,834	\$530	\$150,593
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	\$751,799	\$28,330	\$723,469	\$27,786	\$19,525	\$730	\$361,735	\$63,807	\$1,028	\$248,859
2019-21	\$825,894	\$32,873	\$793,021	\$0	\$21,402	\$764	\$396,510	\$93,875	\$1,052	\$279,417
2021-23	\$857,574	\$31,391	\$826,183	\$0	\$21,232	\$774	\$413,092	\$95,668	\$1,060	\$294,358

*Before distributions to local governments



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	17,688.9	18,108.1	18,638.2	19,067.9	19,407.1	19,737.0	20,112.0	20,514.3
% Ch	1.6	2.4	2.9	2.3	1.8	1.7	1.9	2.0
Real Consumption	12,247.5	12,566.9	12,944.5	13,276.1	13,566.2	13,823.9	14,100.4	14,382.4
% Ch	2.7	2.6	3.0	2.6	2.2	1.9	2.0	2.0
Real Nonresidential Fixed Investment	2,425.3	2,531.2	2,692.3	2,771.1	2,847.6	2,941.8	3,061.2	3,213.0
% Ch	0.7	4.4	6.4	2.9	2.8	3.3	4.1	5.0
Real Residential Fixed Investment	591.2	611.9	602.9	591.8	589.3	581.3	588.2	594.4
% Ch	6.5	3.5	-1.5	-1.8	-0.4	-1.4	1.2	1.1
Real Personal Income	15,487.3	15,933.3	16,476.8	17,026.1	17,403.0	17,765.2	18,165.0	18,627.9
% Ch	1.5	2.9	3.4	3.3	2.2	2.1	2.3	2.5
Real Per Capita Income (\$/Person)	47,860	48,925	50,277	51,586	52,355	53,072	53,892	54,891
% Ch	0.8	2.2	2.8	2.6	1.5	1.4	1.5	1.9
Price and Wage Indexes								
PCE Price Index (2012=100)	104.1	105.9	108.1	109.7	112.0	114.3	116.6	118.8
% Ch	1.0	1.8	2.1	1.5	2.1	2.0	2.0	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.400	2.451	2.511	2.556	2.612	2.668	2.727	2.785
% Ch	1.3	2.1	2.4	1.8	2.2	2.2	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.263	1.295	1.334	1.374	1.419	1.469	1.523	1.581
% Ch	2.4	2.6	3.0	3.0	3.3	3.5	3.7	3.8
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,715.0	19,519.4	20,580.2	21,458.6	22,398.0	23,337.0	24,339.6	25,396.5
% Ch	2.7	4.3	5.4	4.3	4.4	4.2	4.3	4.3
Personal Income	16,121.2	16,878.8	17,819.2	18,682.8	19,498.4	20,308.5	21,174.7	22,132.5
% Ch	2.6	4.7	5.6	4.8	4.4	4.2	4.3	4.5
Employment (Millions)								
U.S. Civilian Labor Force	159.2	160.3	162.1	163.2	164.9	166.2	167.3	168.2
Total U.S. Employment	151.4	153.3	155.8	157.2	158.9	159.9	160.7	161.3
Unemployment Rate (%)	4.87	4.35	3.89	3.67	3.62	3.78	3.95	4.09
Nonfarm Payroll Employment	144.35	146.61	149.06	151.36	153.07	153.88	154.59	155.36
% Ch	1.8	1.6	1.7	1.5	1.1	0.5	0.5	0.5
Manufacturing	12.35	12.44	12.69	12.84	12.72	12.48	12.45	12.53
% Ch	0.1	0.7	2.0	1.2	-1.0	-1.8	-0.2	0.6
Durable Manufacturing	7.71	7.74	7.94	8.07	8.01	7.86	7.86	7.97
% Ch	-0.7	0.3	2.7	1.5	-0.8	-1.8	0.1	1.4
Nondurable Manufacturing	4.64	4.70	4.74	4.78	4.71	4.62	4.59	4.56
% Ch	1.5	1.3	0.9	0.7	-1.4	-1.8	-0.7	-0.6
Construction	6.73	6.97	7.29	7.49	7.52	7.59	7.73	7.88
% Ch	4.1	3.6	4.6	2.8	0.3	1.0	1.8	2.0
Service-Providing	124.60	126.53	128.36	130.27	132.10	133.07	133.65	134.17
% Ch	1.9	1.5	1.4	1.5	1.4	0.7	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	43.2	51.0	64.9	56.6	53.5	51.6	51.1	51.3
Personal Saving/Disposable Income (%)	6.8	7.0	7.7	8.1	8.1	8.3	8.5	8.8
Auto Sales (Millions)	6.9	6.1	5.3	4.8	4.5	4.5	4.4	4.5
% Ch	-8.6	-11.5	-12.8	-9.5	-5.5	-1.7	-1.1	1.0
Housing Starts (Millions)	1.178	1.209	1.250	1.229	1.249	1.228	1.266	1.285
% Ch	6.4	2.6	3.4	-1.6	1.6	-1.7	3.1	1.5
Federal Budget Surplus (Billions)	-677.0	-724.7	-1,009.8	-1,166.4	-1,161.9	-1,204.8	-1,260.8	-1,278.1
Net Exports (Billions)	-518.8	-575.3	-638.2	-636.8	-577.9	-564.8	-522.4	-462.4
3-Month Treasury Bill Rate (%)	0.32	0.93	1.94	2.13	1.58	1.84	2.15	2.39
10-Year Treasury Note Yield (%)	1.84	2.33	2.91	2.06	2.08	2.70	3.13	3.33
Bond Index of 20 G.O. Munis. (%)	3.27	3.67	3.96	3.69	3.81	4.28	4.63	4.82
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.54	3.88	3.82	4.34	4.67	4.84

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	18,438.3	18,598.1	18,732.7	18,783.5	18,927.3	19,023.0	19,117.4	19,204.0
% Ch , Annual Rate	2.6	3.5	2.9	1.1	3.1	2.0	2.0	1.8
Real Consumption	12,782.9	12,909.2	13,019.8	13,066.3	13,103.3	13,253.4	13,341.0	13,406.8
% Ch , Annual Rate	1.7	4.0	3.5	1.4	1.1	4.7	2.7	2.0
Real Nonresidential Fixed Investment	2,639.5	2,689.9	2,703.9	2,735.8	2,765.6	2,761.1	2,759.5	2,798.0
% Ch , Annual Rate	8.8	7.9	2.1	4.8	4.4	-0.6	-0.2	5.7
Real Residential Fixed Investment	612.1	606.3	600.1	593.0	591.4	587.1	592.4	596.2
% Ch , Annual Rate	-5.3	-3.7	-4.0	-4.7	-1.0	-2.9	3.7	2.6
Real Personal Income	16,331.6	16,413.8	16,537.2	16,624.5	16,858.6	16,987.8	17,070.5	17,187.3
% Ch , Annual Rate	4.7	2.0	3.0	2.1	5.8	3.1	2.0	2.8
Real Per Capita Income (\$/Person)	49,961	50,133	50,420	50,595	51,216	51,516	51,675	51,936
% Ch , Annual Rate	4.2	1.4	2.3	1.4	5.0	2.4	1.2	2.0
Price and Wage Indexes								
PCE Price Index (2012=100)	107.4	108.0	108.4	108.8	108.9	109.5	110.0	110.5
% Ch , Annual Rate	2.5	2.2	1.6	1.3	0.4	2.3	1.8	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.493	2.506	2.518	2.528	2.533	2.551	2.564	2.576
% Ch , Annual Rate	3.2	2.1	2.0	1.5	0.9	2.9	2.0	1.8
Employment Cost Index (Dec. 2005=1.0)	1.320	1.328	1.339	1.349	1.359	1.367	1.379	1.390
% Ch , Annual Rate	3.7	2.4	3.4	3.0	3.0	2.4	3.5	3.2
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	20,163.2	20,510.2	20,749.8	20,897.8	21,098.8	21,339.1	21,579.4	21,816.9
% Ch , Annual Rate	5.0	7.1	4.8	2.9	3.9	4.6	4.6	4.5
Personal Income	17,540.3	17,725.0	17,928.5	18,082.8	18,355.4	18,600.8	18,776.8	18,998.1
% Ch , Annual Rate	7.4	4.3	4.7	3.5	6.2	5.5	3.8	4.8
Employment (Millions)								
U.S. Civilian Labor Force	161.6	161.8	162.0	162.9	163.1	162.7	163.4	163.7
Total U.S. Employment	155.0	155.4	155.9	156.8	156.8	156.8	157.5	157.9
Unemployment Rate (%)	4.09	3.91	3.79	3.77	3.88	3.62	3.63	3.54
Nonfarm Payroll Employment	148.05	148.74	149.41	150.06	150.68	151.12	151.61	152.02
% Ch , Annual Rate	1.8	1.9	1.8	1.7	1.7	1.2	1.3	1.1
Manufacturing	12.59	12.66	12.72	12.79	12.83	12.84	12.86	12.84
% Ch , Annual Rate	2.3	2.3	1.9	2.2	1.4	0.3	0.8	-0.7
Durable Manufacturing	7.86	7.92	7.97	8.02	8.06	8.06	8.08	8.07
% Ch , Annual Rate	3.4	3.0	2.7	2.4	1.8	0.2	1.0	-0.7
Nondurable Manufacturing	4.73	4.74	4.74	4.77	4.77	4.78	4.78	4.77
% Ch , Annual Rate	0.5	1.0	0.6	1.8	0.7	0.4	0.4	-0.8
Construction	7.18	7.26	7.33	7.39	7.45	7.49	7.51	7.53
% Ch , Annual Rate	6.7	4.8	4.0	3.1	3.2	2.3	1.4	0.6
Service-Providing	127.58	128.09	128.62	129.13	129.64	130.03	130.48	130.90
% Ch , Annual Rate	1.4	1.6	1.6	1.6	1.6	1.2	1.4	1.3
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	62.9	68.0	69.8	58.9	54.8	59.8	56.0	55.6
Personal Saving/Disposable Income (%)	7.9	7.6	7.5	7.8	8.5	8.0	7.9	8.1
Auto Sales (Millions)	5.4	5.3	5.2	5.3	5.0	4.8	4.7	4.7
% Ch , Annual Rate	-30.3	-8.1	-11.7	9.9	-20.8	-12.9	-9.3	-1.1
Housing Starts (Millions)	1.321	1.260	1.233	1.185	1.213	1.258	1.213	1.232
% Ch , Annual Rate	20.8	-17.2	-8.2	-14.7	9.8	15.8	-13.5	6.2
Federal Budget Surplus (Billions)	-976.3	-1,013.8	-981.3	-1,067.6	-1,122.9	-1,170.8	-1,186.9	-1,184.9
Net Exports (Billions)	-629.0	-568.4	-671.4	-684.1	-633.8	-663.9	-639.5	-610.1
3-Month Treasury Bill Rate (%)	1.56	1.84	2.04	2.32	2.39	2.30	1.98	1.85
10-Year Treasury Note Yield (%)	2.76	2.92	2.93	3.03	2.65	2.33	1.71	1.56
Bond Index of 20 G.O. Munis. (%)	3.73	3.89	3.97	4.25	4.13	3.70	3.52	3.42
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.78	4.38	4.01	3.64	3.50

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	19,287.5	19,369.7	19,445.8	19,525.3	19,609.5	19,694.5	19,775.1	19,868.9
% Ch , Annual Rate	1.8	1.7	1.6	1.6	1.7	1.7	1.6	1.9
Real Consumption	13,476.8	13,541.1	13,596.7	13,650.1	13,720.6	13,789.8	13,858.1	13,927.2
% Ch , Annual Rate	2.1	1.9	1.7	1.6	2.1	2.0	2.0	2.0
Real Nonresidential Fixed Investment	2,827.9	2,831.5	2,850.7	2,880.4	2,905.0	2,929.0	2,953.3	2,979.9
% Ch , Annual Rate	4.3	0.5	2.7	4.2	3.5	3.3	3.3	3.7
Real Residential Fixed Investment	595.0	589.8	585.7	586.7	584.1	579.8	579.4	582.0
% Ch , Annual Rate	-0.8	-3.5	-2.8	0.7	-1.7	-2.9	-0.3	1.8
Real Personal Income	17,272.9	17,365.3	17,445.5	17,528.2	17,632.2	17,721.1	17,807.0	17,900.6
% Ch , Annual Rate	2.0	2.2	1.9	1.9	2.4	2.0	2.0	2.1
Real Per Capita Income (\$/Person)	52,102	52,288	52,437	52,593	52,813	52,986	53,151	53,337
% Ch , Annual Rate	1.3	1.4	1.1	1.2	1.7	1.3	1.2	1.4
Price and Wage Indexes								
PCE Price Index (2012=100)	111.2	111.7	112.3	112.9	113.5	114.0	114.6	115.2
% Ch , Annual Rate	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.592	2.605	2.620	2.632	2.646	2.661	2.676	2.690
% Ch , Annual Rate	2.5	2.1	2.3	1.9	2.2	2.3	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.401	1.414	1.425	1.437	1.450	1.462	1.476	1.489
% Ch , Annual Rate	3.4	3.6	3.2	3.3	3.6	3.6	3.7	3.6
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	22,046.8	22,283.2	22,512.1	22,749.7	22,984.1	23,217.2	23,449.4	23,697.3
% Ch , Annual Rate	4.3	4.4	4.2	4.3	4.2	4.1	4.1	4.3
Personal Income	19,202.4	19,405.6	19,597.9	19,787.7	20,005.5	20,207.6	20,406.2	20,614.6
% Ch , Annual Rate	4.4	4.3	4.0	3.9	4.5	4.1	4.0	4.1
Employment (Millions)								
U.S. Civilian Labor Force	164.2	164.9	165.1	165.4	165.7	166.1	166.4	166.7
Total U.S. Employment	158.4	159.0	159.1	159.3	159.6	159.8	160.0	160.2
Unemployment Rate (%)	3.57	3.58	3.65	3.69	3.72	3.75	3.80	3.85
Nonfarm Payroll Employment	152.55	153.19	153.21	153.35	153.57	153.80	153.99	154.17
% Ch , Annual Rate	1.4	1.7	0.1	0.4	0.6	0.6	0.5	0.5
Manufacturing	12.87	12.78	12.64	12.57	12.50	12.49	12.48	12.46
% Ch , Annual Rate	1.0	-3.0	-4.1	-2.2	-2.4	-0.3	-0.3	-0.6
Durable Manufacturing	8.10	8.05	7.96	7.92	7.86	7.86	7.86	7.85
% Ch , Annual Rate	1.7	-2.8	-4.3	-1.9	-2.9	0.1	-0.2	-0.4
Nondurable Manufacturing	4.77	4.73	4.68	4.65	4.64	4.63	4.62	4.61
% Ch , Annual Rate	-0.2	-3.5	-3.8	-2.6	-1.5	-0.8	-0.5	-0.9
Construction	7.52	7.51	7.51	7.53	7.55	7.57	7.60	7.63
% Ch , Annual Rate	-0.6	-0.3	0.0	1.1	1.2	1.1	1.3	1.8
Service-Providing	131.41	132.16	132.32	132.51	132.78	132.99	133.17	133.33
% Ch , Annual Rate	1.6	2.3	0.5	0.6	0.8	0.6	0.5	0.5
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	54.8	53.8	53.0	52.5	52.0	51.7	51.5	51.3
Personal Saving/Disposable Income (%)	8.0	8.1	8.1	8.2	8.3	8.3	8.3	8.3
Auto Sales (Millions)	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.4
% Ch , Annual Rate	-7.5	-4.4	-3.0	-2.1	-0.6	-1.2	-0.7	-2.1
Housing Starts (Millions)	1.244	1.255	1.249	1.248	1.217	1.219	1.231	1.244
% Ch , Annual Rate	4.0	3.5	-1.8	-0.4	-9.4	0.5	4.0	4.3
Federal Budget Surplus (Billions)	-1,165.8	-1,157.4	-1,159.8	-1,164.7	-1,188.2	-1,197.6	-1,209.9	-1,223.4
Net Exports (Billions)	-556.2	-579.1	-598.9	-577.2	-573.8	-568.6	-564.3	-552.4
3-Month Treasury Bill Rate (%)	1.65	1.57	1.54	1.54	1.73	1.75	1.93	1.95
10-Year Treasury Note Yield (%)	1.82	2.02	2.16	2.33	2.49	2.64	2.78	2.90
Bond Index of 20 G.O. Munis. (%)	3.63	3.76	3.87	3.99	4.11	4.22	4.35	4.45
30-Year Fixed Mortgage Rate (%)	3.60	3.77	3.89	4.01	4.18	4.29	4.40	4.48

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	19,963.8	20,061.5	20,162.8	20,260.0	20,363.3	20,463.2	20,563.9	20,666.6
% Ch , Annual Rate	1.9	2.0	2.0	1.9	2.1	2.0	2.0	2.0
Real Consumption	13,996.4	14,065.7	14,135.2	14,204.4	14,274.7	14,346.0	14,418.6	14,490.4
% Ch , Annual Rate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Real Nonresidential Fixed Investment	3,009.0	3,042.0	3,078.0	3,115.7	3,155.3	3,194.0	3,232.4	3,270.3
% Ch , Annual Rate	4.0	4.5	4.8	5.0	5.2	5.0	4.9	4.8
Real Residential Fixed Investment	584.9	587.3	589.4	591.0	592.5	593.7	594.7	596.9
% Ch , Annual Rate	2.1	1.6	1.5	1.1	1.0	0.8	0.7	1.5
Real Personal Income	18,013.5	18,111.6	18,216.3	18,318.5	18,455.3	18,574.2	18,684.7	18,797.3
% Ch , Annual Rate	2.5	2.2	2.3	2.3	3.0	2.6	2.4	2.4
Real Per Capita Income (\$/Person)	53,581	53,780	53,998	54,209	54,521	54,779	55,012	55,251
% Ch , Annual Rate	1.8	1.5	1.6	1.6	2.3	1.9	1.7	1.7
Price and Wage Indexes								
PCE Price Index (2012=100)	115.7	116.3	116.8	117.4	118.0	118.5	119.1	119.7
% Ch , Annual Rate	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.705	2.720	2.734	2.749	2.763	2.778	2.793	2.808
% Ch , Annual Rate	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.503	1.516	1.530	1.544	1.559	1.574	1.589	1.604
% Ch , Annual Rate	3.7	3.7	3.6	3.7	3.9	3.9	3.9	3.9
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	23,950.3	24,208.5	24,470.2	24,729.6	24,997.8	25,260.0	25,528.0	25,800.2
% Ch , Annual Rate	4.3	4.4	4.4	4.3	4.4	4.3	4.3	4.3
Personal Income	20,846.4	21,062.1	21,284.3	21,506.1	21,771.5	22,014.2	22,251.4	22,493.1
% Ch , Annual Rate	4.6	4.2	4.3	4.2	5.0	4.5	4.4	4.4
Employment (Millions)								
U.S. Civilian Labor Force	166.9	167.2	167.4	167.6	167.9	168.1	168.3	168.6
Total U.S. Employment	160.4	160.6	160.8	160.9	161.1	161.3	161.4	161.6
Unemployment Rate (%)	3.89	3.93	3.96	4.01	4.04	4.07	4.10	4.14
Nonfarm Payroll Employment	154.33	154.50	154.68	154.85	155.12	155.33	155.43	155.53
% Ch, Annual Rate	0.4	0.4	0.5	0.5	0.7	0.5	0.3	0.3
Manufacturing	12.45	12.44	12.45	12.47	12.51	12.53	12.55	12.55
% Ch, Annual Rate	-0.2	-0.3	0.2	0.6	1.3	0.9	0.4	0.0
Durable Manufacturing	7.85	7.85	7.86	7.89	7.93	7.96	7.98	8.00
% Ch, Annual Rate	0.1	-0.1	0.6	1.2	2.1	1.7	1.2	0.8
Nondurable Manufacturing	4.60	4.59	4.59	4.58	4.58	4.57	4.56	4.55
% Ch, Annual Rate	-0.8	-0.7	-0.6	-0.5	-0.2	-0.5	-1.1	-1.2
Construction	7.67	7.71	7.74	7.78	7.82	7.86	7.90	7.94
% Ch, Annual Rate	2.1	1.9	1.9	1.9	2.1	2.1	2.0	2.2
Service-Providing	133.45	133.59	133.73	133.84	134.03	134.17	134.21	134.27
% Ch, Annual Rate	0.4	0.4	0.4	0.3	0.6	0.4	0.1	0.2
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	51.2	51.1	51.1	51.2	51.2	51.2	51.4	51.6
Personal Saving/Disposable Income (%)	8.4	8.5	8.5	8.5	8.7	8.8	8.8	8.8
Auto Sales (Millions)	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5
% Ch, Annual Rate	-1.5	-0.4	-0.8	0.5	1.5	1.9	1.8	2.0
Housing Starts (Millions)	1.264	1.264	1.265	1.269	1.271	1.288	1.291	1.289
% Ch, Annual Rate	6.7	0.1	0.2	1.1	0.8	5.5	1.0	-0.7
Federal Budget Surplus (Billions)	-1,253.3	-1,260.4	-1,263.9	-1,265.6	-1,279.3	-1,278.0	-1,276.5	-1,278.7
Net Exports (Billions)	-542.2	-530.0	-516.3	-501.3	-483.7	-468.0	-453.9	-444.1
3-Month Treasury Bill Rate (%)	2.15	2.16	2.15	2.15	2.36	2.41	2.39	2.39
10-Year Treasury Note Yield (%)	3.00	3.10	3.18	3.23	3.33	3.33	3.33	3.33
Bond Index of 20 G.O. Munis. (%)	4.53	4.60	4.66	4.72	4.80	4.81	4.83	4.84
30-Year Fixed Mortgage Rate (%)	4.57	4.64	4.70	4.75	4.81	4.85	4.85	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	388.340	404.762	424.223	441.677	453.431	465.106	477.563	492.487
% Ch	4.0	4.2	4.8	4.1	2.7	2.6	2.7	3.1
Real Wage and Salary Disb.	195.306	205.865	219.377	229.994	237.777	244.625	251.789	260.573
% Ch	5.0	5.4	6.6	4.8	3.4	2.9	2.9	3.5
Real Nonwage Income	193.034	198.896	204.845	211.684	215.653	220.481	225.774	231.914
% Ch	3.0	3.0	3.0	3.3	1.9	2.2	2.4	2.7
Real Per Capita Income (\$/Person)	53,228	54,521	56,289	57,751	58,441	59,135	59,932	61,052
% Ch	2.2	2.4	3.2	2.6	1.2	1.2	1.3	1.9
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.041	1.059	1.081	1.097	1.120	1.143	1.166	1.188
% Ch	1.0	1.8	2.1	1.5	2.1	2.0	2.0	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.550	2.628	2.711	2.783	2.851	2.912	2.976	3.040
% Ch	2.3	3.0	3.2	2.6	2.4	2.2	2.2	2.2
Average Nonfarm Annual Wage	60,530	63,583	67,569	70,597	73,271	76,076	79,073	82,624
% Ch	3.0	5.0	6.3	4.5	3.8	3.8	3.9	4.5
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.42	27.37	28.42	29.50	30.57	31.60	32.71	33.91
% Ch	3.5	3.6	3.8	3.8	3.6	3.4	3.5	3.7
Current Dollar Income (Billions of Dollars)								
Personal Income	404.232	428.765	458.771	484.650	508.031	531.693	556.694	585.149
% Ch	5.1	6.1	7.0	5.6	4.8	4.7	4.7	5.1
Disposable Personal Income	355.183	376.797	405.282	427.429	447.980	469.186	491.200	515.173
% Ch	5.3	6.1	7.6	5.5	4.8	4.7	4.7	4.9
Per Capita Income (\$/Person)	55,405	57,753	60,872	63,368	65,477	67,600	69,862	72,538
% Ch	3.2	4.2	5.4	4.1	3.3	3.2	3.3	3.8
Employment (Thousands)								
Washington Civilian Labor Force	3,643.9	3,719.3	3,790.5	3,881.5	3,951.4	4,007.9	4,058.9	4,105.4
Total Washington Employment	3,451.3	3,543.9	3,620.3	3,703.2	3,768.7	3,817.3	3,860.1	3,899.3
Unemployment Rate (%)	5.29	4.72	4.49	4.59	4.62	4.75	4.90	5.02
Nonfarm Payroll Employment	3,242.8	3,321.2	3,404.2	3,469.0	3,529.6	3,569.1	3,604.9	3,640.3
% Ch	3.1	2.4	2.5	1.9	1.7	1.1	1.0	1.0
Manufacturing	290.4	284.2	287.5	295.3	294.9	293.0	295.0	298.7
% Ch	-0.7	-2.1	1.2	2.7	-0.2	-0.6	0.7	1.2
Durable Manufacturing	207.7	200.3	202.1	207.7	207.8	206.8	208.7	212.0
% Ch	-1.7	-3.5	0.9	2.8	0.0	-0.5	0.9	1.6
Aerospace	91.0	84.2	84.0	88.9	89.9	89.9	89.9	89.9
% Ch	-3.2	-7.5	-0.3	5.9	1.1	0.0	0.0	0.0
Nondurable Manufacturing	82.7	83.9	85.5	87.6	87.1	86.3	86.4	86.7
% Ch	2.0	1.4	1.9	2.5	-0.6	-1.0	0.1	0.3
Construction	186.6	199.8	213.4	217.3	214.8	211.8	210.5	209.9
% Ch	7.7	7.0	6.8	1.9	-1.2	-1.4	-0.6	-0.3
Service-Providing	2,759.5	2,831.0	2,897.0	2,950.3	3,013.8	3,058.3	3,093.3	3,125.6
% Ch	3.2	2.6	2.3	1.8	2.2	1.5	1.1	1.0
Software Publishers	58.9	61.4	65.3	70.1	71.7	72.4	73.3	74.5
% Ch	5.3	4.2	6.4	7.3	2.3	0.9	1.3	1.6
Electronic Shopping and Mail-Order	38.2	49.7	54.8	59.5	62.6	64.9	66.8	68.5
% Ch	26.6	30.1	10.2	8.7	5.1	3.8	3.0	2.5
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	44.077	45.794	47.746	45.239	43.323	42.463	42.362	41.715
% Ch	9.2	3.9	4.3	-5.3	-4.2	-2.0	-0.2	-1.5
Single-Family	22.463	23.115	23.676	22.083	22.866	22.855	23.343	23.620
% Ch	13.5	2.9	2.4	-6.7	3.5	0.0	2.1	1.2
Multi-Family	21.614	22.679	24.070	23.156	20.456	19.609	19.019	18.095
% Ch	5.0	4.9	6.1	-3.8	-11.7	-4.1	-3.0	-4.9
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.54	3.88	3.82	4.34	4.67	4.84

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	419.603	421.240	425.642	430.406	436.609	440.432	443.341	446.327
% Ch, Annual Rate	8.6	1.6	4.2	4.6	5.9	3.5	2.7	2.7
Real Wage and Salary Disb.	217.232	217.585	220.575	222.117	227.427	228.871	230.990	232.687
% Ch, Annual Rate	15.8	0.7	5.6	2.8	9.9	2.6	3.8	3.0
Real Nonwage Income	202.371	203.655	205.067	208.289	209.182	211.561	212.351	213.640
% Ch, Annual Rate	1.5	2.6	2.8	6.4	1.7	4.6	1.5	2.4
Real Per Capita Income (\$/Person)	55,987	56,005	56,374	56,790	57,410	57,695	57,861	58,038
% Ch, Annual Rate	7.1	0.1	2.7	3.0	4.4	2.0	1.2	1.2
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.074	1.080	1.084	1.088	1.089	1.095	1.100	1.105
% Ch, Annual Rate	2.5	2.2	1.6	1.3	0.4	2.3	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.687	2.703	2.715	2.740	2.758	2.766	2.796	2.811
% Ch, Annual Rate	3.8	2.4	1.9	3.6	2.7	1.2	4.5	2.0
Average Nonfarm Annual Wage	66,894	67,106	67,964	68,311	69,822	70,272	70,845	71,447
% Ch, Annual Rate	14.8	1.3	5.2	2.1	9.1	2.6	3.3	3.4
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.95	28.36	28.52	28.84	29.19	29.10	29.74	29.96
% Ch, Annual Rate	1.8	5.9	2.3	4.6	5.0	-1.3	9.2	3.0
Current Dollar Income (Billions of Dollars)								
Personal Income	450.638	454.871	461.432	468.143	475.359	482.234	487.657	493.351
% Ch, Annual Rate	11.4	3.8	5.9	5.9	6.3	5.9	4.6	4.8
Disposable Personal Income	397.330	401.705	407.731	414.361	419.500	424.928	430.117	435.170
% Ch, Annual Rate	13.7	4.5	6.1	6.7	5.1	5.3	5.0	4.8
Per Capita Income (\$/Person)	60,128	60,477	61,114	61,769	62,505	63,171	63,645	64,153
% Ch, Annual Rate	9.8	2.3	4.3	4.4	4.8	4.3	3.0	3.2
Employment (Thousands)								
Washington Civilian Labor Force	3,759.0	3,777.4	3,802.5	3,823.0	3,849.0	3,874.8	3,894.2	3,908.0
Total Washington Employment	3,585.7	3,607.7	3,634.8	3,652.9	3,673.8	3,694.6	3,714.0	3,730.3
Unemployment Rate (%)	4.61	4.49	4.41	4.45	4.55	4.65	4.63	4.55
Nonfarm Payroll Employment	3,381.6	3,394.3	3,411.1	3,430.0	3,441.2	3,460.5	3,480.3	3,493.9
% Ch, Annual Rate	3.8	1.5	2.0	2.2	1.3	2.3	2.3	1.6
Manufacturing	284.8	285.9	288.0	291.4	293.8	294.4	296.6	296.5
% Ch, Annual Rate	3.2	1.5	3.0	4.8	3.3	0.8	3.1	-0.2
Durable Manufacturing	199.6	200.9	202.8	204.9	206.6	207.1	208.6	208.6
% Ch, Annual Rate	2.8	2.5	3.8	4.3	3.4	0.8	3.0	0.1
Aerospace	82.3	83.0	84.6	86.0	87.2	88.6	89.9	89.9
% Ch, Annual Rate	2.3	3.6	8.0	7.0	5.6	6.6	6.0	0.0
Nondurable Manufacturing	85.2	85.0	85.2	86.5	87.1	87.3	88.0	87.9
% Ch, Annual Rate	4.0	-0.8	1.2	5.9	3.2	0.8	3.3	-0.7
Construction	209.7	211.9	213.7	218.3	216.1	218.1	217.9	217.3
% Ch, Annual Rate	10.5	4.4	3.5	8.8	-3.9	3.7	-0.4	-1.1
Service-Providing	2,880.8	2,890.2	2,903.0	2,914.1	2,925.1	2,942.1	2,959.9	2,974.1
% Ch, Annual Rate	3.4	1.3	1.8	1.5	1.5	2.3	2.4	1.9
Software Publishers	63.5	64.7	66.0	67.0	68.3	69.6	71.0	71.4
% Ch, Annual Rate	7.0	7.9	8.0	6.5	7.9	7.8	8.2	1.9
Electronic Shopping and Mail-Order	54.3	54.3	54.2	56.2	58.4	59.0	59.9	60.8
% Ch, Annual Rate	6.8	0.1	-0.8	15.4	16.8	4.0	6.4	5.6
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	53.183	45.970	42.801	49.030	43.753	48.607	45.410	43.186
% Ch, Annual Rate	20.4	-44.2	-24.9	72.2	-36.6	52.3	-23.8	-18.2
Single-Family	25.018	23.344	23.607	22.734	21.060	22.141	22.625	22.508
% Ch, Annual Rate	7.6	-24.2	4.6	-14.0	-26.4	22.2	9.0	-2.0
Multi-Family	28.165	22.626	19.193	26.296	22.693	26.466	22.785	20.678
% Ch, Annual Rate	33.5	-58.4	-48.2	252.3	-44.5	85.0	-45.1	-32.2
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.57	4.78	4.38	4.01	3.64	3.50

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	448.966	452.218	454.872	457.667	460.997	463.739	466.414	469.274
% Ch, Annual Rate	2.4	2.9	2.4	2.5	2.9	2.4	2.3	2.5
Real Wage and Salary Disb.	234.725	237.228	238.740	240.417	242.211	243.797	245.416	247.074
% Ch, Annual Rate	3.5	4.3	2.6	2.8	3.0	2.6	2.7	2.7
Real Nonwage Income	214.242	214.989	216.132	217.250	218.786	219.942	220.998	222.201
% Ch, Annual Rate	1.1	1.4	2.1	2.1	2.9	2.1	1.9	2.2
Real Per Capita Income (\$/Person)	58,172	58,386	58,525	58,682	58,909	59,060	59,203	59,369
% Ch, Annual Rate	0.9	1.5	1.0	1.1	1.6	1.0	1.0	1.1
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.112	1.117	1.123	1.129	1.135	1.140	1.146	1.152
% Ch, Annual Rate	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.828	2.843	2.859	2.872	2.888	2.905	2.920	2.936
% Ch, Annual Rate	2.6	2.1	2.3	1.9	2.2	2.3	2.2	2.2
Average Nonfarm Annual Wage	72,192	72,915	73,638	74,337	75,048	75,726	76,412	77,116
% Ch, Annual Rate	4.2	4.1	4.0	3.9	3.9	3.7	3.7	3.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	30.20	30.46	30.69	30.93	31.19	31.46	31.73	32.00
% Ch, Annual Rate	3.3	3.4	3.0	3.2	3.4	3.4	3.5	3.5
Current Dollar Income (Billions of Dollars)								
Personal Income	499.118	505.350	510.994	516.663	523.048	528.807	534.493	540.423
% Ch, Annual Rate	4.8	5.1	4.5	4.5	5.0	4.5	4.4	4.5
Disposable Personal Income	440.115	445.531	450.590	455.683	461.421	466.596	471.734	476.995
% Ch, Annual Rate	4.6	5.0	4.6	4.6	5.1	4.6	4.5	4.5
Per Capita Income (\$/Person)	64,670	65,246	65,745	66,247	66,838	67,347	67,844	68,370
% Ch, Annual Rate	3.3	3.6	3.1	3.1	3.6	3.1	3.0	3.1
Employment (Thousands)								
Washington Civilian Labor Force	3,925.9	3,947.9	3,959.1	3,972.9	3,987.5	4,001.4	4,014.8	4,027.9
Total Washington Employment	3,745.7	3,766.6	3,775.3	3,787.3	3,800.2	3,812.0	3,823.1	3,834.1
Unemployment Rate (%)	4.59	4.59	4.64	4.67	4.70	4.73	4.78	4.81
Nonfarm Payroll Employment	3,508.4	3,529.4	3,535.7	3,544.8	3,555.2	3,564.5	3,573.7	3,583.0
% Ch, Annual Rate	1.7	2.4	0.7	1.0	1.2	1.0	1.0	1.0
Manufacturing	297.0	295.6	293.8	293.1	292.5	292.8	293.2	293.5
% Ch, Annual Rate	0.7	-1.9	-2.4	-1.0	-0.8	0.5	0.5	0.4
Durable Manufacturing	209.1	208.2	207.1	206.7	206.3	206.6	206.9	207.2
% Ch, Annual Rate	0.9	-1.7	-2.1	-0.7	-0.9	0.7	0.5	0.6
Aerospace	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	88.0	87.4	86.7	86.3	86.2	86.2	86.3	86.3
% Ch, Annual Rate	0.4	-2.6	-3.1	-1.8	-0.4	0.0	0.3	0.0
Construction	215.8	215.2	214.5	213.7	212.8	211.8	211.3	211.2
% Ch, Annual Rate	-2.6	-1.1	-1.4	-1.4	-1.7	-1.8	-0.9	-0.3
Service-Providing	2,989.4	3,012.5	3,021.3	3,031.9	3,043.8	3,053.8	3,063.2	3,072.2
% Ch, Annual Rate	2.1	3.1	1.2	1.4	1.6	1.3	1.2	1.2
Software Publishers	71.5	71.6	71.8	71.9	72.1	72.3	72.4	72.6
% Ch, Annual Rate	0.6	0.7	0.9	1.0	0.9	0.9	1.0	1.1
Electronic Shopping and Mail-Order	61.5	62.3	62.9	63.5	64.1	64.7	65.2	65.7
% 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	43.262	43.473	43.359	43.195	42.508	42.386	42.408	42.552
% Ch, Annual Rate	0.7	2.0	-1.0	-1.5	-6.2	-1.1	0.2	1.4
Single-Family	22.622	22.778	22.952	23.114	22.782	22.755	22.856	23.026
% Ch, Annual Rate	2.0	2.8	3.1	2.9	-5.6	-0.5	1.8	3.0
Multi-Family	20.641	20.695	20.408	20.082	19.725	19.631	19.552	19.526
% Ch, Annual Rate	-0.7	1.1	-5.4	-6.2	-6.9	-1.9	-1.6	-0.5
30-Year Fixed Mortgage Rate (%)	3.60	3.77	3.89	4.01	4.18	4.29	4.40	4.48

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	472.722	475.833	479.173	482.524	486.789	490.674	494.377	498.107
% Ch, Annual Rate	3.0	2.7	2.8	2.8	3.6	3.2	3.1	3.1
Real Wage and Salary Disb.	248.920	250.765	252.726	254.746	257.127	259.507	261.725	263.932
% Ch, Annual Rate	3.0	3.0	3.2	3.2	3.8	3.8	3.5	3.4
Real Nonwage Income	223.803	225.068	226.446	227.777	229.662	231.167	232.651	234.175
% Ch, Annual Rate	2.9	2.3	2.5	2.4	3.4	2.6	2.6	2.6
Real Per Capita Income (\$/Person)	59,610	59,809	60,039	60,271	60,617	60,917	61,195	61,478
% Ch, Annual Rate	1.6	1.3	1.5	1.6	2.3	2.0	1.8	1.9
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.157	1.163	1.168	1.174	1.180	1.185	1.191	1.197
% Ch, Annual Rate	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.952	2.968	2.984	3.000	3.016	3.032	3.048	3.065
% Ch, Annual Rate	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2
Average Nonfarm Annual Wage	77,883	78,652	79,460	80,296	81,208	82,144	83,093	84,051
% Ch, Annual Rate	4.0	4.0	4.2	4.3	4.6	4.7	4.7	4.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	32.29	32.57	32.84	33.13	33.44	33.75	34.07	34.39
% Ch, Annual Rate	3.6	3.5	3.4	3.5	3.8	3.8	3.8	3.8
Current Dollar Income (Billions of Dollars)								
Personal Income	547.065	553.349	559.875	566.487	574.259	581.548	588.746	596.043
% Ch, Annual Rate	5.0	4.7	4.8	4.8	5.6	5.2	5.0	5.1
Disposable Personal Income	482.940	488.382	493.939	499.540	506.102	512.189	518.180	524.222
% Ch, Annual Rate	5.1	4.6	4.6	4.6	5.4	4.9	4.8	4.7
Per Capita Income (\$/Person)	68,985	69,553	70,151	70,758	71,509	72,199	72,876	73,565
% Ch, Annual Rate	3.6	3.3	3.5	3.5	4.3	3.9	3.8	3.8
Employment (Thousands)								
Washington Civilian Labor Force	4,040.7	4,053.0	4,065.0	4,076.7	4,088.5	4,099.9	4,111.1	4,122.1
Total Washington Employment	3,844.7	3,855.3	3,865.3	3,875.0	3,885.0	3,894.7	3,904.2	3,913.4
Unemployment Rate (%)	4.85	4.88	4.91	4.95	4.98	5.01	5.03	5.06
Nonfarm Payroll Employment	3,591.7	3,600.7	3,609.2	3,617.9	3,628.2	3,637.4	3,644.3	3,651.1
% Ch, Annual Rate	1.0	1.0	1.0	1.0	1.2	1.0	0.8	0.7
Manufacturing	294.0	294.6	295.3	296.3	297.4	298.4	299.1	299.7
% Ch, Annual Rate	0.7	0.7	1.0	1.3	1.5	1.4	0.9	0.8
Durable Manufacturing	207.7	208.2	208.9	209.8	210.8	211.7	212.4	213.1
% Ch, Annual Rate	1.0	0.9	1.3	1.7	1.9	1.8	1.4	1.2
Aerospace	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.3	86.3	86.4	86.5	86.6	86.7	86.7	86.6
% Ch, Annual Rate	0.0	0.2	0.3	0.4	0.7	0.4	-0.2	-0.3
Construction	210.8	210.7	210.3	210.0	209.9	209.9	209.8	209.9
% Ch, Annual Rate	-0.8	-0.2	-0.8	-0.5	-0.2	-0.1	0.0	0.0
Service-Providing	3,080.9	3,089.4	3,097.6	3,105.5	3,114.8	3,123.0	3,129.2	3,135.4
% Ch, Annual Rate	1.1	1.1	1.1	1.0	1.2	1.1	0.8	0.8
Software Publishers	72.9	73.2	73.4	73.7	74.0	74.3	74.6	74.9
% Ch, Annual Rate	1.3	1.5	1.5	1.6	1.6	1.7	1.7	1.7
Electronic Shopping and Mail-Order	66.2	66.6	67.1	67.5	67.9	68.3	68.7	69.1
% 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	42.817	42.421	42.195	42.016	41.827	41.868	41.715	41.450
% Ch, Annual Rate	2.5	-3.7	-2.1	-1.7	-1.8	0.4	-1.5	-2.5
Single-Family	23.303	23.342	23.345	23.381	23.424	23.513	23.691	23.852
% Ch, Annual Rate	4.9	0.7	0.1	0.6	0.7	1.5	3.1	2.8
Multi-Family	19.514	19.079	18.850	18.635	18.403	18.356	18.024	17.598
% Ch, Annual Rate	-0.2	-8.6	-4.7	-4.5	-4.9	-1.0	-7.0	-9.1
30-Year Fixed Mortgage Rate (%)	4.57	4.64	4.70	4.75	4.81	4.85	4.85	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	151.36	153.07	153.88	154.59	155.36
% Ch	1.8	1.6	1.7	1.5	1.1	0.5	0.5	0.5
Manufacturing	12.35	12.44	12.69	12.84	12.72	12.48	12.45	12.53
% Ch	0.1	0.7	2.0	1.2	-1.0	-1.8	-0.2	0.6
Durable Manufacturing	7.71	7.74	7.94	8.07	8.01	7.86	7.86	7.97
% Ch	-0.7	0.3	2.7	1.5	-0.8	-1.8	0.1	1.4
Wood Products	0.39	0.40	0.41	0.41	0.42	0.43	0.45	0.47
% Ch	2.7	1.1	2.4	0.8	2.2	2.3	5.4	5.0
Primary and Fabricated Metals	1.80	1.80	1.84	1.87	1.83	1.78	1.79	1.85
% Ch	-3.0	0.0	2.7	1.2	-1.7	-3.2	0.9	3.4
Computer and Electronic Products	1.05	1.04	1.06	1.08	1.08	1.08	1.09	1.10
% Ch	-0.5	-0.9	1.6	2.5	-0.4	0.2	1.1	0.9
Machinery and Electrical Equipment	1.46	1.47	1.52	1.55	1.53	1.51	1.53	1.57
% Ch	-3.0	0.4	3.7	1.9	-0.9	-1.4	1.2	2.5
Transportation Equipment	1.63	1.64	1.70	1.73	1.73	1.68	1.62	1.58
% Ch	1.6	0.8	3.6	1.8	-0.5	-2.6	-3.7	-2.6
Other Durables	1.39	1.40	1.42	1.43	1.42	1.38	1.38	1.40
% Ch	1.3	0.9	1.3	0.8	-0.8	-2.3	-0.2	1.2
Nondurable Manufacturing	4.64	4.70	4.74	4.78	4.71	4.62	4.59	4.56
% Ch	1.5	1.3	0.9	0.7	-1.4	-1.8	-0.7	-0.6
Food Manufacturing	1.56	1.60	1.62	1.63	1.63	1.63	1.64	1.65
% Ch	3.0	2.7	1.3	0.8	-0.4	0.2	0.7	0.6
Paper and Paper Products	0.37	0.37	0.37	0.37	0.36	0.35	0.34	0.34
% Ch	-0.5	-1.2	0.2	0.8	-2.9	-3.7	-1.4	-0.4
Other Nondurables	2.71	2.73	2.76	2.78	2.72	2.65	2.61	2.57
% Ch	1.0	0.9	0.8	0.7	-1.8	-2.8	-1.5	-1.3
Natural Resources and Mining	0.67	0.68	0.73	0.75	0.74	0.74	0.76	0.77
% Ch	-17.8	1.1	8.3	2.9	-1.2	0.1	1.8	1.7
Construction	6.73	6.97	7.29	7.49	7.52	7.59	7.73	7.88
% Ch	4.1	3.6	4.6	2.8	0.3	1.0	1.8	2.0
Trade, Transportation, and Utilities	27.20	27.40	27.65	27.84	27.75	27.60	27.36	27.11
% Ch	1.4	0.7	0.9	0.7	-0.3	-0.6	-0.8	-0.9
Wholesale Trade	5.79	5.81	5.85	5.94	5.96	5.98	5.97	5.96
% Ch	0.1	0.5	0.7	1.5	0.3	0.3	-0.1	-0.1
Retail Trade	15.84	15.84	15.82	15.76	15.63	15.49	15.33	15.14
% Ch	1.4	0.0	-0.1	-0.4	-0.8	-0.9	-1.1	-1.2
Trans., Warehousing, and Utilities	5.57	5.75	5.97	6.13	6.16	6.12	6.07	6.01
% Ch	2.6	3.1	3.9	2.6	0.5	-0.6	-1.0	-0.9
Information	2.79	2.81	2.83	2.82	2.86	2.88	2.86	2.92
% Ch	1.6	0.7	0.5	-0.1	1.1	0.9	-0.7	2.1
Publishing Industries	0.73	0.73	0.73	0.74	0.72	0.69	0.67	0.65
% Ch	0.5	-0.2	0.5	0.9	-2.8	-4.4	-3.1	-1.7
Other Information	2.06	2.08	2.09	2.08	2.14	2.19	2.19	2.26
% Ch	1.9	1.0	0.5	-0.4	2.6	2.6	0.0	3.2
Financial Activities	8.29	8.45	8.57	8.67	8.75	8.78	8.76	8.71
% Ch	2.0	2.0	1.4	1.2	0.9	0.4	-0.2	-0.6
Professional and Business Services	20.11	20.51	21.00	21.48	22.37	23.21	23.84	24.50
% Ch	2.1	2.0	2.4	2.3	4.2	3.8	2.7	2.8
Education and Health Services	22.64	23.19	23.67	24.26	24.61	24.73	24.74	24.70
% Ch	2.8	2.4	2.1	2.5	1.4	0.5	0.0	-0.1
Leisure and Hospitality	15.66	16.05	16.35	16.71	17.01	17.11	17.24	17.27
% Ch	3.3	2.5	1.9	2.2	1.8	0.6	0.7	0.2
Other Services	5.69	5.77	5.84	5.94	5.95	5.90	5.84	5.77
% Ch	1.2	1.4	1.3	1.7	0.1	-0.8	-1.1	-1.1
Federal Government	2.79	2.80	2.80	2.82	2.94	2.82	2.82	2.82
% Ch	1.4	0.4	-0.3	0.9	4.4	-4.2	0.0	0.0
State and Local Government	19.44	19.55	19.65	19.73	19.87	20.03	20.20	20.36
% Ch	0.9	0.6	0.5	0.4	0.7	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	150.68	151.12	151.61	152.02
% Ch, Annual Rate	1.8	1.9	1.8	1.7	1.7	1.2	1.3	1.1
Manufacturing	12.59	12.66	12.72	12.79	12.83	12.84	12.86	12.84
% Ch, Annual Rate	2.3	2.3	1.9	2.2	1.4	0.3	0.8	-0.7
Durable Manufacturing	7.86	7.92	7.97	8.02	8.06	8.06	8.08	8.07
% Ch, Annual Rate	3.4	3.0	2.7	2.4	1.8	0.2	1.0	-0.7
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	1.2	0.2	0.9	-0.3
Primary and Fabricated Metals	1.83	1.84	1.85	1.86	1.87	1.86	1.86	1.87
% Ch, Annual Rate	3.5	3.1	2.7	1.2	2.0	-0.6	0.0	0.9
Computer and Electronic Products	1.05	1.05	1.06	1.06	1.07	1.08	1.09	1.09
% Ch, Annual Rate	1.2	1.9	1.9	2.2	3.6	2.6	3.3	-0.9
Machinery and Electrical Equipment	1.49	1.51	1.53	1.54	1.54	1.54	1.55	1.55
% Ch, Annual Rate	3.8	5.3	3.6	2.8	1.6	-0.4	1.3	1.3
Transportation Equipment	1.68	1.69	1.71	1.73	1.74	1.74	1.74	1.72
% Ch, Annual Rate	4.9	3.3	4.0	4.5	1.9	0.6	0.5	-5.1
Other Durables	1.41	1.41	1.42	1.42	1.43	1.43	1.43	1.43
% Ch, Annual Rate	2.2	1.1	1.0	1.8	0.3	-0.2	1.1	0.8
Nondurable Manufacturing	4.73	4.74	4.74	4.77	4.77	4.78	4.78	4.77
% Ch, Annual Rate	0.5	1.0	0.6	1.8	0.7	0.4	0.4	-0.8
Food Manufacturing	1.61	1.62	1.62	1.63	1.63	1.63	1.63	1.63
% Ch, Annual Rate	1.1	1.5	0.6	2.5	0.7	0.3	-0.2	-1.2
Paper and Paper Products	0.36	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	-0.1	1.8	2.5	1.8	0.4	-0.2	1.0	-2.0
Other Nondurables	2.75	2.75	2.76	2.77	2.77	2.77	2.78	2.78
% Ch, Annual Rate	0.3	0.7	0.3	1.3	0.7	0.5	0.7	-0.4
Natural Resources and Mining	0.71	0.73	0.74	0.75	0.76	0.76	0.75	0.75
% Ch, Annual Rate	9.6	13.3	6.6	5.5	3.4	0.2	-2.8	-3.2
Construction	7.18	7.26	7.33	7.39	7.45	7.49	7.51	7.53
% Ch, Annual Rate	6.7	4.8	4.0	3.1	3.2	2.3	1.4	0.6
Trade, Transportation, and Utilities	27.55	27.61	27.68	27.76	27.82	27.81	27.84	27.87
% Ch, Annual Rate	1.2	0.9	0.9	1.2	0.9	-0.2	0.4	0.4
Wholesale Trade	5.83	5.83	5.86	5.89	5.92	5.93	5.95	5.96
% Ch, Annual Rate	0.5	-0.1	2.4	1.8	1.9	1.1	1.0	1.0
Retail Trade	15.83	15.84	15.82	15.81	15.82	15.78	15.75	15.72
% Ch, Annual Rate	0.2	0.3	-0.5	-0.1	0.1	-1.0	-0.6	-0.9
Trans., Warehousing, and Utilities	5.90	5.95	5.99	6.06	6.09	6.10	6.14	6.19
% Ch, Annual Rate	4.4	3.5	3.2	4.4	2.1	0.8	2.4	3.2
Information	2.82	2.83	2.83	2.83	2.81	2.82	2.83	2.83
% Ch, Annual Rate	-0.1	2.1	-0.5	0.4	-2.5	0.7	2.0	0.3
Publishing Industries	0.73	0.73	0.73	0.73	0.73	0.74	0.74	0.74
% Ch, Annual Rate	0.8	0.4	0.6	0.1	0.2	2.8	1.8	-0.5
Other Information	2.08	2.10	2.09	2.10	2.08	2.08	2.09	2.09
% Ch, Annual Rate	-0.4	2.6	-0.9	0.5	-3.4	0.0	2.1	0.5
Financial Activities	8.52	8.55	8.58	8.61	8.63	8.66	8.68	8.72
% Ch, Annual Rate	1.4	1.5	1.4	1.4	0.7	1.3	1.1	1.9
Professional and Business Services	20.77	20.93	21.07	21.22	21.30	21.41	21.55	21.66
% Ch, Annual Rate	2.2	3.0	2.8	2.8	1.6	2.1	2.6	2.0
Education and Health Services	23.48	23.59	23.74	23.86	24.02	24.18	24.33	24.50
% Ch, Annual Rate	2.3	1.9	2.6	2.0	2.7	2.8	2.5	2.7
Leisure and Hospitality	16.23	16.30	16.38	16.50	16.66	16.70	16.73	16.75
% Ch, Annual Rate	1.5	1.8	2.0	2.9	3.9	1.0	0.7	0.6
Other Services	5.81	5.84	5.85	5.87	5.90	5.93	5.96	5.99
% Ch, Annual Rate	0.8	2.2	0.8	1.2	1.8	2.3	1.7	2.4
Federal Government	2.79	2.79	2.80	2.80	2.80	2.81	2.84	2.83
% Ch, Annual Rate	-0.8	0.1	0.4	0.5	0.2	1.9	3.5	-1.6
State and Local Government	19.60	19.64	19.69	19.68	19.71	19.71	19.73	19.76
% Ch, Annual Rate	0.4	0.8	0.9	0.0	0.4	0.1	0.5	0.6

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	152.55	153.19	153.21	153.35	153.57	153.80	153.99	154.17
% Ch, Annual Rate	1.4	1.7	0.1	0.4	0.6	0.6	0.5	0.5
Manufacturing	12.87	12.78	12.64	12.57	12.50	12.49	12.48	12.46
% Ch, Annual Rate	1.0	-3.0	-4.1	-2.2	-2.4	-0.3	-0.3	-0.6
Durable Manufacturing	8.10	8.05	7.96	7.92	7.86	7.86	7.86	7.85
% Ch, Annual Rate	1.7	-2.8	-4.3	-1.9	-2.9	0.1	-0.2	-0.4
Wood Products	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.44
% Ch, Annual Rate	8.3	1.1	-1.7	1.6	1.3	5.7	3.5	4.4
Primary and Fabricated Metals	1.87	1.85	1.82	1.80	1.78	1.78	1.77	1.77
% Ch, Annual Rate	0.2	-4.5	-6.1	-3.9	-4.5	-1.2	-0.8	-0.1
Computer and Electronic Products	1.09	1.08	1.07	1.07	1.07	1.08	1.08	1.09
% Ch, Annual Rate	-0.4	-2.4	-1.7	-0.3	0.2	1.5	1.6	1.3
Machinery and Electrical Equipment	1.56	1.54	1.52	1.51	1.51	1.51	1.51	1.51
% Ch, Annual Rate	1.6	-4.8	-5.3	-1.6	-1.5	1.0	0.4	0.5
Transportation Equipment	1.73	1.74	1.72	1.71	1.69	1.69	1.68	1.66
% Ch, Annual Rate	3.9	0.0	-3.5	-1.6	-5.1	-1.1	-1.6	-3.5
Other Durables	1.44	1.42	1.41	1.40	1.39	1.39	1.38	1.38
% Ch, Annual Rate	1.0	-3.1	-4.6	-2.4	-3.0	-0.8	-0.9	-1.0
Nondurable Manufacturing	4.77	4.73	4.68	4.65	4.64	4.63	4.62	4.61
% Ch, Annual Rate	-0.2	-3.5	-3.8	-2.6	-1.5	-0.8	-0.5	-0.9
Food Manufacturing	1.64	1.63	1.62	1.62	1.62	1.63	1.63	1.64
% Ch, Annual Rate	2.5	-2.1	-2.3	-0.9	1.4	1.1	1.3	0.7
Paper and Paper Products	0.37	0.36	0.36	0.35	0.35	0.35	0.35	0.34
% Ch, Annual Rate	-1.8	-5.9	-6.1	-5.0	-3.9	-1.9	-1.6	-1.8
Other Nondurables	2.77	2.74	2.71	2.68	2.67	2.65	2.64	2.63
% Ch, Annual Rate	-1.6	-3.9	-4.4	-3.3	-2.9	-1.8	-1.5	-1.7
Natural Resources and Mining	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.75
% Ch, Annual Rate	-0.9	-0.5	1.0	-1.5	-0.2	0.6	0.9	2.3
Construction	7.52	7.51	7.51	7.53	7.55	7.57	7.60	7.63
% Ch, Annual Rate	-0.6	-0.3	0.0	1.1	1.2	1.1	1.3	1.8
Trade, Transportation, and Utilities	27.78	27.76	27.76	27.71	27.69	27.64	27.56	27.51
% Ch, Annual Rate	-1.2	-0.4	0.0	-0.6	-0.4	-0.7	-1.1	-0.7
Wholesale Trade	5.96	5.96	5.96	5.97	5.98	5.98	5.98	5.98
% Ch, Annual Rate	-0.5	-0.1	0.6	0.4	0.7	0.1	-0.2	-0.2
Retail Trade	15.66	15.64	15.64	15.60	15.56	15.52	15.46	15.43
% Ch, Annual Rate	-1.5	-0.4	-0.1	-1.0	-0.9	-1.0	-1.5	-0.8
Trans., Warehousing, and Utilities	6.17	6.16	6.16	6.15	6.14	6.13	6.12	6.10
% Ch, Annual Rate	-1.1	-0.7	-0.2	-0.6	-0.2	-0.7	-1.0	-1.1
Information	2.83	2.84	2.87	2.88	2.90	2.89	2.88	2.86
% Ch, Annual Rate	-0.8	1.9	4.5	1.1	2.1	-1.3	-1.4	-2.2
Publishing Industries	0.73	0.72	0.71	0.71	0.70	0.69	0.68	0.68
% Ch, Annual Rate	-5.4	-5.1	-4.4	-4.2	-4.4	-4.5	-4.2	-3.8
Other Information	2.10	2.12	2.16	2.17	2.20	2.20	2.19	2.18
% Ch, Annual Rate	0.9	4.5	7.7	2.9	4.3	-0.2	-0.5	-1.7
Financial Activities	8.70	8.74	8.77	8.78	8.78	8.78	8.78	8.78
% Ch, Annual Rate	-0.7	1.7	1.6	0.2	0.3	-0.3	0.1	-0.1
Professional and Business Services	22.03	22.29	22.46	22.71	22.97	23.15	23.30	23.44
% Ch, Annual Rate	7.0	4.8	3.2	4.4	4.7	3.2	2.5	2.6
Education and Health Services	24.55	24.58	24.63	24.67	24.72	24.73	24.74	24.75
% Ch, Annual Rate	0.9	0.5	0.8	0.6	0.9	0.1	0.2	0.1
Leisure and Hospitality	16.88	16.99	17.08	17.08	17.02	17.07	17.15	17.20
% Ch, Annual Rate	3.0	2.6	2.2	0.1	-1.5	1.2	1.9	1.3
Other Services	5.96	5.95	5.95	5.93	5.92	5.91	5.89	5.87
% Ch, Annual Rate	-1.8	-0.9	-0.3	-1.1	-0.4	-0.9	-1.2	-1.2
Federal Government	2.87	3.17	2.91	2.82	2.82	2.82	2.82	2.82
% Ch, Annual Rate	6.7	48.8	-29.0	-12.2	0.0	0.0	0.0	0.0
State and Local Government	19.80	19.84	19.89	19.93	19.97	20.01	20.05	20.09
% Ch, Annual Rate	0.8	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	154.33	154.50	154.68	154.85	155.12	155.33	155.43	155.53
% Ch, Annual Rate	0.4	0.4	0.5	0.5	0.7	0.5	0.3	0.3
Manufacturing	12.45	12.44	12.45	12.47	12.51	12.53	12.55	12.55
% Ch, Annual Rate	-0.2	-0.3	0.2	0.6	1.3	0.9	0.4	0.0
Durable Manufacturing	7.85	7.85	7.86	7.89	7.93	7.96	7.98	8.00
% Ch, Annual Rate	0.1	-0.1	0.6	1.2	2.1	1.7	1.2	0.8
Wood Products	0.44	0.45	0.45	0.46	0.47	0.47	0.48	0.48
% Ch, Annual Rate	5.9	5.7	6.4	6.6	5.4	4.5	2.6	2.5
Primary and Fabricated Metals	1.78	1.78	1.79	1.81	1.83	1.84	1.86	1.87
% Ch, Annual Rate	1.3	1.3	2.3	3.2	4.0	4.2	3.4	2.8
Computer and Electronic Products	1.09	1.09	1.09	1.10	1.10	1.10	1.10	1.10
% Ch, Annual Rate	1.3	0.5	0.8	1.1	1.1	1.0	0.7	0.4
Machinery and Electrical Equipment	1.52	1.52	1.53	1.54	1.55	1.56	1.57	1.58
% Ch, Annual Rate	1.3	1.2	2.2	2.9	3.2	2.6	1.9	1.7
Transportation Equipment	1.65	1.63	1.61	1.59	1.59	1.58	1.57	1.56
% Ch, Annual Rate	-4.3	-4.9	-4.3	-3.8	-0.8	-2.4	-1.6	-2.3
Other Durables	1.38	1.38	1.38	1.39	1.39	1.40	1.40	1.40
% Ch, Annual Rate	0.0	0.0	0.8	1.4	1.6	1.7	0.7	0.5
Nondurable Manufacturing	4.60	4.59	4.59	4.58	4.58	4.57	4.56	4.55
% Ch, Annual Rate	-0.8	-0.7	-0.6	-0.5	-0.2	-0.5	-1.1	-1.2
Food Manufacturing	1.64	1.64	1.64	1.65	1.65	1.65	1.65	1.65
% Ch, Annual Rate	0.6	0.7	0.5	0.6	1.0	0.7	0.0	-0.2
Paper and Paper Products	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
% Ch, Annual Rate	-1.7	-1.2	-0.7	-0.4	0.2	-0.2	-0.8	-1.0
Other Nondurables	2.62	2.61	2.60	2.60	2.59	2.58	2.57	2.56
% Ch, Annual Rate	-1.6	-1.4	-1.3	-1.2	-0.9	-1.3	-1.8	-1.9
Natural Resources and Mining	0.75	0.76	0.76	0.76	0.77	0.77	0.77	0.77
% Ch, Annual Rate	1.4	2.2	2.5	2.1	1.4	1.2	1.7	1.4
Construction	7.67	7.71	7.74	7.78	7.82	7.86	7.90	7.94
% Ch, Annual Rate	2.1	1.9	1.9	1.9	2.1	2.1	2.0	2.2
Trade, Transportation, and Utilities	27.46	27.40	27.33	27.26	27.22	27.16	27.08	27.00
% Ch, Annual Rate	-0.6	-0.9	-1.0	-1.0	-0.6	-1.0	-1.2	-1.2
Wholesale Trade	5.98	5.97	5.97	5.97	5.97	5.97	5.96	5.96
% Ch, Annual Rate	0.0	-0.3	0.0	0.0	-0.3	0.0	-0.1	0.0
Retail Trade	15.40	15.36	15.30	15.24	15.23	15.17	15.11	15.04
% Ch, Annual Rate	-0.8	-1.1	-1.5	-1.5	-0.4	-1.4	-1.7	-1.7
Trans., Warehousing, and Utilities	6.09	6.07	6.06	6.05	6.03	6.02	6.00	5.99
% Ch, Annual Rate	-0.9	-1.1	-0.8	-0.8	-1.2	-0.8	-0.9	-0.8
Information	2.86	2.85	2.86	2.87	2.88	2.91	2.93	2.95
% Ch, Annual Rate	-0.4	-0.6	0.6	1.1	2.3	3.6	3.4	3.0
Publishing Industries	0.67	0.67	0.66	0.66	0.66	0.66	0.65	0.65
% Ch, Annual Rate	-2.9	-2.4	-2.0	-1.7	-1.8	-1.2	-1.3	-1.3
Other Information	2.19	2.19	2.19	2.20	2.22	2.25	2.28	2.30
% Ch, Annual Rate	0.4	0.0	1.4	1.9	3.6	5.0	4.8	4.2
Financial Activities	8.77	8.76	8.75	8.75	8.73	8.71	8.70	8.69
% Ch, Annual Rate	-0.2	-0.4	-0.4	-0.4	-0.9	-0.6	-0.6	-0.4
Professional and Business Services	23.61	23.77	23.92	24.07	24.32	24.47	24.56	24.66
% Ch, Annual Rate	2.8	2.7	2.7	2.5	4.2	2.4	1.5	1.5
Education and Health Services	24.75	24.74	24.73	24.73	24.71	24.71	24.70	24.69
% Ch, Annual Rate	0.0	-0.2	0.0	0.0	-0.3	0.0	-0.2	-0.1
Leisure and Hospitality	17.19	17.23	17.26	17.27	17.25	17.27	17.27	17.28
% Ch, Annual Rate	-0.3	1.0	0.6	0.3	-0.5	0.4	0.1	0.1
Other Services	5.86	5.84	5.83	5.81	5.79	5.78	5.76	5.76
% Ch, Annual Rate	-1.0	-1.1	-1.0	-1.1	-1.5	-1.0	-0.8	-0.7
Federal Government	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.14	20.18	20.22	20.26	20.30	20.34	20.38	20.43
% 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	3,404.2	3,469.0	3,529.6	3,569.1	3,604.9	3,640.3
% Ch	3.1	2.4	2.5	1.9	1.7	1.1	1.0	1.0
Manufacturing	290.4	284.2	287.5	295.3	294.9	293.0	295.0	298.7
% Ch	-0.7	-2.1	1.2	2.7	-0.2	-0.6	0.7	1.2
Durable Manufacturing	207.7	200.3	202.1	207.7	207.8	206.8	208.7	212.0
% Ch	-1.7	-3.5	0.9	2.8	0.0	-0.5	0.9	1.6
Wood Products	13.1	12.9	13.0	13.2	13.3	13.3	13.6	13.9
% Ch	-1.6	-1.7	0.9	1.7	0.6	-0.2	2.5	2.2
Primary and Fabricated Metals	25.2	25.1	26.1	26.6	26.2	25.3	25.5	26.4
% Ch	-2.0	-0.6	4.0	2.1	-1.7	-3.4	0.9	3.6
Computer and Electronic Products	20.1	19.6	19.8	19.9	19.9	20.2	20.8	21.4
% Ch	0.7	-2.3	0.8	0.4	0.1	1.4	3.0	2.7
Machinery and Electrical Equipment	20.5	20.7	21.3	21.0	20.9	21.1	22.0	23.5
% Ch	-1.2	1.0	2.8	-1.1	-0.8	0.9	4.7	6.6
Aerospace	91.0	84.2	84.0	88.9	89.9	89.9	89.9	89.9
% Ch	-3.2	-7.5	-0.3	5.9	1.1	0.0	0.0	0.0
Other Transportation Equip.	10.2	10.2	9.9	9.8	9.4	9.1	8.8	8.5
% Ch	-0.9	0.1	-3.1	-0.8	-4.1	-3.3	-3.2	-2.7
Other Durables	27.6	27.7	28.1	28.3	28.3	28.0	28.0	28.3
% Ch	1.2	0.2	1.6	0.8	-0.2	-0.9	0.1	1.1
Nondurable Manufacturing	82.7	83.9	85.5	87.6	87.1	86.3	86.4	86.7
% Ch	2.0	1.4	1.9	2.5	-0.6	-1.0	0.1	0.3
Food Manufacturing	37.6	38.0	38.9	39.9	39.7	39.4	39.4	39.3
% Ch	1.9	1.3	2.3	2.6	-0.5	-0.6	-0.1	-0.3
Paper and Paper Products	7.8	7.7	7.6	7.5	7.1	6.7	6.6	6.5
% Ch	-3.5	-0.2	-1.8	-1.0	-5.5	-5.3	-2.6	-1.4
Other Nondurables	37.4	38.1	39.0	40.2	40.3	40.1	40.4	40.9
% Ch	3.4	1.9	2.2	3.1	0.3	-0.5	0.8	1.2
Natural Resources and Mining	6.3	6.2	6.3	6.0	6.1	6.1	6.1	6.1
% Ch	-0.8	-1.0	1.5	-4.2	1.1	-0.8	0.0	0.7
Construction	186.6	199.8	213.4	217.3	214.8	211.8	210.5	209.9
% Ch	7.7	7.0	6.8	1.9	-1.2	-1.4	-0.6	-0.3
Trade, Transportation, and Utilities	605.7	624.6	637.2	643.5	647.4	649.7	649.6	648.5
% Ch	3.1	3.1	2.0	1.0	0.6	0.3	0.0	-0.2
Wholesale Trade	132.1	133.3	136.4	138.9	140.1	141.0	141.4	141.7
% Ch	0.6	0.9	2.3	1.9	0.8	0.7	0.3	0.2
Retail Trade	365.2	378.7	386.2	389.1	391.1	392.6	392.7	392.0
% Ch	3.2	3.7	2.0	0.7	0.5	0.4	0.0	-0.2
Electronic Shopping and Mail-Order	38.2	49.7	54.8	59.5	62.6	64.9	66.8	68.5
% Ch	26.6	30.1	10.2	8.7	5.1	3.8	3.0	2.5
Other Retail Trade	327.0	329.0	331.4	329.5	328.5	327.6	325.9	323.4
% Ch	1.0	0.6	0.7	-0.6	-0.3	-0.3	-0.5	-0.8
Trans., Warehousing, and Utilities	108.4	112.6	114.6	115.5	116.3	116.1	115.4	114.8
% Ch	6.0	3.8	1.9	0.7	0.7	-0.2	-0.5	-0.5
Information	121.4	126.3	133.6	142.2	146.5	148.4	148.7	152.2
% Ch	6.2	4.1	5.8	6.4	3.0	1.3	0.2	2.4
Software Publishers	58.9	61.4	65.3	70.1	71.7	72.4	73.3	74.5
% Ch	5.3	4.2	6.4	7.3	2.3	0.9	1.3	1.6
Other Publishing Industries	5.9	5.5	5.1	4.7	4.1	3.5	3.0	2.6
% Ch	-4.0	-6.8	-7.7	-7.9	-11.8	-15.3	-14.2	-12.4
Other Information	56.5	59.4	63.2	67.4	70.7	72.6	72.4	75.1
% Ch	8.4	5.0	6.4	6.7	4.8	2.7	-0.3	3.8
Financial Activities	151.0	154.0	157.5	158.4	159.7	159.5	158.3	156.4
% Ch	2.1	2.0	2.3	0.6	0.8	-0.1	-0.8	-1.2
Professional and Business Services	401.5	413.4	426.1	437.8	457.6	476.3	491.3	506.6
% Ch	3.5	3.0	3.1	2.7	4.5	4.1	3.2	3.1
Education and Health Services	463.5	475.6	491.4	503.9	515.0	522.1	526.9	530.7
% Ch	3.4	2.6	3.3	2.5	2.2	1.4	0.9	0.7
Leisure and Hospitality	323.3	331.5	342.3	349.4	357.0	361.3	365.6	368.0
% Ch	4.3	2.6	3.3	2.1	2.2	1.2	1.2	0.7
Other Services	117.6	119.7	121.7	126.6	129.4	131.2	132.9	134.3
% Ch	2.3	1.8	1.7	4.0	2.2	1.4	1.2	1.1
Federal Government	74.5	74.8	74.7	76.9	80.1	78.1	78.4	78.8
% Ch	1.9	0.4	-0.2	2.9	4.2	-2.5	0.5	0.4
State and Local Government	501.1	511.0	512.4	511.6	521.1	531.5	541.6	550.1
% Ch	2.5	2.0	0.3	-0.2	1.9	2.0	1.9	1.6

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	3,430.0	3,441.2	3,460.5	3,480.3	3,493.9
% Ch, Annual Rate	3.8	1.5	2.0	2.2	1.3	2.3	2.3	1.6
Manufacturing	284.8	285.9	288.0	291.4	293.8	294.4	296.6	296.5
% Ch, Annual Rate	3.2	1.5	3.0	4.8	3.3	0.8	3.1	-0.2
Durable Manufacturing	199.6	200.9	202.8	204.9	206.6	207.1	208.6	208.6
% Ch, Annual Rate	2.8	2.5	3.8	4.3	3.4	0.8	3.0	0.1
Wood Products	13.1	13.0	12.9	12.9	13.1	13.2	13.3	13.2
% Ch, Annual Rate	4.0	-1.5	-3.1	0.9	4.6	4.1	2.6	-2.4
Primary and Fabricated Metals	25.7	26.1	26.2	26.3	26.6	26.6	26.6	26.7
% Ch, Annual Rate	9.7	5.4	1.8	2.4	3.8	0.5	-0.1	1.1
Computer and Electronic Products	19.7	19.7	19.9	19.9	19.7	19.8	20.0	20.0
% Ch, Annual Rate	1.7	0.0	2.5	0.0	-3.8	2.7	4.5	-0.2
Machinery and Electrical Equipment	21.1	21.2	21.3	21.5	21.8	20.9	20.7	20.9
% Ch, Annual Rate	1.3	2.3	1.5	4.6	4.3	-15.7	-3.6	4.6
Aerospace	82.3	83.0	84.6	86.0	87.2	88.6	89.9	89.9
% Ch, Annual Rate	2.3	3.6	8.0	7.0	5.6	6.6	6.0	0.0
Other Transportation Equip.	9.8	9.8	9.9	10.0	9.8	9.8	9.8	9.7
% Ch, Annual Rate	-6.5	0.2	2.7	5.9	-6.6	-0.3	-0.4	-6.1
Other Durables	28.0	28.1	28.1	28.2	28.5	28.2	28.3	28.3
% Ch, Annual Rate	3.0	1.6	-0.2	2.2	4.2	-4.9	1.6	-0.2
Nondurable Manufacturing	85.2	85.0	85.2	86.5	87.1	87.3	88.0	87.9
% Ch, Annual Rate	4.0	-0.8	1.2	5.9	3.2	0.8	3.3	-0.7
Food Manufacturing	39.0	38.6	38.7	39.4	39.8	39.7	40.1	39.9
% Ch, Annual Rate	8.3	-4.4	1.0	8.2	4.0	-0.8	4.2	-1.9
Paper and Paper Products	7.6	7.6	7.6	7.6	7.6	7.6	7.4	7.4
% Ch, Annual Rate	-1.9	0.4	-2.8	-1.0	4.2	0.2	-10.1	-3.1
Other Nondurables	38.5	38.8	39.0	39.5	39.7	39.9	40.4	40.5
% Ch, Annual Rate	1.1	2.6	2.3	4.9	2.2	2.5	5.1	0.9
Natural Resources and Mining	6.3	6.3	6.3	6.2	6.2	6.0	6.0	6.0
% Ch, Annual Rate	5.8	0.5	0.5	-5.8	-5.1	-10.2	-0.9	2.4
Construction	209.7	211.9	213.7	218.3	216.1	218.1	217.9	217.3
% Ch, Annual Rate	10.5	4.4	3.5	8.8	-3.9	3.7	-0.4	-1.1
Trade, Transportation, and Utilities	636.8	636.2	637.8	638.2	641.5	642.9	643.7	645.8
% Ch, Annual Rate	4.0	-0.4	1.0	0.2	2.1	0.9	0.5	1.3
Wholesale Trade	135.6	136.2	136.7	137.1	138.4	138.7	139.0	139.6
% Ch, Annual Rate	5.0	1.8	1.5	1.2	4.0	0.9	0.8	1.6
Retail Trade	386.8	385.4	386.4	386.2	388.8	388.9	389.0	389.7
% Ch, Annual Rate	5.0	-1.4	1.0	-0.2	2.7	0.1	0.1	0.7
Electronic Shopping and Mail-Order	54.3	54.3	54.2	56.2	58.4	59.0	59.9	60.8
% Ch	6.8	0.1	-0.8	15.4	16.8	4.0	6.4	5.6
Other Retail Trade	332.5	331.1	332.2	330.0	330.3	329.9	329.0	328.9
% Ch	4.8	-1.6	1.3	-2.6	0.5	-0.5	-1.0	-0.2
Trans., Warehousing, and Utilities	114.4	114.5	114.7	114.9	114.3	115.3	115.8	116.6
% Ch, Annual Rate	-0.3	0.3	0.6	0.7	-2.2	3.5	1.7	2.8
Information	129.9	132.4	135.0	137.1	139.2	141.2	144.0	144.5
% Ch, Annual Rate	5.5	8.1	8.2	6.3	6.1	6.0	8.0	1.7
Software Publishers	63.5	64.7	66.0	67.0	68.3	69.6	71.0	71.4
% Ch, Annual Rate	7.0	7.9	8.0	6.5	7.9	7.8	8.2	1.9
Other Publishing Industries	5.2	5.2	5.1	4.9	4.9	4.7	4.6	4.6
% Ch, Annual Rate	-7.9	-4.7	-6.0	-10.0	-3.9	-17.9	-0.8	-5.8
Other Information	61.2	62.5	64.0	65.1	65.9	66.9	68.3	68.6
% Ch, Annual Rate	5.2	9.4	9.5	7.4	5.0	6.1	8.5	1.9
Financial Activities	156.8	157.8	157.9	157.5	157.4	158.1	158.6	159.4
% Ch, Annual Rate	4.5	2.5	0.1	-1.0	-0.1	1.7	1.4	1.8
Professional and Business Services	422.1	424.1	427.4	430.9	432.5	436.3	439.7	442.7
% Ch, Annual Rate	5.5	2.0	3.2	3.2	1.5	3.5	3.2	2.8
Education and Health Services	486.5	489.2	492.8	497.0	497.8	501.9	505.8	509.8
% Ch, Annual Rate	3.3	2.2	3.0	3.5	0.6	3.4	3.2	3.2
Leisure and Hospitality	339.7	341.1	342.5	346.0	347.3	349.1	350.1	351.2
% Ch, Annual Rate	6.0	1.7	1.5	4.2	1.5	2.1	1.1	1.3
Other Services	120.8	121.3	122.3	122.5	125.0	125.8	127.5	128.2
% Ch, Annual Rate	1.4	1.8	3.1	0.5	8.6	2.6	5.5	2.4
Federal Government	74.7	74.7	74.4	75.0	75.5	76.7	77.8	77.6
% Ch, Annual Rate	-0.7	-0.2	-1.2	3.1	2.5	6.9	5.5	-0.9
State and Local Government	513.5	513.4	512.9	509.9	509.0	510.0	512.6	514.8
% Ch, Annual Rate	-0.4	-0.1	-0.4	-2.3	-0.7	0.8	2.1	1.7

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	3,508.4	3,529.4	3,535.7	3,544.8	3,555.2	3,564.5	3,573.7	3,583.0
% Ch, Annual Rate	1.7	2.4	0.7	1.0	1.2	1.0	1.0	1.0
Manufacturing	297.0	295.6	293.8	293.1	292.5	292.8	293.2	293.5
% Ch, Annual Rate	0.7	-1.9	-2.4	-1.0	-0.8	0.5	0.5	0.4
Durable Manufacturing	209.1	208.2	207.1	206.7	206.3	206.6	206.9	207.2
% Ch, Annual Rate	0.9	-1.7	-2.1	-0.7	-0.9	0.7	0.5	0.6
Wood Products	13.4	13.3	13.2	13.2	13.2	13.3	13.3	13.3
% Ch, Annual Rate	4.9	-1.1	-3.5	-0.7	-1.0	2.7	0.9	1.7
Primary and Fabricated Metals	26.7	26.4	25.9	25.7	25.4	25.3	25.2	25.2
% Ch, Annual Rate	0.2	-4.6	-6.4	-4.1	-4.9	-1.3	-0.8	-0.1
Computer and Electronic Products	20.0	19.9	19.8	19.8	19.9	20.1	20.3	20.4
% Ch, Annual Rate	0.4	-2.7	-1.7	0.7	1.4	3.5	3.7	3.4
Machinery and Electrical Equipment	21.2	20.9	20.7	20.7	20.7	21.0	21.2	21.3
% Ch, Annual Rate	5.2	-4.2	-4.9	0.7	0.7	4.4	3.5	3.6
Aerospace	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.6	9.4	9.3	9.2	9.1	9.1	9.1	9.0
% Ch, Annual Rate	-4.0	-5.2	-5.7	-2.9	-4.7	-0.9	-1.4	-3.2
Other Durables	28.4	28.3	28.2	28.2	28.1	28.0	28.0	28.0
% Ch, Annual Rate	1.2	-0.6	-1.3	-0.8	-1.6	-0.5	-0.5	-0.2
Nondurable Manufacturing	88.0	87.4	86.7	86.3	86.2	86.2	86.3	86.3
% Ch, Annual Rate	0.4	-2.6	-3.1	-1.8	-0.4	0.0	0.3	0.0
Food Manufacturing	40.1	39.8	39.5	39.4	39.4	39.4	39.5	39.5
% Ch, Annual Rate	1.5	-2.8	-2.9	-1.6	0.5	0.3	0.5	-0.2
Paper and Paper Products	7.3	7.2	7.0	6.9	6.8	6.8	6.7	6.7
% Ch, Annual Rate	-2.9	-7.8	-8.1	-6.7	-5.5	-3.2	-2.8	-3.0
Other Nondurables	40.5	40.4	40.1	40.0	40.0	40.0	40.1	40.2
% Ch, Annual Rate	0.0	-1.5	-2.3	-1.0	-0.5	0.3	0.7	0.7
Natural Resources and Mining	6.1	6.1	6.1	6.1	6.1	6.1	6.0	6.0
% Ch, Annual Rate	5.0	2.6	-1.5	-1.1	-1.0	-1.2	-0.5	-0.5
Construction	215.8	215.2	214.5	213.7	212.8	211.8	211.3	211.2
% Ch, Annual Rate	-2.6	-1.1	-1.4	-1.4	-1.7	-1.8	-0.9	-0.3
Trade, Transportation, and Utilities	645.7	646.8	648.4	648.9	649.6	649.8	649.5	649.7
% Ch, Annual Rate	-0.1	0.7	0.9	0.3	0.4	0.1	-0.2	0.1
Wholesale Trade	139.6	139.9	140.2	140.5	140.8	141.0	141.1	141.2
% Ch, Annual Rate	0.2	0.7	1.1	0.8	0.9	0.4	0.3	0.3
Retail Trade	389.8	390.7	391.8	392.1	392.5	392.7	392.4	392.7
% Ch, Annual Rate	0.1	1.0	1.1	0.3	0.4	0.2	-0.3	0.3
Electronic Shopping and Mail-Order	61.5	62.3	62.9	63.5	64.1	64.7	65.2	65.7
% Ch	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Other Retail Trade	328.2	328.5	328.9	328.6	328.3	328.0	327.2	327.0
% Ch	-0.8	0.3	0.5	-0.4	-0.3	-0.4	-0.9	-0.2
Trans., Warehousing, and Utilities	116.3	116.3	116.3	116.3	116.3	116.2	116.0	115.8
% Ch, Annual Rate	-0.9	-0.1	0.2	-0.2	0.1	-0.4	-0.6	-0.7
Information	144.9	146.0	147.4	147.9	148.7	148.6	148.4	148.1
% Ch, Annual Rate	0.9	3.0	3.9	1.4	2.2	-0.3	-0.4	-0.9
Software Publishers	71.5	71.6	71.8	71.9	72.1	72.3	72.4	72.6
% Ch, Annual Rate	0.6	0.7	0.9	1.0	0.9	0.9	1.0	1.1
Other Publishing Industries	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3
% Ch, Annual Rate	-15.4	-15.3	-14.5	-14.5	-15.3	-16.1	-15.8	-15.6
Other Information	69.0	70.1	71.6	72.1	72.9	72.7	72.6	72.2
% Ch, Annual Rate	2.4	6.7	8.2	2.8	4.5	-0.6	-1.0	-2.2
Financial Activities	158.9	159.6	160.1	160.0	159.9	159.6	159.4	159.2
% Ch, Annual Rate	-1.2	1.7	1.5	-0.2	-0.3	-0.9	-0.4	-0.6
Professional and Business Services	450.1	455.6	459.7	465.0	470.4	474.6	478.2	481.8
% Ch, Annual Rate	6.8	5.0	3.6	4.6	4.8	3.6	3.0	3.0
Education and Health Services	512.1	513.9	516.0	517.9	520.1	521.5	522.9	524.2
% Ch, Annual Rate	1.8	1.4	1.6	1.5	1.7	1.1	1.1	1.0
Leisure and Hospitality	353.9	356.4	358.5	359.3	359.0	360.4	362.2	363.7
% Ch, Annual Rate	3.1	2.8	2.5	0.8	-0.4	1.6	2.1	1.6
Other Services	128.7	129.2	129.7	130.1	130.6	131.0	131.5	131.9
% Ch, Annual Rate	1.4	1.5	1.6	1.4	1.5	1.4	1.3	1.3
Federal Government	78.1	85.3	79.2	77.9	77.9	78.0	78.1	78.2
% Ch, Annual Rate	2.3	42.8	-25.7	-6.7	0.5	0.5	0.5	0.5
State and Local Government	517.2	519.7	522.4	525.0	527.6	530.2	532.9	535.5
% Ch, Annual Rate	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0

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	3,591.7	3,600.7	3,609.2	3,617.9	3,628.2	3,637.4	3,644.3	3,651.1
% Ch, Annual Rate	1.0	1.0	1.0	1.0	1.2	1.0	0.8	0.7
Manufacturing	294.0	294.6	295.3	296.3	297.4	298.4	299.1	299.7
% Ch, Annual Rate	0.7	0.7	1.0	1.3	1.5	1.4	0.9	0.8
Durable Manufacturing	207.7	208.2	208.9	209.8	210.8	211.7	212.4	213.1
% Ch, Annual Rate	1.0	0.9	1.3	1.7	1.9	1.8	1.4	1.2
Wood Products	13.4	13.5	13.6	13.8	13.8	13.9	13.9	13.9
% Ch, Annual Rate	2.9	2.8	3.3	3.5	2.5	1.7	0.2	0.0
Primary and Fabricated Metals	25.3	25.4	25.5	25.8	26.0	26.3	26.6	26.8
% Ch, Annual Rate	1.3	1.4	2.5	3.4	4.4	4.6	3.7	3.0
Computer and Electronic Products	20.6	20.7	20.9	21.0	21.2	21.3	21.4	21.5
% Ch, Annual Rate	3.3	2.0	2.5	2.9	3.1	2.8	2.5	1.8
Machinery and Electrical Equipment	21.6	21.8	22.2	22.6	23.0	23.4	23.7	24.0
% Ch, Annual Rate	4.8	4.7	6.2	7.2	7.6	6.8	5.7	5.4
Aerospace	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.9	8.8	8.7	8.7	8.6	8.6	8.5	8.5
% Ch, Annual Rate	-4.1	-3.9	-3.5	-2.4	-2.3	-2.6	-2.6	-2.5
Other Durables	28.0	28.0	28.1	28.1	28.2	28.3	28.4	28.5
% Ch, Annual Rate	0.3	0.3	0.7	0.9	1.3	1.5	1.2	1.2
Nondurable Manufacturing	86.3	86.3	86.4	86.5	86.6	86.7	86.7	86.6
% Ch, Annual Rate	0.0	0.2	0.3	0.4	0.7	0.4	-0.2	-0.3
Food Manufacturing	39.4	39.4	39.4	39.4	39.4	39.4	39.3	39.2
% Ch, Annual Rate	-0.3	-0.2	-0.3	-0.2	0.1	-0.1	-0.8	-1.0
Paper and Paper Products	6.6	6.6	6.5	6.5	6.5	6.5	6.5	6.4
% Ch, Annual Rate	-2.9	-2.3	-1.8	-1.4	-0.7	-1.2	-1.9	-2.1
Other Nondurables	40.2	40.3	40.5	40.6	40.7	40.9	41.0	41.0
% Ch, Annual Rate	0.8	1.0	1.2	1.3	1.5	1.2	0.8	0.6
Natural Resources and Mining	6.0	6.0	6.1	6.1	6.1	6.1	6.1	6.1
% Ch, Annual Rate	0.1	0.5	0.7	1.1	0.4	0.9	0.4	0.8
Construction	210.8	210.7	210.3	210.0	209.9	209.9	209.8	209.9
% Ch, Annual Rate	-0.8	-0.2	-0.8	-0.5	-0.2	-0.1	0.0	0.0
Trade, Transportation, and Utilities	650.0	649.8	649.4	649.1	649.3	648.9	648.2	647.5
% Ch, Annual Rate	0.1	-0.1	-0.2	-0.2	0.2	-0.2	-0.4	-0.4
Wholesale Trade	141.3	141.3	141.5	141.6	141.6	141.7	141.8	141.9
% Ch, Annual Rate	0.3	0.2	0.3	0.3	0.0	0.3	0.2	0.3
Retail Trade	393.0	393.0	392.6	392.3	392.7	392.4	391.7	391.0
% Ch, Annual Rate	0.3	0.0	-0.4	-0.4	0.5	-0.4	-0.7	-0.7
Electronic Shopping and Mail-Order	66.2	66.6	67.1	67.5	67.9	68.3	68.7	69.1
% Ch	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Other Retail Trade	326.8	326.4	325.6	324.8	324.8	324.0	323.0	321.9
% Ch	-0.2	-0.6	-1.0	-1.0	0.1	-0.9	-1.3	-1.4
Trans., Warehousing, and Utilities	115.7	115.5	115.3	115.2	115.0	114.9	114.8	114.6
% Ch, Annual Rate	-0.5	-0.6	-0.5	-0.4	-0.8	-0.4	-0.5	-0.4
Information	148.2	148.3	148.8	149.4	150.3	151.6	152.9	154.1
% Ch, Annual Rate	0.4	0.3	1.2	1.6	2.5	3.5	3.4	3.2
Software Publishers	72.9	73.2	73.4	73.7	74.0	74.3	74.6	74.9
% Ch, Annual Rate	1.3	1.5	1.5	1.6	1.6	1.7	1.7	1.7
Other Publishing Industries	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5
% Ch, Annual Rate	-14.0	-13.1	-12.5	-12.2	-12.8	-11.6	-12.2	-12.5
Other Information	72.2	72.1	72.4	72.8	73.5	74.6	75.7	76.6
% Ch, Annual Rate	0.2	-0.3	1.4	2.1	4.2	6.0	5.8	5.2
Financial Activities	158.9	158.5	158.1	157.7	157.1	156.6	156.2	155.8
% Ch, Annual Rate	-0.8	-0.9	-1.1	-1.0	-1.6	-1.2	-1.2	-1.0
Professional and Business Services	485.7	489.4	493.2	496.8	502.0	505.6	508.1	510.7
% Ch, Annual Rate	3.2	3.1	3.1	2.9	4.3	2.8	2.0	2.0
Education and Health Services	525.3	526.3	527.4	528.5	529.2	530.3	531.1	532.0
% Ch, Annual Rate	0.9	0.8	0.8	0.8	0.6	0.8	0.6	0.7
Leisure and Hospitality	364.1	365.3	366.2	366.9	367.1	367.8	368.4	368.9
% Ch, Annual Rate	0.4	1.3	1.0	0.8	0.2	0.8	0.6	0.6
Other Services	132.3	132.7	133.1	133.4	133.8	134.1	134.5	134.8
% Ch, Annual Rate	1.3	1.2	1.2	1.1	1.0	1.1	1.0	1.0
Federal Government	78.3	78.4	78.5	78.6	78.6	78.7	78.8	78.9
% Ch, Annual Rate	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
State and Local Government	538.1	540.5	542.8	545.1	547.3	549.3	551.1	552.8
% Ch, Annual Rate	2.0	1.8	1.7	1.7	1.6	1.5	1.3	1.3

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	16,121.2	16,878.8	17,819.2	18,682.8	19,498.4	20,308.5	21,174.7	22,132.5
% Ch	2.6	4.7	5.6	4.8	4.4	4.2	4.3	4.5
Total Wage and Salary Disbursements	8,083.5	8,462.1	8,888.5	9,370.7	9,842.9	10,290.7	10,766.9	11,297.0
% Ch	2.9	4.7	5.0	5.4	5.0	4.5	4.6	4.9
Nonwage Personal Income	8,037.7	8,416.7	8,930.7	9,312.1	9,655.5	10,017.7	10,407.8	10,835.5
% Ch	2.2	4.7	6.1	4.3	3.7	3.8	3.9	4.1
Supplements to Wages and Salaries	1,876.8	1,949.5	2,040.0	2,127.7	2,231.3	2,337.1	2,444.7	2,549.5
% Ch	1.9	3.9	4.6	4.3	4.9	4.7	4.6	4.3
Proprietor's Income	1,423.7	1,518.2	1,588.8	1,650.4	1,658.1	1,659.9	1,677.9	1,694.7
% Ch	0.1	6.6	4.6	3.9	0.5	0.1	1.1	1.0
Farm	35.6	38.1	27.2	28.8	30.3	37.0	63.7	66.3
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,388.1	1,480.1	1,561.6	1,621.5	1,627.8	1,622.8	1,614.2	1,628.5
% Ch	1.6	6.6	5.5	3.8	0.4	-0.3	-0.5	0.9
Less: Contribution For Govt. Soc. Ins.	1,239.9	1,299.6	1,356.5	1,430.8	1,497.9	1,557.8	1,624.6	1,700.8
% Ch	2.9	4.8	4.4	5.5	4.7	4.0	4.3	4.7
Dividends/Int./Rent	3,202.8	3,400.4	3,686.9	3,787.1	3,923.9	4,073.9	4,236.7	4,433.2
% Ch	2.7	6.2	8.4	2.7	3.6	3.8	4.0	4.6
Transfer Payments	2,774.2	2,848.1	2,971.5	3,177.8	3,340.1	3,504.7	3,673.1	3,858.8
% Ch	3.4	2.7	4.3	6.9	5.1	4.9	4.8	5.1

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	17,540.3	17,725.0	17,928.5	18,082.8	18,355.4	18,600.8	18,776.8	18,998.1
% Ch, Annual Rate	7.4	4.3	4.7	3.5	6.2	5.5	3.8	4.8
Total Wage and Salary Disbursements	8,776.7	8,845.0	8,942.2	8,990.0	9,211.5	9,319.6	9,423.1	9,528.5
% Ch, Annual Rate	6.4	3.2	4.5	2.2	10.2	4.8	4.5	4.6
Nonwage Personal Income	8,763.7	8,879.9	8,986.3	9,092.8	9,143.9	9,281.3	9,353.8	9,469.6
% Ch, Annual Rate	8.4	5.4	4.9	4.8	2.3	6.1	3.2	5.0
Supplements to Wages and Salaries	2,009.4	2,031.1	2,052.0	2,067.4	2,095.1	2,116.5	2,138.3	2,161.1
% Ch, Annual Rate	4.8	4.4	4.2	3.0	5.5	4.2	4.2	4.3
Proprietor's Income	1,567.5	1,573.3	1,590.0	1,624.4	1,621.2	1,632.7	1,652.7	1,694.9
% Ch, Annual Rate	6.5	1.5	4.3	8.9	-0.8	2.9	5.0	10.6
Farm	28.1	27.5	17.4	35.9	24.8	19.8	21.4	49.3
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,539.4	1,545.8	1,572.6	1,588.4	1,596.3	1,612.9	1,631.3	1,645.6
% Ch, Annual Rate	7.7	1.7	7.1	4.1	2.0	4.2	4.7	3.5
Less: Contribution For Govt. Soc. Ins.	1,344.0	1,350.9	1,362.4	1,368.7	1,407.6	1,422.4	1,437.4	1,456.0
% Ch, Annual Rate	6.9	2.1	3.5	1.9	11.9	4.3	4.3	5.3
Dividends/Int./Rent	3,595.4	3,663.3	3,722.9	3,766.1	3,722.2	3,794.8	3,798.7	3,832.7
% Ch, Annual Rate	10.9	7.8	6.7	4.7	-4.6	8.0	0.4	3.6
Transfer Payments	2,935.4	2,963.1	2,983.8	3,003.7	3,113.1	3,159.7	3,201.4	3,236.8
% Ch, Annual Rate	8.1	3.8	2.8	2.7	15.4	6.1	5.4	4.5

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	19,202.4	19,405.6	19,597.9	19,787.7	20,005.5	20,207.6	20,406.2	20,614.6
% Ch, Annual Rate	4.4	4.3	4.0	3.9	4.5	4.1	4.0	4.1
Total Wage and Salary Disbursements	9,662.4	9,798.5	9,902.4	10,008.3	10,119.5	10,233.0	10,347.1	10,463.4
% Ch, Annual Rate	5.7	5.8	4.3	4.3	4.5	4.6	4.5	4.6
Nonwage Personal Income	9,540.0	9,607.1	9,695.5	9,779.4	9,886.0	9,974.6	10,059.1	10,151.3
% Ch, Annual Rate	3.0	2.8	3.7	3.5	4.4	3.6	3.4	3.7
Supplements to Wages and Salaries	2,190.8	2,220.4	2,244.8	2,269.4	2,298.4	2,324.2	2,349.9	2,376.1
% Ch, Annual Rate	5.6	5.5	4.5	4.5	5.2	4.6	4.5	4.5
Proprietor's Income	1,669.3	1,651.1	1,655.5	1,656.5	1,657.1	1,658.4	1,659.0	1,664.9
% Ch, Annual Rate	-5.9	-4.3	1.1	0.2	0.1	0.3	0.1	1.4
Farm	39.8	30.0	26.3	25.2	28.0	33.0	39.6	47.5
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,629.4	1,621.1	1,629.2	1,631.4	1,629.1	1,625.4	1,619.4	1,617.4
% Ch, Annual Rate	-3.9	-2.0	2.0	0.5	-0.5	-0.9	-1.5	-0.5
Less: Contribution For Govt. Soc. Ins.	1,477.4	1,492.9	1,504.6	1,516.8	1,536.9	1,550.7	1,564.6	1,579.0
% Ch, Annual Rate	6.0	4.3	3.2	3.3	5.4	3.6	3.6	3.7
Dividends/Int./Rent	3,868.8	3,906.1	3,942.7	3,977.9	4,016.7	4,056.6	4,092.2	4,129.9
% Ch, Annual Rate	3.8	3.9	3.8	3.6	4.0	4.0	3.6	3.7
Transfer Payments	3,288.6	3,322.5	3,357.0	3,392.4	3,450.7	3,486.1	3,522.6	3,559.4
% Ch, Annual Rate	6.6	4.2	4.2	4.3	7.1	4.2	4.3	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	20,846.4	21,062.1	21,284.3	21,506.1	21,771.5	22,014.2	22,251.4	22,493.1
% Ch, Annual Rate	4.6	4.2	4.3	4.2	5.0	4.5	4.4	4.4
Total Wage and Salary Disbursements	10,582.9	10,703.7	10,827.7	10,953.4	11,093.6	11,232.3	11,364.2	11,498.1
% Ch, Annual Rate	4.6	4.6	4.7	4.7	5.2	5.1	4.8	4.8
Nonwage Personal Income	10,263.5	10,358.4	10,456.6	10,552.8	10,677.9	10,781.9	10,887.1	10,995.0
% Ch, Annual Rate	4.5	3.8	3.8	3.7	4.8	4.0	4.0	4.0
Supplements to Wages and Salaries	2,406.2	2,432.2	2,457.8	2,482.6	2,511.6	2,537.3	2,562.3	2,587.0
% Ch, Annual Rate	5.2	4.4	4.3	4.1	4.8	4.2	4.0	3.9
Proprietor's Income	1,669.0	1,675.7	1,681.5	1,685.4	1,688.9	1,692.3	1,696.3	1,701.3
% Ch, Annual Rate	1.0	1.6	1.4	0.9	0.8	0.8	1.0	1.2
Farm	55.5	62.5	67.3	69.5	69.5	67.9	65.2	62.5
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,613.5	1,613.2	1,614.2	1,615.9	1,619.4	1,624.4	1,631.1	1,638.8
% Ch, Annual Rate	-1.0	-0.1	0.2	0.4	0.9	1.2	1.7	1.9
Less: Contribution For Govt. Soc. Ins.	1,601.2	1,616.5	1,632.3	1,648.3	1,674.2	1,692.4	1,709.5	1,726.9
% Ch, Annual Rate	5.7	3.9	4.0	4.0	6.4	4.4	4.1	4.1
Dividends/Int./Rent	4,169.6	4,211.7	4,258.9	4,306.6	4,355.6	4,407.1	4,458.3	4,511.7
% Ch, Annual Rate	3.9	4.1	4.6	4.6	4.6	4.8	4.7	4.9
Transfer Payments	3,619.9	3,655.3	3,690.7	3,726.5	3,796.0	3,837.6	3,879.7	3,922.0
% Ch, Annual Rate	7.0	4.0	3.9	3.9	7.7	4.4	4.5	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	458.771	484.650	508.031	531.693	556.694	585.149
% Ch	5.1	6.1	7.0	5.6	4.8	4.7	4.7	5.1
Total Wage and Salary Disbursements	203.300	218.077	237.242	252.372	266.412	279.647	293.512	309.602
% Ch	6.1	7.3	8.8	6.4	5.6	5.0	5.0	5.5
Manufacturing	21.729	21.691	22.816	23.899	24.587	25.419	26.615	28.065
% Ch	-0.3	-0.2	5.2	4.7	2.9	3.4	4.7	5.4
Durable Manufacturing	17.316	17.080	17.955	18.780	19.302	19.979	20.945	22.127
% Ch	-1.6	-1.4	5.1	4.6	2.8	3.5	4.8	5.6
Nondurable Manufacturing	4.413	4.611	4.860	5.119	5.286	5.440	5.670	5.937
% Ch	4.8	4.5	5.4	5.3	3.3	2.9	4.2	4.7
Nonmanufacturing	174.575	189.496	207.216	221.011	234.038	246.111	258.441	272.716
% Ch	7.1	8.5	9.4	6.7	5.9	5.2	5.0	5.5
Other Private Wages	1.193	1.232	1.368	1.339	1.409	1.476	1.544	1.621
% Ch	4.1	3.3	11.0	-2.2	5.3	4.7	4.6	5.0
Farm Wages	1.700	1.467	1.518	1.630	1.750	1.867	1.987	2.123
% Ch	11.5	-13.7	3.5	7.4	7.4	6.6	6.5	6.8
Military Wages	4.103	4.190	4.324	4.493	4.627	4.775	4.924	5.077
% Ch	0.1	2.1	3.2	3.9	3.0	3.2	3.1	3.1
Nonwage Personal Income	200.932	210.688	221.529	232.278	241.619	252.045	263.182	275.547
% Ch	4.1	4.9	5.1	4.9	4.0	4.3	4.4	4.7
Supplements to Wages and Salaries	46.393	48.687	51.588	54.049	56.939	59.773	62.661	65.664
% Ch	5.6	4.9	6.0	4.8	5.3	5.0	4.8	4.8
Proprietor's Income	32.419	35.590	37.368	38.728	38.283	38.209	38.453	38.805
% Ch	-0.2	9.8	5.0	3.6	-1.1	-0.2	0.6	0.9
Farm	2.016	1.922	1.699	1.659	1.048	1.096	1.543	1.587
% Ch	...	...	...	...	...	...	...	...
Nonfarm	30.403	33.667	35.668	37.069	37.234	37.114	36.910	37.218
% Ch	3.1	10.7	5.9	3.9	0.4	-0.3	-0.5	0.8
Less: Contribution For Govt. Soc. Ins.	33.509	36.007	39.030	41.261	43.353	45.144	47.103	49.450
% Ch	4.4	7.5	8.4	5.7	5.1	4.1	4.3	5.0
Plus: Residence Adjustment	4.190	4.301	4.414	4.620	4.897	5.159	5.437	5.748
% Ch	7.8	2.7	2.6	4.7	6.0	5.4	5.4	5.7
Dividends/Int./Rent	91.551	96.125	101.998	105.449	110.057	115.025	120.364	126.645
% Ch	3.8	5.0	6.1	3.4	4.4	4.5	4.6	5.2
Transfer Payments	59.888	61.992	65.190	70.694	74.796	79.023	83.370	88.135
% Ch	5.8	3.5	5.2	8.4	5.8	5.7	5.5	5.7
State U.I. Benefits	0.982	0.975	0.925	0.914	0.961	1.142	1.355	1.566
% Ch	1.2	-0.7	-5.2	-1.2	5.1	18.9	18.6	15.6
Other Transfers	58.906	61.016	64.265	69.780	73.836	77.881	82.015	86.569
% Ch	5.9	3.6	5.3	8.6	5.8	5.5	5.3	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	450.638	454.871	461.432	468.143	475.359	482.234	487.657	493.351
% Ch, Annual Rate	11.4	3.8	5.9	5.9	6.3	5.9	4.6	4.8
Total Wage and Salary Disbursements	233.299	234.957	239.122	241.592	247.612	250.594	254.079	257.202
% Ch, Annual Rate	18.7	2.9	7.3	4.2	10.3	4.9	5.7	5.0
Manufacturing	23.153	22.311	22.502	23.296	24.158	23.490	23.875	24.073
% Ch, Annual Rate	26.5	-13.8	3.5	14.9	15.6	-10.6	6.7	3.4
Durable Manufacturing	18.354	17.507	17.632	18.329	19.128	18.406	18.711	18.875
% Ch, Annual Rate	30.5	-17.2	2.9	16.8	18.6	-14.3	6.8	3.5
Nondurable Manufacturing	4.800	4.804	4.870	4.968	5.030	5.084	5.164	5.198
% Ch, Annual Rate	12.5	0.4	5.6	8.3	5.1	4.4	6.4	2.7
Nonmanufacturing	203.057	205.468	209.330	211.009	216.112	219.690	222.688	225.555
% Ch, Annual Rate	18.3	4.8	7.7	3.2	10.0	6.8	5.6	5.3
Other Private Wages	1.341	1.404	1.382	1.347	1.317	1.329	1.347	1.362
% Ch, Annual Rate	18.2	20.1	-6.1	-9.7	-8.8	3.8	5.4	4.7
Farm Wages	1.487	1.497	1.528	1.561	1.592	1.614	1.644	1.670
% Ch, Annual Rate	3.4	3.0	8.5	8.8	8.2	5.7	7.6	6.7
Military Wages	4.261	4.277	4.380	4.378	4.434	4.471	4.526	4.541
% Ch, Annual Rate	3.4	1.5	10.0	-0.1	5.2	3.4	5.0	1.4
Nonwage Personal Income	217.339	219.914	222.310	226.551	227.747	231.640	233.577	236.148
% Ch, Annual Rate	4.1	4.8	4.4	7.9	2.1	7.0	3.4	4.5
Supplements to Wages and Salaries	50.838	51.206	51.922	52.387	53.027	53.717	54.404	55.049
% Ch, Annual Rate	10.7	2.9	5.7	3.6	5.0	5.3	5.2	4.8
Proprietor's Income	36.653	37.210	37.523	38.085	38.246	38.484	38.893	39.289
% Ch, Annual Rate	4.7	6.2	3.4	6.1	1.7	2.5	4.3	4.1
Farm	1.687	1.780	1.630	1.701	1.837	1.625	1.540	1.633
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	34.967	35.430	35.893	36.384	36.409	36.859	37.353	37.656
% Ch, Annual Rate	6.3	5.4	5.3	5.6	0.3	5.0	5.5	3.3
Less: Contribution For Govt. Soc. Ins.	38.399	38.673	39.368	39.679	40.454	40.990	41.523	42.079
% Ch, Annual Rate	17.1	2.9	7.4	3.2	8.0	5.4	5.3	5.5
Plus: Residence Adjustment	4.365	4.394	4.404	4.493	4.527	4.590	4.651	4.713
% Ch, Annual Rate	-1.9	2.7	0.9	8.4	3.0	5.7	5.4	5.4
Dividends/Int./Rent	99.822	101.074	102.472	104.627	103.337	105.560	105.875	107.023
% Ch, Annual Rate	4.7	5.1	5.6	8.7	-4.8	8.9	1.2	4.4
Transfer Payments	64.061	64.705	65.356	66.638	69.064	70.279	71.277	72.154
% Ch, Annual Rate	5.5	4.1	4.1	8.1	15.4	7.2	5.8	5.0
State U.I. Benefits	0.984	0.914	0.902	0.898	0.936	0.931	0.931	0.858
% Ch, Annual Rate	5.1	-25.6	-5.1	-1.8	17.6	-1.9	0.0	-27.8
Other Transfers	63.077	63.790	64.454	65.739	68.129	69.348	70.346	71.296
% Ch, Annual Rate	5.5	4.6	4.2	8.2	15.3	7.4	5.9	5.5

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	499.118	505.350	510.994	516.663	523.048	528.807	534.493	540.423
% Ch, Annual Rate	4.8	5.1	4.5	4.5	5.0	4.5	4.4	4.5
Total Wage and Salary Disbursements	260.945	265.101	268.195	271.408	274.813	278.005	281.238	284.534
% Ch, Annual Rate	5.9	6.5	4.8	4.9	5.1	4.7	4.7	4.8
Manufacturing	24.366	24.528	24.636	24.819	25.014	25.281	25.552	25.829
% Ch, Annual Rate	4.9	2.7	1.8	3.0	3.2	4.3	4.4	4.4
Durable Manufacturing	19.106	19.248	19.348	19.504	19.655	19.870	20.084	20.308
% Ch, Annual Rate	5.0	3.0	2.1	3.3	3.1	4.5	4.4	4.5
Nondurable Manufacturing	5.259	5.281	5.288	5.315	5.359	5.411	5.467	5.521
% Ch, Annual Rate	4.8	1.6	0.6	2.0	3.4	3.9	4.3	4.0
Nonmanufacturing	228.915	232.820	235.727	238.690	241.798	244.645	247.526	250.476
% Ch, Annual Rate	6.1	7.0	5.1	5.1	5.3	4.8	4.8	4.9
Other Private Wages	1.381	1.403	1.418	1.434	1.452	1.468	1.484	1.500
% Ch, Annual Rate	5.7	6.4	4.4	4.6	4.9	4.5	4.5	4.5
Farm Wages	1.703	1.739	1.766	1.794	1.824	1.852	1.881	1.910
% Ch, Annual Rate	8.0	8.8	6.3	6.5	6.9	6.3	6.3	6.3
Military Wages	4.580	4.611	4.648	4.671	4.726	4.759	4.795	4.819
% Ch, Annual Rate	3.4	2.7	3.3	2.0	4.8	2.8	3.1	2.0
Nonwage Personal Income	238.174	240.249	242.798	245.254	248.234	250.802	253.256	255.890
% Ch, Annual Rate	3.5	3.5	4.3	4.1	4.9	4.2	4.0	4.2
Supplements to Wages and Salaries	55.838	56.654	57.299	57.964	58.772	59.435	60.102	60.783
% Ch, Annual Rate	5.9	6.0	4.6	4.7	5.7	4.6	4.6	4.6
Proprietor's Income	38.565	38.130	38.212	38.224	38.210	38.200	38.172	38.256
% Ch, Annual Rate	-7.2	-4.4	0.9	0.1	-0.1	-0.1	-0.3	0.9
Farm	1.295	1.045	0.945	0.907	0.946	1.028	1.138	1.270
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	37.270	37.085	37.266	37.316	37.264	37.172	37.034	36.985
% Ch, Annual Rate	-4.0	-2.0	2.0	0.5	-0.6	-1.0	-1.5	-0.5
Less: Contribution For Govt. Soc. Ins.	42.704	43.210	43.560	43.936	44.555	44.942	45.336	45.744
% Ch, Annual Rate	6.1	4.8	3.3	3.5	5.8	3.5	3.6	3.6
Plus: Residence Adjustment	4.791	4.871	4.931	4.993	5.058	5.125	5.192	5.260
% Ch, Annual Rate	6.8	6.8	5.1	5.1	5.3	5.4	5.3	5.3
Dividends/Int./Rent	108.227	109.464	110.681	111.856	113.135	114.444	115.636	116.886
% Ch, Annual Rate	4.6	4.7	4.5	4.3	4.7	4.7	4.2	4.4
Transfer Payments	73.456	74.340	75.235	76.154	77.614	78.540	79.491	80.449
% Ch, Annual Rate	7.4	4.9	4.9	5.0	7.9	4.9	4.9	4.9
State U.I. Benefits	0.911	0.922	0.986	1.024	1.064	1.111	1.170	1.224
% Ch, Annual Rate	26.9	5.0	30.8	16.4	16.3	19.1	23.1	19.6
Other Transfers	72.546	73.418	74.249	75.130	76.550	77.429	78.320	79.225
% Ch, Annual Rate	7.2	4.9	4.6	4.8	7.8	4.7	4.7	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	547.065	553.349	559.875	566.487	574.259	581.548	588.746	596.043
% Ch, Annual Rate	5.0	4.7	4.8	4.8	5.6	5.2	5.0	5.1
Total Wage and Salary Disbursements	288.066	291.616	295.291	299.074	303.330	307.568	311.685	315.825
% Ch, Annual Rate	5.1	5.0	5.1	5.2	5.8	5.7	5.5	5.4
Manufacturing	26.133	26.439	26.769	27.121	27.504	27.889	28.254	28.613
% Ch, Annual Rate	4.8	4.8	5.1	5.4	5.8	5.7	5.3	5.2
Durable Manufacturing	20.555	20.801	21.069	21.356	21.666	21.981	22.282	22.580
% Ch, Annual Rate	5.0	4.9	5.3	5.6	5.9	5.9	5.6	5.5
Nondurable Manufacturing	5.578	5.638	5.700	5.764	5.838	5.908	5.971	6.032
% Ch, Annual Rate	4.2	4.4	4.4	4.6	5.2	4.9	4.3	4.2
Nonmanufacturing	253.600	256.763	260.022	263.379	267.138	270.901	274.561	278.263
% Ch, Annual Rate	5.1	5.1	5.2	5.3	5.8	5.8	5.5	5.5
Other Private Wages	1.518	1.535	1.553	1.571	1.591	1.612	1.631	1.651
% Ch, Annual Rate	4.7	4.6	4.7	4.7	5.4	5.2	4.9	4.9
Farm Wages	1.940	1.971	2.002	2.034	2.070	2.106	2.141	2.175
% Ch, Annual Rate	6.6	6.5	6.5	6.6	7.3	7.1	6.7	6.6
Military Wages	4.875	4.908	4.945	4.969	5.026	5.061	5.099	5.124
% Ch, Annual Rate	4.7	2.8	3.0	2.0	4.6	2.8	3.0	2.0
Nonwage Personal Income	258.999	261.733	264.585	267.413	270.929	273.980	277.061	280.218
% Ch, Annual Rate	4.9	4.3	4.4	4.3	5.4	4.6	4.6	4.6
Supplements to Wages and Salaries	61.609	62.312	63.013	63.709	64.560	65.303	66.035	66.757
% Ch, Annual Rate	5.5	4.6	4.6	4.5	5.4	4.7	4.6	4.4
Proprietor's Income	38.303	38.413	38.512	38.585	38.659	38.741	38.847	38.973
% Ch, Annual Rate	0.5	1.2	1.0	0.8	0.8	0.9	1.1	1.3
Farm	1.406	1.523	1.604	1.641	1.642	1.614	1.569	1.522
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.897	36.890	36.908	36.944	37.017	37.127	37.278	37.451
% Ch, Annual Rate	-0.9	-0.1	0.2	0.4	0.8	1.2	1.6	1.9
Less: Contribution For Govt. Soc. Ins.	46.404	46.857	47.331	47.820	48.616	49.183	49.727	50.273
% Ch, Annual Rate	5.9	4.0	4.1	4.2	6.8	4.7	4.5	4.5
Plus: Residence Adjustment	5.330	5.400	5.473	5.546	5.628	5.710	5.787	5.865
% Ch, Annual Rate	5.4	5.4	5.5	5.5	6.1	5.9	5.5	5.5
Dividends/Int./Rent	118.192	119.565	121.085	122.614	124.182	125.820	127.447	129.133
% Ch, Annual Rate	4.5	4.7	5.2	5.1	5.2	5.4	5.3	5.4
Transfer Payments	81.970	82.899	83.833	84.777	86.516	87.589	88.673	89.763
% Ch, Annual Rate	7.8	4.6	4.6	4.6	8.5	5.1	5.0	5.0
State U.I. Benefits	1.280	1.326	1.378	1.436	1.486	1.541	1.590	1.647
% Ch, Annual Rate	19.7	15.0	16.8	17.8	14.8	15.5	13.4	15.0
Other Transfers	80.690	81.573	82.454	83.341	85.029	86.048	87.082	88.116
% Ch, Annual Rate	7.6	4.5	4.4	4.4	8.4	4.9	4.9	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	102.8	1.5	2.367	1.6	2.460	1.8
2015	103.0	0.2	2.370	0.1	2.494	1.4
2016	104.1	1.0	2.400	1.3	2.550	2.3
2017	105.9	1.8	2.451	2.1	2.628	3.0
2018	108.1	2.1	2.511	2.4	2.711	3.2
Forecast						
2019	109.7	1.5	2.556	1.8	2.783	2.6
2020	112.0	2.1	2.612	2.2	2.851	2.4
2021	114.3	2.0	2.668	2.2	2.912	2.2
2022	116.6	2.0	2.727	2.2	2.976	2.2
2023	118.8	1.9	2.785	2.2	3.040	2.2

* 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	104.8	2.4	102.9	1.9	98.3	-0.5	93.5	-3.8
2015	106.7	1.8	104.1	1.1	69.8	-29.0	68.7	-26.6
2016	109.1	2.3	103.0	-1.0	58.0	-17.0	61.0	-11.1
2017	111.8	2.4	102.9	-0.1	66.9	15.3	68.9	12.8
2018	114.9	2.7	103.4	0.5	80.8	20.9	78.0	13.3

Forecast

2019	117.4	2.3	104.8	1.3	76.2	-5.7	74.6	-4.4
2020	120.6	2.7	106.6	1.7	72.7	-4.6	73.1	-2.0
2021	124.0	2.8	108.7	2.0	72.3	-0.5	72.3	-1.1
2022	127.3	2.7	110.6	1.8	73.3	1.4	72.8	0.8
2023	130.6	2.6	112.6	1.8	74.8	2.0	74.0	1.5

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	August 2019	unchanged
U.S. Real GDP Growth	2nd quarter 2019	-
U.S. ISM Index	September 2019	-
U.S. Employment YOY%Δ	August 2019	-
U.S. Unemployment Rate	August 2019	unchanged
U.S. Consumer Confidence	September 2019	-
U.S. Consumer Sentiment	September 2019	+
U.S. Light Vehicle Sales	August 2019	+
U.S. CPI YOY%Δ	August 2019	unchanged
U.S. Home Prices YOY%Δ	July 2019	-
S&P 500 Index	September 2019	+
WA Leading Index	August 2019	-
WA ISM-WW Index	August 2019	-
WA Employment YOY%Δ	August 2019	-
WA Aerospace Empl. YOY%Δ	August 2019	-
WA Unemployment Rate	August 2019	unchanged
WA Help Wanted Index	August 2019	-
WA Business Cycle Indicator	August 2019	-
WA Initial Unemploy. Claims	August 2019	-
WA Housing Permits	August 2019	-
WA Weekly Hours in Mfg.	August 2019	+
WA New Vehicle Registration	August 2019	+
WA In-Migration	August 2019	+
WA Exports-Total YOY%Δ	2nd quarter 2019	-
WA Exports- w/o Trans. Equip. YOY%Δ	2nd quarter 2019	-
Seattle CPI YOY%Δ	August 2019	-
Seattle Home Prices YOY%Δ	July 2019	+
WA Construction Activity Index	August 2019	-

*Change from the previous reading

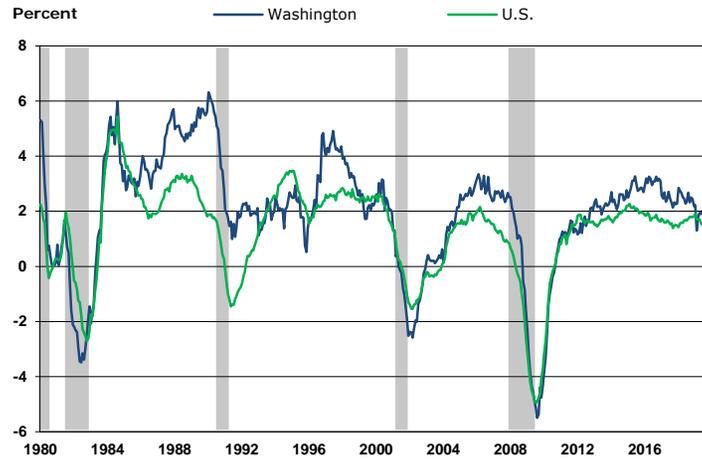
Table A6.2
Washington Business Indicators
 Historical Data

	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	113.6	92.0	48.3	93.9	118.2	63.5	51.8
2014:02	113.9	92.5	46.9	94.7	118.5	68.7	54.3
2014:03	114.5	93.4	47.4	95.1	118.6	63.6	54.4
2014:04	115.1	93.5	49.8	96.3	120.6	53.7	55.3
2014:05	115.3	94.0	50.2	95.9	118.7	59.6	55.6
2014:06	116.2	94.7	50.6	95.4	121.0	67.0	55.7
2014:07	116.9	95.2	51.8	97.9	121.3	50.1	56.4
2014:08	116.7	95.5	52.0	96.5	121.6	62.9	58.1
2014:09	116.8	96.1	52.1	99.0	114.3	60.3	56.1
2014:10	117.1	96.4	52.1	98.4	119.0	57.6	57.9
2014:11	118.0	96.8	54.1	100.2	128.0	63.1	57.6
2014:12	117.8	97.3	54.6	101.2	122.0	53.3	55.1
2015:01	118.4	97.4	55.4	103.9	127.6	66.6	53.5
2015:02	119.4	97.4	60.2	107.6	137.2	65.9	52.9
2015:03	118.8	97.9	59.4	104.1	138.8	64.1	51.5
2015:04	118.9	98.4	59.3	102.5	135.7	60.4	51.5
2015:05	119.4	98.8	59.2	102.8	139.0	60.3	52.8
2015:06	119.7	99.3	59.4	103.1	136.0	51.4	53.5
2015:07	119.5	99.1	61.1	103.2	141.0	53.6	52.7
2015:08	119.4	99.1	60.3	104.7	139.1	48.0	51.1
2015:09	118.5	99.0	59.4	104.5	126.6	48.0	50.2
2015:10	118.9	99.4	60.6	103.2	132.4	46.1	50.1
2015:11	119.1	99.8	60.9	103.6	134.3	50.0	48.6
2015:12	119.3	99.6	63.2	105.9	130.7	54.5	48.0
2016:01	118.9	99.3	64.2	106.1	128.7	57.2	48.2
2016:02	119.3	99.2	65.9	107.2	124.9	55.4	49.7
2016:03	119.7	99.2	63.2	106.9	128.9	55.7	51.7
2016:04	120.7	99.7	63.8	108.0	130.9	50.8	50.7
2016:05	121.5	99.5	66.1	108.2	148.2	49.2	51.0
2016:06	121.8	99.8	66.7	109.1	151.3	49.1	52.8
2016:07	122.2	100.2	68.1	108.7	156.3	50.8	52.3
2016:08	121.8	100.2	67.1	106.3	153.1	47.7	49.4
2016:09	122.5	100.4	67.5	110.9	143.4	51.4	51.7
2016:10	122.7	100.5	69.0	111.5	152.3	53.1	52.0
2016:11	122.4	100.7	70.6	112.0	148.8	53.3	53.5
2016:12	122.2	101.2	71.5	113.1	149.2	47.3	54.5
2017:01	122.9	101.8	70.2	111.2	152.5	54.2	56.0
2017:02	122.4	102.1	69.1	111.9	140.1	48.6	57.7
2017:03	123.2	102.6	70.6	111.6	143.4	59.2	57.2
2017:04	123.5	102.8	69.7	112.0	143.3	59.2	54.8
2017:05	124.3	103.2	71.1	112.7	149.2	45.0	54.9
2017:06	124.8	103.8	70.5	113.2	145.4	50.0	57.8
2017:07	125.0	104.1	70.8	113.8	139.5	47.0	56.3
2017:08	125.4	104.5	72.1	114.1	135.1	58.2	58.8
2017:09	125.8	104.5	73.6	113.5	140.4	57.5	60.8
2017:10	126.6	105.9	74.2	117.0	132.7	51.8	58.7
2017:11	126.7	106.3	76.8	117.2	134.7	65.0	58.2
2017:12	127.3	107.1	76.0	116.4	138.6	65.8	59.7
2018:01	127.6	107.8	75.7	116.0	136.8	60.8	59.1
2018:02	128.3	108.5	76.7	117.8	133.3	68.3	60.8
2018:03	129.0	108.8	77.6	119.9	137.4	68.0	59.3
2018:04	129.0	109.3	76.8	116.9	133.7	55.8	57.3
2018:05	127.8	109.4	77.4	115.6	128.0	61.7	58.7
2018:06	127.7	110.0	77.0	117.2	123.1	56.0	60.2
2018:07	127.8	110.4	76.8	115.9	124.8	60.0	58.1
2018:08	127.8	110.9	75.8	117.4	123.4	61.1	61.3
2018:09	128.5	111.5	76.7	116.4	131.5	62.7	59.8
2018:10	128.9	111.4	77.6	117.9	129.3	55.0	57.7
2018:11	128.7	111.5	78.7	118.9	127.8	60.0	59.3
2018:12	129.2	111.3	78.6	119.6	131.2	52.7	54.1
2019:01	129.6	111.3	78.6	119.2	133.0	54.5	56.6
2019:02	126.7	111.5	73.9	114.3	131.9	61.1	54.2
2019:03	129.5	111.7	76.2	119.9	125.6	57.8	55.3
2019:04	129.8	111.8	76.5	120.8	125.5	54.0	52.8
2019:05	129.2	111.7	75.9	119.6	124.0	54.0	52.1
2019:06	129.5	111.7	75.3	118.6	122.8	56.7	51.7
2019:07	130.7	112.1	75.3	121.3	122.5	57.0	51.2
2019:08	129.7	112.1	74.3	118.7	122.0	56.0	49.1

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

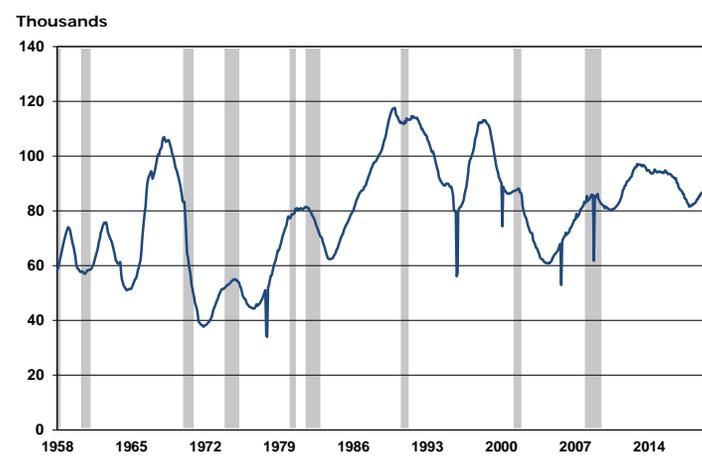
January 1980 to August 2019



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

Washington Aircraft and Parts Employment

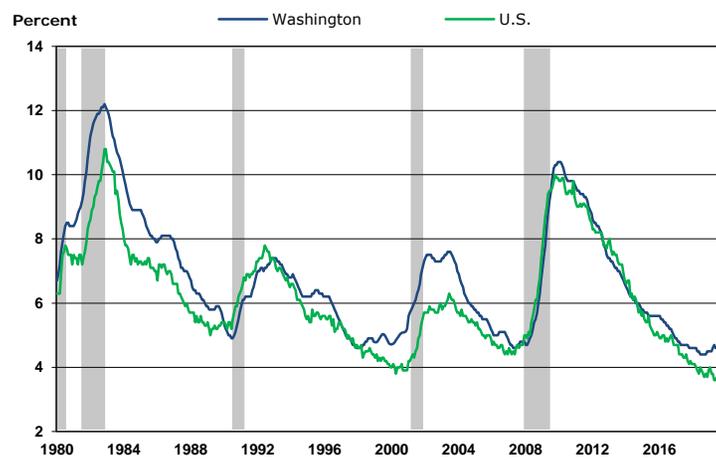
January 1958 to August 2019



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

January 1980 to August 2019



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to August 2019

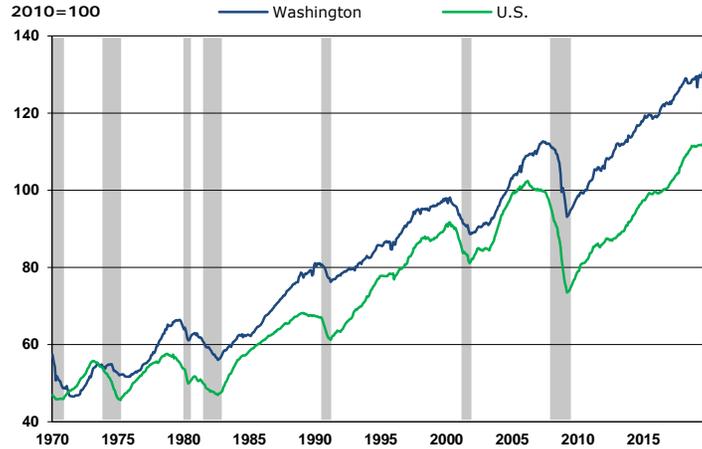


* Source: ERFC

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

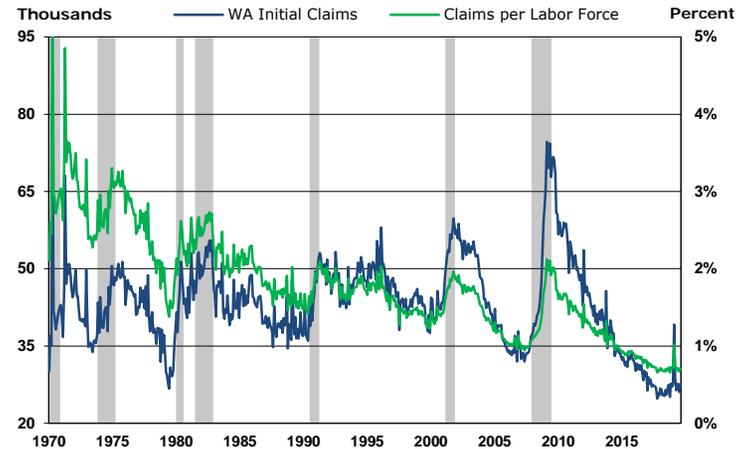
January 1970 to August 2019



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

January 1970 to August 2019, S.A.



* Source: WA State Employment Security, ERFC

Washington State Help Wanted Index

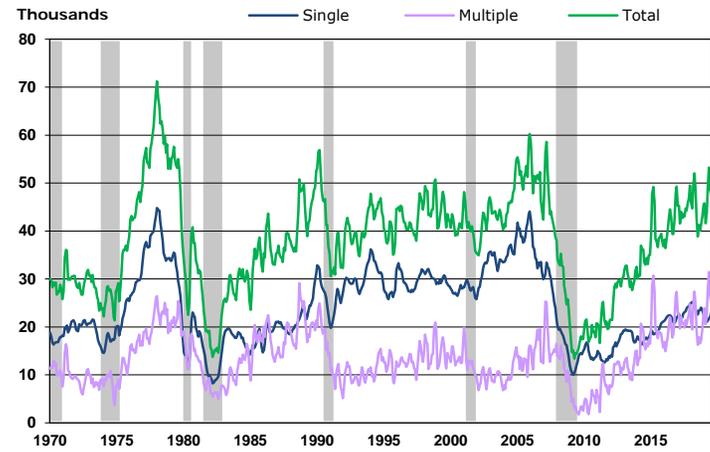
January 1964 to August 2019



* Source: The Conference Board, ERFC

Housing Units Authorized in Washington State

January 1970 to August 2019, 3mma, SAAR

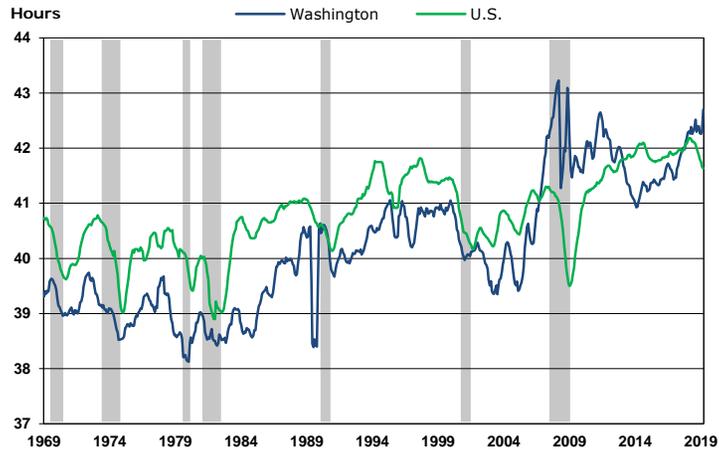


* Source: Census Bureau, ERFC

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

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



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

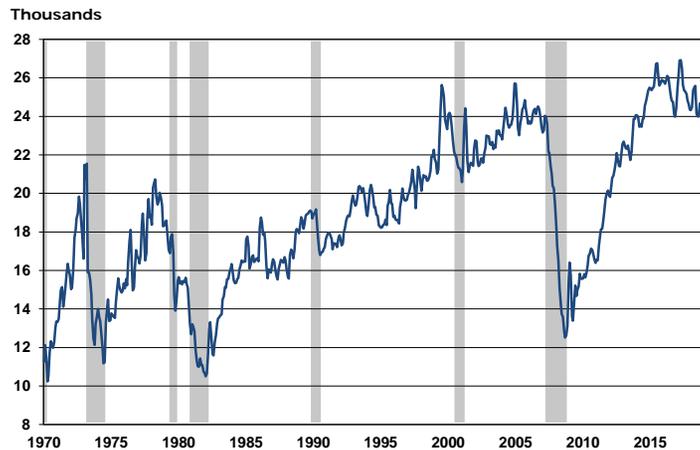
January 1988 to August 2019, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

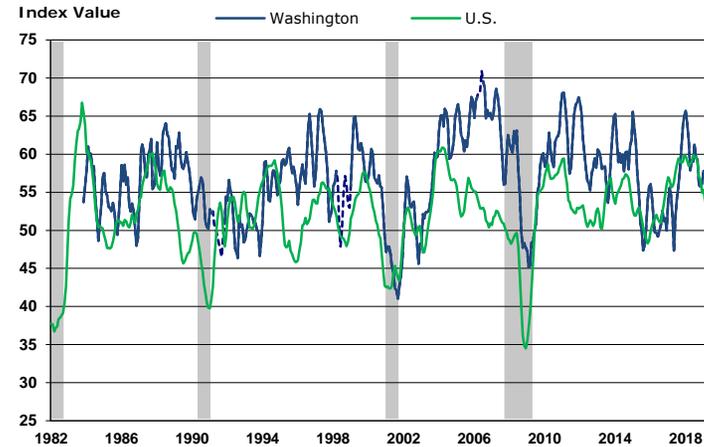
September 1970 to August 2019, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

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

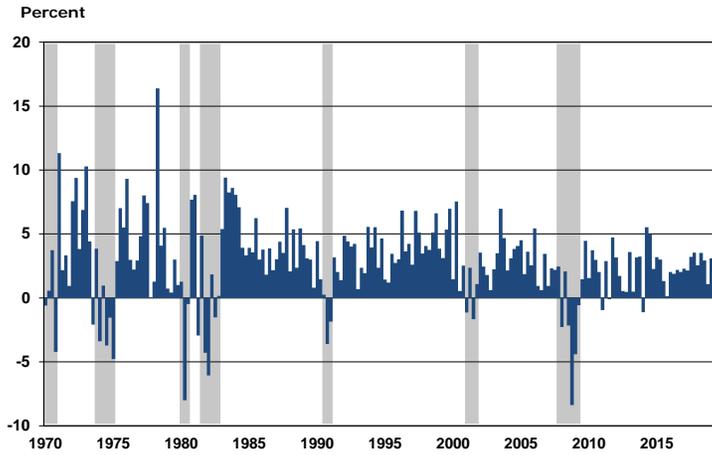


* Source: Institute for Supply Management, ISM-WW, ERFC

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

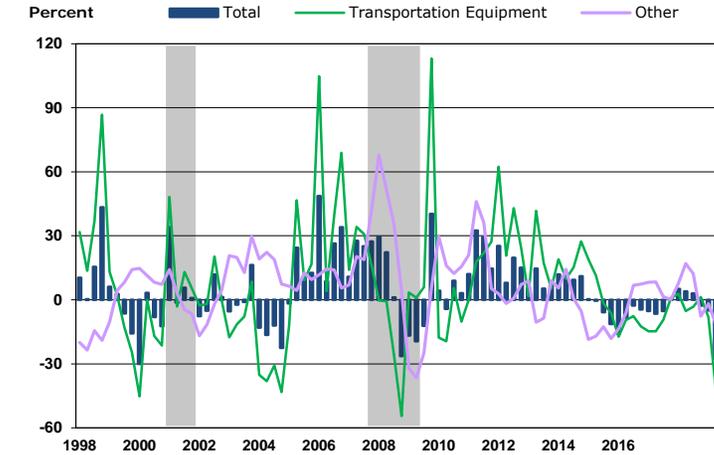
1970Q1 to 2019Q2, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

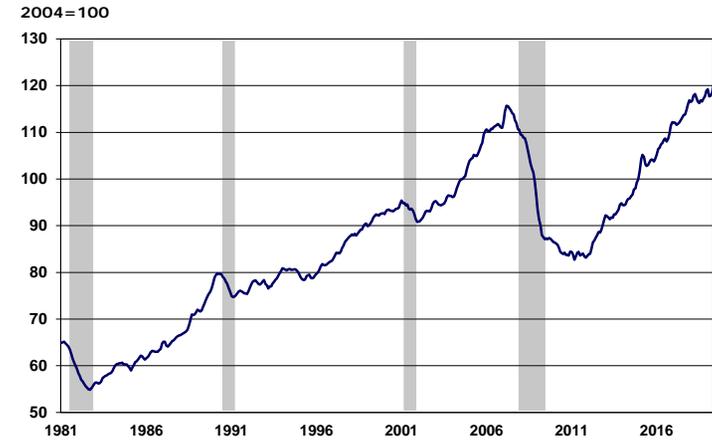
1998Q1 to 2019Q2, Year-over-year percent change



* Source: WISER

Washington State Construction Index

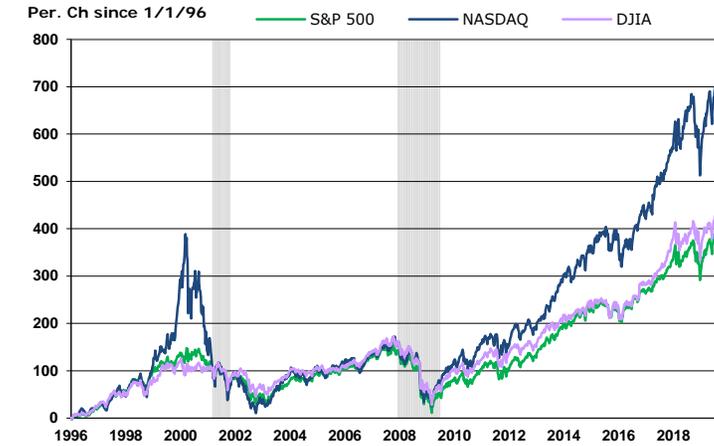
January 1981 to August 2019, 3mma



* Source: ERFC

National Stock Indexes

January 1, 1996 to September 23, 2019

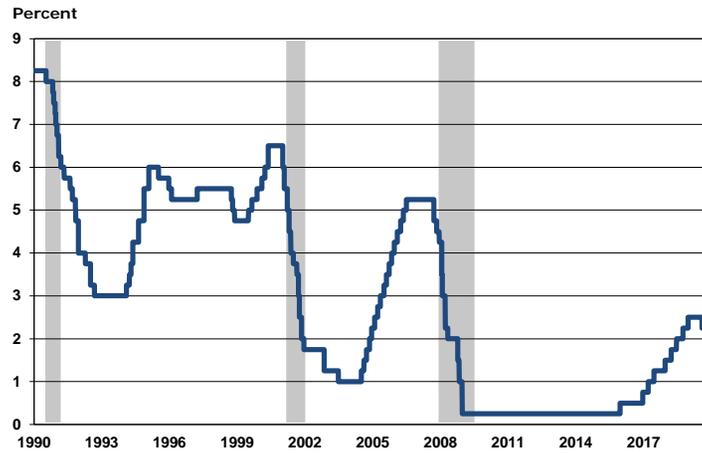


* Source: ERFC

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

Federal Funds Target Rate

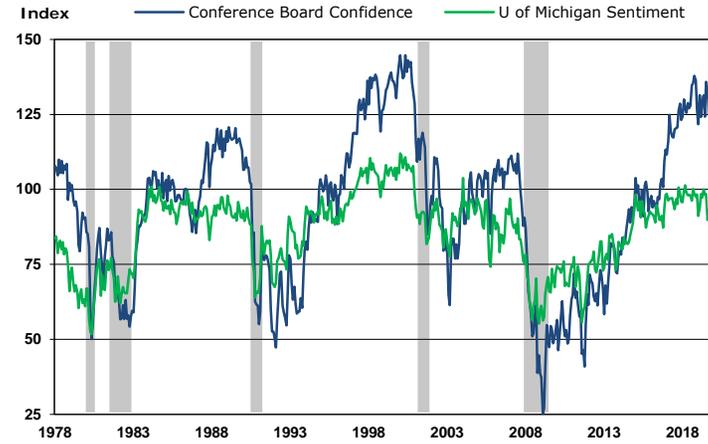
January 1, 1990 to August 20, 2019



* Federal Reserve

Consumer Confidence

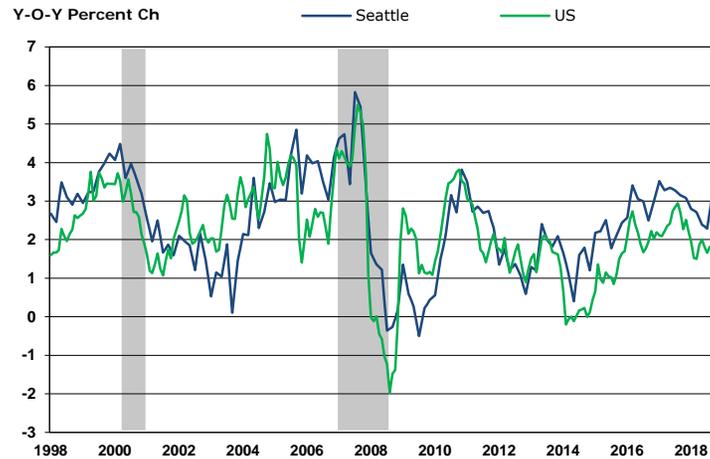
March 1978 to September 2019



* Source: The Conference Board, University of Michigan

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

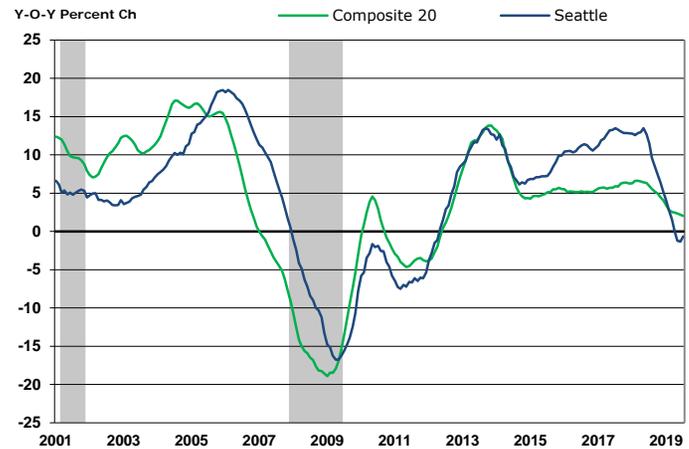
December 1998 to August 2019



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to July 2019, SA



* Source: Case Shiller, ERFC

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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 and the Washington Opportunity Pathways 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.