

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

February 2018
Volume XLI, No. 1



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

February 2018
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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 February 28, 2018.

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Executive Summary

- **The national economy continues to expand at a moderate pace. Real GDP rose 2.5% (SAAR) in the fourth quarter after growing 3.2% (SAAR) in the third quarter.**
- **The forecast for real GDP growth in 2018 was increased from 2.5% to 2.7% and 2019 growth was increased from 2.1% to 2.4%. Growth for 2020 and 2021 remained unchanged at 2.1% and 2.0%. The forecast calls for growth of 2.0% and 2.1% in 2022 and 2023.**
- **This forecast incorporates the impacts of the federal Tax Cut and Jobs Act, which were not included in the November forecast.**
- **Washington employment, income, and population are all growing much faster than the corresponding national averages.**
- **The forecast assumes the worst of the aerospace job cuts are over however electronic shopping employment growth will slow.**
- **As in November, we expect the Washington economy to continue to outperform the U.S. economy.**
- **Revenue collections since the November 2017 forecast have come in \$185 million over the forecasted amount.**
- **Forecasted General Fund-State revenue has increased by \$647 million in the current biennium and \$671 million in the 2019-21 biennium.**
- **Much of the forecast increase stemmed from property taxes, which saw an increase of \$374 million over the two biennia due mainly to the final appraisal of taxable property values for the 2018 levy.**
- **Most of the remaining forecast increases were from retail sales, business and occupation and real estate excise taxes.**

U.S. Economic Forecast

The national economy continues to expand at a moderate pace

The national economy continues to expand at a moderate pace. Real GDP rose 2.5% (SAAR) in the fourth quarter after growing 3.2% in the third quarter of the year. Job gains have remained solid even as the economy reaches full employment. The unemployment rate remains low. Consumer and business confidence have improved and are now at cyclical highs. The housing market continues to improve. Oil prices have increased

but remain well below pre-recession levels. The federal tax cut should provide a short-term boost to the economy. Monetary policy has remained steady and we do not expect a shift under the new leadership. The global economy has improved. Geopolitical risks, while elevated, have had little impact on the U.S. economy.

The economic outlook has improved

The economic outlook is stronger than the November forecast. Our February forecast for real GDP growth in 2018 was increased from 2.5% to 2.7% and 2019 growth was increased from 2.1% to 2.4%. Growth for 2020 and 2021 remained unchanged at 2.1% and 2.0%. The forecast calls for growth of 2.0% and 2.1% in 2022 and 2023 (see Figure 1.4). This forecast incorporates the impacts of the federal Tax Cut and Jobs Act, which were not included in the November forecast.

The fiscal policy outlook incorporates the impacts of the federal tax cut

The February economic forecast incorporates the impacts of the federal Tax Cut and Jobs Act (TCJA), which were not included in the November forecast. The TCJA cuts reduce individual and business tax rates while broadening the corresponding tax bases. It costs \$1.5 trillion over 10 years. IHS Markit estimates that by 2021 the boost to real GDP growth will be between 0.1 and 0.3 percentage points per year. The unemployment rate is expected to be 0.25 percentage points lower, bringing modest upward pressure on inflation. The stimulus to domestic demand will be partially offset by tighter monetary policy. The tax cuts now included in the forecast will reduce personal tax receipts throughout the forecast.

Washington Economic Forecast

The Washington economy is expanding at a rapid pace

The Washington economy is expanding at a rapid pace. Washington employment, income, and population are all growing much faster than the corresponding national averages. Washington unemployment remains near a historic low. Seattle home prices continue to rise very rapidly and housing construction remains strong. Washington exports are rising for the first time in nearly three years and manufacturing is growing. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

The February forecast for Washington State is generally stronger than the November forecast

The February forecast for Washington State is generally stronger than the November forecast. Washington employment is expected to grow 2.2% this year, which is slightly lower than the 2.4% expected in the November forecast. However, we expect employment growth to average 1.6% per year in 2019 through 2021, which is slightly more than the 1.4% average rate in the November forecast. Our forecast for nominal personal income growth this year is 5.0%, up from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2019 through 2021 averages 5.3% per year which is the same rate as expected in the November forecast. The February

housing construction forecast is slightly higher than the forecast adopted in November. We expect total housing units authorized by building permits to average 43,200 units this year compared to 41,800 in the November forecast. We expect permits to average 42,800 during the next three years compared to 42,400 in November. We expect the all-items Seattle CPI to rise 3.1% this year, up from 2.5% in the November forecast. We expect Seattle area inflation will average 2.3% per year in 2019 through 2021, which is the same rate expected in the November forecast.

Revenue Forecast

The revenue forecast has increased due to stronger than expected tax receipts, changes to the economic forecast and increased taxable property values

Since the November 2017 forecast, General Fund – State (GF-S) revenue collections have come in much higher than forecasted. Much of the collection surplus came from real estate excise taxes, which have continued to exceed expectations. Most of the rest came from stronger than expected retail sales and business and occupation taxes. The large collection surplus, coupled with increases in disposable personal income and other changes to the economic forecast, has resulted in an increase in forecasted revenue larger than most over the last several years. Much of this increase also stemmed from an increase in expected property taxes, the chief cause of which was a larger-than-expected final appraisal of taxable property values for the 2018 levy.

GF-S forecast change by biennium (millions):

*17-19: +\$647
19-21: +\$671*

In the current biennium, revenue sources that are tracked monthly came in \$184.9 million higher than forecasted in November. Changes to the economic forecast resulted in a \$462.2 million increase to projected collections for the rest of the biennium. The total of these components was a \$647.0 million increase in projected revenue for the current 2017-19 biennium. Changes to the economic forecast resulted in a \$671.2 million increase to projected collections for the 2019-21 biennium. The forecast for GF-S revenue totals \$44,212.9 million in the 2017-19 biennium and \$48,253.4 million in the 2019-21 biennium. The forecast period has now been extended through the 2021-23 biennium. Forecasted GF-S revenue for the biennium is \$51,932.0 million.

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

- **The national economy continues to expand at a moderate pace. Real GDP rose 2.5% (SAAR) in the fourth quarter after growing 3.2% (SAAR) in the third quarter.**
- **Employment growth has been solid and unemployment is low.**
- **Consumer and business confidence remain high.**
- **The manufacturing sector is strong and construction appears to be improving.**
- **Oil prices have increased recently.**
- **Inflation remains moderate.**
- **The forecast for real GDP growth in 2018 was increased from 2.5% to 2.7% and 2019 growth was increased from 2.1% to 2.4%. Growth for 2020 and 2021 remained unchanged at 2.1% and 2.0%. The forecast calls for growth of 2.0% and 2.1% in 2022 and 2023.**
- **This forecast incorporates the impacts of the federal Tax Cut and Jobs Act, which were not included in the November forecast.**
- **Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A slowdown in global growth is the major downside risk.**

Current Conditions

The national economy continues to expand at a moderate pace

The national economy continues to expand at a moderate pace. Real GDP rose 2.5% (SAAR) in the fourth quarter after growing 3.2% in the third quarter of the year. Job gains have remained solid even as the economy reaches full employment. The unemployment rate remains low. Consumer and business confidence have improved and are now at cyclical highs. The housing market continues to improve. Oil prices have increased but remain well below pre-recession levels. The federal tax cut should provide a short-term boost to the economy. Monetary policy has remained steady and we do not expect a shift under the new leadership. The global economy has improved. Geopolitical risks, while elevated, have had little impact on the U.S. economy.

U.S. real GDP rose 2.5% (SAAR) in the fourth quarter

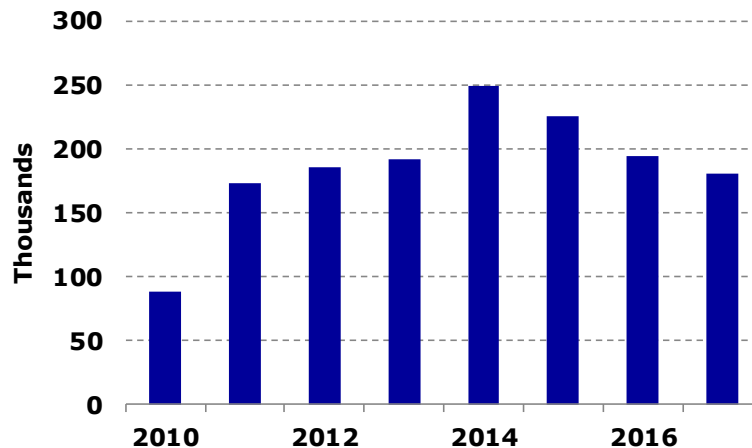
U.S. real GDP rose 2.5% (SAAR) in the fourth quarter of 2017 after growing 3.2% (SAAR) in the third quarter. For all of 2017, Real GDP increased 2.7%. Growth in consumer spending accelerated in the fourth quarter. Spending increased at a 3.8% rate (SAAR), adding 2.6 percentage points to growth, more than all of the increase in GDP. Fixed investment growth was robust in the fourth quarter, growing 8.1% (SAAR) and adding 1.3 percentage points to GDP growth. Residential investment rebounded from a 4.7% (SAAR) decline in the third quarter to 13.0% (SAAR) in the fourth quarter. Equipment investment was also very strong, increasing at an 11.8% (SAAR) rate. Nonresidential structures and investment in intellectual property remained positive, increasing at a 2.5% (SAAR) rate and a 2.4% (SAAR) rate respectively. Inventory investment was a major drag on growth, subtracting 0.7 points from overall growth. Final sales, which exclude the impact of inventories, increased 3.3% (SAAR). Government spending was positive with growth in national defense spending and state and local governments. Net exports were the largest drag on overall growth in the fourth quarter, subtracting 1.1 percentage points. Strong growth in exports of 7.1% (SAAR) was not enough to offset the surge from imports, which grew 14.0% (SAAR). Real disposable income grew just 1.1% (SAAR) after a 0.7% increase in the third quarter.

Employment growth has remained solid

The trend in employment growth remains solid. Nonfarm payrolls increased 200,000 in January after increasing 160,000 in December. For all of 2017, the U.S. economy added 2.17 million jobs, an increase of 1.5%. This corresponds to an average

Figure 1.1: Average U.S. Monthly Employment Change

Job gains are lower than previous years but remain solid



Source: U.S. BLS; data through 2017

monthly job gain of 181,000 (see Figure 1.1). In January, the goods-producing sector increased 57,000 with gains in construction (+36,000) and durable manufacturing (+18,000),

and mining and logging (+6,000). Nondurable goods manufacturing declined by 3,000 jobs. Private service-providing industries increased 139,000 in January. Sectors with the highest job gains were education and health services (+38,000) and leisure and hospitality (+35,000). Professional and business services were strong (+23,000) even as temporary help services slowed (+1,800). Retail trade gained 15,300 jobs due to strong growth in clothing stores (+15,100). The information sector lost 6,000 jobs and utilities declined 1,400. The unemployment rate remain at 4.1% in January and is at the lowest level since the end of 2000.

Consumer attitudes remain strong

Consumer attitudes are improving off an already high level. In February, the Conference Board measure of consumer confidence increased 6.5 points to 130.8. Confidence is now at the highest level since November 2000. Consumers reported that they are pleased with the job market and businesses reported good business conditions. The present conditions component continues to soar. Future expectations also rose in February, but posted a much more modest gain. The University of Michigan Consumer Sentiment Index increased by 4.2 points to 99.9 in February. Consumers rated both their current conditions and future expectations more favorably.

Small business confidence remains high

Small business confidence remains high. The National Federation of Independent Business (NFIB) Index of Small Business Optimism increased 2.0 points to 106.9 in January. This is down slightly from 107.5 reached in November, but remains one of the strongest readings in the 45-year history of the survey. Good economic conditions were cited as the top reason for the optimistic outlook. The details of the January survey were mixed, with six of the ten index components posting a gain. Job creation was solid and plans to increase worker compensation increased. Capital expenditure plans improved slightly. Sixty-one percent of businesses reported capital outlays. Both actual sales and sales expectations have weakened yet remain positive. Quality of labor has now surpassed taxes as the most cited concern for small businesses. Labor markets for both skilled and unskilled workers are tight. Almost half of small businesses reported few or no qualified applicants for the positions they were trying to fill. Businesses are responding by raising compensation. Businesses reported that they are raising worker compensation or plan to do so in the near future.

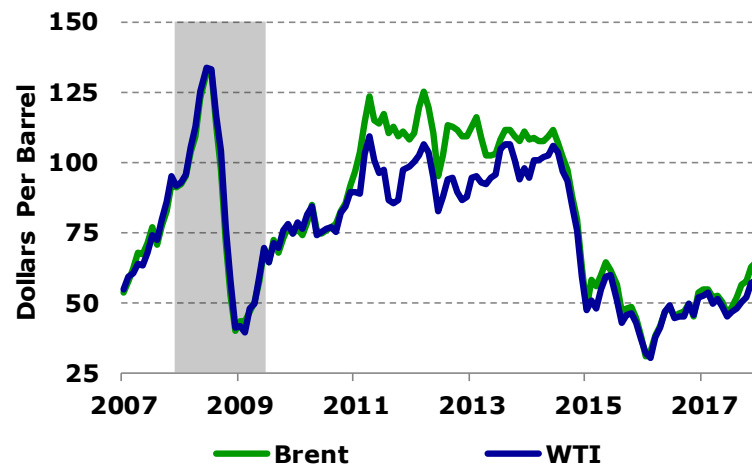
Oil prices are increasing

Oil prices have moved up recently. West Texas Intermediate (WTI) reached \$64 per barrel in January, up from \$58 in November. Brent crude oil was \$69 per barrel in January, up from \$64 in the prior month. Both prices are up from last year (see Figure 1.2). Internationally, the Organization of Petroleum Exporting Countries' (OPEC) is attempting to reduce supply by cutting output. While this has led to an increase in prices, U.S. production has ramped up in response. U.S. crude production

increased 384,000 barrels per day since last month and is nearing an all-time high. The U.K. is also set to become a net crude oil exporter in the near future. This would further limit the influence of OPEC. There is additional uncertainty surrounding oil markets as well. Saudi Arabia is under new leadership at a time when it must navigate the dwindling influence of OPEC. The Venezuelan military has taken over its country's state run oil production. The lack of expertise and corruption has led to a sharp drop in output. In addition, the Trump administration is threatening to embargo Venezuelan oil.

Figure 1.2: Crude Oil Prices

Oil prices have increased recently but remain below post-recession highs



Source: U.S. EIA; data through January 2018

Inflation remains tame

Headline inflation took a surprise jump in January. The Consumer Price Index (CPI) increased 0.5% over the month. Despite the increase, fears of higher inflation right around the corner may be overblown. The CPI is still up only 2.1% since last year, the same annual increase as in December, and lower than the 2.2% inflation in November. Much of the increase in January was due to an increase in gasoline prices. Energy prices increased 2.7% in January, and are now up 5.6% since last year. Food price inflation is starting to pick up but remains modest. Prices were up 0.3% over the month and are up 1.7% from last year. Shelter costs continue to be a driver of overall price inflation. Shelter costs increased 0.2% in January and are now up 3.2% year over year. Core inflation, which excludes food and energy, increased 0.3% in January. Year-over-year core inflation remains modest at 1.8%.

The housing market is showing signs of improvement

The housing market is showing signs of improvement to start the year. Housing starts increased 9.7% in January led by strong growth in the multi-family segment. Single-family starts increased 3.7% while multi-family starts increased 19.7%. Housing starts are up 7.3% from a year ago. The multi-family segment, while somewhat sporadic, appears to have fully recovered from the housing downturn. Housing permits also

increased in January. Total permits increased 7.4%, also led by multi-family. Single-family permits are up 8.8% while multi-family permits are up 1.2% since last year. Much like housing starts, multi-family permits have essentially recovered from the housing downturn. New home sales had a weak start to the year, falling 7.8% since December. New home sales are now down 1.0% since last year. The number of new homes for sale increased 2.4% in January. The inventory-to-sales ratio increased to 6.1 months, up from a 5.1-month supply in December. Homebuilder confidence held steady at 72 in January and remains healthy. The National Association of Homebuilders (NAHB) Housing Market Index measures confidence of homebuilders (readings above 50 indicate a positive view of conditions). Current sales conditions declined 1 point to 78 while sales expectations rose 2 points to 80.

Home price appreciation remains strong

Home price appreciation is strong. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.6% over the month in December. Home prices are now 6.3% higher than a year ago. Home prices appear to be picking up steam. Prices have increased 46.1% since the trough in prices, and are now only 0.4% below their previous peak. Rising prices encourage new construction and are contributing to the high level of homebuilder confidence. Home price appreciation also enables previously underwater homeowners to sell their homes and trade up for more expensive houses. Mortgage rates are starting to climb (see Figure 1.3). The average rate for a fixed 30-year mortgage has risen 45 basis points since the beginning of the year. The average rate on the 30 year fixed loan was 4.33% in February.

Figure 1.3: U.S. Average 30-Year Fixed Mortgage Rate

Mortgage rates are starting to climb



Source: Freddie Mac; data through February 2018

Manufacturing sector remains strong

The manufacturing sector remains strong, but growth is no longer accelerating. The Institute of Supply Management (ISM) Report on Business indicated strong growth despite a slight

slowing in in the manufacturing sector in January. The index declined to 59.1 from 59.7 (index levels above 50 indicate expansion). The new orders component decreased by 2.0 points but remains strong at 65.4. Production fell 0.7 points to 64.5. The latest G-17 report from the Federal Reserve indicates manufacturing output was unchanged for the second consecutive month. The production of durable goods increased 0.2% while nondurable goods were unchanged. Manufacturing output is now 1.8% higher than last year. New orders for core capital goods (nondefense capital goods excluding aircraft) declined 0.3% in December after increasing by 0.2% the month before. New orders are now 5.3% above year-ago levels.

U.S. exports are growing

U.S. exports increased in the fourth quarter by 7.8% year over year. Aerospace exports declined 3.2% year over year. Petroleum and coal exports again increased 30.4% from a year ago. Oil and gas exports continue to surge, up 130.7% from last year. Global economic growth has picked up, increasing demand for U.S. products. The U.S. dollar remains weaker than last year, making U.S. exports more affordable. Exports to the rest of North America picked up in the fourth quarter. Exports to Canada increased 10.7% while exports to Mexico were up 8.2%. Exports to China and Japan, our third and fourth largest trading partners, increased 8.2% and 5.6% respectively.

Forecast

Our forecast is based on the January Blue Chip Consensus forecast

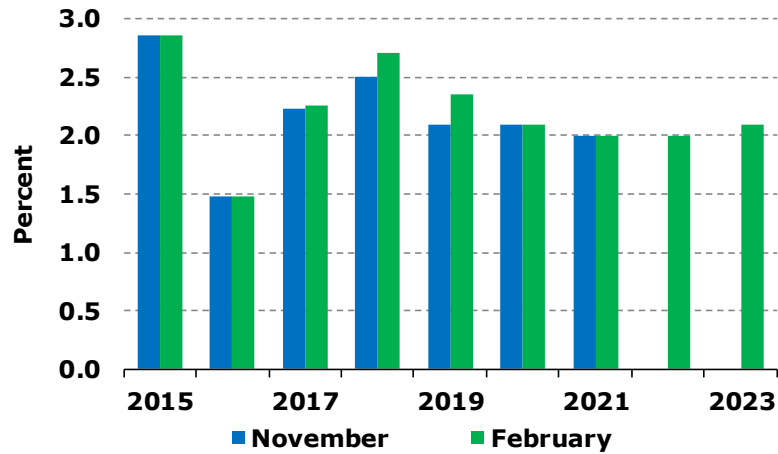
The economic forecast was based on a modified version of the February IHS Markit (formerly Global Insight) control forecast for the U.S. economy. Consistent with our standard practice, the U.S. real GDP forecast was adjusted to match the January Blue Chip Consensus GDP forecasts for 2018 and 2019. We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

The economic outlook has improved

The economic outlook is stronger than the November forecast. Our February forecast for real GDP growth in 2018 was increased from 2.5% to 2.7% and 2019 growth was increased from 2.1% to 2.4%. Growth for 2020 and 2021 remained unchanged at 2.1% and 2.0%. The forecast calls for growth of 2.0% and 2.1% in 2022 and 2023 (see Figure 1.4). This forecast incorporates the impacts of the federal Tax Cut and Jobs Act, which were not included in the November forecast.

Figure 1.4: Real GDP Growth

Real GDP growth is slightly higher



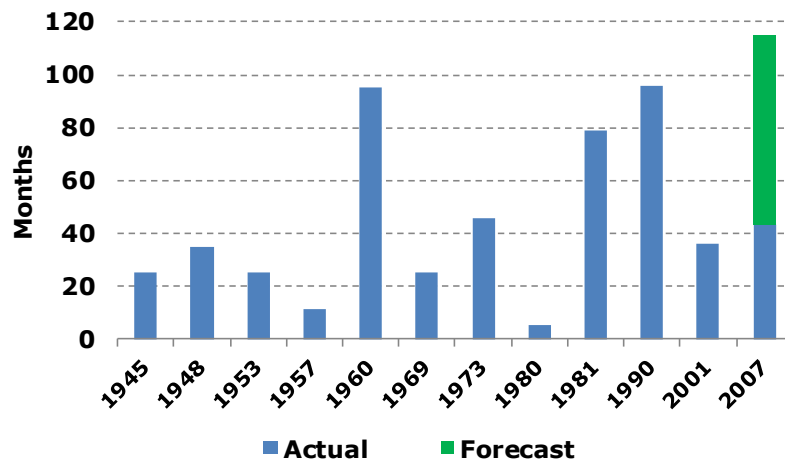
Source: BEA, February ERFC forecast; historical data through 2017

This recovery will be the longest on record

The positive GDP growth throughout the forecast will make the recovery from the 2007-09 recession the longest on record. From the second quarter of 2009 through the end of our forecast in 2023, the recovery will be at least 174 months. Through February, this recovery has already lasted 104 months. Prior to this, the longest recovery was from the 1990-91 recession and lasted 120 months. A major reason for the exceptional length of the current recovery was the depth of the recession. Despite positive GDP growth, the labor market remained weak for an extended period. It took 58 months of recovery just to reach the previous peak in employment. When comparing recoveries in

Figure 1.5: Months of Recovery After Reaching Previous Peak in Employment

The recovery is forecasted to be the longest on record



Source: BEA, November 2017 ERFC forecast; historical data through 2016

terms of the duration since reaching the previous employment peak, this expansion appears more in line with other post-war expansionary periods (see Figure 1.5). 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 2021, which would result in 115 months of employment gains after reaching the previous employment peak.

Oil prices are expected to decline

Oil prices are higher than the prices used in the November forecast but decline more rapidly. The refiner acquisition price of crude oil is expected to decline after rising to \$64 per barrel in the first quarter. The forecast calls for prices to decline throughout the forecast, reaching \$51 in 2023. Oil prices will remain well below the levels seen earlier in the recovery. Oil production in the U.S. has topped 10 million barrels per day in recent months. The most recent data from November has U.S. production of 10.038 million barrels per day, just off the all-time high of 10.044 in November 1970. Drilling responds to prices with a three to six month lag. The number of drilling structures has been increasing lately as prices have climbed. The Baker Hughes rig count was at 975 in mid-February, an increase of 224 since last year.

Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) has risen in recent years but remained low at 1.7% in 2017. While energy prices remain low, they are rising and adding to overall inflation. Rising housing costs have put upward pressure on inflation as well. We expect low to moderate inflation throughout the forecast. We expect inflation to be 1.9% this year, compared to 1.8% in the November forecast. We then expect inflation to range from 1.8% to 2.1% each year from 2019 through 2023. Core inflation (minus food and energy) is expected to reach the Federal Reserve's goal of 2%. The forecast calls for core inflation to be 1.8% this year and increase to 2.1% in 2020 through 2023.

Consumer spending is solid

Real consumer spending was stronger than expected in the fourth quarter of 2017, growing 3.8% (SAAR) compared to 2.7% (SAAR) expected in the previous forecast. The recent hurricanes affected consumer spending in the short term. Third quarter growth was slowed as consumers curtailed purchases, although fourth quarter growth was boosted due to rebuilding. We expect real consumer spending to grow 2.6% this year, up slightly from 2.5% growth expected in the previous forecast. Consumer optimism remains high. Rising home prices and a stronger stock market make consumers feel more confident in their financial situation. Wages are slowly increasing. Unemployment continues to fall and more part-time workers are finding full-time jobs. The forecast calls for real consumption growth of 2.3% in 2019. Consumer spending growth will then slow to 2.0% in 2020 and 2021 before improving slightly to 2.1% and 2.2% in 2022 and

2023. We expect consumer spending to contribute 1.5 percentage points to real GDP growth on average for each year of the forecast through 2023.

Disposable personal income growth is expected to rebound

Real disposable personal income growth is expected to rebound from 1.2% in 2017 to 2.9% in 2018. The November forecast expected growth of 1.7% this year. Disposable income is higher than in November throughout the forecast period due to the federal tax cut, which was not included in the previous forecast. Growth in real disposable income is expected to increase to 3.3% in 2019. We expect growth to moderate to 2.0% in 2022 and 2.1% in 2023. Nominal disposable income is projected to grow 4.9% this year, led by strong growth in rental income of 6.3%. Interest income is expected to grow 5.5% in 2018 as the Federal Reserve slowly tightens monetary policy. Growth in wages and salaries is expected to be strong at 4.5% compared to 3.7% in the previous forecast. Private sector wages and salaries are forecasted to grow 4.9%. Wage growth in the public sector will again lag, with growth of 2.6% in 2018. Total wages and salaries are forecasted to average 4.5% growth throughout the forecast. Dividend payments are projected to grow 2.5% in 2018. Growth in government transfer payments is expected to be 2.9% this year. We expect growth to pick up an average of 5.5% per year in 2018 through 2021 as an increasingly older population results in rising Medicare and Social Security payments. Income will be boosted in the latter part of the forecast by rising interest income, as interest rates return to pre-recession levels, as well as by dividend income.

The outlook for employment has been revised up

The employment forecast has been revised up since November. Growth in payrolls is anticipated to be 1.5% this year compared to 1.2% in the previous forecast. We expect employment growth of 1.4% and 1.1% in 2019 and 2020. The November forecast called for employment growth of 0.9% and 0.7%. We then expect payroll growth to average 0.5% from 2021 through 2023. By 2021, the forecast expects 2.1 million more jobs than in November, a difference of 1.5%. Due to the steady job growth, we expect the unemployment rate to average 4.0% in 2018 and reach a trough in 2019 of 3.7%. The November forecast expected of the trough to be 4.0% in 2018. We expect the unemployment rate to increase slowly to 4.1% by 2023. The continued strengthening of the labor market will create an incentive for more and more marginally attached workers to begin looking for a job. We expect the labor force participation rate to grow from 61.5% this year to a peak of 61.9% in 2020 after which the participation rate will resume its long-term secular decline.

Private sector hiring will continue to outpace public sector hiring

Employment growth in nonfarm payrolls has been led by private sector hiring throughout the recovery as the public sector has been weighed down by budget concerns. While state and local governments have largely worked through their budgetary issues

and have started hiring again, the pace of hiring has been slow. Federal government employment is expected to remain steady throughout the forecast except for the temporary hiring of census workers in 2020. The lack of growth in federal government jobs will be offset by modest gains in state and local government employment, keeping total government employment growth slightly positive throughout the forecast. We expect private sector job growth of 1.8% this year, after also growing by 1.8% in 2017. The forecast calls for private sector job growth of 1.6% in 2019, slowly declining to 0.4% in 2023.

Business investment is expected to be strong

Real nonresidential fixed investment is expected to grow 5.9% this year after growing 4.7% in 2017. The firming of oil prices has increased the incentive for additional investment by energy companies. The capital-intensive manufacturing sector remains strong. Demand for new office space is increasing as office vacancy rates fell to a 10 year low. We expect real nonresidential construction to remain strong for the next few years. The forecast calls for growth of 4.2%, 5.1%, and 4.9% over the next three years. We then expect growth to average 0.8% per year through 2023. Real equipment investment is anticipated to grow 7.4% this year. We expect strong growth throughout the forecast as businesses expand and improve productivity. Although we do not expect to see the double-digit growth experienced early in the recovery, we do expect capital equipment to remain an important driver of GDP growth after this year. The forecast calls for growth to average 5.1% from 2019 through 2023. We expect overall real nonresidential fixed investment growth to average 3.7% from 2019 through 2023.

The housing recovery will continue

The forecast for housing starts is slightly higher than in November. The housing market ended the year solidly after stalling in the first half. Infrastructure spending was strong to end the year, although it remains near a 20-year low. Existing home sales fell in December, but remain near post-recession highs. Homebuilder confidence remains high and home prices continue to climb. Mortgage rates remain low by historical standards. We expect housing starts to grow 6.9% this year, compared to 4.2% in November. The forecast calls for growth of 6.2% in 2019 and 6.0% in 2020 before tapering to 4.7% in 2021 and 1.7% in 2022. We expect housing starts to remain flat in 2023. The forecast calls for growth in single-family housing starts of 8.2% this year. The forecast expects the growth in single-family housing starts to average 4.2% from 2019 through 2023. We expect the multi-family segment to grow 3.7% this year after declining 9.3% in 2017. The forecast calls for growth to average 2.4% through the remainder of the forecast.

Foreign growth is improving

Major foreign economies are improving. The Canadian economy slipped to 1.7% (SAAR) growth in the second quarter, but early indications point to a rebound in the fourth quarter. Manufacturing was particularly strong in November and

temporary shutdowns at automobile and chemical plants ended. The latest Blue Chip forecast expects growth of 2.2% in Canada for 2018 and 1.9% in 2019, down from 3.0% in 2017. GDP growth in Mexico accelerated to 4.0% (SAAR) in the fourth quarter. This increase was largely a rebound from natural disasters in August and September. The Mexican economy grew 2.1% for all of 2017. The Blue Chip forecast called for 2.2% growth this year followed by 2.3% growth in 2019. The recovery in the Eurozone is continuing with real GDP increasing 2.3% in 2017. The latest Blue Chip forecast calls for 2.2% growth this year and 1.9% in 2019. China, which is the largest U.S. export market outside of North America, continues to slow. The Chinese have had difficulty transitioning to a more domestic consumer driven economy. China reported 6.9% growth in 2017, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.3% this year and 6.1% in 2019. Japan's economy expanded by 0.5% (SAAR) in the fourth quarter, the eighth consecutive quarter of growth. This marks the longest period of uninterrupted growth in more than a decade. Japan's long run potential GDP growth is roughly 0.7% due primarily to demographics. Japan's economy grew 1.8% in 2017. The most recent Blue Chip forecast expects slow growth of 1.4% this year followed by 1.0% in 2018.

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

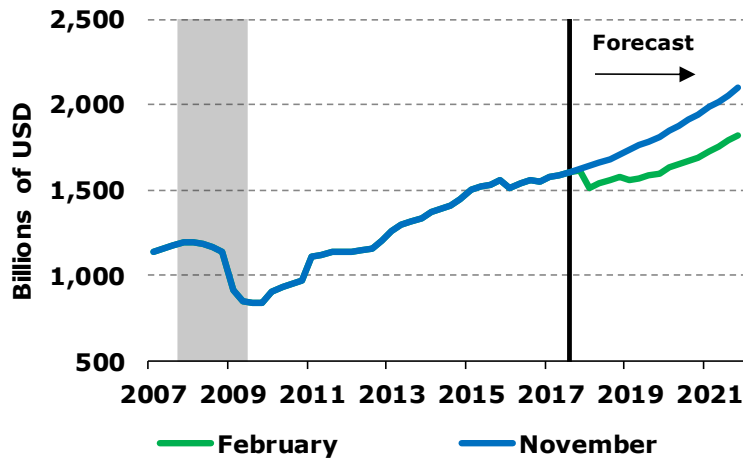
Economic growth of major U.S. trading partners is expected to slow this year after a strong 2017. GDP growth of U.S. trading partners grew 3.0% in 2017. The forecast calls for GDP of U.S. trading partners to grow 2.8% this year. The forecast calls for GDP of U.S. trading partners to grow 2.7% in 2019 and then 2.8% per year through 2023. The dollar has declined recently and the drag on exports has diminished. Real U.S. exports are forecasted to grow 6.0% this year after increasing 3.4% in 2017. Export growth is forecasted to slow but remain strong over the next three years, averaging 5.4% from 2019 through 2021. We then expect real export growth to slow to 4.1% and 3.9% in 2022 and 2023. Export growth is more than offset by increased imports through 2021. In 2022 and 2023, import growth slows and net exports are a slight positive to overall growth.

The fiscal policy outlook incorporates the impacts of the federal tax cut

The February economic forecast incorporates the impacts of the federal Tax Cut and Jobs Act (TCJA), which were not included in the November forecast. The TCJA cuts reduce individual and business tax rates while broadening the corresponding tax bases. It costs \$1.5 trillion over 10 years. IHS Markit estimates that by 2021 the boost to real GDP growth will be between 0.1 and 0.3 percentage points per year. The unemployment rate is expected to be 0.25 percentage points lower, bringing modest upward pressure on inflation. The stimulus to domestic demand will be partially offset by tighter monetary policy. The tax cuts now included in the forecast will reduce personal tax receipts (see Figure 1.6) throughout the forecast.

Figure 1.6: Federal Personal Tax Receipts

The November forecast did not include a tax cut



Source: BEA, ERFC February 2018 forecast; historical data through 2017

The federal budget deficit will increase this year

The federal budget deficit is expected to increase this year to \$954 billion from \$683 billion in 2017. Much of the increase in the deficit is due to the passage of the TCJA. We expect the federal budget deficit to grow, reaching \$1,089 billion in 2019 and \$1,167 billion in 2020 before leveling off. The November forecast had the budget deficit reaching \$802 billion in 2021. The February forecast calls for real defense spending to grow 1.0% this year before slowly trending down through 2023. Real nondefense spending is expected to decline 0.9% this year and also decline throughout the rest of the forecast. State and local governments, having worked through the majority of their budget difficulties, will offset the decline in spending at the federal level. We expect total real government spending growth to average 0.5% through 2023.

The Fed is gradually tightening monetary policy

The Federal Reserve is gradually tightening monetary policy after years of measures aimed at supporting the economy. The Federal Reserve is facing a more upbeat economic outlook but also a more uncertain policy environment. Jerome Powell assumed office at Chair on February 5. We do not expect any major deviations from the approach taken by Janet Yellen. The forecast assumes several rate hikes over the next few years.

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

Risks to the Forecast

Downside risks outweigh upside risks

Our view of the risks to the forecast is unchanged since the November forecast. The level of uncertainty in the baseline remains elevated, and downside risks once again outweigh upside risks.

Downside Risks

- Increasing geopolitical tensions negatively affect consumer confidence
- An unexpected shift in monetary policy
- A breakdown in trade relations
- Chinese economy experiences a “hard landing” (annual growth under 5%); growth is weaker in emerging market economies
- Weaker than expected employment growth
- Real wage growth stagnates, leading to slower consumer spending
- Slower household formation
- Slowdown in economic growth and negative effects to financial markets due to Brexit
- U.S. dollar appreciates against other currencies, limiting exports
- Weak global growth persists, further impacting 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 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 2018 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
Real National Income Accounts (Billions of Chained 2009 Dollars)								
Real Gross Domestic Product	16,577.6	16,891.0	17,330.1	17,773.0	18,163.5	18,527.5	18,899.6	19,289.5
% Ch	1.7	1.9	2.6	2.6	2.2	2.0	2.0	2.1
Real Consumption	11,413.0	11,732.8	12,046.3	12,343.9	12,604.6	12,855.0	13,115.7	13,400.9
% Ch	3.0	2.8	2.7	2.5	2.1	2.0	2.0	2.2
Real Nonresidential Fixed Investment	2,210.4	2,253.3	2,382.2	2,510.4	2,629.5	2,734.7	2,824.2	2,895.4
% Ch	-0.2	1.9	5.7	5.4	4.7	4.0	3.3	2.5
Real Residential Fixed Investment	580.2	592.3	605.0	625.2	645.1	679.5	703.8	718.8
% Ch	9.6	2.1	2.2	3.3	3.2	5.3	3.6	2.1
Real Personal Income	14,327.3	14,457.5	14,702.5	15,112.5	15,552.0	15,950.5	16,335.5	16,706.9
% Ch	2.9	0.9	1.7	2.8	2.9	2.6	2.4	2.3
Real Per Capita Income (\$/Person)	44,417	44,515	44,933	45,818	46,779	47,604	48,378	49,103
% Ch	2.2	0.2	0.9	2.0	2.1	1.8	1.6	1.5
Price and Wage Indexes								
PCE Price Index (2009=100)	110.0	111.8	113.7	115.8	118.1	120.5	122.9	125.4
% Ch	0.7	1.6	1.7	1.9	1.9	2.0	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.383	2.427	2.480	2.533	2.583	2.642	2.699	2.754
% Ch	0.7	1.9	2.2	2.1	2.0	2.3	2.1	2.0
Employment Cost Index (Dec. 2005=1.0)	1.248	1.278	1.313	1.356	1.403	1.452	1.503	1.556
% Ch	2.2	2.4	2.7	3.3	3.5	3.5	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,344.5	18,985.6	19,870.0	20,883.5	21,856.1	22,828.2	23,819.1	24,849.0
% Ch	2.9	3.5	4.7	5.1	4.7	4.4	4.3	4.3
Personal Income	15,764.0	16,159.6	16,716.4	17,504.9	18,359.9	19,214.5	20,081.9	20,955.6
% Ch	3.6	2.5	3.4	4.7	4.9	4.7	4.5	4.4
Employment (Millions)								
U.S. Civilian Labor Force	158.0	159.8	161.0	163.0	165.0	166.4	167.4	168.5
Total U.S. Employment	150.1	152.4	154.4	156.8	158.8	160.0	161.0	161.8
Unemployment Rate (%)	4.98	4.67	4.12	3.78	3.76	3.85	3.87	3.96
Nonfarm Payroll Employment	143.10	145.54	147.72	150.02	151.99	153.09	153.96	154.74
% Ch	1.9	1.7	1.5	1.6	1.3	0.7	0.6	0.5
Manufacturing	12.36	12.37	12.56	12.76	12.78	12.82	12.89	12.92
% Ch	0.6	0.2	1.5	1.6	0.2	0.3	0.6	0.2
Durable Manufacturing	7.75	7.70	7.83	8.01	8.03	8.05	8.13	8.16
% Ch	0.1	-0.6	1.7	2.3	0.2	0.3	1.0	0.4
Nondurable Manufacturing	4.61	4.67	4.73	4.75	4.76	4.76	4.76	4.75
% Ch	1.5	1.4	1.2	0.5	0.1	0.1	-0.1	-0.1
Construction	6.61	6.84	7.07	7.26	7.55	7.90	8.19	8.39
% Ch	4.7	3.6	3.3	2.7	4.0	4.6	3.6	2.5
Service-Providing	123.41	125.66	127.38	129.24	130.87	131.59	132.08	132.64
% Ch	2.0	1.8	1.4	1.5	1.3	0.5	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	41.7	48.6	58.3	60.6	55.9	53.2	51.7	51.2
Personal Saving/Disposable Income (%)	5.8	4.0	3.3	4.1	4.9	5.2	5.3	5.2
Auto Sales (Millions)	7.2	6.5	6.0	5.7	5.6	5.8	5.7	5.7
% Ch	-5.9	-10.4	-7.9	-4.8	-0.5	2.0	-0.5	-0.6
Housing Starts (Millions)	1.149	1.201	1.240	1.334	1.404	1.492	1.541	1.543
% Ch	8.9	4.5	3.3	7.5	5.2	6.3	3.3	0.1
Federal Budget Surplus (Billions)	-649.4	-671.9	-830.7	-1,016.4	-1,132.8	-1,181.8	-1,178.1	-1,176.5
Net Exports (Billions)	-519.7	-551.8	-580.3	-525.9	-477.8	-446.4	-405.0	-354.4
3-Month Treasury Bill Rate (%)	0.18	0.55	1.38	2.20	2.84	3.17	3.16	3.14
10-Year Treasury Note Yield (%)	2.02	2.10	2.57	3.33	3.63	3.65	3.62	3.58
Bond Index of 20 G.O. Munis. (%)	3.51	3.51	3.59	3.84	4.02	4.07	4.04	4.00
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.14	4.85	5.23	5.30	5.29	5.27

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

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

Table 1.4

Fiscal Years

Forecast Comparison

Forecast 2018 to 2021

	2015	2016	2017	2018	2019	2020	2021
U.S.							
Real GDP							
February Baseline	16292.6	16577.6	16891.0	17330.1	17773.0	18163.5	18527.5
% Ch	3.2	1.7	1.9	2.6	2.6	2.2	2.0
November Baseline	16292.6	16577.6	16891.0	17316.3	17701.1	18079.1	18442.7
% Ch	3.2	1.7	1.9	2.5	2.2	2.1	2.0
PCE Price Index							
February Baseline	109.3	110.0	111.8	113.7	115.8	118.1	120.5
% Ch	0.9	0.7	1.6	1.7	1.9	1.9	2.0
November Baseline	109.3	110.0	111.8	113.6	115.6	117.8	120.2
% Ch	0.9	0.7	1.6	1.6	1.8	1.9	2.0
Unemployment Rate							
February Baseline	5.69	4.98	4.67	4.12	3.78	3.76	3.85
November Baseline	5.68	4.98	4.66	4.13	4.02	4.12	4.19
Mortgage Rate							
February Baseline	3.92	3.80	3.85	4.14	4.85	5.23	5.30
November Baseline	3.92	3.80	3.85	4.13	4.70	5.03	5.13
3 Month T-Bill Rate							
February Baseline	0.02	0.18	0.55	1.38	2.20	2.84	3.17
November Baseline	0.02	0.18	0.55	1.19	1.81	2.33	2.79

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Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid pace.**
- **Washington employment, income, and population are all growing much faster than the corresponding national averages.**
- **Seattle home prices continue to rise very rapidly and housing construction remains strong.**
- **Washington exports are rising for the first time in nearly three years and manufacturing is growing.**
- **Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.**
- **The forecast assumes the worst of the aerospace job cuts are over however electronic shopping employment growth will slow.**
- **Washington housing and construction are at, or near, their cyclical peaks.**
- **As in November, we expect the Washington economy to continue to outperform the U.S. economy.**

Current Conditions

The Washington economy is expanding at a rapid pace

The Washington economy is expanding at a rapid pace. Washington employment, income, and population are all growing much faster than the corresponding national averages. Washington unemployment remains near a historic low. Seattle home prices continue to rise very rapidly and housing construction remains strong. Washington exports are rising for the first time in nearly three years and manufacturing is growing. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

Employment growth has been close to the forecast

We have three months of new Washington employment data since the November forecast was released. Total nonfarm payroll employment rose 16,800 (seasonally adjusted) in November, December, and January, which was 2,800 less than the 19,600 expected in the November forecast. Private, service-providing sectors accounted for most of the job growth by adding 15,200

net new jobs. The manufacturing sector added 800 jobs and construction added 1,700 jobs. Government employment increased by 2,000 in November, December, and January.

Historical employment estimates were revised lower

We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions lowered the estimated level of total employment in October 2017 by 10,300 jobs (0.3%). The downward revision to history combined with the lower than expected growth since October results in 13,100 (0.4%) fewer jobs in January 2018 than expected in the November forecast.

Washington unemployment remains near a historic low

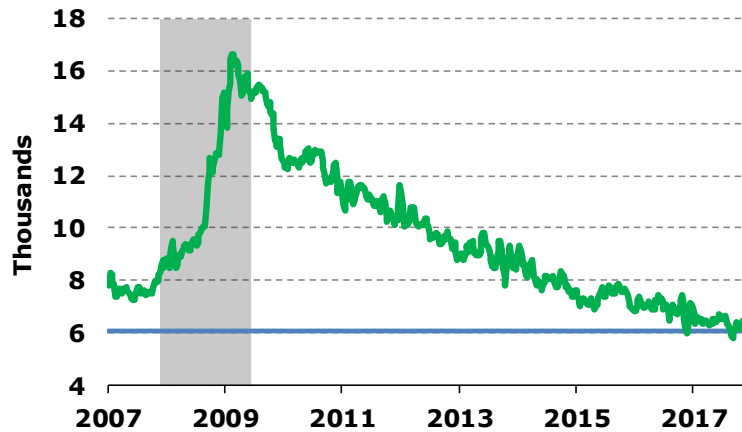
Washington's unemployment rate inched up to 4.5% in December from 4.4% in November. November's 4.4% rate was the lowest in the series that extends back to 1976. A year earlier, in December 2016, the Washington unemployment rate stood at 5.1%.

Washington UI claims remain near the post-recession low

Washington initial claims for unemployment insurance remain near the post-recession low (see Figure 2.1). The four-week moving average of seasonally adjusted claims declined to 6,000 in the week ending February 17, 2018 from 6,200 in the previous week. The current level of claims is well below the trough of 7,200 reached during the last expansion. Claims have fallen 64% since the peak in early 2009.

Figure 2.1: Initial Claims for Unemployment Insurance

The current level of claims is well below the trough during the last expansion



Source: Washington State Employment Security Department; data through February 17, 2018

Washington exports are up over the year

For the first time in nearly three years, Washington exports were up over the year. Exports increased 0.6% in the fourth quarter of 2017 compared to the fourth quarter of 2016. The last year-over-year increase was in the first quarter of 2015. Transportation equipment exports (mostly Boeing planes) edged up 0.8%, which was the first over-the-year increase since the

second quarter of 2015. Exports of agricultural products fell 9.3% over the year but exports of all other commodities (mostly manufacturing) increased 6.8% over the year.

Washington housing construction in the fourth quarter was stronger than expected

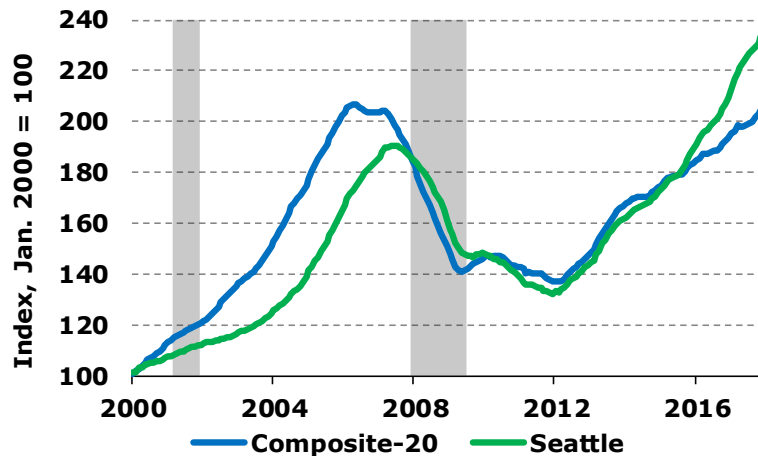
Washington housing construction in the fourth quarter was stronger than expected in the November forecast because of very strong multi-family activity. Of the 7,800 variance in total units (SAAR), 7,500 was due to stronger-than-expected multi-family construction and only 300 to stronger-than-expected single-family construction. In October, November, and December, 51,700 units (SAAR) were permitted of which 24,500 were single family and 27,200 were multi-family. The November forecast assumed an average rate of 43,900 units for the fourth quarter as a whole (SAAR) consisting of 24,200 single-family units and 19,700 multi-family units. The first quarter started out much slower due to a drop in multi-family activity. In January, 39,100 units (SAAR) were permitted of which 24,900 were single family and 14,200 were multi-family. The February forecast assumed an average rate of 43,200 units for the first quarter as a whole (SAAR) consisting of 23,500 single-family units and 19,700 multi-family units.

Seattle home prices continue to rise very rapidly

According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices rose 1.2% in December compared to 0.6% in the Composite-20 index. The over-the-year growth was 12.7% in in Seattle, which was more than double the 6.3% increase in the Composite-20 index. Seattle home prices are now up 78% since the December 2011 trough and now exceed the May 2007 peak by 24% (see Figure 2.2).

Seattle home prices now exceed the May 2007 peak by 24%

Figure 2.2: Case-Shiller Home Price Indices



Source: S&P Dow Jones Indices; data through December 2017

Washington light vehicle sales declined in December and January

Washington car and truck sales declined for the second consecutive month in January after five consecutive monthly increases. Seasonally adjusted new vehicle registrations decreased 4.9% in December and 5.9% in January to 300,800

units (SAAR) from a post-recession high of 336,200 in November. Car and truck sales are down 0.2% compared to January 2017.

Manufacturing slowed but remained positive in January

The Institute of Supply Management – Western Washington Index (ISM-WW) declined in January but remained in positive territory. The index, which measures conditions in the manufacturing sector, decreased from 65.8 in December to 60.8 in January (index values above 50 indicate growth while values below 50 indicate contraction). The production, orders, employment, and inventory components all indicated expansion. Only the deliveries component was below 50 in January.

Washington personal income growth leads the nation

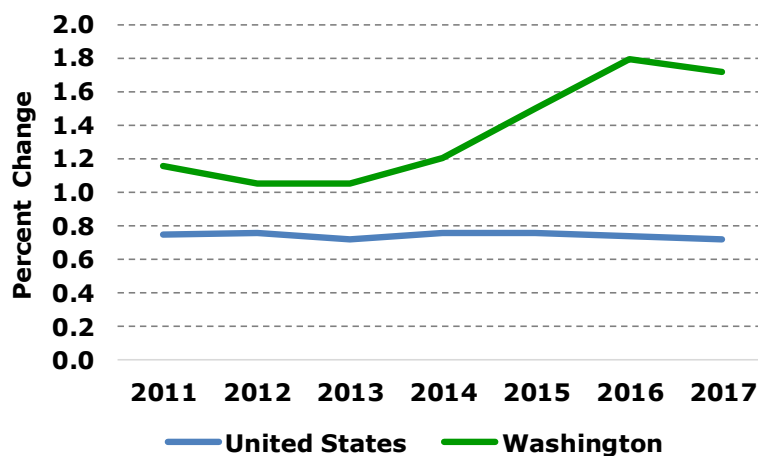
In December, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the third quarter of 2017. According to these estimates, Washington personal income rose to \$418.3 billion (SAAR) in the third quarter of 2017 from \$414.1.0 billion in the second quarter. The reported 4.1% growth rate (SAAR) in Washington personal income was the highest among the states and District of Columbia and exceeded the 2.7% growth rate for the U.S. by a large margin. Over the year, Washington personal income grew 4.6%, which was also highest among the states and DC and easily surpassed the 2.6% rate for the U.S. as a whole.

Washington's population is growing rapidly

According to Census Bureau data released in December, Washington's population grew 1.71% in the year ending July 1, 2017 (see Figure 2.3). This was down slightly from 1.79% in the previous year. Washington's population growth was the fourth highest among the states and easily surpassed the 0.72% growth rate for the U.S. as a whole. Net migration accounted for 73% of Washington's population growth over the year.

Washington's 1.71% population easily surpassed the 0.72% growth rate for the U.S. as a whole

Figure 2.3: Population Growth



Source: Bureau of the Census; data through July 1, 2017

Seattle area consumer...

Seattle area consumer price inflation remains above the national average. Over the last year, from December 2016 to December

... price inflation remains above the national average

2017, consumer prices in the Seattle area rose 3.5% compared to 2.1% for the U.S. city average. Core prices, which exclude food and energy, were up 3.2% in Seattle compared to 1.8% for the nation. The higher Seattle inflation is largely due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 5.5% compared to 3.2% for the nation. Excluding shelter, Seattle inflation was still above the national average at 2.3% compared to 1.6%.

Washington State Forecast

The February forecast for Washington State is generally stronger than the November forecast

The February forecast for Washington State is generally stronger than the November forecast. Washington employment is expected to grow 2.2% this year, which is slightly lower than the 2.4% expected in the November forecast. However, we expect employment growth to average 1.6% per year in 2019 through 2021, which is slightly more than the 1.4% average rate in the November forecast. Our forecast for nominal personal income growth this year is 5.0%, up from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2019 through 2021 averages 5.3% per year which is the same rate as expected in the November forecast. The February housing construction forecast is slightly higher than the forecast adopted in November. We expect total housing units authorized by building permits to average 43,200 units this year compared to 41,800 in the November forecast. We expect permits to average 42,800 during the next three years compared to 42,400 in November. We expect the all-items Seattle CPI to rise 3.1% this year, up from 2.5% in the November forecast. We expect Seattle area inflation will average 2.3% per year in 2019 through 2021, which is the same rate expected in the November forecast.

Washington Payroll Employment

Washington employment growth is expected to decelerate

Washington employment growth slowed slightly in 2017 to 2.8% from an 18-year high 3.1% in 2016. Washington employment is expected to grow 2.2% this year, which is slightly lower than the 2.4% expected in the November forecast. As in November, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.6% per year in 2019 through 2021, which is slightly more than the 1.4% average rate in the November forecast. On an annual basis, we expect 2.1% employment growth in 2019, 1.7% in 2020, 1.1% in 2021, 1.0% in 2022, and 0.9% in 2023.

Aerospace employment forecast is virtually unchanged since November

Washington aerospace employment has been declining since the first quarter of 2013. As of the fourth quarter of 2017, 16,300 jobs were lost with most of them (12,900) occurring in the last two years. The aerospace employment forecast is virtually unchanged since November. As in November, our forecast assumes that the pace of job reductions will be much slower over

the next two years with only 2,800 jobs lost from the fourth quarter of 2017 to the fourth quarter of 2019. On an annual average basis, we expect aerospace employment to decline 4.4% in 2018, 2.0% in 2019, and 0.8% in 2020 with no change in 2021, 2022, or 2023.

The software employment forecast is slightly lower

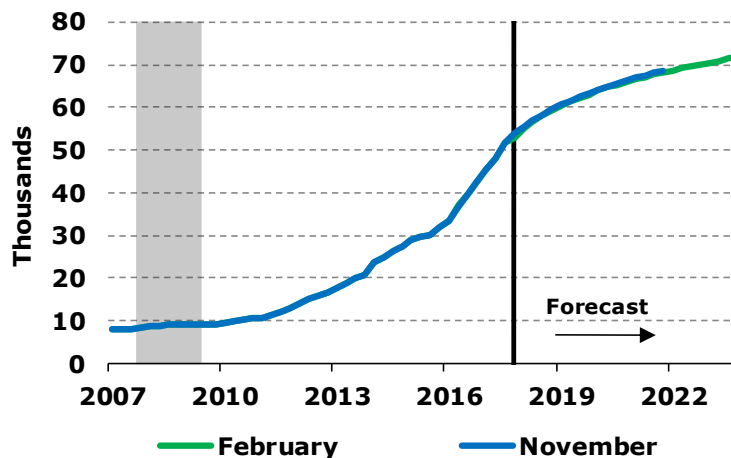
Software employment grew only 0.5% in 2015 after absorbing a series of Microsoft layoffs during the latter part of 2014. Growth rebounded to 5.2% in 2016 and 4.4% in 2017. The February software employment forecast is slightly lower than November because actual employment in the fourth quarter of 2017 was about 300 below the forecast. As in November, we expect 2,200 net new jobs by the end of 2021. On an annual average basis, we expect 2.3% growth in 2018, 0.3% in 2019, 0.8% in 2020, 1.0% in 2021, 1.1% growth in 2022, and 1.2% growth in 2023.

Washington electronic shopping and mail order employment growth will slow

In Washington, electronic shopping and mail order consists almost entirely of electronic shopping employment. As of January 2018, year-over-year electronic shopping and mail order employment grew by 10,100 jobs, a 22.5% rate of growth. While still extremely strong, this is actually down from the previous year when employment grew by 11,900 (36.4%). We expect employment growth to remain strong for some time but to continue to slow (see Figure 2.4). The announcement by Amazon of a second headquarters lends support to this view. Our forecast calls for employment growth of 15,400 from the fourth quarter of 2017 through the fourth quarter of 2021, which is very close to the 14,700 expected in the November forecast. On an annual basis, electronic shopping and mail order employment is expected to grow 15.5% in 2018, 7.8% in 2019, 5.2% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

Figure 2.4: Electronic Shopping and Mail Order Employment

The electronic shopping and mail order forecast is similar to November



Source: Washington Employment Security Department, ERFC; historical data through Quarter 4, 2017

Construction employment has nearly reached its previous peak

As of the fourth quarter of 2017, construction employment was 205,700, just 4,300 (2.0%) below the 210,000 peak in the second quarter of 2007. The sector has now recovered 94% of the 74,900 jobs lost in the recession. The forecast expects construction employment to peak at 212,400 in the fourth quarter of 2020. On an annual average basis, construction employment is expected to grow 3.3% this year, 0.3% in 2019, 1.1% in 2020, and 0.5% in 2021 before declining 0.6% in 2022 and 1.2% in 2023.

Washington Personal Income

Washington personal income is very close to the November assumption

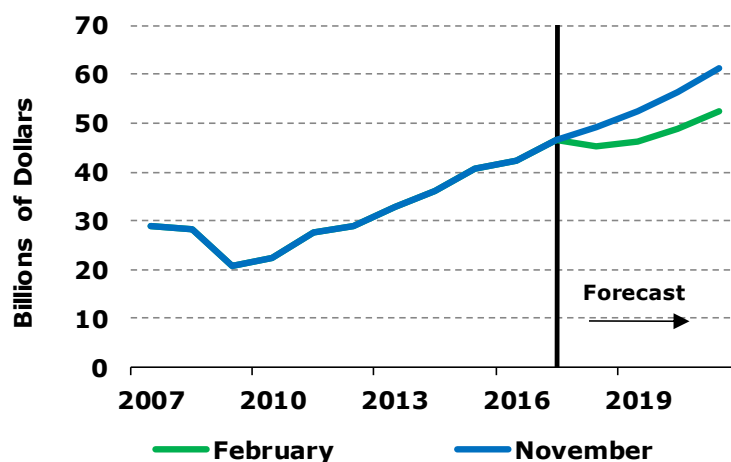
In December, after the November forecast was complete, the Bureau of Economic Analysis released estimates for state personal income through the third quarter of 2017. We have incorporated the new BEA estimates as well as additional Washington wage data. Our current estimate of Washington personal income in the third quarter of 2017 is \$421.1 billion, which is \$0.2 billion (0.0%) lower than assumed in the November forecast. The new estimate of wage and salary income is \$1.0 billion (0.5%) lower than expected but nonwage income is \$0.9 (0.4%) billion higher.

Our forecast for nominal personal income is slightly higher than in November

Our forecast for nominal personal income growth this year is 5.0%, up from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2019 through 2021 averages 5.3% per year which is the same rate as expected in the November forecast. On an annual basis, we expect personal income to grow 5.4% in 2019, 5.3% in 2020, 5.2% in 2021, 5.0% in 2022, and 4.9% in 2023.

Figure 2.5: Federal Personal Taxes, Washington

Federal personal taxes are \$6.8 billion per year lower in 2018-21



Source: Bureau of Economic Analysis, ERFC; historical data through 2017

In November, we had assumed that no significant tax legislation would be enacted. The February forecast incorporates the Tax

The February forecast incorporates the TCJA

Cuts & Jobs Act (TCJA). Because of the legislation, federal personal taxes average \$6.8 billion less per year in 2018 through 2021 (see Figure 2.5) even though pre-tax personal income is slightly higher. The lower taxes directly raise disposable personal income (personal income less personal taxes) by 1.6%.

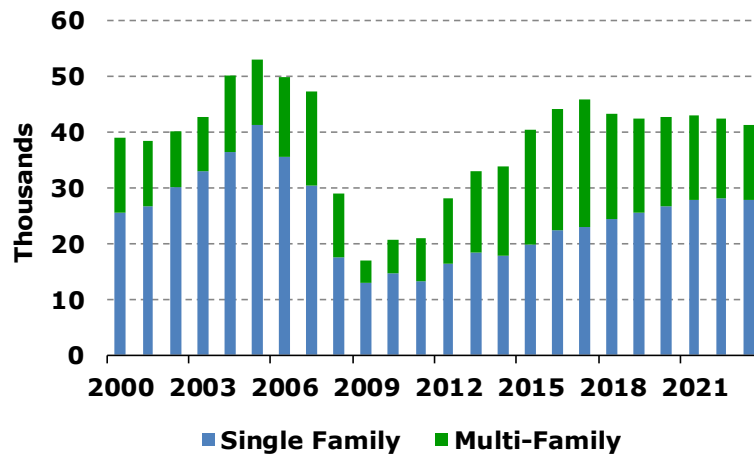
Washington Building Permits

The housing recovery in Washington is essentially complete

The housing recovery in Washington is essentially complete although the composition of new housing will change in coming years (see Figure 2.6). Multi-family housing has recovered from a low of only 4,000 units in 2009 to 22,800 in 2017. We believe 2017 was the peak in multi-family construction in this cycle and that permits will decline to 13,500 by 2023. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 22,900 in 2017. We expect single-family construction to continue to strengthen with the number of units rising to 28,100 by 2022. Overall, the February housing construction forecast is very close to the forecast adopted in November. We expect total housing units authorized by building permits to decline 5.6% this year to 43,200 units and 1.4% next year to 42,600. We expect little change in the final four years of the forecast with the number of units rising 0.5% in 2020 to 42,800 and 0.5% in 2021 to 43,000 then declining 1.1% in 2022 to 42,500 and 2.6% in 2023 to 41,400.

Figure 2.6: Washington Building Permits

We believe multi-family construction has peaked but single-family will continue to strengthen



Source: Bureau of the Census, ERFC; historical data through 2017

Seattle Consumer Price Index

Rents are driving Seattle core inflation higher

Core inflation (excluding food and energy) in Seattle was 2.8% in 2017 while national core inflation was 1.8%. The reason for the difference was shelter costs, which were rising much faster in Seattle. Recent data show that shelter costs continue to rise

faster in Seattle than in the U.S. city average. However, we expect core inflation in Seattle to moderate as shelter costs stabilize. Our forecast for core Seattle inflation is 3.0% in 2018, 2.3% in 2019, 2.4% in 2020, 2.4% in 2021, 2.3% in 2022, and 2.1% in 2023.

Energy costs are expected to stabilize

After working to reduce overall inflation considerably in 2015 and 2016, energy costs had little impact on headline inflation in 2017. We expect energy costs to remain relatively stable. As a result, they will not significantly affect headline inflation in the next few years. We expect the Seattle CPI to rise 3.1% this year, 2.1% in 2019, 2.4% in 2020, 2.3% in 2021, 2.2% in 2022, and 2.1% in 2023.

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

Alternative Scenarios

Alternative forecasts are required by law

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

Optimistic

In the optimistic scenario, the housing market bounces back

Housing starts remained low by historical standards in 2017 because of slow household formation. In the optimistic scenario, young adults move to form households in greater numbers because of the improving economy, driving the level of housing starts above 1.5 million in 2019 and above 1.7 million in 2020. With higher productivity, wage and price pressures remain muted in 2018. Since inflation is not a problem, the Federal Reserve takes a gradual approach to raising interest rates over the first two years of the forecast period. Given the strengthening outlook, both consumer and business confidence improve and the stock market sees strong gains. On the demand side, higher incomes combine with lower oil prices and inflation to support robust consumer spending. Meanwhile, economic conditions in the rest of the world improve with the help of structural reforms and quantitative-easing programs.

The optimistic scenario also assumes a much stronger Washington economy

In addition to reflecting the impact of the stronger U.S. forecast on the state economy, the optimistic Washington forecast assumes that aerospace employment gradually rises through 2023 rather than continuing to fall through 2019 then levelling off as in the baseline. Software employment growth is also much stronger than in the baseline forecast. In the optimistic scenario, the stronger regional economy drives Seattle consumer price inflation above the baseline. Washington average wage growth is also higher in the optimistic scenario than in the baseline.

Washington population growth is higher in the optimistic scenario as the strong local economy attracts migrants from other states. The recovery in construction employment is much stronger than in the baseline forecast with employment in the sector exceeding the previous peak in the second quarter of 2018. By the end of 2021, Washington nonfarm payroll employment is higher by 215,300 jobs (5.9%) than in the baseline forecast and Washington personal income is \$76.8 billion (13.3%) higher.

Pessimistic

The pessimistic alternative assumes a recession caused by setback in commercial real estate and declining confidence

In the pessimistic scenario, a drop in confidence and a setback in the commercial real estate market combine to end the expansion. Rising prices have made the commercial real estate market vulnerable. Real estate prices correct and confidence sags in the pessimistic scenario. The drop in confidence continues to depress the dollar and propels long-term interest rates up. Higher interest rates combined with lower confidence abruptly ends the seven-year-old housing recovery, with starts continuing to tumble until early 2019. Meanwhile, the S&P 500 starts to fall in the second quarter of 2018 and continues to tumble until the first quarter of 2019. Higher interest rates slam both consumer spending and capital expenditures. Taken together, the US economy contracts at annual rates of 0.9% in the third quarter of 2018 and then 1.6% in the fourth quarter. The unemployment rate climbs through most of 2019, reaching an eventual peak of 5.0%.

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 declines much more rapidly than assumed in the baseline forecast and continues to decline through 2023. Software employment also declines rather than growing moderately as in the baseline forecast. Population growth is also weaker than in the baseline forecast as migration into Washington drops. Construction employment peaks in early 2018 then declines through 2023 rather than flattening as in the baseline. The relatively weak local economy puts downward pressure on Washington wages and the Seattle CPI. By the end of 2021, Washington nonfarm payroll employment is 181,600 (5.0%) lower than in the baseline forecast and Washington personal income is \$43.3 billion (7.5%) lower.

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

Governor's Council of Economic Advisors (GCEA)

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

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

At the national level, the GCEA forecast for real GDP growth is the same as the baseline except in 2018 when it is slightly lower

and in 2023 when it is slightly higher. The GCEA forecast averages 2.2% per year over the six-year interval, which is the same rate as in the baseline forecast. The GCEA forecast of 2.1% average real consumer spending growth is also very close to the baseline forecast of 2.2%. At 2.0% per year, the GCEA PCE inflation forecast is also the same as the baseline average over the six-year forecast. The Council members' mortgage rate forecast is slightly lower than the baseline forecast in 2019 and 2020 but higher in 2022 and 2023. The GCEA oil price forecast is slightly lower than the baseline forecast, averaging \$58 in 2018 through 2023 compared to \$60 in the baseline forecast.

The GCEA members expect generally weaker Washington growth

The GCEA scenario for Washington real personal income growth averages 2.8% per year in 2018 through 2023 compared to the baseline forecast of 3.1%. Their nominal personal income forecast is slightly closer to ours at 4.9% versus 5.1%. At an average rate of 1.3% per year, the Council members' forecast for total employment growth over the six-year period is also lower than the baseline forecast of 1.5% per year. The GCEA forecast for manufacturing employment growth is lower than the baseline forecast but their construction employment growth forecast is higher. The Council members' housing permit forecast is slightly higher than ours is, averaging 43,500 units per year through 2023 compared to 42,600 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 43,400 (1.2%) lower than in the baseline forecast and Washington personal income is \$8.1 billion (1.4%) lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1
Washington Economic Forecast Summary
 Forecast 2018 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2009 Dollars)								
Real Personal Income	353.532	365.873	377.974	390.933	404.011	416.771	429.405	441.638
% Ch	4.2	3.5	3.3	3.4	3.3	3.2	3.0	2.8
Real Wage and Salary Disb.	180.187	188.869	197.687	204.536	210.621	217.044	223.680	230.341
% Ch	5.5	4.8	4.7	3.5	3.0	3.0	3.1	3.0
Real Nonwage Income	173.345	177.004	180.287	186.397	193.390	199.726	205.725	211.297
% Ch	3.0	2.1	1.9	3.4	3.8	3.3	3.0	2.7
Real Per Capita Income (\$/Person)	48,931	49,754	50,523	51,411	52,333	53,235	54,122	54,967
% Ch	2.6	1.7	1.5	1.8	1.8	1.7	1.7	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.118	1.137	1.158	1.181	1.205	1.229	1.254
% Ch	0.7	1.6	1.7	1.9	1.9	2.0	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.521	2.589	2.669	2.737	2.796	2.864	2.929	2.992
% Ch	1.9	2.7	3.1	2.5	2.2	2.4	2.3	2.1
Average Nonfarm Annual Wage	59,887	61,974	64,414	66,460	68,466	71,077	73,968	76,985
% Ch	3.3	3.5	3.9	3.2	3.0	3.8	4.1	4.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.00	26.81	28.04	28.95	29.87	30.83	31.84	32.87
% Ch	2.8	3.1	4.6	3.3	3.2	3.2	3.3	3.2
Current Dollar Income (Billions of Dollars)								
Personal Income	388.979	408.946	429.745	452.824	476.960	502.061	527.890	553.956
% Ch	4.9	5.1	5.1	5.4	5.3	5.3	5.1	4.9
Disposable Personal Income	340.903	358.410	377.746	399.864	421.694	443.303	464.651	486.630
% Ch	4.8	5.1	5.4	5.9	5.5	5.1	4.8	4.7
Per Capita Income (\$/Person)	53,837	55,610	57,441	59,549	61,781	64,128	66,534	68,944
% Ch	3.2	3.3	3.3	3.7	3.7	3.8	3.8	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,589.6	3,677.0	3,770.5	3,853.5	3,932.9	3,997.2	4,054.2	4,109.0
Total Washington Employment	3,388.8	3,492.6	3,601.7	3,693.8	3,772.3	3,832.5	3,887.8	3,937.7
Unemployment Rate (%)	5.59	5.02	4.47	4.14	4.08	4.12	4.10	4.17
Nonfarm Payroll Employment	3,193.1	3,290.2	3,371.8	3,446.5	3,512.0	3,558.9	3,597.9	3,633.5
% Ch	2.9	3.0	2.5	2.2	1.9	1.3	1.1	1.0
Manufacturing	292.3	286.4	282.1	285.6	286.3	288.2	291.2	294.2
% Ch	0.6	-2.0	-1.5	1.2	0.3	0.6	1.1	1.0
Durable Manufacturing	210.5	203.3	197.9	200.1	200.2	201.2	203.4	205.5
% Ch	-0.1	-3.4	-2.7	1.1	0.0	0.5	1.1	1.0
Aerospace	93.2	87.5	81.0	79.1	77.8	77.7	77.7	77.7
% Ch	-1.2	-6.1	-7.5	-2.3	-1.6	-0.1	0.0	0.0
Nondurable Manufacturing	81.8	83.1	84.2	85.5	86.1	87.0	87.8	88.7
% Ch	2.5	1.6	1.4	1.4	0.8	1.0	1.0	1.0
Construction	178.8	194.5	206.0	208.2	209.8	212.0	211.7	209.7
% Ch	6.4	8.8	5.9	1.1	0.8	1.1	-0.2	-0.9
Service-Providing	2,715.8	2,803.1	2,877.5	2,946.5	3,009.6	3,052.3	3,088.7	3,123.1
% Ch	3.0	3.2	2.7	2.4	2.1	1.4	1.2	1.1
Software Publishers	57.2	60.2	62.3	62.9	63.2	63.8	64.5	65.3
% Ch	3.1	5.3	3.4	0.9	0.6	0.9	1.1	1.1
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	40.116	44.519	45.754	42.896	42.454	43.068	42.904	41.970
% Ch	3.3	11.0	2.8	-6.2	-1.0	1.4	-0.4	-2.2
Single-Family	21.823	21.941	24.037	25.131	25.914	27.564	28.077	27.961
% Ch	17.0	0.5	9.6	4.5	3.1	6.4	1.9	-0.4
Multi-Family	18.294	22.578	21.716	17.766	16.540	15.504	14.826	14.009
% Ch	-9.3	23.4	-3.8	-18.2	-6.9	-6.3	-4.4	-5.5
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.14	4.85	5.23	5.30	5.29	5.27

Table 2.2
Comparison of Alternative Forecasts

Fiscal Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP, Percent Change						
Optimistic	2.9	4.1	3.3	2.6	2.2	2.3
Baseline	2.6	2.6	2.2	2.0	2.0	2.1
Pessimistic	2.2	0.2	2.4	2.3	2.0	1.8
PCE Price Index, Percent Change						
Optimistic	1.7	1.8	1.8	2.2	2.2	2.2
Baseline	1.7	1.9	1.9	2.0	2.1	2.0
Pessimistic	1.7	1.8	1.9	2.4	2.4	2.4
Mortgage Rate, Percent						
Optimistic	4.26	5.62	6.29	6.63	6.90	6.83
Baseline	4.14	4.85	5.23	5.30	5.29	5.27
Pessimistic	4.34	5.10	4.18	4.79	5.09	5.01
3 Month T-Bill Rate, Percent						
Optimistic	1.38	2.23	2.89	3.48	3.91	3.90
Baseline	1.38	2.20	2.84	3.17	3.16	3.14
Pessimistic	1.29	1.09	1.15	2.31	2.75	2.73
Washington						
Real Personal Income, Percent Change						
Optimistic	4.2	6.5	6.4	5.2	4.5	4.0
Baseline	3.3	3.4	3.3	3.2	3.0	2.8
Pessimistic	2.5	0.6	1.7	2.6	1.9	1.6
Personal Income, Percent Change						
Optimistic	6.0	8.4	8.3	7.5	6.7	6.3
Baseline	5.1	5.4	5.3	5.3	5.1	4.9
Pessimistic	4.3	2.4	3.7	5.0	4.4	4.1
Employment, Percent Change						
Optimistic	2.7	3.2	3.1	2.5	1.9	1.7
Baseline	2.5	2.2	1.9	1.3	1.1	1.0
Pessimistic	2.2	0.7	0.9	0.8	0.6	0.4
Housing Permits, Thousands of Authorized Units						
Optimistic	46.3	45.8	47.7	50.4	50.6	50.6
Baseline	45.8	42.9	42.5	43.1	42.9	42.0
Pessimistic	44.6	36.2	35.9	37.4	37.4	35.6

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

Calendar Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP						
<i>Growth</i>						
ERFC	2.7	2.4	2.1	2.0	2.0	2.1
GCEA Average	2.5	2.4	2.1	2.0	2.0	2.0
Real Consumption						
<i>Growth</i>						
ERFC	2.6	2.3	2.0	2.0	2.1	2.2
GCEA Average	2.5	2.2	2.1	2.1	2.0	2.0
PCE Price Index						
<i>Growth</i>						
ERFC	1.9	1.8	2.0	2.0	2.1	2.0
GCEA Average	2.0	2.1	2.1	2.0	2.0	2.1
Mortgage Rate						
<i>Percent</i>						
ERFC	4.5	5.1	5.3	5.3	5.3	5.2
GCEA Average	4.5	5.0	5.1	5.3	5.4	5.4
Oil Price (Brent)						
<i>Dollars per barrel</i>						
ERFC	67.5	63.0	59.5	57.4	56.5	56.3
GCEA Average	61.2	59.2	57.9	56.9	57.3	57.7
Washington State						
Real Personal Income						
<i>Growth</i>						
ERFC	3.0	3.6	3.2	3.1	2.9	2.8
GCEA Average	2.9	3.2	2.8	2.5	2.7	2.7
Wage and Salary Employment						
<i>Growth</i>						
ERFC	2.2	2.1	1.7	1.1	1.0	0.9
GCEA Average	2.0	1.5	1.3	1.0	1.0	1.0
Manufacturing Employment						
<i>Growth</i>						
ERFC	0.3	0.7	0.3	0.9	1.1	1.0
GCEA Average	-0.2	0.0	0.0	0.1	0.1	0.1
Construction Employment						
<i>Growth</i>						
ERFC	3.3	0.3	1.1	0.5	-0.6	-1.2
GCEA Average	2.7	1.3	1.4	1.3	0.8	0.6
Housing Permits						
<i>Thousands of authorized units</i>						
ERFC	43.2	42.6	42.8	43.0	42.5	41.4
GCEA Average	42.9	42.9	43.2	43.9	44.1	43.8
Washington Average Annual Wage						
<i>Growth</i>						
ERFC	3.1	3.0	3.4	4.0	4.1	4.1
GCEA Average	2.8	3.2	3.2	3.2	3.2	3.3

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

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

Table 2.6
Forecast Comparison
 Forecast 2018 to 2021

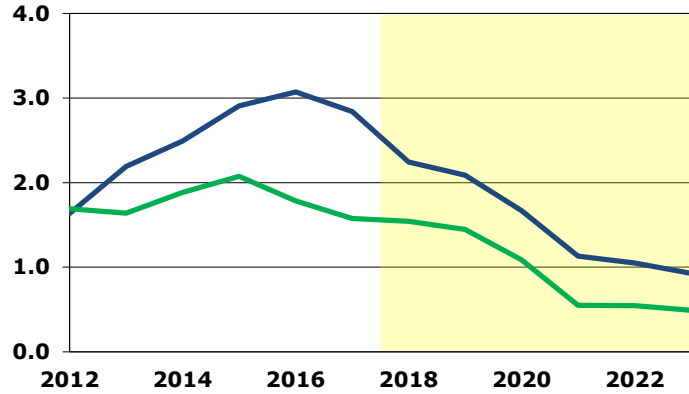
Fiscal Years

	2015	2016	2017	2018	2019	2020	2021
Washington							
Real Personal Income							
February	339.180	353.532	365.873	377.974	390.933	404.011	416.771
% Ch	6.8	4.2	3.5	3.3	3.4	3.3	3.2
November	339.180	353.532	365.693	377.262	389.692	402.850	415.657
% Ch	6.8	4.2	3.4	3.2	3.3	3.4	3.2
Personal Income							
February	370.709	388.979	408.946	429.745	452.824	476.960	502.061
% Ch	7.7	4.9	5.1	5.1	5.4	5.3	5.3
November	370.709	388.979	408.744	428.606	450.564	474.655	499.758
% Ch	7.7	4.9	5.1	4.9	5.1	5.3	5.3
Employment							
February	3102.4	3193.1	3290.2	3371.8	3446.5	3512.0	3558.9
% Ch	2.8	2.9	3.0	2.5	2.2	1.9	1.3
November	3102.5	3193.2	3290.2	3383.0	3449.9	3502.8	3543.0
% Ch	2.8	2.9	3.0	2.8	2.0	1.5	1.1
Housing Permits							
February	38.835	40.116	44.519	45.754	42.896	42.454	43.068
% Ch	16.8	3.3	11.0	2.8	-6.2	-1.0	1.4
November	38.703	40.103	44.154	42.959	41.599	42.643	42.558
% Ch	16.5	3.6	10.1	-2.7	-3.2	2.5	-0.2

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

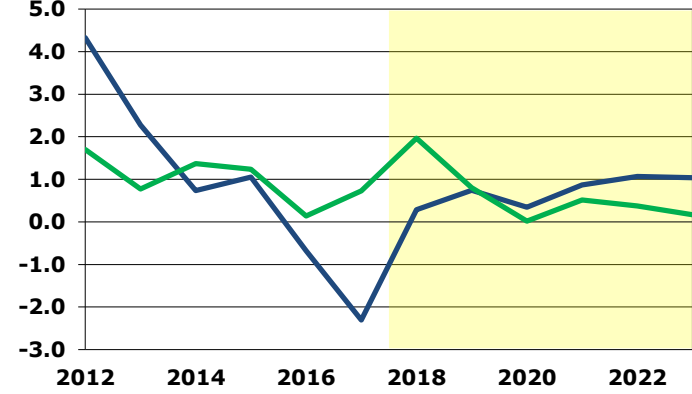
Forecast

Total Nonfarm Payroll Employment



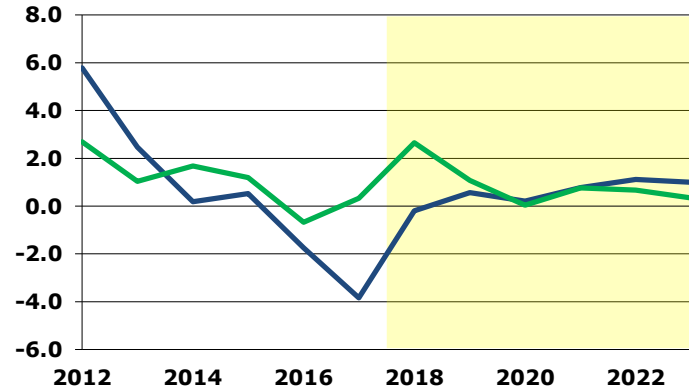
Source: WA State Employment Security Dept. 2017, ERFC 2023

Manufacturing Employment



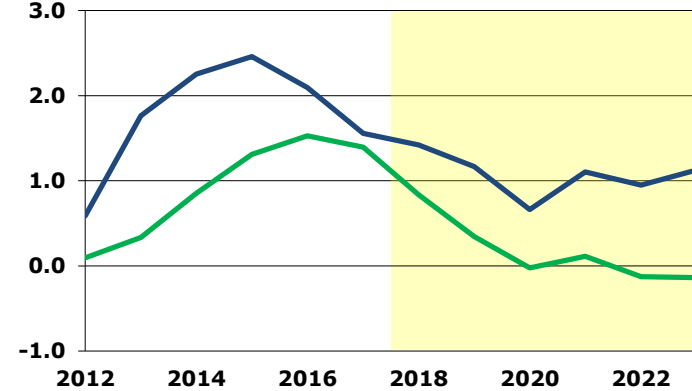
Source: WA State Employment Security Dept. 2017, ERFC 2023

Durable Manufacturing Employment



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

Nondurable Manufacturing Employment



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

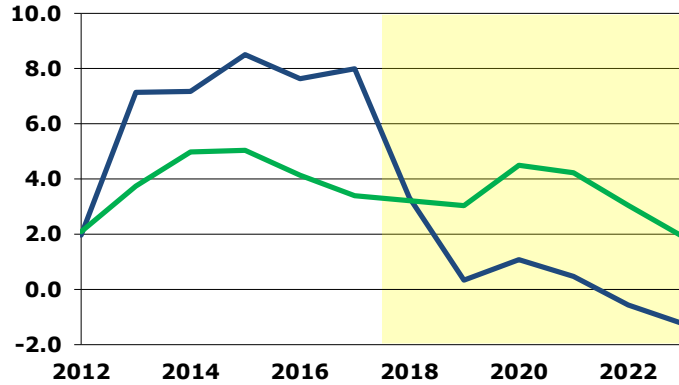
■ Washington

■ U.S.

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

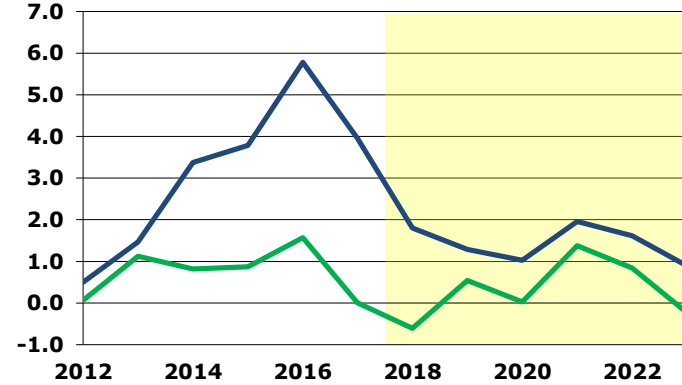
Forecast

Construction Employment



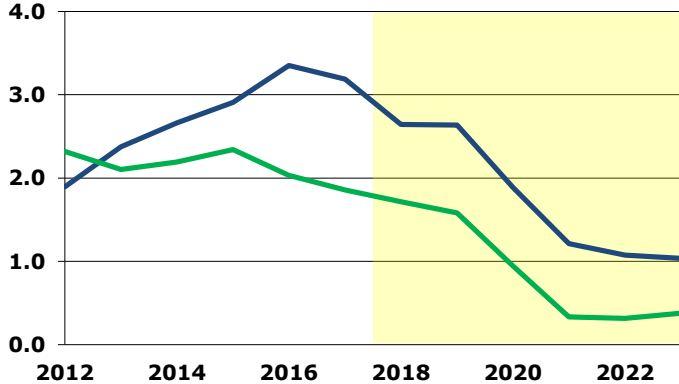
Source: WA State Employment Security Dept. 2017, ERFC 2023

Information Employment



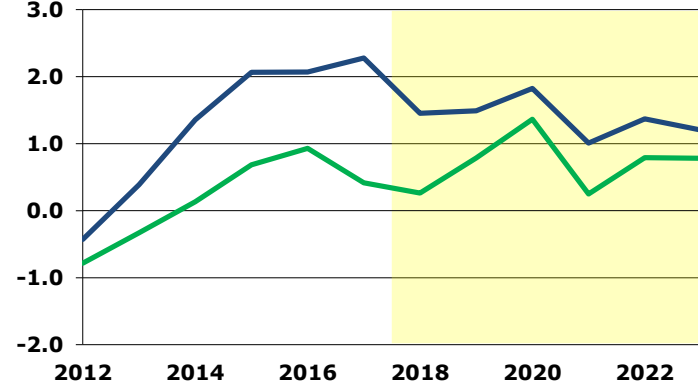
Source: WA State Employment Security Dept. 2017, ERFC 2023

Other Private Employment



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

Government Employment



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

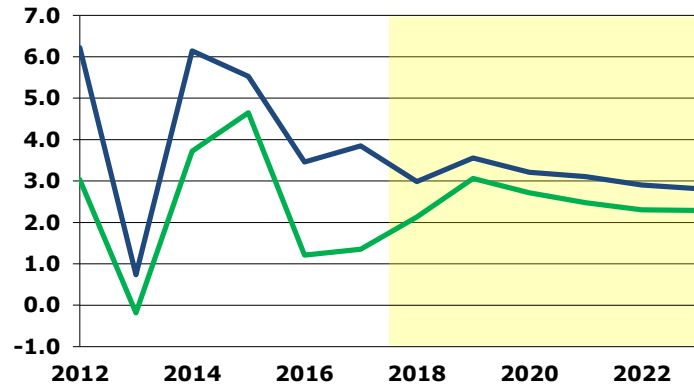
Washington

U.S.

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

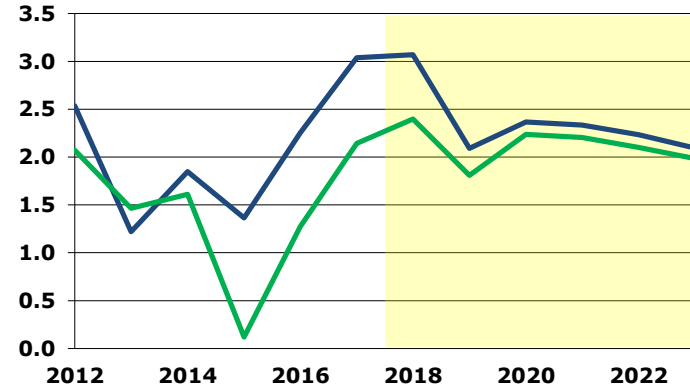
Forecast

Real Personal Income



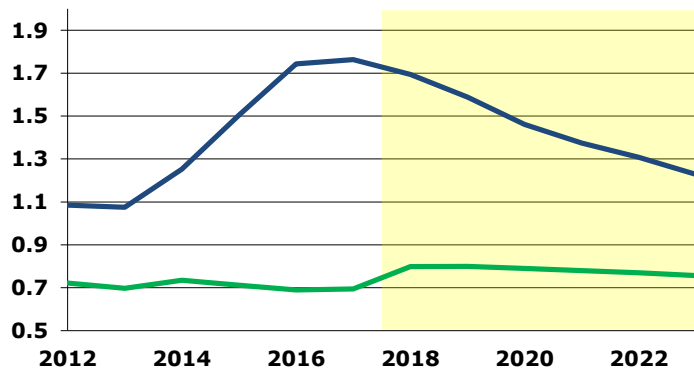
Source: Bureau of Economic Analysis 2016, ERFC 2023

Consumer Price Indices



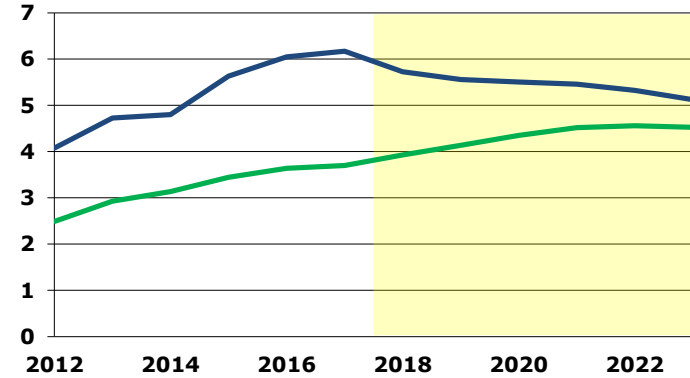
Source: Bureau of Labor Statistics 2017, ERFC 2023

Population



Source: Census Bureau 2016, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2016, ERFC 2023

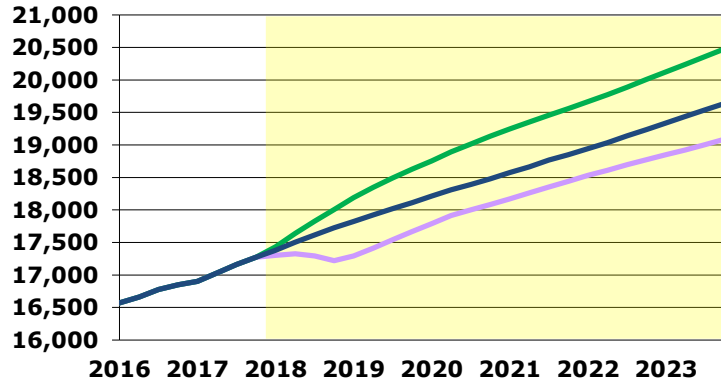
Washington

U.S.

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

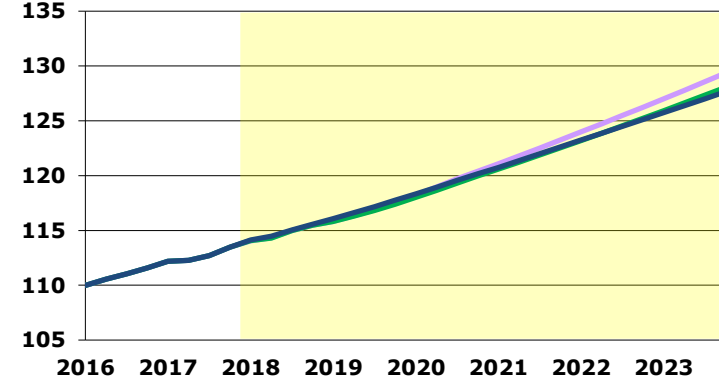
Forecast

Real GDP, Billions of 2009 Dollars



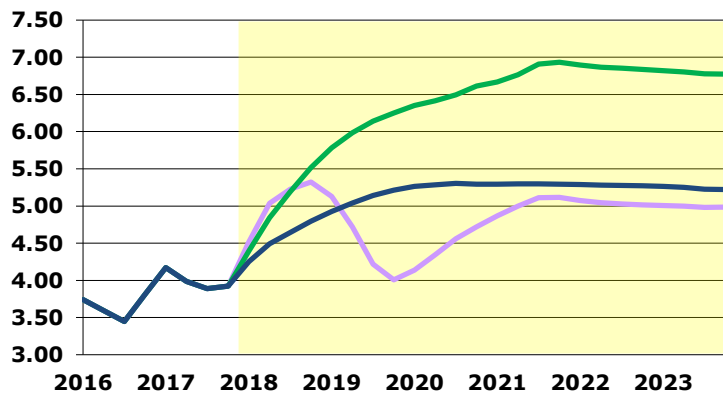
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

PCE Price Index, 2009 = 100



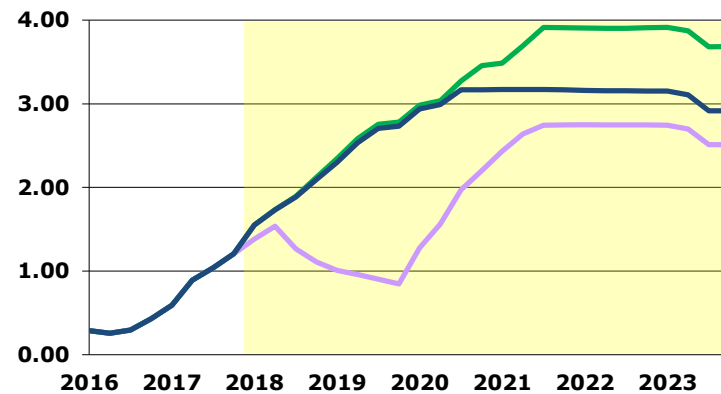
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2017 Q4, ERFC 2023

Three Month T-Bill Rate, Percent



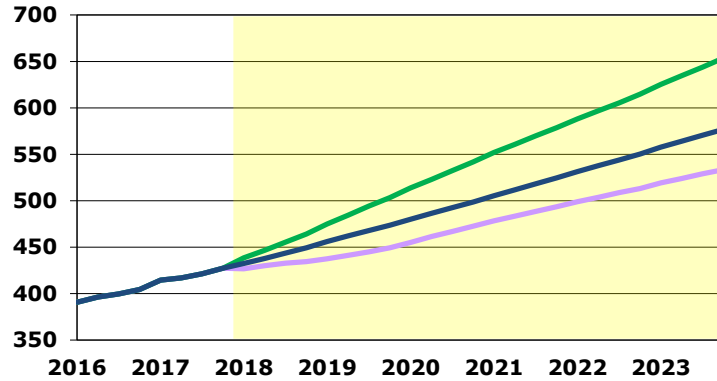
Source: Federal Reserve Board 2017 Q4, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

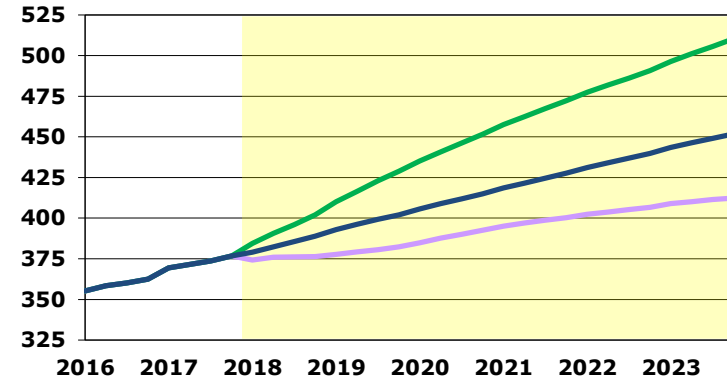
Forecast

Personal Income, Billions of Dollars



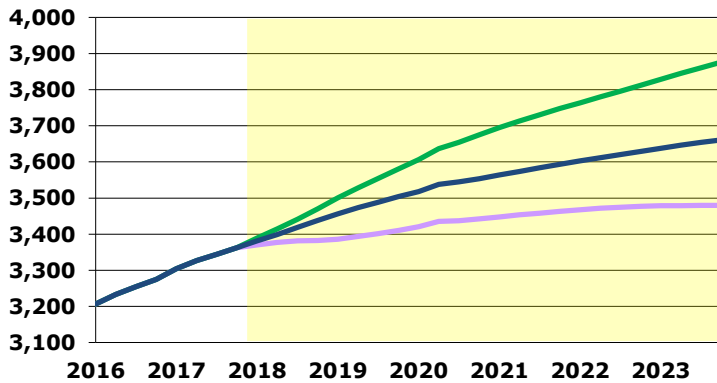
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Real Personal Income, Billions of 2009 Dollars



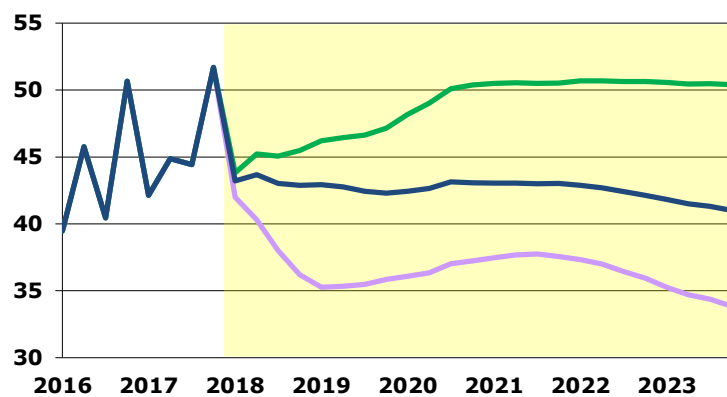
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2017 Q4, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2017 Q4, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic



Chapter 3: Washington State Revenue Forecast Summary

- **Revenue collections since the November 2017 forecast have come in \$185 million over the forecasted amount.**
- **Forecasted General Fund-State revenue has increased by \$647 million in the current biennium and \$671 million in the 2019-21 biennium.**
- **Much of the forecast increase stemmed from property taxes, which saw an increase of \$374 million over the two biennia due mainly to the final appraisal of taxable property values for the 2018 levy.**
- **Most of the remaining forecast increases were from retail sales, business and occupation and real estate excise taxes.**

Overview

The revenue forecast has increased due to stronger than expected tax receipts, changes to the economic forecast and increased taxable property values

Since the November 2017 forecast, General Fund – State (GF-S) revenue collections have come in \$185 million higher than forecasted. Much of the collection surplus came from real estate excise taxes, which have continued to exceed expectations. Most of the rest came from stronger than expected retail sales and business and occupation taxes. The large collection surplus, coupled with increases in disposable personal income and other changes to the economic forecast, has resulted in an increase in forecasted revenue larger than most over the last several years. Much of this increase also stemmed from an increase in expected property taxes, the chief cause of which was a larger-than-expected final appraisal of taxable property values for the 2018 levy.

GF-S forecast change by biennium (millions):

*17-19: +\$647
19-21: +\$671*

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2017-19 through 2019-21 biennia. For the current biennium, revenue sources that are tracked monthly came in \$184.9 million higher than forecasted in November. Changes to the economic forecast resulted in a \$462.2 million increase to projected collections for the rest of the biennium. The total of these components was a \$647.0 million increase in projected revenue for the current 2017-19 biennium. Changes to the economic forecast resulted in a \$671.2 million increase to projected collections for the 2019-21 biennium. The forecast for

GF-S revenue totals \$44,212.9 million in the 2017-19 biennium and \$48,253.4 million in the 2019-21 biennium. The forecast period has now been extended through the 2021-23 biennium. Forecasted GF-S revenue for the biennium is \$51,932.0 million.

GF-S forecast (\$millions):

2017-19:
\$44,213

2019-21:
\$48,253

2021-23:
\$51,932

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

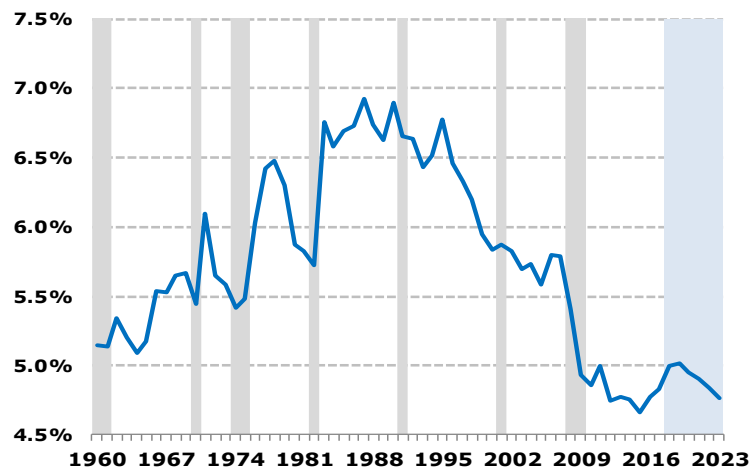
	2017-19 Biennium	2019-21 Biennium
Collection Experience	\$184.9	NA
Non-Economic Change	\$0.0	\$0.0
Forecast Change	\$462.2	\$671.2
Total Change	\$647.0	\$671.2

Though the ratio of collections to income is expected to increase for several years, it will still be 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 for two years and is expected to increase for two more years. The ratio of revenue to income has been on a downward trend since 1995, broken only by the housing boom that raised the ratio from 2005 to mid-2008, and by temporary taxes and transfers of funds from non-GF-S sources into the GF-S that again boosted the ratio in fiscal years 2011 and 2013. The ratio increased slightly in FY 2014 due to low personal income growth and then decreased slightly in FY 2015. The ratio then increased in FY 2016 and 2017, largely due to revenue increases stemming from legislative changes. Additional legislative changes enacted in June of 2017

Figure 3.1: GF-S Revenue (Current Definition) 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 2017. Gray shaded area indicates recession; blue shaded area indicates forecast.

will further boost the ratio through FY 2019, after which it will continue its downward trend. Despite the increases, the ratio of revenue to income in FY 2019 will still be below that of any fiscal year on record prior to FY 2009.

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 \$185 million (3.5%) more than the November 2017 forecast

Revenue collections from the Department of Revenue (DOR), Department of Licensing, and Administrative Office of the Courts are tracked monthly. In the period since the November 2017 forecast, total revenue from the above sources came in \$184.9 million (3.5%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$132.5 million (3.3%) above the forecast. Revenue from other DOR tax sources was \$51.6 million (3.9%) above the forecast.

Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the November 2017 forecast, cash basis, millions of dollars)

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$132.5	3.3%
Non-Revenue Act	\$51.6	3.9%
Subtotal	\$184.1	3.5%
Administrative Office of the Courts		
	\$0.8	4.4%
Total*	\$184.9	3.5%

* Detail may not add to total due to rounding.

Source: ERFC; Period: November 11, 2017 - February 10, 2018

Much of the Revenue Act forecast variance was due to large payments of past due taxes

Much of the variance in Revenue Act collections was due to \$62.2 million in large one-time payments of past-due taxes, most of which were B&O tax payments. These payments were partially offset by a \$20.7 million refund of retail sales taxes. Even without the net \$41.5 million from these payments minus refunds, however, collections were a strong \$142.6 million (2.7%) higher than forecasted.

Most of the remaining forecast variance was due to real estate excise taxes

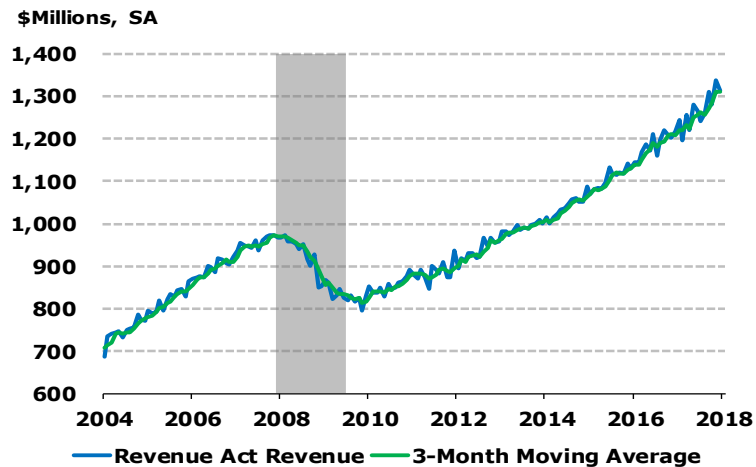
Most of the positive variance in non-Revenue Act collections was due to real estate excise taxes (REET), which came in \$44.1 million (21.1%) higher than forecasted. Transfers of unclaimed property into the GF-S came in \$5.8 million (34.5%) higher than forecasted. Cigarette tax receipts came in \$2.2 million (2.4%) higher than forecasted and liquor sales and liter tax receipts came in \$0.3 million (0.5%) lower than forecasted. Property tax receipts came in \$1.7 million (0.2%) lower than forecasted. All other DOR revenue sources came in \$1.5 million (4.0%) higher than forecasted. Revenue from the Administrative Office of the Courts was \$0.8 million (4.4%) higher than forecasted.

Adjusted Revenue Act collections were up 6.9% year over year in the most recent collection period and 11.3% in the previous period

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. As can be seen in the figure, despite large swings in monthly collections the three-month moving average continues on an upward trend. Adjusted for large one-time payments and refunds, collections grew 6.9% year over year in the January 11 – February 10 collections period and 11.3% in the previous period. Growth on a quarterly basis shows accelerated growth in the fourth quarter. Adjusted year-over-year growth in collections representing fourth quarter 2017 activity (November 11, 2017 – February 10, 2018 collections) was 8.4% after 6.4% growth for third quarter 2017 activity (August 11 – November 10, 2017 collections). Collections growth for second quarter 2017 activity was 5.6% and first quarter growth was 6.3%.

Figure 3.2: Revenue Act Collections*

Year-over-year growth in adjusted Revenue Act collections increased in the fourth quarter



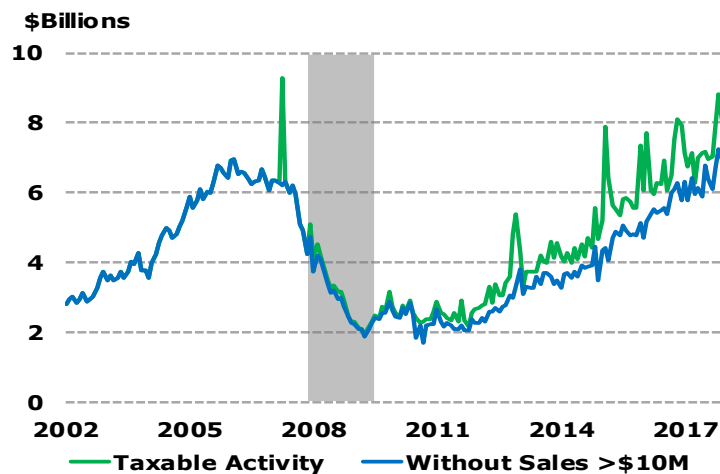
Source: ERFC; Data through February 10, 2018 preliminary allocation
*Adjusted for large payments/refunds and payment pattern change

Sales of large commercial properties were stronger than expected

Much of the large positive variance in REET collections was once again due to stronger-than-expected sales of large commercial property. Sales of property worth \$10 million or more totaled \$3.1 billion in the two months since the last forecast. These sales had averaged \$2.3 billion per quarter in the first three quarters of 2017 but rebounded to \$3.6 billion in the fourth quarter. Large commercial sales have been responsible for much of the increase in taxable activity since November 2012, creating many spikes in activity, many representing transfers of controlling interest during corporate mergers (see Figure 3.3). Residential sales and smaller commercial sales have also been stronger than expected since the November 2017 forecast. Though the number of sales has increased, most of the increases in taxable activity have been the result of increased sale prices.

Figure 3.3: Taxable Real Estate Excise Activity, SA

Large commercial sales have caused spikes in activity since November 2012



Source: ERFC; data through January 2018

Revenue Forecasts by Source

Department of Revenue

Taxes collected by DOR are most of GF-S taxes

The Department of Revenue (DOR) collects and administers the majority of Washington’s GF-S revenue, accounting for 94.8% of total GF-S revenue in FY 2017. 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.

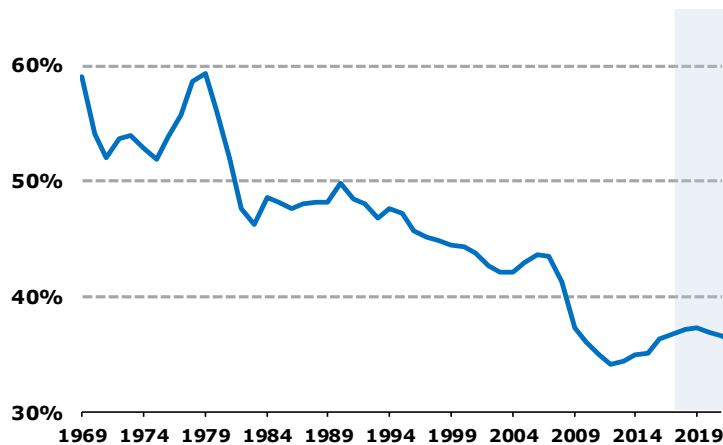
Retail sales taxes are the largest source of GF-S revenue

The retail sales tax is the largest source of GF-S revenue, accounting for 47.9% of GF-S revenue in FY 2017. The state’s share of the tax is 6.5% of the sales price. While construction labor, repair services, and some other services are taxed, the tax

does not apply to most services. Taxable sales as a share of personal income have been declining. Their share fell sharply during the recession and continued to fall through FY 2012. In that year, 34.1% of personal income was spent on taxable items and services, the lowest percentage on record. Increased spending on construction and autos, along with legislative changes to services and companies deemed taxable, caused the share to grow through FY 2017, reaching 37.4% of personal income. Legislation passed in June 2017 that extends the tax to bottled water and certain online sales is forecasted to cause the share to continue to increase through FY 2019. From FY 2019 on, however, the additional revenue will not grow as quickly as personal income, causing the ratio of sales to income to continue its downward trend. The historical and forecasted relationship between taxable sales and income is illustrated in Figure 3.4.

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 2017, forecast through FY 2023

Retail sales tax receipt growth forecast:

FY18: 7.7%
 FY19: 5.3%
 FY20: 4.5%
 FY21: 4.4%

Strong growth in construction and auto sales brought taxable retail sales growth of 8.1% in FY 2015. Legislative changes coupled with continued growth in construction and auto sales boosted growth in FY 2016 taxable activity to 8.4%. Slowing construction growth and flat auto sales lowered growth in FY 2017 activity to 6.3%. Forecasted growth remains at 6.3% in FY 2018. Growth in FY 2019 stays relatively strong at 5.6% despite slowing auto sales and construction because of increases in the number of online sales that are taxed due to legislation passed in 2017. Growth then declines through the end of the forecast period (see Table 3.4) as auto sales, construction and online sales growth settles down to lower levels. 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 2017 was 6.0%. Collections

growth is forecasted at 7.7% in FY 2018, 5.3% in FY 2019, 4.5% in FY 2020, 4.4% in FY 2021, 3.6% in FY 2022 and 3.3% in FY 2023.

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

The business and occupation (B&O) tax is the second largest source of GF-S revenue, accounting for 19.4% of GF-S revenue in FY 2017. 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 2016, 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 45% of B&O taxes due. The next largest sector was retailing, which is taxed at 0.471% and represented an estimated 25% of taxes due, followed by the wholesaling sector, which is taxed at 0.484% and represented an estimated 20% of taxes due.

B&O tax growth forecast:

*FY18: 7.6%
FY19: 3.0%
FY20: 4.9%
FY21: 4.9%*

In FY 2017, B&O tax receipts grew by 5.3%. Growth is forecasted to increase to 7.6% in FY 2018 due to large one-time payments of past due taxes since the last forecast and the continued legislative expansion of the tax base. Forecasted growth then slows to 3.0% in FY 2019 due to the elevated level of FY 2018 collections. Growth is forecasted at 4.9% in FY 2020 and FY 2021, 4.7% 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 10.6% of total revenue in FY 2017. 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:

*FY18: 31.7%
FY19: 25.1%
FY20: 5.6%
FY21: 4.5%*

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. For fiscal years 2018 through 2021, however, the levy will grow at the rate of property price appreciation plus the value of new construction. The first payments under the additional state levy will be due in the latter half of FY 2018, bringing projected total GF-S property tax growth of 31.7% for the fiscal year. The new levy will be in effect for all of FY 2019, bringing projected growth of another 25.1 % in that year. Growth is then expected to slow to 5.6% in FY 2020, 4.5% in FY 2021, 3.5% in FY 2022 and 2.7% in FY 2023.

Higher final assessed property values increased forecast

The growth rates of GF-S property tax receipts for FY 2018 and 2019 are higher than those of the November forecast due to an increase in projected property values that was prompted by the final state appraisal of taxable property values for the calendar year 2018 levy. Coupled with other smaller forecast changes, this increased valuation, which carries forward to future years,

resulted in an increase in expected revenue of \$145.4 million for the current biennium and \$228.2 million for the 2019-21 biennium.

REET was the fourth largest GF-S source in FY 2017

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2017, accounting for 5.1% of total revenue. The state portion of REET is 1.28% of the sales price. The tax is divided between the GF-S (92.3%), a fund for local public works (2.0%), a fund for assistance of cities and counties (1.6%) and, from July 1, 2013 – June 30, 2019, the Education Legacy Trust Account (4.1%). The tax is applied to both residential and commercial real estate, including purchases of vacant land.

REET growth forecast:

*FY18: 4.2 %
FY19: -12.9%
FY20: -0.7%
FY21: 3.8%*

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. Large commercial sales are expected to flatten and begin to decline in FY 2018 as residential sales grow more slowly, resulting in a 4.2% increase in collections. Price moderation in residential sales coupled with continuing declines in commercial sales is forecasted to cause collections to continue to decrease by 12.9% in FY 2019 and 0.7% in FY 2020, with growth resuming at 3.8% in FY 2021. Growth is forecasted at 2.2% in FY 2022 and 2.9% in FY 2023.

Use tax was the fifth largest GF-S source in FY 2017

The state use tax was the fifth largest GF-S revenue source in FY 2017 at 3.4% 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:

*FY18: -0.4%
FY19: 3.0%
FY20: 3.7%
FY21: 4.4%*

The legislated elimination of certain tax exemptions, along with several large one-time remittance payments, boosted use tax growth to 7.1% in FY 2016. Growth decreased to 6.0% in FY 2017. Lower used car sales and declines in expected used car prices are expected to cause collections to shrink by 0.4% in FY 2018 and grow at only 3.0% in FY 2019. Growth is then expected to resume at more normal levels of 3.7% in FY 2020 and 4.4% in FY 2021.

Public utility taxes were the sixth largest GF-S source in FY 2017

Public utility taxes were the sixth largest DOR source of GF-S revenue in FY 2017, bringing in 2.1% 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:*

*FY18: 3.9%
FY19: 7.5%
FY20: 3.4%
FY21: 6.4%*

Public utility tax receipts grew by 4.5% in FY 2016. Lower natural gas prices brought growth in receipts to 1.4% in FY 2017. Growth is forecasted at 3.9% in FY 2018. A recovery in projected natural gas prices and increased electricity prices bring expected growth of 7.5% in FY 2019. Growth is forecasted at 3.4% in FY 2020, 6.4% in FY 2021, 4.8% in FY 2022 and 3.5% 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 2017 at 1.9% 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:*

*FY18: -2.3%
FY19: -2.0%
FY20: -2.0%
FY21: -1.3%*

The total number of taxed cigarettes has been on a downward trend due to a continuing decline in the number of smokers. Recently, the rate of decline has been increasing further due to increased consumption of e-cigarettes, which are not subject to the cigarette tax but are subject to retail sales taxes. Despite an increase in tax enforcement established in the 2015 legislative session, collections decreased by 1.8% in FY 2016 and 3.5% in FY 2017. Collections are forecasted to decrease by 2.3% in FY 2018, 2.0% in FY 2019 and FY 2020, 1.3% in FY 2021, 2.0% in FY 2022 and 2.2% 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: \$7.6

Distributions of cannabis excise taxes to the GF-S totaled \$15.3 million in the 2013-15 biennium and \$147.6 million in the 2015-17 biennium. GF-S distributions are forecasted at \$250 million in the 2017-19 biennium, unchanged from the November forecast, and \$277.7 million in the 2019-21 biennium, an increase of \$7.6 million. The initial forecast of GF-S distributions for the 2021-23 biennium is \$297.8 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: \$0.4
19-21: -\$1.2

The Office of Financial Management (OFM) is responsible for preparing General Fund-State revenue and transfer forecasts for all agencies excluding the Department of Revenue, the Liquor and Cannabis Board, the Insurance Commissioner, the Washington State Lottery, and the State Treasurer. Starting with the September 2017 forecast cycle, the office also added the Department of Licensing to its list of covered agencies. The office's forecast for the 2017-19 biennium was increased \$0.4 million to \$327.9 million and the forecast for the 2019-21 biennium was decreased \$1.2 million to \$162.5 million. The office's initial forecast of revenue for the 2021-23 biennium is \$157.6 million.

State Treasurer

Forecast change by biennium (millions):

17-19: \$2.8
19-21: \$0.6

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's forecast for the 2017-19 biennium has been increased \$2.8 million to \$28.3 million and the forecast for the 2019-21 biennium has been increased \$0.6 million to \$49.3 million. The office's initial forecast of revenue for the 2021-23 biennium is \$53.8 million.

Insurance Commissioner

Forecast change by biennium (millions):

17-19: \$0.3
19-21: \$0.8

The Office of the Insurance Commissioner collects premium taxes on most classes of insurance sold in Washington State. These taxes are distributed to the GF-S and various accounts in support of fire services. The GF-S revenue forecast for the 2017-19 biennium has been increased \$0.3 million to \$1,167.2 million and the forecast for the 2019-21 biennium has been increased \$0.8 million to \$1,274.1 million. The office's initial forecast of revenue for the 2021-23 biennium is \$1,383.7 million.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

17-19: \$4.2
19-21: \$12.0

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The forecast of revenue for the 2017-19 biennium has been increased \$4.2 million to \$502.9 million and the forecast for the 2019-21 biennium has been increased \$12.0 million to \$550.3 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. The initial forecast of revenue for the 2021-23 biennium is \$591.3 million.

Lottery Commission

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

17-19: \$8.1
19-21: \$6.3

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. Forecasted transfers of lottery revenue into the GF-S for the 2017-19 biennium have been increased \$8.1 million to \$49.7 million and forecasted transfers for the 2019-21 biennium have been increased \$6.3 million to \$54.7 million. The initial forecast of GF-S transfers for the 2021-23 biennium is \$57.3 million.

*OPA forecast
change by
biennium
(millions):*

17-19: ~~-\$0.1~~
19-21: \$0.6

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The forecast of OPA revenue for the 2017-19 biennium has been decreased \$0.1 million to \$257.3 million and the forecast for the 2019-21 biennium has been increased \$0.6 million to \$258.0 million. The initial forecast of OPA revenue for the 2021-23 biennium is \$265.6 million.

Administrative Office of the Courts

*Forecast
change by
biennium
(millions):*

17-19: ~~-\$0.2~~
19-21: ~~-\$2.7~~

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast for the 2017-19 biennium has been decreased \$0.2 million to \$137.4 million and the forecast of transfers for the 2019-21 biennium has been decreased \$2.7 million to \$134.4 million. The initial forecast of revenue for the 2021-23 biennium is \$137.6 million.

Track Record for the 2017-19 Biennium

The February 2018 forecast is \$1.2 billion (2.9%) 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 February 2018 forecast is \$5.50 billion (14.2%) higher than the initial forecast. Non-economic changes have increased the forecast by \$2.48 billion (6.4%). Excluding non-economic changes, the current forecast is \$3.03 billion (7.8%) higher than the initial forecast. The June 2017 forecast, coupled with the \$2,079 million in legislative and budget-driven revenue changes passed in the 2017 special legislative sessions, was the basis for the initial budget for the 2017-19 biennium. The February forecast of biennial revenue is \$1.23 billion (2.9%) higher than that sum.

Track Record for the 2019-21 Biennium

This forecast is \$4.8 billion (11.1%) higher than the initial February 2016 forecast, due mainly to legislative changes

Table 3.11 summarizes the historical changes to the GF-S revenue forecast for the 2019-21 biennium. The February 2016 forecast was the initial forecast for the biennium. The February 2018 forecast is \$4.81 billion (11.1%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.27 billion (7.5%). Excluding non-economic changes, the current forecast is \$1.54 billion (3.5%) higher than the initial forecast.

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

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

Legislation enacted in 1987 requires that the state's biennial budget be in conformance with Generally Accepted Accounting Principles (GAAP). It also requires a GF-S revenue forecast on both a cash and GAAP basis. The GAAP forecasts of GF-S revenue for the 2017-19 and 2019-21 biennia are presented in Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for those biennia is in Table 3.15. The primary difference between the cash and GAAP forecasts is the timing of the receipt of revenue. On a GAAP basis, revenue is credited to the biennium in which it is earned even though it may not have been received. The cash forecast, on the other hand, reflects expected cash receipts during a fiscal period. The forecast on a GAAP, or accrual, basis is primarily used for financial reporting. The cash forecast is used for cash flow management and revenue tracking. The cash forecast is also the forecast used in the state's budgetary balance sheet, which is the principal tool for assessing the General Fund's current surplus or deficit position. References to the GF-S forecast in the text of this chapter refer to the cash forecast unless otherwise noted. Likewise, figures from revenue tables other than Tables 3.6, 3.8 and 3.16 are projected on a cash basis.

Budgetary Balance Sheet for the 2015-17 and 2017-19 Biennia

The forecast implies total GF-S reserves of \$3.72 billion at the end of the 2017-19 biennium and \$3.75 billion in reserves for GF-S, ELTA and OPA

Table 3.12 shows the budgetary balance sheets for the 2015-17 and 2017-19 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 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 final GF-S ending fund balance for the 2015-17 biennium is \$1,100.6 million and the total ending balance for GF-S, ELTA and OPA is \$1,148.5 million. Based on the February 2018 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$2,324.4 million at the end of the 2017-19 biennium and GF-S, ELTA and OPA reserves are projected to be \$2,354.8 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,393.7 million, bringing total projected GF-S reserves to \$3,718.0 million. Projected combined reserves for the ELTA and OPA are \$30.5 million, for total projected reserves of \$3,748.5 million for GF-S, ELTA and OPA at the end of the 2017-19 biennium.

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

*Optimistic scenario (billions):
17-19: +\$1.1
19-21: +\$3.3*

*Pessimistic scenario:
17-19: -\$1.4
19-21: -\$3.6*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 60% to the baseline forecast, 15% to a scenario based on the upside risks and 25% to a scenario based on the downside risks. The revenue implications of these alternative scenarios for the 2017-19 biennium are shown in Table 3.13 and those of the 2019-21 biennium are shown in Table 3.14. For the 2017-19 biennium, the optimistic forecast generates \$45,310.6 million in GF-S revenue, \$1,097.8 million (2.5%) more than the baseline scenario, while the pessimistic forecast produces \$42,832.0 million in revenue, \$1,380.8 million (3.1%) less than the baseline. For the 2019-21 biennium, the optimistic forecast generates \$51,593.2 million in GF-S revenue, \$3,339.8 million (6.9%) more than the baseline scenario, while the pessimistic forecast produces \$44,669.8 million in revenue, \$3,583.6 million (7.4%) less than the baseline.

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

“Near General Fund” accounts are those included in the GF-S plus the Education Legacy Trust Account (ELTA). 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

*Near
General
Fund
Forecast
(millions):*

*2017-19:
\$44,732.8*

*2019-21:
\$48,818.4*

*2021-23:
\$52,524.7*

legislation also added revenue from solid waste taxes beginning in FY 2016. The forecast of Near General Fund revenue for the 2017-19 biennium is \$44,732.8 million, \$627.9 million more than the November 2017 forecast, and the forecast for the 2019-21 biennium is \$48,818.4 million, \$659.2 million more than the November forecast. The initial forecast of Near General Fund revenue for the 2021-23 biennium is \$52,524.7 million. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17. The table also includes projected revenue for the OPA and the sum of Near General Fund plus OPA revenues by fiscal year.

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

Biennium	Current Dollars	Percent Change	2009 Chained Dollars	Percent Change
1961-63	\$817.1		\$4,300.0	
1963-65	866.2	6.0%	4,439.3	3.2%
1965-67	1,128.6	30.3%	5,565.5	25.4%
1967-69	1,440.5	27.6%	6,658.6	19.6%
1969-71	1,732.7	20.3%	7,767.2	16.6%
1971-73	1,922.1	10.9%	7,971.8	2.6%
1973-75	2,372.4	23.4%	8,500.2	6.6%
1975-77	3,395.0	43.1%	10,580.8	24.5%
1977-79	4,490.0	32.3%	12,284.4	16.1%
1979-81	5,356.4	19.3%	12,197.3	-0.7%
1981-83	6,801.4	27.0%	13,492.7	10.6%
1983-85	8,202.4	20.6%	15,008.3	11.2%
1985-87	9,574.6	16.7%	16,528.2	10.1%
1987-89	10,934.1	14.2%	17,618.6	6.6%
1989-91	13,309.0	21.7%	19,772.8	12.2%
1991-93	14,862.2	11.7%	20,789.0	5.1%
1993-95	16,564.6	11.5%	22,140.3	6.5%
1995-97	17,637.7	6.5%	22,629.9	2.2%
1997-99	19,620.1	11.2%	24,520.4	8.4%
1999-01	21,262.1	8.4%	25,587.4	4.4%
2001-03	21,140.7	-0.6%	24,595.4	-3.9%
2003-05	23,388.5	10.6%	26,077.7	6.0%
2005-07	27,772.0	18.7%	29,316.2	12.4%
2007-09	27,703.0	-0.2%	27,888.3	-4.9%
2009-11	28,218.1	1.9%	27,704.7	-0.7%
2011-13	30,657.0	8.6%	28,906.9	4.3%
2013-15	33,666.0	9.8%	30,933.1	7.0%
2015-17	38,317.4	13.8%	34,552.9	11.7%
2017-19 ^F	44,212.9	15.4%	38,526.9	11.5%
2019-21 ^F	48,253.4	9.1%	40,462.5	5.0%
2021-23 ^F	51,932.0	7.6%	41,820.6	3.4%

^F February 2018 forecast

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

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

Table 3.4
Taxable retail sales*
(millions of dollars)

Fiscal Year	Amount	Percent Change
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 ^F	159,497	6.3%
2019 ^F	168,443	5.6%
2020 ^F	175,834	4.4%
2021 ^F	183,384	4.3%
2022 ^F	189,946	3.6%
2023 ^F	196,043	3.2%

^F February 2018 forecast

Source: ERFC

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

Table 3.5

Comparison of the General Fund-State forecast by agency

2017-19 biennium; cash basis

(millions of dollars)

Forecast by Agency	Nov. 2017 Forecast¹	Non- Economic Changes	Forecast Revision	Feb. 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$20,753.5	\$0.0	\$155.5	\$20,909.0	\$155.5
Business & Occupation	8,224.8	0.0	122.5	8,347.3	122.5
Use	1,355.1	0.0	8.1	1,363.2	8.1
Public Utility	897.6	0.0	(21.8)	875.8	(21.8)
Liquor Sales/Liter	545.4	0.0	1.1	546.5	1.1
Cigarette	726.1	0.0	5.1	731.2	5.1
Property (State Levy)	6,034.3	0.0	145.4	6,179.7	145.4
Real Estate Excise	1,830.5	0.0	135.8	1,966.3	135.8
Timber Excise	4.2	0.0	0.3	4.5	0.3
Other	996.5	0.0	79.4	1,076.0	79.4
Subtotal	41,368.1	0.0	631.4	41,999.4	631.4
Insurance Commissioner					
Insurance Premiums	1,166.9	0.0	0.3	1,167.2	0.3
Liquor Control Board					
Fees, Cannabis Excise Tax	442.8	0.0	3.1	445.9	3.1
Beer & Wine Surtax	55.9	0.0	1.1	57.0	1.1
Lottery Commission					
Lottery Revenue	41.6	0.0	8.1	49.7	8.1
State Treasurer					
Interest Earnings	25.5	0.0	2.8	28.3	2.8
Office of Financial Management**					
Other Agencies	327.5	0.0	0.4	327.9	0.4
Administrative Office of the Courts					
Fines and Forfeitures	137.6	0.0	(0.2)	137.4	(0.2)
Total General Fund-State *	\$43,565.8	\$0.0	\$647.0	\$44,212.9	\$647.0

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council November 20, 2017² Forecast for the 2017-19 biennium, adopted February 15, 2018

*Detail may not add to totals because of rounding.

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

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

Table 3.6

Comparison of the General Fund-State forecast by agency

2017-19 biennium; GAAP basis

(millions of dollars)

Forecast by Agency	Nov. 2017 Forecast¹	Non- Economic Changes	Forecast Revision	Feb. 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$20,753.5	\$0.0	\$155.5	\$20,909.0	\$155.5
Business & Occupation	8,224.8	0.0	122.5	8,347.3	122.5
Use	1,355.1	0.0	8.1	1,363.2	8.1
Public Utility	897.6	0.0	(21.8)	875.8	(21.8)
Liquor Sales/Liter	545.4	0.0	1.1	546.5	1.1
Cigarette	726.1	0.0	5.1	731.2	5.1
Property (State Levy)	6,034.3	0.0	145.4	6,179.7	145.4
Real Estate Excise	1,830.5	0.0	135.8	1,966.3	135.8
Timber Excise	3.7	0.0	0.3	4.1	0.3
Other	996.5	0.0	79.7	1,076.2	79.7
Subtotal	41,367.6	0.0	631.7	41,999.3	631.7
Insurance Commissioner					
Insurance Premiums	1,166.9	0.0	0.3	1,167.2	0.3
Liquor Control Board					
Fees, Cannabis Excise Tax	442.8	0.0	3.1	445.9	3.1
Beer & Wine Surtax	55.9	0.0	1.1	57.0	1.1
Lottery Commission					
Lottery Revenue	41.2	0.0	8.4	49.6	8.4
State Treasurer					
Interest Earnings	24.9	0.0	3.3	28.2	3.3
Office of Financial Management**					
Other Agencies	327.5	0.0	0.4	327.9	0.4
Administrative Office of the Courts					
Fines and Forfeitures	137.6	0.0	(0.2)	137.4	(0.2)
Total General Fund-State *	\$43,564.3	\$0.0	\$648.1	\$44,212.4	\$648.1

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council November 20, 2017² Forecast for the 2017-19 biennium, adopted February 15, 2018

*Detail may not add to totals because of rounding.

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

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

Table 3.7

Comparison of the General Fund-State forecast by agency

2019-21 biennium; cash basis

(millions of dollars)

Forecast by Agency	Nov. 2017 Forecast¹	Non- Economic Changes	Forecast Revision	Feb. 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$22,676.0	\$0.0	\$236.4	\$22,912.3	\$236.4
Business & Occupation Use	9,057.8	0.0	47.5	9,105.3	47.5
Public Utility	1,458.5	0.0	8.9	1,467.4	8.9
Liquor Sales/Liter	961.0	0.0	6.8	967.8	6.8
Cigarette	566.0	0.0	5.7	571.7	5.7
Property (State Levy)	698.0	0.0	6.6	704.6	6.6
Real Estate Excise	7,187.7	0.0	228.2	7,415.9	228.2
Timber Excise	1,765.2	0.0	86.7	1,851.9	86.7
Other	4.2	0.0	0.2	4.4	0.2
Subtotal	998.4	0.0	28.3	1,026.7	28.3
	45,372.6	0.0	655.3	46,027.9	655.3
Insurance Commissioner					
Insurance Premiums	1,273.4	0.0	0.8	1,274.1	0.8
Liquor Control Board					
Fees, Cannabis Excise Tax	481.8	0.0	11.4	493.3	11.4
Beer & Wine Surtax	56.5	0.0	0.6	57.1	0.6
Lottery Commission					
Lottery Revenue	48.4	0.0	6.3	54.7	6.3
State Treasurer					
Interest Earnings	48.7	0.0	0.6	49.3	0.6
Office of Financial Management**					
Other Agencies	163.7	0.0	(1.2)	162.5	(1.2)
Administrative Office of the Courts					
Fines and Forfeitures	137.1	0.0	(2.7)	134.4	(2.7)
Total General Fund-State *	\$47,582.2	\$0.0	\$671.2	\$48,253.4	\$671.2

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2017² Forecast for the 2019-21 biennium, adopted February 15, 2018

*Detail may not add to totals because of rounding.

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

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

Table 3.8

Comparison of the General Fund-State forecast by agency

2019-21 biennium; GAAP basis

(millions of dollars)

Forecast by Agency	Nov. 2017 Forecast¹	Non- Economic Changes	Forecast Revision	Feb. 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$22,676.0	\$0.0	\$236.4	\$22,912.3	\$236.4
Business & Occupation Use	9,057.8	0.0	47.5	9,105.3	47.5
Public Utility	1,458.5	0.0	8.9	1,467.4	8.9
Liquor Sales/Liter	961.0	0.0	6.8	967.8	6.8
Cigarette	566.0	0.0	5.7	571.7	5.7
Property (State Levy)	698.0	0.0	6.6	704.6	6.6
Real Estate Excise	7,187.7	0.0	228.2	7,415.9	228.2
Timber Excise	1,765.2	0.0	86.7	1,851.9	86.7
Other	4.0	0.0	0.4	4.4	0.4
Subtotal	998.4	0.0	28.3	1,026.7	28.3
	45,372.4	0.0	655.5	46,027.9	655.5
Insurance Commissioner					
Insurance Premiums	1,273.4	0.0	0.8	1,274.1	0.8
Liquor Control Board					
Fees, Cannabis Excise Tax	481.8	0.0	11.4	493.3	11.4
Beer & Wine Surtax	56.5	0.0	0.6	57.1	0.6
Lottery Commission					
Lottery Revenue	48.3	0.0	3.9	52.2	3.9
State Treasurer					
Interest Earnings	49.5	0.0	0.5	50.0	0.5
Office of Financial Management**					
Other Agencies	163.7	0.0	(1.2)	162.5	(1.2)
Administrative Office of the Courts					
Fines and Forfeitures	137.1	0.0	(2.7)	134.4	(2.7)
Total General Fund-State *	\$47,582.7	\$0.0	\$668.8	\$48,251.6	\$668.8

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2017² Forecast for the 2019-21 biennium, adopted February 15, 2018

*Detail may not add to totals because of rounding.

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

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

Table 3.9

February 2018 General Fund-State history and forecast**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**	\$10,183.1	\$10,725.8	\$20,909.0	\$11,211.6	\$11,700.7	\$22,912.3	\$12,122.8	\$12,518.4	\$24,641.2
Business & occupation	4,111.6	4,235.7	8,347.3	4,443.9	4,661.3	9,105.3	4,881.1	5,114.0	9,995.1
Use**	671.4	691.8	1,363.2	717.7	749.6	1,467.4	783.6	816.1	1,599.7
Public Utility	422.0	453.7	875.8	469.0	498.8	967.8	522.8	541.2	1,064.1
Liquor sales/liter	271.2	275.4	546.5	282.5	289.2	571.7	295.5	301.2	596.7
Beer & wine surtax	28.7	28.3	57.0	28.5	28.6	57.1	28.7	28.8	57.5
Cigarette	378.6	371.4	750.0	364.0	359.5	723.5	352.7	345.2	697.9
Tobacco products	57.7	57.3	115.1	58.0	58.7	116.8	59.4	60.1	119.6
Cannabis Excise Taxes	115.3	126.2	241.5	132.1	137.7	269.8	142.5	147.2	289.7
Property (state school levy)	2,745.0	3,434.7	6,179.7	3,627.2	3,788.7	7,415.9	3,921.1	4,025.3	7,946.4
Leasehold Excise Tax	35.8	34.1	69.9	33.9	33.9	67.8	33.9	34.0	68.0
Public utility district	55.1	56.1	111.1	56.9	57.8	114.7	58.6	59.4	118.0
Brokered Natural Gas	20.6	20.7	41.3	20.9	21.3	42.2	21.7	22.1	43.8
Real estate excise***	1,050.8	915.5	1,966.3	908.7	943.2	1,851.9	963.9	991.5	1,955.4
Timber excise	2.3	2.1	4.5	2.2	2.2	4.4	2.3	2.3	4.6
Estate/inheritance	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Boat excise	14.8	14.0	28.7	14.0	14.0	27.9	14.0	14.0	27.9
Insurance premiums	569.1	598.0	1,167.2	623.8	650.3	1,274.1	677.8	705.8	1,383.7
Penalties and interest on past due taxes	203.6	170.2	373.9	176.3	182.6	358.9	188.5	194.7	383.1
Other	82.0	51.0	133.0	51.6	52.1	103.7	52.7	52.7	105.4
Total Taxes	21,018.9	22,262.0	43,281.0	23,222.7	24,230.3	47,453.0	25,123.5	25,974.0	51,097.6
State Non-Tax Sources									
Licenses, permits, fees	132.2	133.8	266.0	136.7	140.5	277.2	143.6	146.8	290.4
Liquor & Cannabis fees	99.7	104.6	204.4	109.2	114.3	223.5	120.2	124.0	244.2
Earnings on investments	10.8	17.5	28.3	22.5	26.8	49.3	26.7	27.1	53.8
Administrative Office of the Courts	70.7	66.8	137.4	66.9	67.6	134.4	68.4	69.2	137.6
Transfers of unclaimed property	88.0	73.4	161.4	73.6	74.4	148.0	75.5	76.6	152.1
Other revenue & transfers	71.4	63.0	134.4	(15.4)	(16.6)	(32.0)	(19.9)	(23.7)	(43.6)
Total Non-Tax	472.8	459.1	931.9	393.4	406.9	800.4	414.5	420.0	834.4
Total General Fund-State *	\$21,491.7	\$22,721.2	\$44,212.9	\$23,616.2	\$24,637.2	\$48,253.4	\$25,538.0	\$26,394.0	\$51,932.0

* 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 February 2018

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
Total change***:						
From February 2014	2,870	155	3,025	2,478	5,503	
Percent change	7.8	8.5	7.8	6.4	14.2	

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

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

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

First official forecast for the 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

Table 3.11

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

February 2016 through February 2018

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		671	48,253
Total change***:						
From February 2016	1,657	(115)	1,542	3,271	4,812	
Percent change	4.5	(6.3)	3.5	7.5	11.1	

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

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

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

First official forecast for the 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

2015-17 with Enacted Supplementals and 2017-19 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

	2015-17			2017-19		
	GFS	ELTA and OPA	TOTAL	GFS	ELTA and OPA	TOTAL
RESOURCES						
Beginning Fund Balance	990.9	20.3	1,011.2	1,100.6	48.0	1,148.5
November 2017 Revenue Forecast	38,317.4	732.9	39,050.3	43,565.8	796.5	44,362.3
February 2018 Revenue Forecast change	-	-	-	647.0	(19.2)	627.8
Current Revenue Totals	38,317.4	732.9	39,050.3	44,212.9	777.2	44,990.1
Transfer to Budget Stabilization Account (1% of GSR)	(383.2)		(383.2)	(434.8)		(434.8)
Transfer to Budget Stabilization Account (EORG)	(925.2)		(925.2)	(1,304.4)		(1,304.4)
Transfer from BSA (EORG)				1,078.0		1,078.0
CAFR Adjustment	(78.9)	(9.6)	(88.5)	-	-	-
Enacted Fund Transfers	167.7		167.7	74.1	254.0	328.1
Actual/Assumed Prior Period Adjustments	521.7		521.7	40.8		40.8
Total Resources (including beginning fund balance)	38,610.4	743.7	39,354.1	44,767.1	1,079.2	45,846.3
EXPENDITURES						
Enacted Budgets						
2015-17 Biennium	37,788.8	699.1	38,487.8			
2017-19 Biennium	-	-	-	42,659.6	1,048.8	43,708.4
Actual/Assumed Reversions	(278.9)	(3.4)	(282.3)	(216.9)	-	(216.9)
Total Expenditures	37,509.9	695.7	38,205.6	42,442.8	1,048.8	43,491.5
RESERVES						
Projected Ending Balance (GFS + ELTA + OPA)	1,100.6	48.0	1,148.5	2,324.4	30.5	2,354.8
Budget Stabilization Account						
Budget Stabilization Account Beginning Balance	513.1		513.1	1,638.3		1,638.3
Transfers from General Fund, Interest Earnings & Adjustments	390.7		390.7	473.1		473.1
Transfers from GFS (EORG)	925.2		925.2	1,304.4		1,304.4
Less 15-17 Biennium expenditures	(190.6)		(190.6)	-		-
Less 17-19 Appropriations from BSA				(19.0)		(19.0)
Less 17-19 Transfers to Pension Stabilization Account				(925.2)		(925.2)
Less Transfers out to GFS (EORG)	-		-	(1,078.0)		(1,078.0)
Projected Budget Stabilization Account Ending Balance	1,638.3		1,638.3	1,393.7		1,393.7
Total Reserves (Near General Fund plus Budget Stabilization)	2,738.9	48.0	2,786.9	3,718.0	30.5	3,748.5

>>> Final accounting adjustments for fiscal year 2017 made subsequent to the balance sheet adopted in November 2017 increased the ending fund balance for 15-17 Biennium from \$785 million to \$1.15 billion.

Acronyms

GSR- General State Revenues
EORG- Extraordinary General State Revenues
CAFR- Comprehensive Annual Financial Report

Table 3.13

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

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$21,495.1	\$20,909.0	\$20,238.5
Business & Occupation	8,570.7	8,347.3	8,089.8
Use	1,408.6	1,363.2	1,318.0
Public Utility	892.7	875.8	856.7
Property (school levy)	6,205.0	6,179.7	6,153.6
Real Estate Excise	2,107.7	1,966.3	1,730.8
Other	2,335.9	2,358.2	2,307.7
Subtotal	43,015.7	41,999.4	40,695.2
Insurance Commissioner¹	1,196.3	1,167.2	1,138.0
Lottery Commission	52.2	49.7	47.2
State Treasurer - Interest earnings	50.0	28.3	11.2
Liquor and Cannabis Surtaxes & Fees²	521.4	502.9	484.6
Office of Financial Management			
Other agencies	334.5	327.9	321.4
Administrative Office of the Courts			
Fines and Forfeitures	140.5	137.4	134.5
Total General Fund - State*	\$45,310.6	\$44,212.9	\$42,832.0
Difference from February 2018 Baseline	\$1,097.8		(\$1,380.8)

1 Insurance premiums, General Fund-State portion.

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

* Detail may not add to total due to rounding.

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

Table 3.14

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

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$24,759.5	\$22,912.3	\$20,853.9
Business & Occupation Use	9,761.9	9,105.3	8,358.0
Public Utility	1,560.8	1,467.4	1,358.6
Property (school levy)	1,004.6	967.8	910.9
Real Estate Excise	7,483.6	7,415.9	7,329.8
Other	2,255.4	1,851.9	1,558.5
Subtotal	2,411.2	2,307.4	2,187.3
	49,237.2	46,027.9	42,557.0
Insurance Commissioner¹	1,306.0	1,274.1	1,242.3
Lottery Commission	57.5	54.7	52.0
State Treasurer - Interest earnings	93.1	49.3	12.8
Liquor and Cannabis Surtaxes & Fees²	585.5	550.3	522.2
Office of Financial Management			
Other agencies	169.0	162.5	156.0
Administrative Office of the Courts			
Fines and Forfeitures	144.9	134.4	127.4
Total General Fund - State*	\$51,593.2	\$48,253.4	\$44,669.8
Difference from February 2018 Baseline	\$3,339.8		(\$3,583.6)

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 3.15

Lottery transfers by fund

February 2018 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	172.3	24.8	0.0	12.6	0.0	0.0	0.3	4.0	130.5	0.0	0.0
2019	169.0	24.8	0.0	13.1	0.0	0.0	0.4	3.9	126.7	0.0	0.0
2017-19 Biennium	341.3	49.7	0.0	25.8	0.0	0.0	0.7	7.9	257.3	0.0	0.0
2020	173.5	27.1	0.0	13.7	0.0	0.0	0.4	4.0	128.3	0.0	0.0
2021	175.9	27.6	0.0	14.2	0.0	0.0	0.4	4.0	129.7	0.0	0.0
2019-21 Biennium	349.4	54.7	0.0	27.9	0.0	0.0	0.7	8.0	258.0	0.0	0.0
2022	178.6	28.6	0.0	14.2	0.0	0.0	0.4	4.0	131.4	0.0	0.0
2023	181.4	28.7	0.0	14.2	0.0	0.0	0.4	4.0	134.1	0.0	0.0
2021-23 Biennium	360.1	57.3	0.0	28.4	0.0	0.0	0.7	8.0	265.6	0.0	0.0

Table 3.16

Lottery transfers by fund

February 2018 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	169.3	24.8	0.0	12.6	0.0	0.0	0.3	4.0	127.6	0.0	0.0
2019	170.6	24.8	0.0	13.1	0.0	0.0	0.4	4.0	128.3	0.0	0.0
2017-19 Biennium	340.0	49.6	0.0	25.8	0.0	0.0	0.7	8.0	255.9	0.0	0.0
2020	173.7	26.0	0.0	13.7	0.0	0.0	0.4	4.0	129.7	0.0	0.0
2021	176.1	26.1	0.0	14.2	0.0	0.0	0.4	4.0	131.4	0.0	0.0
2019-21 Biennium	349.8	52.2	0.0	27.9	0.0	0.0	0.7	8.0	261.1	0.0	0.0
2022	178.9	26.2	0.0	14.2	0.0	0.0	0.4	4.0	134.1	0.0	0.0
2023	181.7	26.3	0.0	14.2	0.0	0.0	0.4	4.0	136.8	0.0	0.0
2021-23 Biennium	360.5	52.5	0.0	28.4	0.0	0.0	0.7	8.0	270.9	0.0	0.0

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

Source: Lottery Commission, ERFC

Table 3.17

General Fund-State, Education Legacy Trust Account and Opportunity Pathways Account

History and Forecast by Fiscal Year (Cash basis)

February 2018 - Millions of Dollars

	General Fund-State (GF-S) (current definition)		Education Legacy Trust Fund* (ELTA)		Total GF-S plus ELTA		WA Opportunity Pathways Account (OPA)		Total GF-S plus ELTA and OPA	
	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.
History:										
FY 1999	\$10,414	3.6%			\$10,414	3.6%			\$10,414	3.6%
FY 2000	\$11,068	6.3%			\$11,068	6.3%			\$11,068	6.3%
FY 2001	\$11,560	4.4%			\$11,560	4.4%			\$11,560	4.4%
FY 2002	\$11,632	0.6%			\$11,632	0.6%			\$11,632	0.6%
FY 2003	\$11,721	0.8%			\$11,721	0.8%			\$11,721	0.8%
FY 2004	\$12,358	5.4%			\$12,358	5.4%			\$12,358	5.4%
FY 2005	\$13,036	5.5%			\$13,036	5.5%			\$13,036	5.5%
FY 2006	\$14,318	9.8%	\$115		\$14,432	10.7%			\$14,432	10.7%
FY 2007	\$15,467	8.0%	\$266	132.2%	\$15,734	9.0%			\$15,734	9.0%
FY 2008	\$15,659	1.2%	\$213	-20.1%	\$15,872	0.9%			\$15,872	0.9%
FY 2009	\$14,158	-9.6%	\$224	5.4%	\$14,382	-9.4%			\$14,382	-9.4%
FY 2010	\$13,571	-4.1%	\$157	-29.9%	\$13,728	-4.6%			\$13,728	-4.6%
FY 2011	\$14,648	7.9%	\$112	-29.0%	\$14,759	7.5%	\$99		\$14,859	8.2%
FY 2012	\$14,874	1.5%	\$114	2.3%	\$14,988	1.6%	\$118	19.1%	\$15,107	1.7%
FY 2013	\$15,783	6.1%	\$101	-11.5%	\$15,884	6.0%	\$126	5.9%	\$16,009	6.0%
FY 2014	\$16,383	3.8%	\$197	95.3%	\$16,580	4.4%	\$114	-9.4%	\$16,694	4.3%
FY 2015	\$17,283	5.5%	\$207	5.0%	\$17,491	5.5%	\$120	5.7%	\$17,611	5.5%
FY 2016	\$18,579	7.5%	\$215	3.6%	\$18,793	7.4%	\$139	15.7%	\$18,933	7.5%
FY 2017	\$19,739	6.2%	\$252	17.5%	\$19,991	6.4%	\$127	-9.0%	\$20,118	6.3%
Forecast:										
FY 2018	\$21,492	8.9%	\$246	-2.4%	\$21,738	8.7%	\$131	3.1%	\$21,869	8.7%
FY 2019	\$22,721	5.7%	\$274	11.1%	\$22,995	5.8%	\$127	-2.9%	\$23,122	5.7%
FY 2020	\$23,616	3.9%	\$279	2.0%	\$23,895	3.9%	\$128	1.3%	\$24,024	3.9%
FY 2021	\$24,637	4.3%	\$286	2.5%	\$24,923	4.3%	\$130	1.1%	\$25,053	4.3%
FY 2022	\$25,538	3.7%	\$293	2.4%	\$25,831	3.6%	\$131	1.3%	\$25,962	3.6%
FY 2023	\$26,394	3.4%	\$300	2.4%	\$26,694	3.3%	\$134	2.0%	\$26,828	3.3%
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	\$44,213	15.4%	\$520	11.3%	\$44,733	15.3%	\$257	-3.2%	\$44,990	15.2%
19-21 Biennium	\$48,253	9.1%	\$565	8.7%	\$48,818	9.1%	\$258	0.3%	\$49,076	9.1%
21-23 Biennium	\$51,932	7.6%	\$593	4.9%	\$52,525	7.6%	\$266	2.9%	\$52,790	7.6%

*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
 February 2018
 Thousands of dollars

Fiscal year	Total of cannabis excise taxes plus license fees	LCB administration and pre-distribution allotments	Total to distribute	Distribution of remaining funds						
				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	\$366,091	\$21,461	\$344,630	\$27,786	\$9,761	\$365	\$170,000	\$16,205	\$513	\$120,000
2019	\$382,655	\$17,183	\$365,472	\$27,786	\$9,766	\$365	\$180,000	\$17,039	\$516	\$130,000
2020	\$398,238	\$10,668	\$387,570	\$27,786	\$9,766	\$365	\$193,785	\$19,378	\$516	\$135,973
2021	\$411,017	\$10,668	\$400,349	\$27,786	\$9,766	\$365	\$200,174	\$20,017	\$516	\$141,724
2022	\$421,724	\$10,668	\$411,056	\$27,786	\$9,766	\$365	\$205,528	\$20,553	\$516	\$146,542
2023	\$432,209	\$10,668	\$421,541	\$27,786	\$9,766	\$365	\$210,771	\$21,077	\$516	\$151,261
Biennial totals										
2013-15	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269
2015-17	\$468,686	\$17,752	\$450,934	\$40,600	\$15,000	\$690	\$225,467	\$20,770	\$762	\$147,645
2017-19	\$748,746	\$38,644	\$710,102	\$55,572	\$19,527	\$730	\$350,000	\$33,244	\$1,029	\$250,000
2019-21	\$809,254	\$21,336	\$787,918	\$55,572	\$19,532	\$730	\$393,959	\$39,396	\$1,032	\$277,697
2021-23	\$853,933	\$21,336	\$832,597	\$55,572	\$19,532	\$730	\$416,299	\$41,630	\$1,032	\$297,803

*Before distributions to local governments

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Detail Components of the Washington State Economic and Revenue Forecast

Calendar Years

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

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

	2016	2017	2018	2019	2020	2021	2022	2023
Real National Income Accounts (Billions of Chained 2009 Dollars)								
Real Gross Domestic Product	16,716.2	17,092.7	17,556.8	17,970.4	18,347.8	18,714.8	19,089.1	19,489.9
% Ch	1.5	2.3	2.7	2.4	2.1	2.0	2.0	2.1
Real Consumption	11,572.1	11,888.9	12,196.7	12,478.9	12,728.6	12,983.1	13,255.7	13,547.3
% Ch	2.7	2.7	2.6	2.3	2.0	2.0	2.1	2.2
Real Nonresidential Fixed Investment	2,210.4	2,314.2	2,450.2	2,568.9	2,685.1	2,783.2	2,858.4	2,935.4
% Ch	-0.6	4.7	5.9	4.8	4.5	3.7	2.7	2.7
Real Residential Fixed Investment	587.4	597.5	618.2	633.8	662.4	692.8	712.3	724.4
% Ch	5.5	1.7	3.5	2.5	4.5	4.6	2.8	1.7
Real Personal Income	14,377.4	14,571.9	14,883.1	15,339.3	15,755.5	16,145.3	16,517.6	16,895.7
% Ch	1.2	1.4	2.1	3.1	2.7	2.5	2.3	2.3
Real Per Capita Income (\$/Person)	44,420	44,710	45,303	46,321	47,205	47,999	48,731	49,472
% Ch	0.5	0.7	1.3	2.2	1.9	1.7	1.5	1.5
Price and Wage Indexes								
PCE Price Index (2009=100)	110.8	112.7	114.8	116.9	119.2	121.7	124.2	126.7
% Ch	1.2	1.7	1.9	1.8	2.0	2.0	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.400	2.452	2.510	2.556	2.613	2.670	2.727	2.781
% Ch	1.3	2.1	2.4	1.8	2.2	2.2	2.1	2.0
Employment Cost Index (Dec. 2005=1.0)	1.262	1.295	1.333	1.379	1.427	1.477	1.529	1.583
% Ch	2.4	2.6	3.0	3.4	3.5	3.5	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,624.5	19,386.8	20,377.2	21,370.6	22,341.2	23,324.3	24,323.8	25,385.7
% Ch	2.8	4.1	5.1	4.9	4.5	4.4	4.3	4.4
Personal Income	15,928.7	16,416.9	17,087.8	17,932.6	18,789.1	19,646.2	20,512.1	21,406.3
% Ch	2.4	3.1	4.1	4.9	4.8	4.6	4.4	4.4
Employment (Millions)								
U.S. Civilian Labor Force	159.2	160.3	162.0	163.9	165.9	166.9	168.0	169.0
Total U.S. Employment	151.4	153.3	155.6	157.9	159.5	160.5	161.4	162.2
Unemployment Rate (%)	4.87	4.35	3.95	3.72	3.81	3.85	3.91	4.02
Nonfarm Payroll Employment	144.35	146.62	148.89	151.04	152.68	153.52	154.36	155.11
% Ch	1.8	1.6	1.5	1.4	1.1	0.6	0.5	0.5
Manufacturing	12.35	12.44	12.69	12.79	12.79	12.86	12.91	12.93
% Ch	0.1	0.7	2.0	0.8	0.0	0.5	0.4	0.2
Durable Manufacturing	7.71	7.74	7.94	8.03	8.03	8.09	8.15	8.18
% Ch	-0.7	0.3	2.7	1.1	0.0	0.8	0.7	0.3
Nondurable Manufacturing	4.64	4.70	4.74	4.76	4.76	4.76	4.76	4.75
% Ch	1.5	1.4	0.8	0.3	0.0	0.1	-0.1	-0.1
Construction	6.73	6.95	7.18	7.39	7.73	8.05	8.30	8.46
% Ch	4.1	3.4	3.2	3.0	4.5	4.2	3.0	1.9
Service-Providing	124.60	126.55	128.29	130.08	131.37	131.82	132.35	132.93
% Ch	2.0	1.6	1.4	1.4	1.0	0.3	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	43.2	51.0	63.4	58.0	54.4	52.3	51.3	51.2
Personal Saving/Disposable Income (%)	4.9	3.4	3.7	4.5	5.1	5.3	5.2	5.1
Auto Sales (Millions)	6.9	6.1	5.8	5.6	5.7	5.8	5.7	5.8
% Ch	-8.6	-11.3	-5.2	-3.0	1.9	0.8	-1.6	2.2
Housing Starts (Millions)	1.177	1.207	1.290	1.370	1.452	1.520	1.546	1.546
% Ch	6.3	2.5	6.9	6.2	6.0	4.7	1.7	0.0
Federal Budget Surplus (Billions)	-697.3	-683.0	-954.6	-1,089.4	-1,167.0	-1,184.4	-1,174.9	-1,175.9
Net Exports (Billions)	-521.2	-570.9	-569.7	-496.2	-464.7	-422.6	-383.0	-332.4
3-Month Treasury Bill Rate (%)	0.32	0.93	1.82	2.57	3.07	3.17	3.16	3.02
10-Year Treasury Note Yield (%)	1.84	2.33	3.02	3.52	3.66	3.64	3.60	3.56
Bond Index of 20 G.O. Munis. (%)	3.27	3.67	3.71	3.94	4.06	4.06	4.02	3.98
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.55	5.08	5.29	5.30	5.28	5.24

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

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Real National Income Accounts (Billions of Chained 2009 Dollars)								
Real Gross Domestic Product	17,380.2	17,503.8	17,617.6	17,725.8	17,823.9	17,924.9	18,019.9	18,113.2
% Ch , Annual Rate	2.5	2.9	2.6	2.5	2.2	2.3	2.1	2.1
Real Consumption	12,079.9	12,160.7	12,235.6	12,310.7	12,379.9	12,449.4	12,512.9	12,573.5
% Ch , Annual Rate	1.7	2.7	2.5	2.5	2.3	2.3	2.1	2.0
Real Nonresidential Fixed Investment	2,400.7	2,435.3	2,470.6	2,494.2	2,524.7	2,552.0	2,583.8	2,615.0
% Ch , Annual Rate	6.1	5.9	5.9	3.9	5.0	4.4	5.1	4.9
Real Residential Fixed Investment	611.8	617.9	618.9	624.2	626.9	630.9	635.5	641.8
% Ch , Annual Rate	5.7	4.1	0.6	3.5	1.7	2.6	3.0	4.0
Real Personal Income	14,724.4	14,830.4	14,933.2	15,044.4	15,182.1	15,290.0	15,394.0	15,490.9
% Ch , Annual Rate	1.9	2.9	2.8	3.0	3.7	2.9	2.7	2.5
Real Per Capita Income (\$/Person)	44,956	45,189	45,411	45,658	45,984	46,219	46,441	46,641
% Ch , Annual Rate	1.0	2.1	2.0	2.2	2.9	2.1	1.9	1.7
Price and Wage Indexes								
PCE Price Index (2009=100)	114.1	114.5	115.1	115.6	116.1	116.6	117.2	117.8
% Ch , Annual Rate	2.3	1.3	2.0	1.8	1.7	1.9	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.494	2.502	2.517	2.528	2.537	2.549	2.561	2.575
% Ch , Annual Rate	3.3	1.2	2.5	1.8	1.4	1.9	2.0	2.2
Employment Cost Index (Dec. 2005=1.0)	1.317	1.328	1.338	1.350	1.361	1.373	1.385	1.397
% Ch , Annual Rate	3.2	3.1	3.3	3.5	3.5	3.5	3.4	3.4
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	19,993.4	20,247.1	20,506.0	20,762.4	21,011.4	21,254.1	21,491.8	21,725.3
% Ch , Annual Rate	5.3	5.2	5.2	5.1	4.9	4.7	4.5	4.4
Personal Income	16,804.2	16,979.0	17,181.2	17,386.7	17,621.7	17,829.8	18,037.2	18,241.7
% Ch , Annual Rate	4.2	4.2	4.9	4.9	5.5	4.8	4.7	4.6
Employment (Millions)								
U.S. Civilian Labor Force	161.2	161.7	162.2	162.8	163.1	163.6	164.2	164.8
Total U.S. Employment	154.6	155.2	155.9	156.6	157.1	157.6	158.1	158.6
Unemployment Rate (%)	4.09	3.97	3.91	3.84	3.71	3.68	3.72	3.76
Nonfarm Payroll Employment	148.02	148.55	149.16	149.81	150.31	150.81	151.29	151.74
% Ch , Annual Rate	1.6	1.4	1.7	1.7	1.4	1.3	1.3	1.2
Manufacturing	12.60	12.68	12.74	12.73	12.79	12.80	12.79	12.78
% Ch , Annual Rate	2.7	2.6	1.9	-0.4	1.8	0.5	-0.4	-0.2
Durable Manufacturing	7.87	7.93	7.99	7.98	8.03	8.04	8.03	8.02
% Ch , Annual Rate	4.1	3.5	2.9	-0.5	2.3	0.8	-0.8	-0.4
Nondurable Manufacturing	4.73	4.75	4.75	4.75	4.76	4.76	4.76	4.76
% Ch , Annual Rate	0.5	1.1	0.2	-0.3	1.1	0.1	0.2	0.0
Construction	7.13	7.17	7.19	7.22	7.29	7.35	7.43	7.51
% Ch , Annual Rate	6.1	2.2	1.0	1.7	3.8	3.8	4.1	4.4
Service-Providing	127.58	127.97	128.49	129.10	129.48	129.88	130.30	130.67
% Ch , Annual Rate	1.2	1.2	1.6	1.9	1.2	1.3	1.3	1.1
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	64.9	64.6	63.0	61.2	59.8	58.4	57.3	56.4
Personal Saving/Disposable Income (%)	3.6	3.6	3.7	3.8	4.3	4.5	4.6	4.8
Auto Sales (Millions)	5.9	5.8	5.7	5.7	5.6	5.6	5.6	5.6
% Ch , Annual Rate	-9.8	-8.1	-3.4	-1.6	-4.5	-3.4	-0.3	0.6
Housing Starts (Millions)	1.250	1.288	1.294	1.327	1.350	1.364	1.374	1.392
% Ch , Annual Rate	-0.2	12.9	1.8	10.4	7.3	4.2	2.8	5.3
Federal Budget Surplus (Billions)	-945.3	-940.2	-959.5	-973.4	-1,055.7	-1,077.0	-1,100.8	-1,124.0
Net Exports (Billions)	-606.7	-581.1	-561.3	-529.9	-513.2	-499.4	-489.9	-482.3
3-Month Treasury Bill Rate (%)	1.55	1.73	1.88	2.10	2.30	2.53	2.71	2.73
10-Year Treasury Note Yield (%)	2.74	2.93	3.12	3.28	3.41	3.49	3.57	3.62
Bond Index of 20 G.O. Munis. (%)	3.59	3.68	3.75	3.81	3.86	3.92	3.98	4.02
30-Year Fixed Mortgage Rate (%)	4.25	4.49	4.65	4.79	4.93	5.04	5.14	5.21

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

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real National Income Accounts (Billions of Chained 2009 Dollars)								
Real Gross Domestic Product	18,212.3	18,308.7	18,392.7	18,477.6	18,574.6	18,664.9	18,768.8	18,850.9
% Ch , Annual Rate	2.2	2.1	1.8	1.9	2.1	2.0	2.2	1.8
Real Consumption	12,635.7	12,696.5	12,759.8	12,822.4	12,887.6	12,950.3	13,015.0	13,079.5
% Ch , Annual Rate	2.0	1.9	2.0	2.0	2.1	2.0	2.0	2.0
Real Nonresidential Fixed Investment	2,647.1	2,672.3	2,698.0	2,722.8	2,747.7	2,770.2	2,799.1	2,815.7
% Ch , Annual Rate	5.0	3.9	3.9	3.7	3.7	3.3	4.2	2.4
Real Residential Fixed Investment	647.4	655.9	667.4	678.8	683.0	688.7	697.1	702.3
% Ch , Annual Rate	3.6	5.3	7.2	7.0	2.5	3.4	5.0	3.0
Real Personal Income	15,609.8	15,713.2	15,803.1	15,896.0	16,006.7	16,096.3	16,191.9	16,286.4
% Ch , Annual Rate	3.1	2.7	2.3	2.4	2.8	2.3	2.4	2.4
Real Per Capita Income (\$/Person)	46,907	47,125	47,302	47,488	47,725	47,900	48,091	48,279
% Ch , Annual Rate	2.3	1.9	1.5	1.6	2.0	1.5	1.6	1.6
Price and Wage Indexes								
PCE Price Index (2009=100)	118.3	118.9	119.6	120.2	120.8	121.4	122.0	122.6
% Ch , Annual Rate	1.9	2.1	2.1	2.0	2.0	2.0	2.1	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.589	2.605	2.621	2.635	2.649	2.663	2.678	2.692
% Ch , Annual Rate	2.2	2.5	2.4	2.2	2.0	2.2	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.409	1.421	1.433	1.445	1.458	1.471	1.484	1.497
% Ch , Annual Rate	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.6
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	21,979.3	22,228.0	22,460.2	22,697.2	22,957.7	23,197.6	23,454.5	23,687.3
% Ch , Annual Rate	4.8	4.6	4.2	4.3	4.7	4.2	4.5	4.0
Personal Income	18,470.7	18,690.1	18,894.2	19,101.4	19,328.1	19,534.5	19,751.6	19,970.6
% Ch , Annual Rate	5.1	4.8	4.4	4.5	4.8	4.3	4.5	4.5
Employment (Millions)								
U.S. Civilian Labor Force	165.2	165.9	166.0	166.2	166.5	166.8	167.0	167.3
Total U.S. Employment	159.0	159.6	159.7	159.8	160.1	160.3	160.6	160.9
Unemployment Rate (%)	3.77	3.79	3.82	3.85	3.85	3.86	3.85	3.85
Nonfarm Payroll Employment	152.16	152.76	152.84	152.96	153.17	153.39	153.65	153.87
% Ch , Annual Rate	1.1	1.6	0.2	0.3	0.6	0.6	0.7	0.6
Manufacturing	12.78	12.78	12.79	12.81	12.82	12.85	12.87	12.90
% Ch , Annual Rate	0.0	0.2	0.3	0.4	0.3	0.9	0.8	0.9
Durable Manufacturing	8.02	8.03	8.03	8.04	8.05	8.08	8.11	8.14
% Ch , Annual Rate	0.2	0.3	0.2	0.4	0.4	1.4	1.4	1.4
Nondurable Manufacturing	4.76	4.75	4.76	4.76	4.77	4.77	4.76	4.76
% Ch , Annual Rate	-0.5	-0.1	0.4	0.4	0.0	0.1	-0.2	-0.1
Construction	7.59	7.68	7.77	7.87	7.94	8.02	8.10	8.16
% Ch , Annual Rate	4.5	4.8	4.9	4.9	4.0	3.7	4.0	3.3
Service-Providing	131.01	131.51	131.48	131.50	131.63	131.74	131.89	132.02
% Ch , Annual Rate	1.1	1.5	-0.1	0.0	0.4	0.4	0.5	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	55.5	54.6	54.0	53.4	52.9	52.4	52.1	51.7
Personal Saving/Disposable Income (%)	5.0	5.1	5.2	5.2	5.3	5.3	5.2	5.3
Auto Sales (Millions)	5.6	5.7	5.7	5.8	5.8	5.8	5.8	5.8
% Ch , Annual Rate	3.6	4.5	1.7	1.8	-0.4	-0.1	1.2	-1.0
Housing Starts (Millions)	1.413	1.437	1.480	1.478	1.496	1.514	1.527	1.543
% Ch , Annual Rate	6.3	7.1	12.5	-0.5	4.9	5.0	3.4	4.2
Federal Budget Surplus (Billions)	-1,138.6	-1,167.8	-1,175.7	-1,185.8	-1,179.2	-1,186.6	-1,182.7	-1,189.2
Net Exports (Billions)	-473.5	-465.6	-461.5	-458.2	-439.5	-426.6	-413.6	-410.5
3-Month Treasury Bill Rate (%)	2.94	2.99	3.17	3.17	3.17	3.17	3.17	3.17
10-Year Treasury Note Yield (%)	3.65	3.66	3.67	3.65	3.64	3.64	3.64	3.63
Bond Index of 20 G.O. Munis. (%)	4.04	4.06	4.07	4.07	4.06	4.06	4.06	4.05
30-Year Fixed Mortgage Rate (%)	5.26	5.28	5.30	5.29	5.29	5.30	5.30	5.29

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

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real National Income Accounts (Billions of Chained 2009 Dollars)								
Real Gross Domestic Product	18,942.4	19,036.3	19,138.7	19,239.0	19,340.6	19,439.6	19,541.6	19,638.0
% Ch , Annual Rate	2.0	2.0	2.2	2.1	2.1	2.1	2.1	2.0
Real Consumption	13,148.0	13,220.1	13,291.6	13,363.1	13,437.5	13,511.3	13,583.8	13,656.5
% Ch , Annual Rate	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Real Nonresidential Fixed Investment	2,833.0	2,848.8	2,866.5	2,885.3	2,905.5	2,924.2	2,945.1	2,966.8
% Ch , Annual Rate	2.5	2.2	2.5	2.6	2.8	2.6	2.9	3.0
Real Residential Fixed Investment	705.9	709.8	714.9	718.5	719.6	721.9	726.5	729.5
% Ch , Annual Rate	2.1	2.2	2.9	2.1	0.6	1.3	2.6	1.6
Real Personal Income	16,388.6	16,475.1	16,559.9	16,647.0	16,766.6	16,853.9	16,939.2	17,023.0
% Ch , Annual Rate	2.5	2.1	2.1	2.1	2.9	2.1	2.0	2.0
Real Per Capita Income (\$/Person)	48,489	48,652	48,810	48,974	49,233	49,396	49,553	49,706
% Ch , Annual Rate	1.8	1.4	1.3	1.3	2.1	1.3	1.3	1.2
Price and Wage Indexes								
PCE Price Index (2009=100)	123.2	123.9	124.5	125.1	125.7	126.4	127.0	127.7
% Ch , Annual Rate	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.706	2.720	2.733	2.747	2.760	2.774	2.787	2.801
% Ch , Annual Rate	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.0
Employment Cost Index (Dec. 2005=1.0)	1.510	1.523	1.536	1.549	1.563	1.576	1.590	1.603
% Ch , Annual Rate	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	23,943.9	24,190.7	24,450.5	24,710.0	24,986.5	25,249.0	25,520.3	25,786.9
% Ch , Annual Rate	4.4	4.2	4.4	4.3	4.6	4.3	4.4	4.2
Personal Income	20,198.3	20,407.3	20,615.3	20,827.5	21,081.6	21,297.9	21,514.9	21,730.7
% Ch , Annual Rate	4.6	4.2	4.1	4.2	5.0	4.2	4.1	4.1
Employment (Millions)								
U.S. Civilian Labor Force	167.6	167.8	168.1	168.4	168.6	168.9	169.2	169.4
Total U.S. Employment	161.1	161.3	161.5	161.7	161.9	162.2	162.3	162.5
Unemployment Rate (%)	3.87	3.89	3.92	3.94	3.97	4.00	4.03	4.06
Nonfarm Payroll Employment	154.06	154.25	154.46	154.65	154.83	155.03	155.21	155.38
% Ch, Annual Rate	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4
Manufacturing	12.90	12.90	12.90	12.91	12.92	12.93	12.93	12.93
% Ch, Annual Rate	0.2	-0.1	0.0	0.3	0.2	0.2	0.1	0.0
Durable Manufacturing	8.14	8.14	8.15	8.16	8.17	8.17	8.18	8.18
% Ch, Annual Rate	0.3	0.0	0.1	0.6	0.5	0.3	0.3	0.1
Nondurable Manufacturing	4.76	4.76	4.76	4.76	4.75	4.75	4.75	4.75
% Ch, Annual Rate	0.0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1
Construction	8.22	8.27	8.33	8.38	8.41	8.44	8.47	8.51
% Ch, Annual Rate	2.9	2.6	2.7	2.3	1.6	1.4	1.6	1.6
Service-Providing	132.15	132.28	132.43	132.56	132.70	132.86	133.01	133.14
% Ch, Annual Rate	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	51.5	51.4	51.3	51.2	51.2	51.1	51.2	51.2
Personal Saving/Disposable Income (%)	5.3	5.2	5.2	5.1	5.2	5.1	5.1	5.0
Auto Sales (Millions)	5.7	5.7	5.6	5.7	5.7	5.8	5.8	5.9
% Ch, Annual Rate	-2.7	-4.1	-1.9	2.8	2.4	4.7	3.6	3.8
Housing Starts (Millions)	1.546	1.547	1.545	1.545	1.542	1.540	1.548	1.552
% Ch, Annual Rate	0.9	0.3	-0.6	-0.1	-0.6	-0.5	2.1	1.0
Federal Budget Surplus (Billions)	-1,168.9	-1,171.7	-1,176.8	-1,182.3	-1,172.6	-1,174.2	-1,176.4	-1,180.6
Net Exports (Billions)	-402.9	-393.2	-376.1	-359.6	-347.2	-334.5	-326.4	-321.4
3-Month Treasury Bill Rate (%)	3.16	3.16	3.15	3.15	3.15	3.11	2.92	2.91
10-Year Treasury Note Yield (%)	3.61	3.60	3.59	3.58	3.57	3.57	3.56	3.55
Bond Index of 20 G.O. Munis. (%)	4.03	4.02	4.01	4.00	3.99	3.98	3.97	3.96
30-Year Fixed Mortgage Rate (%)	5.29	5.28	5.28	5.27	5.26	5.25	5.23	5.22

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

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2009 Dollars)								
Real Personal Income	359.037	372.856	383.986	397.637	410.402	423.150	435.454	447.720
% Ch	3.5	3.8	3.0	3.6	3.2	3.1	2.9	2.8
Real Wage and Salary Disb.	183.785	194.408	201.087	207.587	213.819	220.364	226.988	233.651
% Ch	4.9	5.8	3.4	3.2	3.0	3.1	3.0	2.9
Real Nonwage Income	175.252	178.448	182.899	190.050	196.583	202.787	208.467	214.069
% Ch	2.0	1.8	2.5	3.9	3.4	3.2	2.8	2.7
Real Per Capita Income (\$/Person)	49,257	50,267	50,904	51,890	52,785	53,687	54,535	55,391
% Ch	1.7	2.0	1.3	1.9	1.7	1.7	1.6	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.108	1.127	1.148	1.169	1.192	1.217	1.242	1.267
% Ch	1.2	1.7	1.9	1.8	2.0	2.0	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.550	2.627	2.708	2.765	2.830	2.896	2.961	3.023
% Ch	2.3	3.0	3.1	2.1	2.4	2.3	2.2	2.1
Average Nonfarm Annual Wage	60,597	63,473	65,459	67,426	69,698	72,507	75,456	78,544
% Ch	3.0	4.7	3.1	3.0	3.4	4.0	4.1	4.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.42	27.39	28.51	29.41	30.35	31.33	32.35	33.40
% Ch	3.5	3.7	4.1	3.2	3.2	3.2	3.3	3.2
Current Dollar Income (Billions of Dollars)								
Personal Income	397.772	420.047	440.870	464.867	489.425	514.909	540.764	567.250
% Ch	4.7	5.6	5.0	5.4	5.3	5.2	5.0	4.9
Disposable Personal Income	348.823	367.853	389.012	411.066	432.523	453.913	475.498	497.763
% Ch	4.9	5.5	5.8	5.7	5.2	4.9	4.8	4.7
Per Capita Income (\$/Person)	54,570	56,628	58,444	60,662	62,947	65,327	67,722	70,177
% Ch	2.9	3.8	3.2	3.8	3.8	3.8	3.7	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,641.6	3,718.8	3,813.2	3,893.0	3,967.6	4,025.9	4,082.0	4,134.7
Total Washington Employment	3,443.4	3,546.9	3,647.9	3,735.1	3,804.6	3,860.5	3,913.5	3,960.4
Unemployment Rate (%)	5.44	4.62	4.34	4.06	4.11	4.11	4.13	4.21
Nonfarm Payroll Employment	3,242.3	3,334.5	3,409.3	3,480.4	3,538.5	3,578.6	3,616.1	3,649.7
% Ch	3.1	2.8	2.2	2.1	1.7	1.1	1.0	0.9
Manufacturing	289.9	283.2	284.0	286.1	287.1	289.6	292.7	295.7
% Ch	-0.7	-2.3	0.3	0.7	0.3	0.9	1.1	1.0
Durable Manufacturing	207.4	199.5	199.1	200.2	200.6	202.1	204.4	206.5
% Ch	-1.7	-3.8	-0.2	0.6	0.2	0.8	1.1	1.0
Aerospace	90.9	83.6	79.9	78.3	77.7	77.7	77.7	77.7
% Ch	-3.3	-8.0	-4.4	-2.0	-0.8	0.0	0.0	0.0
Nondurable Manufacturing	82.4	83.7	84.9	85.9	86.5	87.4	88.3	89.3
% Ch	2.1	1.6	1.4	1.2	0.7	1.1	1.0	1.1
Construction	186.5	201.4	208.1	208.8	211.1	212.1	210.9	208.3
% Ch	7.6	8.0	3.3	0.3	1.1	0.5	-0.6	-1.2
Service-Providing	2,759.7	2,843.7	2,910.9	2,979.2	3,034.0	3,070.5	3,106.2	3,139.2
% Ch	3.2	3.0	2.4	2.3	1.8	1.2	1.2	1.1
Software Publishers	58.8	61.4	62.8	63.0	63.5	64.2	64.9	65.6
% Ch	5.2	4.4	2.3	0.3	0.8	1.0	1.1	1.2
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	44.077	45.780	43.194	42.609	42.818	43.026	42.536	41.409
% Ch	9.2	3.9	-5.6	-1.4	0.5	0.5	-1.1	-2.6
Single-Family	22.463	22.939	24.475	25.457	26.788	27.908	28.086	27.897
% Ch	13.5	2.1	6.7	4.0	5.2	4.2	0.6	-0.7
Multi-Family	21.614	22.841	18.719	17.152	16.031	15.118	14.450	13.513
% Ch	5.0	5.7	-18.0	-8.4	-6.5	-5.7	-4.4	-6.5
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.55	5.08	5.29	5.30	5.28	5.24

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

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Real Income (Billions of Chained 2009 Dollars)								
Real Personal Income	378.971	382.431	385.627	388.916	392.955	396.235	399.244	402.116
% Ch, Annual Rate	2.3	3.7	3.4	3.5	4.2	3.4	3.1	2.9
Real Wage and Salary Disb.	198.297	200.430	202.008	203.614	205.504	207.020	208.273	209.551
% Ch, Annual Rate	2.9	4.4	3.2	3.2	3.8	3.0	2.4	2.5
Real Nonwage Income	180.674	182.001	183.619	185.302	187.451	189.215	190.971	192.564
% Ch, Annual Rate	1.8	3.0	3.6	3.7	4.7	3.8	3.8	3.4
Real Per Capita Income (\$/Person)	50,551	50,802	51,018	51,247	51,575	51,804	52,001	52,182
% Ch, Annual Rate	0.6	2.0	1.7	1.8	2.6	1.8	1.5	1.4
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.141	1.145	1.151	1.156	1.161	1.166	1.172	1.178
% Ch, Annual Rate	2.4	1.3	2.0	1.8	1.7	1.9	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.686	2.699	2.717	2.731	2.743	2.757	2.772	2.788
% Ch, Annual Rate	3.7	1.8	2.7	2.1	1.8	2.1	2.1	2.3
Average Nonfarm Annual Wage	64,670	65,252	65,728	66,185	66,721	67,207	67,650	68,127
% Ch, Annual Rate	2.9	3.6	3.0	2.8	3.3	2.9	2.7	2.9
Avg. Hourly Earnings-Mfg. (\$/Hour)	28.20	28.40	28.61	28.84	29.06	29.30	29.53	29.75
% Ch, Annual Rate	3.7	2.8	3.0	3.2	3.2	3.3	3.2	3.1
Current Dollar Income (Billions of Dollars)								
Personal Income	432.500	437.836	443.678	449.466	456.099	462.051	467.796	473.521
% Ch, Annual Rate	4.8	5.0	5.4	5.3	6.0	5.3	5.1	5.0
Disposable Personal Income	382.007	386.347	391.359	396.337	403.214	408.545	413.683	418.821
% Ch, Annual Rate	9.0	4.6	5.3	5.2	7.1	5.4	5.1	5.1
Per Capita Income (\$/Person)	57,691	58,162	58,698	59,226	59,862	60,409	60,930	61,448
% Ch, Annual Rate	3.0	3.3	3.7	3.6	4.4	3.7	3.5	3.4
Employment (Thousands)								
Washington Civilian Labor Force	3,782.6	3,801.8	3,823.5	3,845.1	3,862.8	3,882.7	3,903.5	3,923.1
Total Washington Employment	3,612.7	3,635.9	3,659.6	3,683.4	3,705.7	3,726.5	3,745.1	3,762.9
Unemployment Rate (%)	4.49	4.36	4.28	4.21	4.07	4.02	4.06	4.08
Nonfarm Payroll Employment	3,381.3	3,399.0	3,418.6	3,438.3	3,456.0	3,473.2	3,488.7	3,504.0
% Ch, Annual Rate	2.2	2.1	2.3	2.3	2.1	2.0	1.8	1.8
Manufacturing	282.2	283.7	285.0	285.0	286.0	286.3	286.1	286.0
% Ch, Annual Rate	2.3	2.0	2.0	0.0	1.4	0.4	-0.3	-0.1
Durable Manufacturing	197.8	198.7	199.9	199.8	200.3	200.4	200.1	199.9
% Ch, Annual Rate	2.6	1.9	2.4	-0.2	0.9	0.3	-0.7	-0.4
Aerospace	80.5	80.1	79.7	79.3	78.9	78.5	78.1	77.7
% Ch, Annual Rate	0.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Nondurable Manufacturing	84.4	84.9	85.1	85.2	85.7	85.8	86.0	86.1
% Ch, Annual Rate	1.6	2.3	0.9	0.3	2.3	0.8	0.7	0.6
Construction	208.3	208.2	208.1	207.9	208.2	208.6	208.8	209.8
% Ch, Annual Rate	5.3	-0.3	-0.2	-0.4	0.7	0.6	0.5	1.9
Service-Providing	2,884.4	2,900.9	2,919.2	2,939.2	2,955.5	2,972.0	2,987.4	3,001.8
% Ch, Annual Rate	2.0	2.3	2.5	2.8	2.2	2.3	2.1	1.9
Software Publishers	62.7	62.7	62.8	62.9	62.9	62.9	63.0	63.2
% Ch, Annual Rate	3.7	-0.1	0.3	0.8	-0.3	0.3	0.9	1.0
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	43.203	43.682	43.018	42.873	42.937	42.758	42.438	42.304
% Ch, Annual Rate	-51.2	4.5	-5.9	-1.3	0.6	-1.7	-3.0	-1.3
Single-Family	23.514	24.539	24.784	25.065	25.277	25.398	25.471	25.682
% Ch, Annual Rate	-15.2	18.6	4.1	4.6	3.4	1.9	1.2	3.4
Multi-Family	19.689	19.143	18.234	17.809	17.660	17.360	16.967	16.622
% Ch, Annual Rate	-72.5	-10.6	-17.7	-9.0	-3.3	-6.6	-8.8	-7.9
30-Year Fixed Mortgage Rate (%)	4.25	4.49	4.65	4.79	4.93	5.04	5.14	5.21

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

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real Income (Billions of Chained 2009 Dollars)								
Real Personal Income	405.693	408.992	411.903	415.021	418.587	421.573	424.682	427.759
% Ch, Annual Rate	3.6	3.3	2.9	3.1	3.5	2.9	3.0	2.9
Real Wage and Salary Disb.	211.437	213.223	214.549	216.068	217.993	219.568	221.168	222.726
% Ch, Annual Rate	3.6	3.4	2.5	2.9	3.6	2.9	2.9	2.8
Real Nonwage Income	194.255	195.769	197.354	198.953	200.594	202.005	203.515	205.034
% Ch, Annual Rate	3.6	3.2	3.3	3.3	3.3	2.8	3.0	3.0
Real Per Capita Income (\$/Person)	52,456	52,695	52,885	53,102	53,376	53,576	53,791	54,003
% Ch, Annual Rate	2.1	1.8	1.5	1.7	2.1	1.5	1.6	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.183	1.189	1.196	1.202	1.208	1.214	1.220	1.226
% Ch, Annual Rate	1.9	2.1	2.1	2.0	2.0	2.0	2.1	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.804	2.822	2.839	2.856	2.871	2.888	2.905	2.921
% Ch, Annual Rate	2.3	2.6	2.5	2.3	2.2	2.3	2.3	2.3
Average Nonfarm Annual Wage	68,764	69,323	70,004	70,701	71,453	72,148	72,855	73,573
% Ch, Annual Rate	3.8	3.3	4.0	4.0	4.3	3.9	4.0	4.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.99	30.23	30.47	30.71	30.95	31.20	31.46	31.71
% Ch, Annual Rate	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3
Current Dollar Income (Billions of Dollars)								
Personal Income	480.045	486.477	492.471	498.708	505.446	511.621	518.047	524.522
% Ch, Annual Rate	5.6	5.5	5.0	5.2	5.5	5.0	5.1	5.1
Disposable Personal Income	424.283	429.989	435.220	440.601	446.089	451.302	456.403	461.860
% Ch, Annual Rate	5.3	5.5	5.0	5.0	5.1	4.8	4.6	4.9
Per Capita Income (\$/Person)	62,069	62,678	63,230	63,810	64,452	65,020	65,617	66,219
% Ch, Annual Rate	4.1	4.0	3.6	3.7	4.1	3.6	3.7	3.7
Employment (Thousands)								
Washington Civilian Labor Force	3,941.5	3,963.5	3,975.5	3,989.9	4,004.4	4,019.0	4,033.1	4,047.1
Total Washington Employment	3,780.1	3,801.1	3,811.8	3,825.3	3,839.5	3,853.6	3,867.6	3,881.4
Unemployment Rate (%)	4.09	4.10	4.12	4.12	4.12	4.12	4.10	4.09
Nonfarm Payroll Employment	3,518.0	3,537.6	3,544.6	3,553.8	3,563.5	3,573.5	3,583.8	3,593.5
% Ch, Annual Rate	1.6	2.2	0.8	1.0	1.1	1.1	1.2	1.1
Manufacturing	286.4	286.8	287.3	287.9	288.4	289.1	289.9	290.9
% Ch, Annual Rate	0.5	0.6	0.7	0.8	0.7	1.1	1.1	1.3
Durable Manufacturing	200.2	200.5	200.7	201.0	201.2	201.8	202.4	203.2
% Ch, Annual Rate	0.7	0.5	0.4	0.5	0.5	1.1	1.3	1.5
Aerospace	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	86.1	86.3	86.6	86.9	87.1	87.4	87.5	87.7
% Ch, Annual Rate	0.1	0.7	1.4	1.5	1.1	1.1	0.7	1.0
Construction	209.8	210.7	211.5	212.4	212.1	212.2	212.1	211.9
% Ch, Annual Rate	0.1	1.6	1.6	1.6	-0.5	0.1	-0.2	-0.4
Service-Providing	3,015.4	3,033.8	3,039.5	3,047.2	3,056.7	3,065.8	3,075.3	3,084.3
% Ch, Annual Rate	1.8	2.5	0.8	1.0	1.3	1.2	1.2	1.2
Software Publishers	63.3	63.4	63.6	63.7	63.9	64.1	64.2	64.4
% Ch, Annual Rate	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	42.427	42.648	43.130	43.068	43.038	43.035	42.997	43.032
% Ch, Annual Rate	1.2	2.1	4.6	-0.6	-0.3	0.0	-0.4	0.3
Single-Family	26.006	26.499	27.026	27.620	27.774	27.836	27.953	28.068
% Ch, Annual Rate	5.1	7.8	8.2	9.1	2.3	0.9	1.7	1.7
Multi-Family	16.421	16.149	16.104	15.448	15.264	15.199	15.044	14.964
% Ch, Annual Rate	-4.7	-6.5	-1.1	-15.3	-4.7	-1.7	-4.0	-2.1
30-Year Fixed Mortgage Rate (%)	5.26	5.28	5.30	5.29	5.29	5.30	5.30	5.29

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

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real Income (Billions of Chained 2009 Dollars)								
Real Personal Income	431.142	434.036	436.879	439.761	443.529	446.385	449.144	451.822
% Ch, Annual Rate	3.2	2.7	2.6	2.7	3.5	2.6	2.5	2.4
Real Wage and Salary Disb.	224.627	226.199	227.774	229.349	231.328	232.913	234.447	235.917
% Ch, Annual Rate	3.5	2.8	2.8	2.8	3.5	2.8	2.7	2.5
Real Nonwage Income	206.514	207.836	209.105	210.411	212.201	213.472	214.698	215.905
% Ch, Annual Rate	2.9	2.6	2.5	2.5	3.4	2.4	2.3	2.3
Real Per Capita Income (\$/Person)	54,253	54,442	54,627	54,816	55,117	55,306	55,484	55,654
% Ch, Annual Rate	1.9	1.4	1.4	1.4	2.2	1.4	1.3	1.2
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.232	1.239	1.245	1.251	1.257	1.264	1.270	1.277
% Ch, Annual Rate	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.937	2.953	2.969	2.984	3.000	3.015	3.031	3.046
% Ch, Annual Rate	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1
Average Nonfarm Annual Wage	74,356	75,088	75,818	76,564	77,398	78,159	78,926	79,692
% Ch, Annual Rate	4.3	4.0	3.9	4.0	4.4	4.0	4.0	3.9
Avg. Hourly Earnings-Mfg. (\$/Hour)	31.97	32.22	32.48	32.74	33.00	33.26	33.53	33.79
% Ch, Annual Rate	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.2
Current Dollar Income (Billions of Dollars)								
Personal Income	531.364	537.629	543.867	550.197	557.672	564.087	570.469	576.773
% Ch, Annual Rate	5.3	4.8	4.7	4.7	5.5	4.7	4.6	4.5
Disposable Personal Income	467.504	472.836	478.128	483.523	489.745	495.122	500.466	505.719
% Ch, Annual Rate	5.0	4.6	4.6	4.6	5.2	4.5	4.4	4.3
Per Capita Income (\$/Person)	66,865	67,436	68,004	68,582	69,302	69,889	70,472	71,046
% Ch, Annual Rate	4.0	3.5	3.4	3.4	4.3	3.4	3.4	3.3
Employment (Thousands)								
Washington Civilian Labor Force	4,061.3	4,075.3	4,089.0	4,102.4	4,115.8	4,128.7	4,141.1	4,153.2
Total Washington Employment	3,894.7	3,907.5	3,919.8	3,931.9	3,943.8	3,955.4	3,966.2	3,976.4
Unemployment Rate (%)	4.10	4.12	4.14	4.16	4.18	4.20	4.22	4.26
Nonfarm Payroll Employment	3,602.9	3,611.7	3,620.7	3,629.3	3,637.8	3,646.2	3,653.8	3,660.8
% Ch, Annual Rate	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8
Manufacturing	291.7	292.3	293.0	293.8	294.6	295.4	296.1	296.8
% Ch, Annual Rate	1.0	0.8	0.9	1.2	1.1	1.0	0.9	1.0
Durable Manufacturing	203.7	204.1	204.6	205.2	205.8	206.2	206.7	207.1
% Ch, Annual Rate	1.0	0.9	0.9	1.2	1.1	0.9	0.8	0.8
Aerospace	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	88.0	88.1	88.4	88.6	88.8	89.1	89.4	89.7
% Ch, Annual Rate	1.1	0.8	1.0	1.1	1.2	1.2	1.2	1.3
Construction	211.6	211.2	210.7	210.1	209.5	208.7	207.9	207.0
% Ch, Annual Rate	-0.6	-0.8	-0.9	-1.1	-1.2	-1.4	-1.6	-1.8
Service-Providing	3,093.2	3,101.8	3,110.7	3,118.9	3,127.3	3,135.6	3,143.4	3,150.6
% Ch, Annual Rate	1.2	1.1	1.1	1.1	1.1	1.1	1.0	0.9
Software Publishers	64.6	64.8	65.0	65.2	65.3	65.5	65.7	65.9
% Ch, Annual Rate	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	42.883	42.703	42.415	42.142	41.832	41.493	41.310	41.003
% Ch, Annual Rate	-1.4	-1.7	-2.7	-2.6	-2.9	-3.2	-1.8	-2.9
Single-Family	28.130	28.159	28.069	27.987	27.928	27.862	27.932	27.864
% Ch, Annual Rate	0.9	0.4	-1.3	-1.2	-0.8	-0.9	1.0	-1.0
Multi-Family	14.753	14.544	14.346	14.155	13.904	13.631	13.378	13.139
% Ch, Annual Rate	-5.5	-5.5	-5.3	-5.2	-6.9	-7.6	-7.2	-6.9
30-Year Fixed Mortgage Rate (%)	5.29	5.28	5.28	5.27	5.26	5.25	5.23	5.22

Table A2.1

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	144.35	146.62	148.89	151.04	152.68	153.52	154.36	155.11
% Ch	1.8	1.6	1.5	1.4	1.1	0.6	0.5	0.5
Manufacturing	12.35	12.44	12.69	12.79	12.79	12.86	12.91	12.93
% Ch	0.1	0.7	2.0	0.8	0.0	0.5	0.4	0.2
Durable Manufacturing	7.71	7.74	7.94	8.03	8.03	8.09	8.15	8.18
% Ch	-0.7	0.3	2.7	1.1	0.0	0.8	0.7	0.3
Wood Products	0.39	0.40	0.41	0.42	0.42	0.44	0.46	0.48
% Ch	2.7	1.0	2.2	3.1	1.4	4.2	4.5	3.7
Primary and Fabricated Metals	1.80	1.80	1.86	1.88	1.88	1.90	1.93	1.97
% Ch	-3.0	0.4	3.1	1.1	0.2	1.0	1.7	1.7
Computer and Electronic Products	1.05	1.04	1.08	1.10	1.11	1.11	1.12	1.12
% Ch	-0.5	-0.5	3.3	2.1	1.1	0.1	0.3	0.1
Machinery and Electrical Equipment	1.46	1.47	1.55	1.58	1.59	1.59	1.61	1.63
% Ch	-3.0	0.6	5.3	2.4	0.5	0.2	1.0	1.1
Transportation Equipment	1.63	1.63	1.64	1.63	1.62	1.63	1.61	1.57
% Ch	1.6	0.1	0.7	-0.7	-1.0	1.2	-1.4	-2.8
Other Durables	1.39	1.40	1.41	1.42	1.41	1.41	1.42	1.42
% Ch	1.3	0.7	1.2	0.3	-0.7	0.1	0.5	0.3
Nondurable Manufacturing	4.64	4.70	4.74	4.76	4.76	4.76	4.76	4.75
% Ch	1.5	1.4	0.8	0.3	0.0	0.1	-0.1	-0.1
Food Manufacturing	1.56	1.60	1.63	1.66	1.68	1.70	1.72	1.74
% Ch	3.0	2.9	1.6	2.0	0.9	1.2	1.1	1.2
Paper and Paper Products	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.36
% Ch	-0.6	-0.4	0.2	-1.3	-0.6	-0.1	-0.1	-0.1
Other Nondurables	2.71	2.73	2.75	2.73	2.72	2.71	2.68	2.65
% Ch	1.0	0.8	0.5	-0.4	-0.5	-0.5	-0.9	-1.0
Natural Resources and Mining	0.67	0.68	0.74	0.77	0.79	0.79	0.80	0.80
% Ch	-17.8	1.5	8.4	4.9	1.8	0.3	1.1	0.6
Construction	6.73	6.95	7.18	7.39	7.73	8.05	8.30	8.46
% Ch	4.1	3.4	3.2	3.0	4.5	4.2	3.0	1.9
Trade, Transportation, and Utilities	27.26	27.49	27.70	27.83	27.85	27.70	27.47	27.28
% Ch	1.4	0.8	0.7	0.5	0.1	-0.5	-0.8	-0.7
Wholesale Trade	5.86	5.90	6.00	6.09	6.14	6.15	6.16	6.18
% Ch	0.1	0.7	1.7	1.4	0.8	0.3	0.1	0.3
Retail Trade	15.83	15.86	15.82	15.83	15.80	15.65	15.44	15.25
% Ch	1.4	0.2	-0.3	0.0	-0.2	-0.9	-1.4	-1.2
Trans., Warehousing, and Utilities	5.57	5.72	5.87	5.92	5.92	5.90	5.87	5.85
% Ch	2.7	2.8	2.5	0.8	0.1	-0.4	-0.5	-0.3
Information	2.79	2.79	2.78	2.79	2.79	2.83	2.86	2.85
% Ch	1.6	0.0	-0.6	0.5	0.0	1.4	0.8	-0.2
Publishing Industries	0.73	0.72	0.70	0.67	0.66	0.64	0.64	0.63
% Ch	0.5	-1.0	-2.8	-4.2	-2.4	-1.8	-1.2	-1.1
Other Information	2.06	2.07	2.07	2.12	2.14	2.19	2.22	2.22
% Ch	1.9	0.3	0.2	2.2	0.8	2.4	1.5	0.0
Financial Activities	8.29	8.45	8.56	8.70	8.78	8.78	8.76	8.74
% Ch	2.0	2.0	1.3	1.6	0.9	0.0	-0.3	-0.2
Professional and Business Services	20.05	20.47	21.08	22.04	22.79	23.30	23.83	24.40
% Ch	2.1	2.1	3.0	4.6	3.4	2.2	2.3	2.4
Education and Health Services	22.64	23.19	23.59	23.90	24.06	24.12	24.20	24.29
% Ch	2.8	2.4	1.7	1.3	0.7	0.2	0.3	0.4
Leisure and Hospitality	15.66	16.06	16.38	16.50	16.52	16.52	16.55	16.55
% Ch	3.3	2.6	2.0	0.7	0.1	0.0	0.2	0.0
Other Services	5.69	5.78	5.82	5.77	5.71	5.65	5.59	5.54
% Ch	1.2	1.5	0.8	-1.0	-1.0	-1.1	-1.0	-0.9
Federal Government	2.79	2.81	2.80	2.80	2.93	2.80	2.80	2.80
% Ch	1.4	0.4	-0.1	0.0	4.5	-4.3	0.0	0.0
State and Local Government	19.44	19.52	19.58	19.75	19.94	20.12	20.30	20.48
% Ch	0.9	0.4	0.3	0.9	0.9	0.9	0.9	0.9

Table A2.2

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	148.02	148.55	149.16	149.81	150.31	150.81	151.29	151.74
% Ch, Annual Rate	1.6	1.4	1.7	1.7	1.4	1.3	1.3	1.2
Manufacturing	12.60	12.68	12.74	12.73	12.79	12.80	12.79	12.78
% Ch, Annual Rate	2.7	2.6	1.9	-0.4	1.8	0.5	-0.4	-0.2
Durable Manufacturing	7.87	7.93	7.99	7.98	8.03	8.04	8.03	8.02
% Ch, Annual Rate	4.1	3.5	2.9	-0.5	2.3	0.8	-0.8	-0.4
Wood Products	0.40	0.40	0.41	0.41	0.42	0.42	0.42	0.42
% Ch, Annual Rate	1.9	3.2	8.9	1.9	3.8	2.7	0.0	0.4
Primary and Fabricated Metals	1.84	1.86	1.87	1.87	1.88	1.88	1.88	1.88
% Ch, Annual Rate	3.5	3.9	2.7	-0.6	2.5	0.9	-1.1	-0.7
Computer and Electronic Products	1.06	1.07	1.08	1.09	1.09	1.10	1.10	1.11
% Ch, Annual Rate	4.1	2.8	5.3	2.8	1.0	1.5	1.1	1.8
Machinery and Electrical Equipment	1.51	1.54	1.57	1.56	1.57	1.58	1.58	1.59
% Ch, Annual Rate	8.2	7.4	6.5	-1.4	3.3	2.2	0.7	1.1
Transportation Equipment	1.65	1.65	1.64	1.63	1.64	1.64	1.63	1.62
% Ch, Annual Rate	3.3	0.5	-2.5	-1.8	2.6	-1.3	-2.7	-1.9
Other Durables	1.40	1.41	1.42	1.42	1.42	1.42	1.42	1.41
% Ch, Annual Rate	1.9	2.7	2.4	-1.0	1.2	0.2	-1.5	-1.6
Nondurable Manufacturing	4.73	4.75	4.75	4.75	4.76	4.76	4.76	4.76
% Ch, Annual Rate	0.5	1.1	0.2	-0.3	1.1	0.1	0.2	0.0
Food Manufacturing	1.62	1.63	1.63	1.64	1.65	1.66	1.66	1.67
% Ch, Annual Rate	0.4	1.9	1.7	1.4	3.7	1.7	1.3	0.7
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.36
% Ch, Annual Rate	-0.1	0.7	-0.8	-2.4	-1.4	-1.5	-1.1	-0.2
Other Nondurables	2.75	2.75	2.75	2.74	2.74	2.73	2.73	2.73
% Ch, Annual Rate	0.7	0.7	-0.6	-1.0	-0.2	-0.7	-0.3	-0.4
Natural Resources and Mining	0.71	0.73	0.74	0.76	0.76	0.77	0.77	0.78
% Ch, Annual Rate	9.8	10.5	8.0	6.4	3.6	3.2	2.9	3.8
Construction	7.13	7.17	7.19	7.22	7.29	7.35	7.43	7.51
% Ch, Annual Rate	6.1	2.2	1.0	1.7	3.8	3.8	4.1	4.4
Trade, Transportation, and Utilities	27.65	27.68	27.70	27.76	27.82	27.81	27.84	27.85
% Ch, Annual Rate	0.9	0.4	0.3	1.0	0.8	-0.1	0.4	0.2
Wholesale Trade	5.97	5.99	6.01	6.04	6.06	6.07	6.09	6.12
% Ch, Annual Rate	2.5	1.1	1.8	2.0	1.0	0.9	1.6	1.6
Retail Trade	15.86	15.82	15.80	15.81	15.85	15.83	15.82	15.80
% Ch, Annual Rate	-0.3	-0.9	-0.6	0.4	0.9	-0.5	-0.2	-0.4
Trans., Warehousing, and Utilities	5.82	5.87	5.88	5.91	5.91	5.91	5.92	5.93
% Ch, Annual Rate	2.5	3.5	1.2	1.4	0.3	-0.2	0.8	0.8
Information	2.78	2.78	2.77	2.77	2.79	2.81	2.79	2.78
% Ch, Annual Rate	0.1	0.3	-2.0	0.6	1.9	3.7	-2.4	-2.7
Publishing Industries	0.72	0.71	0.70	0.69	0.68	0.67	0.67	0.67
% Ch, Annual Rate	-1.6	-5.7	-4.2	-2.5	-6.5	-4.4	-2.4	-2.0
Other Information	2.07	2.08	2.07	2.08	2.10	2.14	2.13	2.11
% Ch, Annual Rate	0.7	2.5	-1.3	1.6	4.8	6.4	-2.4	-3.0
Financial Activities	8.50	8.53	8.58	8.64	8.66	8.68	8.72	8.75
% Ch, Annual Rate	0.0	1.1	2.6	2.9	1.0	0.8	1.6	1.7
Professional and Business Services	20.79	20.93	21.15	21.44	21.68	21.93	22.17	22.37
% Ch, Annual Rate	2.7	2.7	4.4	5.5	4.5	4.8	4.4	3.7
Education and Health Services	23.43	23.53	23.65	23.75	23.77	23.87	23.95	24.03
% Ch, Annual Rate	1.4	1.7	2.0	1.7	0.3	1.7	1.4	1.4
Leisure and Hospitality	16.26	16.35	16.42	16.48	16.49	16.49	16.50	16.51
% Ch, Annual Rate	2.0	2.0	1.9	1.4	0.3	-0.1	0.3	0.3
Other Services	5.83	5.83	5.82	5.81	5.79	5.77	5.76	5.75
% Ch, Annual Rate	1.0	-0.1	-0.5	-0.5	-1.9	-1.4	-0.5	-0.8
Federal Government	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	19.53	19.55	19.59	19.64	19.69	19.73	19.78	19.82
% Ch, Annual Rate	0.1	0.4	0.9	0.9	0.9	0.9	0.9	0.9

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	152.16	152.76	152.84	152.96	153.17	153.39	153.65	153.87
% Ch, Annual Rate	1.1	1.6	0.2	0.3	0.6	0.6	0.7	0.6
Manufacturing	12.78	12.78	12.79	12.81	12.82	12.85	12.87	12.90
% Ch, Annual Rate	0.0	0.2	0.3	0.4	0.3	0.9	0.8	0.9
Durable Manufacturing	8.02	8.03	8.03	8.04	8.05	8.08	8.11	8.14
% Ch, Annual Rate	0.2	0.3	0.2	0.4	0.4	1.4	1.4	1.4
Wood Products	0.42	0.42	0.43	0.43	0.43	0.44	0.44	0.45
% Ch, Annual Rate	0.5	2.5	2.8	3.7	4.3	5.0	4.7	6.0
Primary and Fabricated Metals	1.88	1.88	1.88	1.89	1.89	1.90	1.90	1.91
% Ch, Annual Rate	0.5	0.5	1.1	0.9	0.5	1.1	1.4	2.3
Computer and Electronic Products	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.12
% Ch, Annual Rate	2.0	0.7	-0.4	-0.4	-0.4	0.4	1.1	0.9
Machinery and Electrical Equipment	1.59	1.59	1.59	1.59	1.59	1.59	1.60	1.60
% Ch, Annual Rate	1.2	-0.4	-0.8	-0.8	-0.1	1.2	1.9	1.3
Transportation Equipment	1.61	1.61	1.62	1.62	1.62	1.63	1.64	1.64
% Ch, Annual Rate	-1.7	0.5	0.6	0.7	0.9	2.5	1.6	0.2
Other Durables	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41
% Ch, Annual Rate	-0.4	-0.4	-0.4	0.3	-0.2	0.5	0.2	0.7
Nondurable Manufacturing	4.76	4.75	4.76	4.76	4.77	4.77	4.76	4.76
% Ch, Annual Rate	-0.5	-0.1	0.4	0.4	0.0	0.1	-0.2	-0.1
Food Manufacturing	1.67	1.67	1.68	1.68	1.69	1.70	1.70	1.70
% Ch, Annual Rate	0.2	0.7	1.6	1.6	1.2	1.2	0.7	1.0
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-0.9	-0.4	0.0	0.0	-0.3	-0.1	-0.1	0.1
Other Nondurables	2.72	2.72	2.72	2.72	2.71	2.71	2.70	2.70
% Ch, Annual Rate	-0.8	-0.5	-0.2	-0.3	-0.7	-0.6	-0.8	-0.8
Natural Resources and Mining	0.78	0.79	0.79	0.79	0.78	0.79	0.79	0.79
% Ch, Annual Rate	1.6	0.6	0.6	-0.1	-0.6	0.8	0.8	1.0
Construction	7.59	7.68	7.77	7.87	7.94	8.02	8.10	8.16
% Ch, Annual Rate	4.5	4.8	4.9	4.9	4.0	3.7	4.0	3.3
Trade, Transportation, and Utilities	27.86	27.85	27.87	27.83	27.78	27.72	27.68	27.63
% Ch, Annual Rate	0.1	-0.1	0.3	-0.6	-0.7	-0.8	-0.6	-0.7
Wholesale Trade	6.13	6.13	6.14	6.14	6.15	6.15	6.15	6.15
% Ch, Annual Rate	0.8	0.1	0.5	0.1	0.5	0.0	0.3	-0.1
Retail Trade	15.80	15.80	15.81	15.77	15.72	15.67	15.63	15.59
% Ch, Annual Rate	-0.1	-0.1	0.3	-0.9	-1.4	-1.2	-1.1	-0.9
Trans., Warehousing, and Utilities	5.93	5.92	5.92	5.91	5.91	5.90	5.89	5.88
% Ch, Annual Rate	0.0	-0.5	-0.2	-0.5	-0.2	-0.6	-0.4	-0.6
Information	2.79	2.79	2.80	2.80	2.81	2.83	2.84	2.85
% Ch, Annual Rate	1.6	0.4	0.8	0.6	1.8	2.2	1.6	1.2
Publishing Industries	0.66	0.66	0.65	0.65	0.65	0.65	0.64	0.64
% Ch, Annual Rate	-2.4	-2.5	-2.1	-2.1	-1.7	-1.7	-1.6	-1.2
Other Information	2.12	2.13	2.14	2.15	2.16	2.18	2.20	2.21
% Ch, Annual Rate	2.9	1.4	1.7	1.5	2.9	3.4	2.6	1.9
Financial Activities	8.77	8.78	8.79	8.79	8.79	8.79	8.78	8.77
% Ch, Annual Rate	0.9	0.2	0.5	0.3	0.0	-0.3	-0.3	-0.5
Professional and Business Services	22.57	22.75	22.88	22.99	23.11	23.23	23.36	23.49
% Ch, Annual Rate	3.6	3.2	2.3	1.9	2.1	2.0	2.4	2.3
Education and Health Services	24.05	24.05	24.07	24.08	24.11	24.11	24.12	24.12
% Ch, Annual Rate	0.4	-0.1	0.4	0.1	0.5	0.0	0.2	0.0
Leisure and Hospitality	16.51	16.51	16.53	16.52	16.50	16.52	16.53	16.55
% Ch, Annual Rate	0.0	0.0	0.4	-0.2	-0.6	0.4	0.3	0.5
Other Services	5.74	5.72	5.70	5.69	5.67	5.66	5.64	5.62
% Ch, Annual Rate	-0.9	-1.3	-1.1	-1.1	-0.8	-1.3	-1.3	-1.4
Federal Government	2.86	3.16	2.90	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	7.8	49.1	-29.1	-12.2	0.0	0.0	0.0	0.0
State and Local Government	19.87	19.91	19.96	20.01	20.05	20.10	20.14	20.19
% Ch, Annual Rate	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	154.06	154.25	154.46	154.65	154.83	155.03	155.21	155.38
% Ch, Annual Rate	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4
Manufacturing	12.90	12.90	12.90	12.91	12.92	12.93	12.93	12.93
% Ch, Annual Rate	0.2	-0.1	0.0	0.3	0.2	0.2	0.1	0.0
Durable Manufacturing	8.14	8.14	8.15	8.16	8.17	8.17	8.18	8.18
% Ch, Annual Rate	0.3	0.0	0.1	0.6	0.5	0.3	0.3	0.1
Wood Products	0.46	0.46	0.46	0.47	0.47	0.48	0.48	0.48
% Ch, Annual Rate	4.3	3.2	3.7	4.6	4.2	3.3	2.6	2.6
Primary and Fabricated Metals	1.92	1.93	1.94	1.95	1.96	1.96	1.97	1.98
% Ch, Annual Rate	1.5	1.5	1.8	2.1	1.8	1.5	1.4	1.4
Computer and Electronic Products	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
% Ch, Annual Rate	0.3	-0.3	-0.2	0.1	0.2	0.2	0.1	-0.1
Machinery and Electrical Equipment	1.60	1.61	1.61	1.62	1.62	1.63	1.63	1.63
% Ch, Annual Rate	0.3	0.6	1.0	1.8	1.3	1.0	0.7	0.8
Transportation Equipment	1.63	1.62	1.60	1.59	1.58	1.57	1.56	1.55
% Ch, Annual Rate	-2.1	-3.3	-4.0	-3.2	-2.5	-2.2	-1.9	-2.9
Other Durables	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42
% Ch, Annual Rate	0.1	0.6	0.8	0.7	0.1	-0.2	-0.1	0.1
Nondurable Manufacturing	4.76	4.76	4.76	4.76	4.75	4.75	4.75	4.75
% Ch, Annual Rate	0.0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1
Food Manufacturing	1.71	1.71	1.72	1.72	1.73	1.73	1.74	1.75
% Ch, Annual Rate	1.4	1.0	1.1	1.1	1.3	1.3	1.3	1.5
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	0.0	-0.2	-0.1	0.0	0.0	0.0	-0.1	-0.2
Other Nondurables	2.69	2.68	2.68	2.67	2.66	2.66	2.65	2.64
% Ch, Annual Rate	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1
Natural Resources and Mining	0.79	0.80	0.80	0.80	0.80	0.80	0.80	0.80
% Ch, Annual Rate	1.1	1.6	0.9	0.8	0.0	0.5	0.8	0.7
Construction	8.22	8.27	8.33	8.38	8.41	8.44	8.47	8.51
% Ch, Annual Rate	2.9	2.6	2.7	2.3	1.6	1.4	1.6	1.6
Trade, Transportation, and Utilities	27.56	27.50	27.43	27.38	27.33	27.30	27.26	27.22
% Ch, Annual Rate	-1.0	-0.9	-0.9	-0.8	-0.8	-0.4	-0.5	-0.6
Wholesale Trade	6.16	6.16	6.16	6.16	6.17	6.18	6.18	6.18
% Ch, Annual Rate	0.2	0.1	0.3	0.2	0.5	0.4	0.3	0.1
Retail Trade	15.53	15.47	15.41	15.36	15.30	15.27	15.24	15.20
% Ch, Annual Rate	-1.7	-1.4	-1.5	-1.3	-1.6	-0.8	-0.9	-0.8
Trans., Warehousing, and Utilities	5.88	5.87	5.86	5.85	5.85	5.85	5.84	5.84
% Ch, Annual Rate	-0.4	-0.6	-0.5	-0.4	-0.1	-0.3	-0.4	-0.5
Information	2.85	2.85	2.86	2.86	2.86	2.85	2.85	2.84
% Ch, Annual Rate	0.5	0.3	0.5	0.2	-0.2	-0.6	-1.1	-1.0
Publishing Industries	0.64	0.64	0.64	0.63	0.63	0.63	0.63	0.63
% Ch, Annual Rate	-1.0	-1.2	-1.3	-1.2	-0.9	-1.0	-1.1	-1.0
Other Information	2.21	2.22	2.22	2.23	2.23	2.22	2.22	2.21
% Ch, Annual Rate	0.9	0.8	1.0	0.7	0.1	-0.5	-1.1	-1.1
Financial Activities	8.77	8.77	8.76	8.75	8.75	8.74	8.74	8.73
% Ch, Annual Rate	0.0	-0.2	-0.4	-0.5	0.1	-0.3	-0.2	-0.3
Professional and Business Services	23.62	23.75	23.89	24.05	24.20	24.33	24.47	24.60
% Ch, Annual Rate	2.2	2.1	2.5	2.6	2.6	2.2	2.3	2.2
Education and Health Services	24.16	24.19	24.22	24.23	24.26	24.28	24.30	24.31
% Ch, Annual Rate	0.6	0.5	0.6	0.1	0.5	0.3	0.3	0.2
Leisure and Hospitality	16.54	16.55	16.56	16.56	16.53	16.55	16.55	16.57
% Ch, Annual Rate	-0.2	0.3	0.2	0.1	-0.7	0.3	0.2	0.3
Other Services	5.61	5.60	5.58	5.57	5.56	5.55	5.53	5.52
% Ch, Annual Rate	-0.7	-0.9	-0.9	-1.1	-0.7	-0.9	-1.0	-1.0
Federal Government	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.23	20.28	20.32	20.37	20.41	20.46	20.50	20.55
% Ch, Annual Rate	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Table A2.3

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	3,242.3	3,334.5	3,409.3	3,480.4	3,538.5	3,578.6	3,616.1	3,649.7
% Ch	3.1	2.8	2.2	2.1	1.7	1.1	1.0	0.9
Manufacturing	289.9	283.2	284.0	286.1	287.1	289.6	292.7	295.7
% Ch	-0.7	-2.3	0.3	0.7	0.3	0.9	1.1	1.0
Durable Manufacturing	207.4	199.5	199.1	200.2	200.6	202.1	204.4	206.5
% Ch	-1.7	-3.8	-0.2	0.6	0.2	0.8	1.1	1.0
Wood Products	13.1	12.9	13.3	13.4	13.4	13.6	13.9	14.1
% Ch	-1.5	-1.3	3.0	0.9	-0.7	1.8	2.1	1.4
Primary and Fabricated Metals	25.2	25.2	26.3	26.6	26.4	26.6	27.0	27.5
% Ch	-2.1	-0.1	4.3	1.1	-0.5	0.7	1.7	1.7
Computer and Electronic Products	20.1	19.4	19.9	20.8	21.4	21.7	22.0	22.3
% Ch	0.7	-3.2	2.8	4.4	2.8	1.2	1.6	1.2
Machinery and Electrical Equipment	20.4	20.6	22.1	23.7	24.7	25.8	27.1	28.7
% Ch	-1.5	0.9	7.0	7.2	4.5	4.2	5.4	5.6
Aerospace	90.9	83.6	79.9	78.3	77.7	77.7	77.7	77.7
% Ch	-3.3	-8.0	-4.4	-2.0	-0.8	0.0	0.0	0.0
Other Transportation Equip.	10.1	9.9	9.4	9.0	8.7	8.4	8.2	7.9
% Ch	-0.8	-1.4	-5.3	-4.4	-3.5	-2.6	-2.8	-4.2
Other Durables	27.6	27.8	28.1	28.4	28.3	28.4	28.4	28.3
% Ch	1.4	0.4	1.4	0.8	-0.3	0.3	0.2	-0.2
Nondurable Manufacturing	82.4	83.7	84.9	85.9	86.5	87.4	88.3	89.3
% Ch	2.1	1.6	1.4	1.2	0.7	1.1	1.0	1.1
Food Manufacturing	37.5	38.0	39.0	39.7	39.7	40.0	40.2	40.5
% Ch	1.9	1.4	2.5	1.8	0.1	0.6	0.5	0.7
Paper and Paper Products	7.8	7.7	7.4	7.2	7.1	7.0	7.0	6.9
% Ch	-3.5	-0.6	-3.6	-2.5	-1.7	-1.2	-1.1	-1.1
Other Nondurables	37.2	38.0	38.5	39.0	39.6	40.4	41.1	41.9
% Ch	3.6	2.2	1.4	1.2	1.7	2.0	1.8	1.9
Natural Resources and Mining	6.3	6.1	6.3	6.3	6.4	6.4	6.4	6.4
% Ch	-1.1	-2.0	2.1	1.4	0.4	0.2	0.4	0.4
Construction	186.5	201.4	208.1	208.8	211.1	212.1	210.9	208.3
% Ch	7.6	8.0	3.3	0.3	1.1	0.5	-0.6	-1.2
Trade, Transportation, and Utilities	607.2	630.2	646.3	657.8	665.1	667.6	667.5	667.6
% Ch	3.3	3.8	2.6	1.8	1.1	0.4	0.0	0.0
Wholesale Trade	133.1	135.8	138.8	141.8	143.6	144.5	145.2	146.0
% Ch	0.9	2.0	2.2	2.1	1.3	0.6	0.4	0.6
Retail Trade	369.8	386.5	396.0	403.5	408.5	410.1	409.4	408.6
% Ch	4.2	4.5	2.5	1.9	1.3	0.4	-0.2	-0.2
Trans., Warehousing, and Utilities	104.3	108.0	111.5	112.5	112.9	113.0	112.9	113.0
% Ch	3.3	3.5	3.2	0.9	0.4	0.1	-0.1	0.0
Information	120.6	125.4	127.6	129.3	130.6	133.1	135.3	136.5
% Ch	5.8	4.0	1.8	1.3	1.0	2.0	1.6	0.9
Software Publishers	58.8	61.4	62.8	63.0	63.5	64.2	64.9	65.6
% Ch	5.2	4.4	2.3	0.3	0.8	1.0	1.1	1.2
Other Publishing Industries	5.9	5.6	5.2	4.6	4.2	3.9	3.6	3.4
% Ch	-4.0	-5.2	-6.8	-11.3	-8.6	-8.0	-7.3	-7.4
Other Information	55.9	58.3	59.6	61.6	62.8	65.1	66.8	67.5
% Ch	7.5	4.4	2.2	3.4	1.9	3.6	2.6	1.1
Financial Activities	150.6	155.0	157.6	159.6	160.4	159.5	158.1	156.8
% Ch	2.0	2.9	1.7	1.2	0.5	-0.6	-0.9	-0.8
Professional and Business Services	403.1	416.6	431.0	455.0	474.8	489.6	504.6	520.1
% Ch	3.6	3.3	3.5	5.6	4.3	3.1	3.1	3.1
Education and Health Services	463.6	477.4	491.3	504.5	513.8	520.7	527.6	534.2
% Ch	3.4	3.0	2.9	2.7	1.8	1.3	1.3	1.2
Leisure and Hospitality	323.5	331.8	339.3	344.9	348.9	352.4	356.0	358.8
% Ch	4.4	2.6	2.3	1.7	1.1	1.0	1.0	0.8
Other Services	117.7	120.8	122.5	124.1	125.4	126.4	127.3	128.1
% Ch	2.3	2.6	1.5	1.3	1.0	0.8	0.7	0.6
Federal Government	74.5	75.0	75.2	75.8	78.7	76.6	77.0	77.3
% Ch	1.9	0.6	0.4	0.7	3.9	-2.6	0.5	0.4
State and Local Government	499.0	511.7	519.9	528.3	536.4	544.6	552.8	560.0
% Ch	2.1	2.5	1.6	1.6	1.5	1.5	1.5	1.3

Table A2.4

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,381.3	3,399.0	3,418.6	3,438.3	3,456.0	3,473.2	3,488.7	3,504.0
% Ch, Annual Rate	2.2	2.1	2.3	2.3	2.1	2.0	1.8	1.8
Manufacturing	282.2	283.7	285.0	285.0	286.0	286.3	286.1	286.0
% Ch, Annual Rate	2.3	2.0	2.0	0.0	1.4	0.4	-0.3	-0.1
Durable Manufacturing	197.8	198.7	199.9	199.8	200.3	200.4	200.1	199.9
% Ch, Annual Rate	2.6	1.9	2.4	-0.2	0.9	0.3	-0.7	-0.4
Wood Products	13.2	13.2	13.4	13.4	13.5	13.5	13.4	13.4
% Ch, Annual Rate	2.7	0.9	5.9	-0.2	1.5	0.5	-1.9	-1.5
Primary and Fabricated Metals	25.9	26.2	26.5	26.4	26.6	26.7	26.5	26.4
% Ch, Annual Rate	10.9	5.1	3.6	-0.8	3.2	0.8	-2.4	-1.7
Computer and Electronic Products	19.5	19.7	20.2	20.4	20.6	20.7	20.9	21.1
% Ch, Annual Rate	4.5	5.6	9.6	5.5	2.6	3.4	2.8	3.9
Machinery and Electrical Equipment	21.1	21.9	22.6	22.7	23.2	23.6	23.8	24.1
% Ch, Annual Rate	6.4	15.3	13.7	1.5	8.7	7.0	4.7	5.3
Aerospace	80.5	80.1	79.7	79.3	78.9	78.5	78.1	77.7
% Ch, Annual Rate	0.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Other Transportation Equip.	9.5	9.4	9.3	9.3	9.2	9.0	8.9	8.8
% Ch, Annual Rate	-0.4	-5.0	-5.3	0.0	-4.5	-7.1	-4.7	-5.0
Other Durables	28.0	28.1	28.2	28.2	28.3	28.4	28.4	28.3
% Ch, Annual Rate	-0.1	1.2	1.8	0.2	1.5	1.0	-0.4	-0.5
Nondurable Manufacturing	84.4	84.9	85.1	85.2	85.7	85.8	86.0	86.1
% Ch, Annual Rate	1.6	2.3	0.9	0.3	2.3	0.8	0.7	0.6
Food Manufacturing	38.8	38.9	39.0	39.1	39.5	39.7	39.7	39.7
% Ch, Annual Rate	6.6	1.5	1.2	0.8	4.3	1.3	0.8	-0.1
Paper and Paper Products	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.2
% Ch, Annual Rate	-4.0	-0.2	-1.9	-3.7	-2.6	-2.8	-2.3	-1.3
Other Nondurables	38.2	38.5	38.6	38.7	38.8	38.9	39.0	39.2
% Ch, Annual Rate	-2.2	3.5	1.2	0.6	1.3	1.0	1.2	1.7
Natural Resources and Mining	6.3	6.2	6.2	6.3	6.3	6.3	6.4	6.4
% Ch, Annual Rate	13.7	-1.4	0.1	0.8	3.5	1.5	1.2	0.9
Construction	208.3	208.2	208.1	207.9	208.2	208.6	208.8	209.8
% Ch, Annual Rate	5.3	-0.3	-0.2	-0.4	0.7	0.6	0.5	1.9
Trade, Transportation, and Utilities	641.6	644.7	647.6	651.2	654.6	656.5	658.9	661.0
% Ch, Annual Rate	2.9	1.9	1.8	2.3	2.1	1.2	1.4	1.3
Wholesale Trade	137.5	138.3	139.3	140.2	140.8	141.4	142.1	142.8
% Ch, Annual Rate	3.2	2.2	2.9	2.8	1.7	1.6	2.1	2.1
Retail Trade	393.5	395.0	396.6	398.9	401.5	402.8	404.2	405.3
% Ch, Annual Rate	3.3	1.5	1.6	2.3	2.7	1.3	1.4	1.1
Trans., Warehousing, and Utilities	110.6	111.4	111.8	112.1	112.3	112.4	112.6	112.8
% Ch, Annual Rate	1.1	3.0	1.3	1.4	0.6	0.2	0.8	0.8
Information	127.3	127.7	127.5	128.0	128.6	129.7	129.5	129.2
% Ch, Annual Rate	1.0	1.1	-0.4	1.4	2.1	3.4	-0.6	-0.8
Software Publishers	62.7	62.7	62.8	62.9	62.9	62.9	63.0	63.2
% Ch, Annual Rate	3.7	-0.1	0.3	0.8	-0.3	0.3	0.9	1.0
Other Publishing Industries	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5
% Ch, Annual Rate	-14.0	-13.1	-10.8	-8.0	-15.4	-11.8	-8.3	-7.6
Other Information	59.1	59.6	59.6	60.0	60.9	62.1	61.9	61.6
% Ch, Annual Rate	-0.2	3.7	-0.3	2.8	6.2	8.0	-1.5	-2.1
Financial Activities	156.7	157.2	157.9	158.7	159.0	159.2	159.7	160.3
% Ch, Annual Rate	0.4	1.1	1.9	2.0	0.8	0.5	1.3	1.6
Professional and Business Services	423.3	427.5	433.3	440.1	446.1	452.4	458.2	463.4
% Ch, Annual Rate	2.3	4.0	5.6	6.5	5.6	5.7	5.2	4.6
Education and Health Services	485.4	489.3	493.4	497.2	499.4	503.0	506.2	509.4
% Ch, Annual Rate	1.5	3.3	3.4	3.1	1.8	2.9	2.6	2.5
Leisure and Hospitality	336.2	338.4	340.4	342.2	343.4	344.4	345.5	346.6
% Ch, Annual Rate	3.0	2.6	2.5	2.1	1.4	1.1	1.3	1.3
Other Services	121.8	122.3	122.8	123.3	123.6	123.9	124.3	124.6
% Ch, Annual Rate	0.6	1.8	1.6	1.5	0.9	1.0	1.3	1.2
Federal Government	75.0	75.2	75.3	75.4	75.6	75.7	75.8	75.9
% Ch, Annual Rate	-1.2	0.7	0.7	0.7	0.7	0.7	0.7	0.6
State and Local Government	517.0	518.7	520.9	523.1	525.2	527.3	529.3	531.3
% Ch, Annual Rate	1.8	1.3	1.7	1.7	1.6	1.6	1.6	1.5

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,518.0	3,537.6	3,544.6	3,553.8	3,563.5	3,573.5	3,583.8	3,593.5
% Ch, Annual Rate	1.6	2.2	0.8	1.0	1.1	1.1	1.2	1.1
Manufacturing	286.4	286.8	287.3	287.9	288.4	289.1	289.9	290.9
% Ch, Annual Rate	0.5	0.6	0.7	0.8	0.7	1.1	1.1	1.3
Durable Manufacturing	200.2	200.5	200.7	201.0	201.2	201.8	202.4	203.2
% Ch, Annual Rate	0.7	0.5	0.4	0.5	0.5	1.1	1.3	1.5
Wood Products	13.3	13.3	13.4	13.4	13.5	13.5	13.6	13.7
% Ch, Annual Rate	-1.4	0.3	0.6	1.3	1.9	2.5	2.2	3.4
Primary and Fabricated Metals	26.4	26.4	26.4	26.5	26.5	26.5	26.6	26.8
% Ch, Annual Rate	-0.4	-0.1	0.7	0.7	-0.1	0.8	1.2	2.4
Computer and Electronic Products	21.3	21.4	21.4	21.5	21.5	21.6	21.7	21.9
% Ch, Annual Rate	4.3	2.1	0.3	0.3	0.4	1.6	2.8	2.6
Machinery and Electrical Equipment	24.5	24.7	24.8	25.0	25.2	25.5	26.0	26.3
% Ch, Annual Rate	5.5	3.2	2.6	2.6	3.7	5.6	6.6	5.9
Aerospace	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.7	8.7	8.7	8.6	8.5	8.5	8.4	8.4
% Ch, Annual Rate	-4.2	-0.6	-1.7	-2.4	-3.0	-3.2	-2.9	-2.4
Other Durables	28.3	28.3	28.3	28.3	28.3	28.4	28.4	28.4
% Ch, Annual Rate	-0.5	-0.4	0.0	0.5	0.2	0.4	0.2	0.4
Nondurable Manufacturing	86.1	86.3	86.6	86.9	87.1	87.4	87.5	87.7
% Ch, Annual Rate	0.1	0.7	1.4	1.5	1.1	1.1	0.7	1.0
Food Manufacturing	39.6	39.6	39.7	39.9	39.9	40.0	40.0	40.0
% Ch, Annual Rate	-0.9	-0.2	1.1	1.2	0.7	0.6	-0.1	0.3
Paper and Paper Products	7.2	7.1	7.1	7.1	7.1	7.0	7.0	7.0
% Ch, Annual Rate	-2.1	-1.5	-1.1	-1.0	-1.4	-1.2	-1.2	-0.9
Other Nondurables	39.3	39.5	39.7	40.0	40.1	40.3	40.5	40.7
% Ch, Annual Rate	1.5	1.9	2.2	2.2	1.9	1.9	1.8	1.9
Natural Resources and Mining	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
% Ch, Annual Rate	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.6
Construction	209.8	210.7	211.5	212.4	212.1	212.2	212.1	211.9
% Ch, Annual Rate	0.1	1.6	1.6	1.6	-0.5	0.1	-0.2	-0.4
Trade, Transportation, and Utilities	662.7	664.3	666.3	666.9	667.2	667.4	667.8	668.0
% Ch, Annual Rate	1.1	0.9	1.2	0.4	0.2	0.1	0.2	0.2
Wholesale Trade	143.2	143.5	143.8	144.0	144.3	144.4	144.6	144.7
% Ch, Annual Rate	1.1	0.6	0.9	0.6	0.7	0.4	0.6	0.2
Retail Trade	406.6	407.9	409.5	410.0	409.9	410.0	410.1	410.4
% Ch, Annual Rate	1.3	1.3	1.6	0.4	-0.1	0.1	0.1	0.2
Trans., Warehousing, and Utilities	112.9	112.9	112.9	113.0	113.0	113.0	113.0	113.0
% Ch, Annual Rate	0.2	0.0	0.2	0.1	0.2	-0.1	0.0	-0.1
Information	129.9	130.3	130.8	131.3	132.0	132.8	133.5	134.2
% Ch, Annual Rate	2.1	1.3	1.6	1.4	2.2	2.5	2.1	1.9
Software Publishers	63.3	63.4	63.6	63.7	63.9	64.1	64.2	64.4
% Ch, Annual Rate	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1
Other Publishing Industries	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8
% Ch, Annual Rate	-8.6	-9.0	-8.3	-8.5	-7.8	-7.8	-7.8	-7.1
Other Information	62.2	62.6	63.0	63.4	64.1	64.8	65.4	66.0
% Ch, Annual Rate	4.2	2.5	2.9	2.6	4.1	4.7	3.9	3.2
Financial Activities	160.5	160.4	160.4	160.4	160.1	159.8	159.4	158.9
% Ch, Annual Rate	0.3	-0.2	0.1	-0.2	-0.7	-0.8	-1.0	-1.2
Professional and Business Services	468.5	473.2	477.0	480.4	484.1	487.6	491.4	495.2
% Ch, Annual Rate	4.5	4.1	3.2	2.9	3.1	2.9	3.2	3.1
Education and Health Services	511.4	512.8	514.8	516.4	518.5	519.9	521.5	522.8
% Ch, Annual Rate	1.6	1.1	1.5	1.2	1.6	1.1	1.3	1.0
Leisure and Hospitality	347.5	348.4	349.5	350.3	350.8	351.9	352.9	354.0
% Ch, Annual Rate	1.1	1.0	1.2	0.9	0.7	1.2	1.1	1.2
Other Services	125.0	125.2	125.5	125.7	126.0	126.3	126.5	126.7
% Ch, Annual Rate	1.1	0.8	0.9	0.8	0.9	0.7	0.7	0.6
Federal Government	76.7	83.9	77.8	76.4	76.5	76.6	76.7	76.8
% Ch, Annual Rate	3.9	43.0	-25.7	-7.3	0.5	0.5	0.5	0.5
State and Local Government	533.3	535.3	537.4	539.4	541.5	543.6	545.7	547.8
% Ch, Annual Rate	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.5

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	3,602.9	3,611.7	3,620.7	3,629.3	3,637.8	3,646.2	3,653.8	3,660.8
% Ch, Annual Rate	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8
Manufacturing	291.7	292.3	293.0	293.8	294.6	295.4	296.1	296.8
% Ch, Annual Rate	1.0	0.8	0.9	1.2	1.1	1.0	0.9	1.0
Durable Manufacturing	203.7	204.1	204.6	205.2	205.8	206.2	206.7	207.1
% Ch, Annual Rate	1.0	0.9	0.9	1.2	1.1	0.9	0.8	0.8
Wood Products	13.8	13.8	13.9	14.0	14.0	14.1	14.1	14.1
% Ch, Annual Rate	1.9	1.0	1.4	2.2	1.8	1.1	0.4	0.5
Primary and Fabricated Metals	26.9	27.0	27.1	27.2	27.4	27.5	27.6	27.6
% Ch, Annual Rate	1.5	1.5	1.7	2.3	1.9	1.5	1.4	1.3
Computer and Electronic Products	22.0	22.0	22.0	22.1	22.2	22.2	22.3	22.4
% Ch, Annual Rate	1.6	0.6	0.7	1.3	1.4	1.4	1.2	0.9
Machinery and Electrical Equipment	26.6	26.9	27.3	27.7	28.1	28.5	28.8	29.2
% Ch, Annual Rate	4.4	4.7	5.4	6.5	5.9	5.4	5.0	5.1
Aerospace	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.3	8.3	8.2	8.1	8.0	7.9	7.8	7.7
% Ch, Annual Rate	-2.1	-2.5	-4.1	-4.7	-4.5	-4.2	-3.8	-3.7
Other Durables	28.4	28.4	28.4	28.4	28.4	28.4	28.3	28.3
% Ch, Annual Rate	0.1	0.1	0.1	0.0	-0.4	-0.5	-0.4	-0.2
Nondurable Manufacturing	88.0	88.1	88.4	88.6	88.8	89.1	89.4	89.7
% Ch, Annual Rate	1.1	0.8	1.0	1.1	1.2	1.2	1.2	1.3
Food Manufacturing	40.1	40.1	40.2	40.3	40.3	40.4	40.5	40.6
% Ch, Annual Rate	1.0	0.4	0.5	0.5	0.7	0.8	0.8	1.0
Paper and Paper Products	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.8
% Ch, Annual Rate	-1.1	-1.3	-1.2	-1.1	-1.1	-1.1	-1.3	-1.3
Other Nondurables	40.9	41.0	41.2	41.4	41.6	41.8	42.0	42.2
% Ch, Annual Rate	1.7	1.6	1.7	1.9	2.0	2.1	2.0	2.0
Natural Resources and Mining	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
% Ch, Annual Rate	0.5	0.3	0.4	0.6	0.5	0.3	0.2	0.4
Construction	211.6	211.2	210.7	210.1	209.5	208.7	207.9	207.0
% Ch, Annual Rate	-0.6	-0.8	-0.9	-1.1	-1.2	-1.4	-1.6	-1.8
Trade, Transportation, and Utilities	667.7	667.6	667.3	667.3	667.1	667.5	667.7	667.8
% Ch, Annual Rate	-0.2	-0.1	-0.1	0.0	-0.1	0.3	0.1	0.1
Wholesale Trade	144.9	145.1	145.3	145.4	145.7	145.9	146.1	146.2
% Ch, Annual Rate	0.6	0.4	0.5	0.4	0.8	0.6	0.5	0.2
Retail Trade	409.8	409.5	409.2	409.0	408.4	408.6	408.7	408.7
% Ch, Annual Rate	-0.5	-0.3	-0.4	-0.2	-0.5	0.2	0.1	0.1
Trans., Warehousing, and Utilities	113.0	112.9	112.9	112.9	113.0	113.0	113.0	112.9
% Ch, Annual Rate	0.0	-0.1	-0.1	0.0	0.2	0.1	0.0	-0.2
Information	134.6	135.1	135.5	135.9	136.3	136.5	136.6	136.7
% Ch, Annual Rate	1.4	1.3	1.4	1.2	1.0	0.6	0.3	0.3
Software Publishers	64.6	64.8	65.0	65.2	65.3	65.5	65.7	65.9
% Ch, Annual Rate	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2
Other Publishing Industries	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3
% Ch, Annual Rate	-6.7	-7.4	-7.6	-7.5	-7.0	-7.3	-7.6	-7.7
Other Information	66.3	66.6	67.0	67.3	67.5	67.5	67.5	67.5
% Ch, Annual Rate	2.1	1.9	2.2	1.8	1.1	0.5	-0.1	0.0
Financial Activities	158.7	158.4	158.0	157.5	157.3	157.0	156.6	156.2
% Ch, Annual Rate	-0.6	-0.8	-1.0	-1.2	-0.4	-0.9	-0.9	-1.0
Professional and Business Services	498.9	502.5	506.5	510.5	514.6	518.2	521.9	525.5
% Ch, Annual Rate	3.0	2.9	3.2	3.3	3.2	2.9	2.9	2.7
Education and Health Services	524.9	526.8	528.7	530.1	532.0	533.5	535.0	536.2
% Ch, Annual Rate	1.6	1.4	1.5	1.1	1.4	1.2	1.1	0.9
Leisure and Hospitality	354.7	355.6	356.5	357.3	357.6	358.4	359.2	360.0
% Ch, Annual Rate	0.8	1.1	1.0	0.9	0.4	0.9	0.8	0.9
Other Services	126.9	127.2	127.4	127.6	127.8	128.0	128.2	128.3
% Ch, Annual Rate	0.9	0.8	0.7	0.6	0.7	0.6	0.5	0.4
Federal Government	76.9	76.9	77.0	77.1	77.2	77.3	77.3	77.4
% Ch, Annual Rate	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
State and Local Government	549.8	551.8	553.8	555.6	557.5	559.2	560.9	562.5
% Ch, Annual Rate	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.2

Table A3.1

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

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	15,928.7	16,416.9	17,087.8	17,932.6	18,789.1	19,646.2	20,512.1	21,406.3
% Ch	2.4	3.1	4.1	4.9	4.8	4.6	4.4	4.4
Total Wage and Salary Disbursements	8,085.2	8,339.6	8,713.5	9,109.2	9,521.5	9,956.3	10,413.7	10,880.9
% Ch	2.9	3.1	4.5	4.5	4.5	4.6	4.6	4.5
Nonwage Personal Income	7,843.5	8,077.3	8,374.3	8,823.4	9,267.6	9,689.9	10,098.4	10,525.4
% Ch	1.9	3.0	3.7	5.4	5.0	4.6	4.2	4.2
Supplements to Wages and Salaries	1,893.4	1,955.1	2,015.4	2,093.3	2,180.0	2,262.5	2,346.9	2,437.6
% Ch	2.4	3.3	3.1	3.9	4.1	3.8	3.7	3.9
Proprietor's Income	1,341.9	1,385.7	1,441.0	1,523.0	1,578.6	1,601.3	1,613.4	1,623.4
% Ch	1.8	3.3	4.0	5.7	3.7	1.4	0.7	0.6
Farm	43.2	35.1	28.5	52.0	75.7	73.5	69.3	72.2
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,298.7	1,350.5	1,412.5	1,471.0	1,503.0	1,527.8	1,544.0	1,551.2
% Ch	2.7	4.0	4.6	4.1	2.2	1.7	1.1	0.5
Less: Contribution For Govt. Soc. Ins.	1,245.3	1,300.7	1,352.9	1,405.7	1,468.3	1,540.1	1,624.5	1,715.0
% Ch	3.1	4.4	4.0	3.9	4.5	4.9	5.5	5.6
Dividends/Int./Rent	3,085.1	3,185.7	3,335.4	3,525.7	3,733.1	3,953.4	4,180.4	4,399.7
% Ch	1.2	3.3	4.7	5.7	5.9	5.9	5.7	5.2
Transfer Payments	2,768.4	2,851.5	2,935.4	3,087.1	3,244.2	3,412.7	3,582.2	3,779.8
% Ch	3.1	3.0	2.9	5.2	5.1	5.2	5.0	5.5

Table A3.2

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

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	16,804.2	16,979.0	17,181.2	17,386.7	17,621.7	17,829.8	18,037.2	18,241.7
% Ch, Annual Rate	4.2	4.2	4.9	4.9	5.5	4.8	4.7	4.6
Total Wage and Salary Disbursements	8,564.1	8,665.4	8,762.4	8,862.1	8,968.5	9,063.6	9,155.4	9,249.2
% Ch, Annual Rate	5.2	4.8	4.6	4.6	4.9	4.3	4.1	4.2
Nonwage Personal Income	8,240.1	8,313.6	8,418.8	8,524.6	8,653.3	8,766.2	8,881.8	8,992.5
% Ch, Annual Rate	3.3	3.6	5.2	5.1	6.2	5.3	5.4	5.1
Supplements to Wages and Salaries	1,992.2	2,003.8	2,022.3	2,043.3	2,069.1	2,083.0	2,100.7	2,120.5
% Ch, Annual Rate	3.3	2.4	3.7	4.2	5.1	2.7	3.4	3.8
Proprietor's Income	1,415.3	1,429.6	1,449.9	1,469.2	1,489.4	1,513.9	1,535.3	1,553.5
% Ch, Annual Rate	3.9	4.1	5.8	5.4	5.6	6.8	5.8	4.8
Farm	26.8	25.6	28.6	32.9	39.7	47.7	56.2	64.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,388.4	1,404.0	1,421.4	1,436.3	1,449.7	1,466.2	1,479.1	1,489.0
% Ch, Annual Rate	4.8	4.6	5.0	4.3	3.8	4.6	3.6	2.7
Less: Contribution For Govt. Soc. Ins.	1,335.9	1,348.9	1,357.9	1,369.0	1,388.0	1,399.4	1,411.3	1,423.9
% Ch, Annual Rate	5.3	3.9	2.7	3.3	5.7	3.3	3.4	3.6
Dividends/Int./Rent	3,276.6	3,311.6	3,355.2	3,398.2	3,447.2	3,499.5	3,552.8	3,603.3
% Ch, Annual Rate	5.1	4.3	5.4	5.2	5.9	6.2	6.2	5.8
Transfer Payments	2,892.0	2,917.4	2,949.4	2,982.9	3,035.6	3,069.2	3,104.3	3,139.1
% Ch, Annual Rate	1.8	3.6	4.5	4.6	7.3	4.5	4.7	4.6

Table A3.2 (continued)

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

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,470.7	18,690.1	18,894.2	19,101.4	19,328.1	19,534.5	19,751.6	19,970.6
% Ch, Annual Rate	5.1	4.8	4.4	4.5	4.8	4.3	4.5	4.5
Total Wage and Salary Disbursements	9,363.8	9,476.8	9,572.4	9,673.1	9,791.1	9,898.9	10,011.3	10,124.0
% Ch, Annual Rate	5.0	4.9	4.1	4.3	5.0	4.5	4.6	4.6
Nonwage Personal Income	9,106.9	9,213.3	9,321.8	9,428.3	9,537.1	9,635.6	9,740.3	9,846.6
% Ch, Annual Rate	5.2	4.8	4.8	4.6	4.7	4.2	4.4	4.4
Supplements to Wages and Salaries	2,147.0	2,169.5	2,191.5	2,212.0	2,235.4	2,252.2	2,271.3	2,291.1
% Ch, Annual Rate	5.1	4.2	4.1	3.8	4.3	3.0	3.4	3.5
Proprietor's Income	1,565.8	1,575.8	1,583.6	1,589.4	1,591.9	1,598.2	1,604.9	1,610.4
% Ch, Annual Rate	3.2	2.6	2.0	1.5	0.6	1.6	1.7	1.4
Farm	71.3	76.0	77.7	77.6	76.3	74.4	72.5	70.8
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,494.5	1,499.7	1,505.9	1,511.7	1,515.7	1,523.7	1,532.4	1,539.5
% Ch, Annual Rate	1.5	1.4	1.7	1.6	1.0	2.1	2.3	1.9
Less: Contribution For Govt. Soc. Ins.	1,446.2	1,461.8	1,475.5	1,489.9	1,514.3	1,530.8	1,548.5	1,567.0
% Ch, Annual Rate	6.4	4.4	3.8	4.0	6.7	4.4	4.7	4.9
Dividends/Int./Rent	3,652.0	3,704.4	3,759.4	3,816.5	3,868.8	3,922.9	3,980.7	4,041.3
% Ch, Annual Rate	5.5	5.9	6.1	6.2	5.6	5.7	6.0	6.2
Transfer Payments	3,188.3	3,225.5	3,262.9	3,300.3	3,355.2	3,393.1	3,431.8	3,470.8
% Ch, Annual Rate	6.4	4.7	4.7	4.7	6.8	4.6	4.6	4.6

Table A3.2 (continued)

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

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	20,198.3	20,407.3	20,615.3	20,827.5	21,081.6	21,297.9	21,514.9	21,730.7
% Ch, Annual Rate	4.6	4.2	4.1	4.2	5.0	4.2	4.1	4.1
Total Wage and Salary Disbursements	10,246.2	10,357.4	10,469.2	10,581.9	10,707.9	10,823.2	10,938.8	11,053.7
% Ch, Annual Rate	4.9	4.4	4.4	4.4	4.8	4.4	4.3	4.3
Nonwage Personal Income	9,952.1	10,049.9	10,146.1	10,245.6	10,373.7	10,474.8	10,576.1	10,677.0
% Ch, Annual Rate	4.4	4.0	3.9	4.0	5.1	4.0	3.9	3.9
Supplements to Wages and Salaries	2,316.3	2,336.1	2,356.9	2,378.3	2,405.4	2,426.7	2,448.3	2,470.1
% Ch, Annual Rate	4.5	3.5	3.6	3.7	4.6	3.6	3.6	3.6
Proprietor's Income	1,610.1	1,612.8	1,613.9	1,616.6	1,616.8	1,620.9	1,625.9	1,629.9
% Ch, Annual Rate	-0.1	0.7	0.3	0.7	0.1	1.0	1.3	1.0
Farm	69.7	69.1	69.1	69.5	70.4	71.5	72.8	74.1
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,540.4	1,543.7	1,544.9	1,547.0	1,546.4	1,549.4	1,553.1	1,555.8
% Ch, Annual Rate	0.2	0.9	0.3	0.6	-0.2	0.8	1.0	0.7
Less: Contribution For Govt. Soc. Ins.	1,594.5	1,614.2	1,634.4	1,654.9	1,684.7	1,705.0	1,725.2	1,745.3
% Ch, Annual Rate	7.2	5.1	5.1	5.1	7.4	4.9	4.8	4.7
Dividends/Int./Rent	4,096.7	4,152.7	4,208.0	4,264.2	4,317.7	4,372.9	4,426.9	4,481.3
% Ch, Annual Rate	5.6	5.6	5.4	5.5	5.1	5.2	5.0	5.0
Transfer Payments	3,523.4	3,562.5	3,601.7	3,641.4	3,718.5	3,759.3	3,800.1	3,841.1
% Ch, Annual Rate	6.2	4.5	4.5	4.5	8.8	4.5	4.4	4.4

Table A3.3

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	397.772	420.047	440.870	464.867	489.425	514.909	540.764	567.250
% Ch	4.7	5.6	5.0	5.4	5.3	5.2	5.0	4.9
Total Wage and Salary Disbursements	203.613	219.015	230.876	242.683	254.990	268.149	281.883	296.031
% Ch	6.1	7.6	5.4	5.1	5.1	5.2	5.1	5.0
Manufacturing	21.735	21.677	22.214	22.924	23.721	24.817	26.035	27.294
% Ch	-0.3	-0.3	2.5	3.2	3.5	4.6	4.9	4.8
Durable Manufacturing	17.318	17.032	17.322	17.828	18.420	19.250	20.190	21.150
% Ch	-1.6	-1.6	1.7	2.9	3.3	4.5	4.9	4.8
Nondurable Manufacturing	4.417	4.645	4.891	5.096	5.301	5.568	5.845	6.145
% Ch	4.9	5.2	5.3	4.2	4.0	5.0	5.0	5.1
Nonmanufacturing	174.750	189.981	200.965	211.759	222.914	234.665	246.833	259.370
% Ch	7.1	8.7	5.8	5.4	5.3	5.3	5.2	5.1
Other Private Wages	1.197	1.288	1.392	1.444	1.495	1.549	1.604	1.659
% Ch	4.0	7.6	8.0	3.7	3.6	3.6	3.6	3.4
Farm Wages	1.813	1.895	2.002	2.107	2.215	2.329	2.448	2.568
% Ch	13.2	4.5	5.7	5.3	5.1	5.2	5.1	4.9
Military Wages	4.118	4.174	4.304	4.449	4.645	4.788	4.962	5.140
% Ch	0.2	1.4	3.1	3.4	4.4	3.1	3.6	3.6
Nonwage Personal Income	194.159	201.032	209.994	222.184	234.436	246.760	258.881	271.219
% Ch	3.2	3.5	4.5	5.8	5.5	5.3	4.9	4.8
Supplements to Wages and Salaries	46.494	49.170	51.122	53.426	55.935	58.417	60.967	63.675
% Ch	6.0	5.8	4.0	4.5	4.7	4.4	4.4	4.4
Proprietor's Income	29.803	30.348	31.352	32.501	33.210	33.667	33.952	34.106
% Ch	0.9	1.8	3.3	3.7	2.2	1.4	0.8	0.5
Farm	2.496	1.709	1.298	1.248	1.299	1.235	1.184	1.190
% Ch	...	...	...	...	...	...	...	...
Nonfarm	27.307	28.639	30.054	31.253	31.911	32.432	32.767	32.915
% Ch	1.9	4.9	4.9	4.0	2.1	1.6	1.0	0.5
Less: Contribution For Govt. Soc. Ins.	33.536	35.743	37.503	39.130	41.034	43.226	45.767	48.500
% Ch	4.2	6.6	4.9	4.3	4.9	5.3	5.9	6.0
Plus: Residence Adjustment	3.717	3.819	4.009	4.202	4.405	4.619	4.844	5.075
% Ch	5.1	2.8	5.0	4.8	4.8	4.8	4.9	4.8
Dividends/Int./Rent	88.021	91.905	96.953	103.287	110.090	117.277	124.674	131.830
% Ch	1.4	4.4	5.5	6.5	6.6	6.5	6.3	5.7
Transfer Payments	59.662	61.533	64.061	67.897	71.830	76.008	80.211	85.033
% Ch	5.6	3.1	4.1	6.0	5.8	5.8	5.5	6.0
State U.I. Benefits	0.982	0.964	0.870	0.687	0.722	0.720	0.735	0.803
% Ch	1.2	-1.8	-9.8	-21.0	5.0	-0.2	2.1	9.2
Other Transfers	58.679	60.569	63.191	67.210	71.109	75.288	79.476	84.230
% Ch	5.7	3.2	4.3	6.4	5.8	5.9	5.6	6.0

Table A3.4

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	432.500	437.836	443.678	449.466	456.099	462.051	467.796	473.521
% Ch, Annual Rate	4.8	5.0	5.4	5.3	6.0	5.3	5.1	5.0
Total Wage and Salary Disbursements	226.306	229.468	232.417	235.314	238.526	241.407	244.034	246.763
% Ch, Annual Rate	5.3	5.7	5.2	5.1	5.6	4.9	4.4	4.5
Manufacturing	21.875	22.129	22.358	22.493	22.705	22.869	22.990	23.130
% Ch, Annual Rate	3.0	4.7	4.2	2.4	3.8	2.9	2.1	2.5
Durable Manufacturing	17.067	17.254	17.436	17.533	17.678	17.794	17.872	17.967
% Ch, Annual Rate	2.4	4.4	4.3	2.2	3.3	2.7	1.8	2.1
Nondurable Manufacturing	4.808	4.876	4.922	4.961	5.028	5.074	5.118	5.163
% Ch, Annual Rate	5.0	5.8	3.8	3.2	5.5	3.8	3.5	3.6
Nonmanufacturing	196.792	199.659	202.337	205.071	207.879	210.554	213.020	215.585
% Ch, Annual Rate	5.4	6.0	5.5	5.5	5.6	5.2	4.8	4.9
Other Private Wages	1.372	1.386	1.398	1.411	1.426	1.439	1.449	1.461
% Ch, Annual Rate	3.5	4.0	3.7	3.7	4.2	3.6	3.1	3.1
Farm Wages	1.963	1.990	2.015	2.041	2.070	2.096	2.120	2.144
% Ch, Annual Rate	5.0	5.6	5.3	5.2	5.8	5.1	4.5	4.6
Military Wages	4.305	4.304	4.309	4.297	4.446	4.450	4.455	4.443
% Ch, Annual Rate	12.0	-0.1	0.5	-1.1	14.6	0.3	0.5	-1.1
Nonwage Personal Income	206.194	208.368	211.260	214.152	217.573	220.644	223.762	226.759
% Ch, Annual Rate	4.2	4.3	5.7	5.6	6.5	5.8	5.8	5.5
Supplements to Wages and Salaries	50.402	50.807	51.344	51.933	52.698	53.152	53.651	54.203
% Ch, Annual Rate	3.9	3.3	4.3	4.7	6.0	3.5	3.8	4.2
Proprietor's Income	30.958	31.187	31.494	31.768	32.040	32.391	32.673	32.900
% Ch, Annual Rate	3.9	3.0	4.0	3.5	3.5	4.5	3.5	2.8
Farm	1.397	1.308	1.258	1.229	1.224	1.234	1.254	1.279
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	29.561	29.880	30.236	30.539	30.816	31.157	31.419	31.621
% Ch, Annual Rate	5.7	4.4	4.9	4.1	3.7	4.5	3.4	2.6
Less: Contribution For Govt. Soc. Ins.	36.957	37.375	37.672	38.010	38.587	38.951	39.301	39.679
% Ch, Annual Rate	5.9	4.6	3.2	3.6	6.2	3.8	3.6	3.9
Plus: Residence Adjustment	3.936	3.986	4.033	4.082	4.134	4.179	4.225	4.272
% Ch, Annual Rate	5.9	5.1	4.8	5.0	5.1	4.5	4.4	4.5
Dividends/Int./Rent	94.942	96.160	97.628	99.081	100.708	102.427	104.175	105.839
% Ch, Annual Rate	6.0	5.2	6.2	6.1	6.7	7.0	7.0	6.5
Transfer Payments	62.913	63.602	64.433	65.297	66.581	67.445	68.339	69.224
% Ch, Annual Rate	2.7	4.5	5.3	5.5	8.1	5.3	5.4	5.3
State U.I. Benefits	0.969	0.887	0.837	0.785	0.692	0.664	0.688	0.705
% Ch, Annual Rate	0.0	-29.7	-20.7	-22.7	-39.5	-15.5	15.0	10.8
Other Transfers	61.944	62.715	63.595	64.512	65.888	66.781	67.652	68.519
% Ch, Annual Rate	2.8	5.1	5.7	5.9	8.8	5.5	5.3	5.2

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	480.045	486.477	492.471	498.708	505.446	511.621	518.047	524.522
% Ch, Annual Rate	5.6	5.5	5.0	5.2	5.5	5.0	5.1	5.1
Total Wage and Salary Disbursements	250.188	253.618	256.514	259.637	263.227	266.468	269.791	273.108
% Ch, Annual Rate	5.7	5.6	4.6	5.0	5.6	5.0	5.1	5.0
Manufacturing	23.352	23.596	23.834	24.100	24.370	24.660	24.960	25.279
% Ch, Annual Rate	3.9	4.2	4.1	4.5	4.5	4.8	5.0	5.2
Durable Manufacturing	18.144	18.331	18.505	18.700	18.902	19.124	19.361	19.611
% Ch, Annual Rate	4.0	4.2	3.8	4.3	4.4	4.8	5.0	5.3
Nondurable Manufacturing	5.208	5.265	5.330	5.400	5.468	5.535	5.599	5.668
% Ch, Annual Rate	3.5	4.4	5.0	5.4	5.1	5.0	4.7	5.0
Nonmanufacturing	218.558	221.638	224.304	227.156	230.256	233.162	236.137	239.105
% Ch, Annual Rate	5.6	5.8	4.9	5.2	5.6	5.1	5.2	5.1
Other Private Wages	1.475	1.490	1.501	1.514	1.529	1.542	1.556	1.569
% Ch, Annual Rate	4.1	4.0	3.1	3.4	4.1	3.5	3.6	3.5
Farm Wages	2.173	2.203	2.228	2.255	2.286	2.314	2.343	2.372
% Ch, Annual Rate	5.7	5.6	4.6	4.9	5.7	5.0	5.1	5.0
Military Wages	4.630	4.692	4.646	4.612	4.786	4.790	4.795	4.783
% Ch, Annual Rate	17.9	5.5	-3.8	-2.9	16.0	0.3	0.4	-1.0
Nonwage Personal Income	229.857	232.858	235.956	239.071	242.218	245.153	248.256	251.414
% Ch, Annual Rate	5.6	5.3	5.4	5.4	5.4	4.9	5.2	5.2
Supplements to Wages and Salaries	54.975	55.635	56.258	56.871	57.594	58.115	58.686	59.270
% Ch, Annual Rate	5.8	4.9	4.6	4.4	5.2	3.7	4.0	4.0
Proprietor's Income	33.029	33.151	33.273	33.386	33.446	33.592	33.749	33.880
% Ch, Annual Rate	1.6	1.5	1.5	1.4	0.7	1.8	1.9	1.6
Farm	1.298	1.308	1.302	1.287	1.267	1.245	1.224	1.206
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	31.731	31.843	31.971	32.099	32.180	32.348	32.525	32.673
% Ch, Annual Rate	1.4	1.4	1.6	1.6	1.0	2.1	2.2	1.8
Less: Contribution For Govt. Soc. Ins.	40.344	40.830	41.254	41.709	42.445	42.950	43.479	44.032
% Ch, Annual Rate	6.9	4.9	4.2	4.5	7.3	4.8	5.0	5.2
Plus: Residence Adjustment	4.328	4.384	4.431	4.480	4.537	4.590	4.646	4.702
% Ch, Annual Rate	5.4	5.2	4.4	4.5	5.2	4.8	4.9	4.9
Dividends/Int./Rent	107.444	109.159	110.951	112.805	114.520	116.288	118.168	120.132
% Ch, Annual Rate	6.2	6.5	6.7	6.9	6.2	6.3	6.6	6.8
Transfer Payments	70.425	71.360	72.298	73.238	74.565	75.517	76.487	77.462
% Ch, Annual Rate	7.1	5.4	5.4	5.3	7.4	5.2	5.2	5.2
State U.I. Benefits	0.712	0.713	0.728	0.733	0.729	0.726	0.716	0.709
% Ch, Annual Rate	3.9	0.7	8.2	2.8	-2.0	-1.5	-5.6	-4.1
Other Transfers	69.713	70.646	71.570	72.505	73.836	74.791	75.771	76.754
% Ch, Annual Rate	7.2	5.5	5.3	5.3	7.5	5.3	5.3	5.3

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	531.364	537.629	543.867	550.197	557.672	564.087	570.469	576.773
% Ch, Annual Rate	5.3	4.8	4.7	4.7	5.5	4.7	4.6	4.5
Total Wage and Salary Disbursements	276.843	280.187	283.554	286.945	290.861	294.327	297.776	301.160
% Ch, Annual Rate	5.6	4.9	4.9	4.9	5.6	4.9	4.8	4.6
Manufacturing	25.584	25.880	26.178	26.497	26.819	27.136	27.451	27.771
% Ch, Annual Rate	4.9	4.7	4.7	5.0	5.0	4.8	4.7	4.7
Durable Manufacturing	19.843	20.071	20.300	20.546	20.792	21.031	21.268	21.508
% Ch, Annual Rate	4.8	4.7	4.6	4.9	4.9	4.7	4.6	4.6
Nondurable Manufacturing	5.741	5.809	5.879	5.951	6.028	6.105	6.183	6.263
% Ch, Annual Rate	5.2	4.8	4.9	5.0	5.2	5.2	5.2	5.3
Nonmanufacturing	242.310	245.312	248.334	251.377	254.740	257.844	260.931	263.966
% Ch, Annual Rate	5.5	5.0	5.0	5.0	5.5	5.0	4.9	4.7
Other Private Wages	1.585	1.598	1.611	1.624	1.640	1.652	1.665	1.677
% Ch, Annual Rate	4.0	3.3	3.3	3.2	3.9	3.2	3.1	3.0
Farm Wages	2.404	2.433	2.462	2.491	2.524	2.554	2.583	2.611
% Ch, Annual Rate	5.6	4.9	4.8	4.8	5.5	4.7	4.6	4.5
Military Wages	4.960	4.964	4.969	4.957	5.138	5.141	5.146	5.134
% Ch, Annual Rate	15.7	0.3	0.4	-1.0	15.4	0.3	0.4	-0.9
Nonwage Personal Income	254.520	257.442	260.313	263.251	266.812	269.760	272.693	275.613
% Ch, Annual Rate	5.0	4.7	4.5	4.6	5.5	4.5	4.4	4.4
Supplements to Wages and Salaries	60.050	60.647	61.268	61.902	62.737	63.363	63.991	64.609
% Ch, Annual Rate	5.4	4.0	4.2	4.2	5.5	4.1	4.0	3.9
Proprietor's Income	33.886	33.946	33.965	34.009	34.000	34.066	34.148	34.208
% Ch, Annual Rate	0.1	0.7	0.2	0.5	-0.1	0.8	1.0	0.7
Farm	1.193	1.185	1.180	1.179	1.182	1.187	1.193	1.199
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	32.692	32.762	32.785	32.830	32.818	32.879	32.955	33.009
% Ch, Annual Rate	0.2	0.9	0.3	0.5	-0.1	0.7	0.9	0.6
Less: Contribution For Govt. Soc. Ins.	44.860	45.457	46.067	46.684	47.589	48.201	48.808	49.402
% Ch, Annual Rate	7.7	5.4	5.5	5.5	8.0	5.2	5.1	5.0
Plus: Residence Adjustment	4.761	4.816	4.872	4.928	4.989	5.046	5.104	5.162
% Ch, Annual Rate	5.2	4.7	4.7	4.7	5.1	4.7	4.7	4.6
Dividends/Int./Rent	121.941	123.770	125.576	127.410	129.158	130.958	132.719	134.486
% Ch, Annual Rate	6.2	6.1	6.0	6.0	5.6	5.7	5.5	5.4
Transfer Payments	78.742	79.718	80.699	81.687	83.517	84.527	85.538	86.550
% Ch, Annual Rate	6.8	5.1	5.0	5.0	9.3	4.9	4.9	4.8
State U.I. Benefits	0.716	0.726	0.743	0.756	0.773	0.789	0.810	0.838
% Ch, Annual Rate	4.4	5.4	9.8	7.5	9.2	8.4	11.4	14.3
Other Transfers	78.025	78.993	79.956	80.930	82.743	83.738	84.728	85.712
% Ch, Annual Rate	6.8	5.1	5.0	5.0	9.3	4.9	4.8	4.7

Table A4.1
Selected Inflation Indicators
(PCE Price Index 2009=100; CPI 1982-84=1)

	PCE Price Index*		U.S. CPI#		Seattle CPI+	
	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	23.3	4.3	0.405	4.2	0.382	2.1
1972	24.1	3.4	0.418	3.3	0.393	2.9
1973	25.4	5.4	0.444	6.3	0.418	6.4
1974	28.0	10.4	0.493	11.0	0.464	11.0
1975	30.3	8.4	0.538	9.1	0.511	10.2
1976	32.0	5.5	0.569	5.8	0.540	5.5
1977	34.1	6.5	0.606	6.5	0.583	8.0
1978	36.5	7.0	0.652	7.6	0.640	9.9
1979	39.7	8.9	0.726	11.3	0.709	10.8
1980	44.0	10.7	0.824	13.5	0.827	16.7
1981	47.9	8.9	0.909	10.4	0.916	10.8
1982	50.6	5.5	0.965	6.2	0.978	6.7
1983	52.7	4.3	0.996	3.2	0.993	1.5
1984	54.7	3.8	1.039	4.4	1.030	3.8
1985	56.7	3.5	1.076	3.5	1.056	2.5
1986	57.9	2.2	1.097	1.9	1.066	1.0
1987	59.7	3.0	1.136	3.6	1.092	2.4
1988	62.0	3.9	1.183	4.1	1.128	3.3
1989	64.6	4.3	1.239	4.8	1.181	4.7
1990	67.4	4.3	1.307	5.4	1.268	7.3
1991	69.7	3.3	1.362	4.2	1.341	5.8
1992	71.5	2.6	1.403	3.0	1.390	3.7
1993	73.3	2.5	1.445	3.0	1.429	2.8
1994	74.8	2.1	1.482	2.6	1.478	3.4
1995	76.4	2.1	1.524	2.8	1.522	3.0
1996	78.0	2.1	1.569	2.9	1.575	3.4
1997	79.3	1.7	1.605	2.3	1.630	3.5
1998	79.9	0.8	1.630	1.5	1.677	2.9
1999	81.1	1.5	1.666	2.2	1.728	3.0
2000	83.1	2.5	1.722	3.4	1.792	3.7
2001	84.7	1.9	1.770	2.8	1.857	3.6
2002	85.9	1.3	1.799	1.6	1.893	2.0
2003	87.6	2.0	1.840	2.3	1.924	1.6
2004	89.7	2.4	1.889	2.7	1.947	1.2
2005	92.3	2.9	1.953	3.4	2.002	2.8
2006	94.7	2.7	2.016	3.2	2.076	3.7
2007	97.1	2.5	2.073	2.9	2.157	3.9
2008	100.1	3.1	2.153	3.8	2.247	4.2
2009	100.0	-0.1	2.146	-0.3	2.260	0.6
2010	101.7	1.7	2.181	1.6	2.267	0.3
2011	104.1	2.5	2.249	3.1	2.328	2.7
2012	106.1	1.9	2.296	2.1	2.386	2.5
2013	107.5	1.3	2.329	1.5	2.416	1.2
2014	109.2	1.5	2.367	1.6	2.460	1.8
2015	109.5	0.3	2.370	0.1	2.494	1.4
2016	110.8	1.2	2.400	1.3	2.550	2.3
2017	112.7	1.7	2.452	2.1	2.627	3.0
Forecast						
2018	114.8	1.9	2.510	2.4	2.708	3.1
2019	116.9	1.8	2.556	1.8	2.765	2.1
2020	119.2	2.0	2.613	2.2	2.830	2.4
2021	121.7	2.0	2.670	2.2	2.896	2.3
2022	124.2	2.1	2.727	2.1	2.961	2.2
2023	126.7	2.0	2.781	2.0	3.023	2.1

* GDP Price Index for Personal Consumption Expenditures

Consumer Price Index for all Urban Consumers

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

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

Table A4.2
Price Indexes for Gross Domestic Product
(2009=100)

	Services		Food		Fuels		Gasoline	
	Index	Percent Change	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	17.9	5.5	22.8	2.3	7.4	6.4	14.0	0.7
1972	18.7	4.2	23.9	4.8	7.5	0.6	14.2	1.3
1973	19.6	4.8	26.9	12.7	8.6	14.6	15.5	9.6
1974	21.3	8.5	31.0	15.2	13.6	58.9	21.0	35.1
1975	23.1	8.6	33.3	7.5	14.8	8.5	22.4	6.7
1976	24.7	6.9	34.0	1.9	15.9	7.3	23.3	4.2
1977	26.6	7.5	36.0	5.9	17.9	13.2	24.7	5.8
1978	28.6	7.8	39.4	9.6	19.0	5.7	25.8	4.3
1979	31.0	8.4	43.3	9.8	26.2	37.9	34.5	34.0
1980	34.2	10.3	46.9	8.4	36.7	40.4	47.9	38.8
1981	37.7	10.2	50.3	7.1	44.9	22.3	53.3	11.3
1982	40.6	7.8	51.6	2.6	44.1	-1.9	50.6	-5.1
1983	43.2	6.2	52.2	1.1	40.6	-7.8	48.9	-3.3
1984	45.4	5.2	53.7	3.0	41.5	2.2	48.2	-1.5
1985	47.7	5.0	54.3	1.1	39.9	-3.9	48.6	0.8
1986	49.6	4.1	55.6	2.4	31.2	-21.7	38.2	-21.5
1987	51.1	2.9	57.4	3.2	32.1	2.6	39.6	3.8
1988	53.5	4.8	59.1	3.0	32.0	0.0	40.0	0.8
1989	56.0	4.6	62.2	5.3	34.0	6.0	43.7	9.2
1990	58.5	4.5	65.2	4.9	40.9	20.4	49.7	13.8
1991	60.7	3.8	67.3	3.1	38.9	-4.8	49.1	-1.3
1992	62.8	3.5	67.8	0.8	37.3	-4.1	48.9	-0.4
1993	65.0	3.5	68.7	1.4	37.1	-0.7	48.4	-1.0
1994	66.8	2.7	69.9	1.7	36.4	-1.8	48.6	0.5
1995	68.6	2.7	71.4	2.2	36.1	-0.9	49.4	1.6
1996	70.5	2.7	73.6	3.1	40.9	13.3	52.4	6.1
1997	72.4	2.8	75.0	1.9	41.0	0.2	52.4	0.0
1998	73.9	2.1	75.9	1.3	36.3	-11.4	45.6	-12.9
1999	75.4	2.0	77.2	1.6	36.9	1.7	49.6	8.9
2000	77.5	2.8	79.0	2.3	54.1	46.6	63.4	27.8
2001	79.9	3.1	81.3	2.9	53.1	-2.0	61.2	-3.6
2002	82.0	2.6	82.5	1.5	47.3	-10.8	57.5	-6.0
2003	84.5	3.1	84.1	1.9	57.2	20.9	67.0	16.5
2004	87.1	3.0	86.7	3.1	66.6	16.4	78.8	17.6
2005	89.9	3.3	88.2	1.7	88.6	33.0	95.8	21.6
2006	93.0	3.4	89.7	1.7	100.7	13.7	108.0	12.8
2007	96.0	3.2	93.2	3.9	107.7	6.9	117.1	8.4
2008	98.9	3.1	98.9	6.1	146.0	35.6	136.6	16.6
2009	100.0	1.1	100.0	1.2	100.0	-31.5	100.0	-26.8
2010	101.7	1.7	100.3	0.3	117.0	17.0	118.2	18.2
2011	103.5	1.8	104.3	4.0	148.8	27.2	149.3	26.3
2012	105.8	2.2	106.7	2.3	150.7	1.3	154.7	3.6
2013	108.3	2.3	107.8	1.1	148.9	-1.2	149.7	-3.2
2014	110.9	2.5	109.8	1.8	148.2	-0.5	145.5	-2.8
2015	113.1	1.9	111.0	1.1	105.3	-29.0	107.0	-26.5
2016	115.9	2.5	109.9	-0.9	87.7	-16.7	95.3	-10.9
2017	118.6	2.3	109.8	-0.1	100.7	14.8	107.5	12.8
Forecast								
2018	121.7	2.7	110.6	0.7	116.2	15.4	117.6	9.4
2019	125.0	2.7	112.1	1.4	116.3	0.0	111.7	-5.0
2020	128.4	2.7	113.9	1.6	118.7	2.1	110.6	-1.0
2021	131.9	2.7	115.8	1.7	121.1	2.0	109.9	-0.7
2022	135.5	2.7	117.6	1.6	123.6	2.1	109.5	-0.4
2023	139.0	2.6	119.5	1.5	127.0	2.8	110.0	0.4

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	54.6	87.1
2017	7310.3	126.6	1.8	91.2	55.4	90.8
Forecast						
2018	7426.3	116.0	1.6	93.5	56.5	79.1
2019	7535.5	109.2	1.5	94.8	57.5	71.8
2020	7638.4	102.9	1.4	96.0	58.4	65.3
2021	7736.2	97.8	1.3	96.9	59.5	60.5
2022	7827.9	91.6	1.2	97.3	60.6	54.9
2023	7916.0	88.2	1.1	98.0	61.8	52.0

* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2
Washington Population*
 (Thousands)

	Actual					Forecast				
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Population	6968.2	7061.4	7183.7	7310.3	7426.3	7535.5	7638.4	7736.2	7827.9	7916.0
Percent Change	1.2	1.3	1.7	1.8	1.6	1.5	1.4	1.3	1.2	1.1
Age 17 and Under	1588.4	1602.8	1625.6	1649.6	1671.0	1691.4	1713.0	1733.4	1750.8	1766.4
Percent of Total	22.8	22.7	22.6	22.6	22.5	22.4	22.4	22.4	22.4	22.3
Age 6-18	1151.0	1162.2	1178.6	1194.9	1210.1	1223.5	1235.6	1250.1	1263.7	1275.4
Percent of Total	16.5	16.5	16.4	16.3	16.3	16.2	16.2	16.2	16.1	16.1
Age 18 and Over	5379.8	5458.7	5558.1	5660.7	5755.4	5844.1	5925.4	6002.8	6077.1	6149.6
Percent of Total	77.2	77.3	77.4	77.4	77.5	77.6	77.6	77.6	77.6	77.7
Age 21 and Over	5107.4	5187.1	5284.0	5382.7	5473.8	5560.3	5642.3	5721.1	5795.0	5863.5
Percent of Total	73.3	73.5	73.6	73.6	73.7	73.8	73.9	74.0	74.0	74.1
Age 20-34	1445.8	1458.8	1482.6	1506.7	1525.9	1543.7	1557.3	1568.7	1577.6	1584.1
Percent of Total	20.7	20.7	20.6	20.6	20.5	20.5	20.4	20.3	20.2	20.0
Age 18-64	4396.9	4431.0	4484.7	4539.0	4581.8	4618.8	4646.2	4671.2	4693.6	4714.2
Percent of Total	63.1	62.7	62.4	62.1	61.7	61.3	60.8	60.4	60.0	59.6
Age 65 and Over	982.8	1027.7	1073.4	1121.8	1173.6	1225.3	1279.2	1331.6	1383.4	1435.4
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	January 2018	+
U.S. Real GDP Growth	4th quarter 2017	-
U.S. ISM Index	January 2018	-
U.S. Employment YOY%Δ	January 2018	unchanged
U.S. Unemployment Rate	January 2018	unchanged
U.S. Consumer Confidence	February 2018	+
U.S. Consumer Sentiment	February 2018	+
U.S. Light Vehicle Sales	January 2018	-
U.S. CPI YOY%Δ	January 2018	unchanged
U.S. Home Prices YOY%Δ	December 2017	-
S&P 500 Index	February 2018	-
WA Leading Index	December 2017	+
WA ISM-WW Index	January 2018	-
WA Employment YOY%Δ	January 2018	-
WA Aerospace Empl. YOY%Δ	January 2018	+
WA Unemployment Rate	December 2017	-
WA Help Wanted Index	January 2018	-
WA Business Cycle Indicator	December 2017	-
WA Initial Unemploy. Claims	January 2018	-
WA Housing Permits	January 2018	-
WA Weekly Hours in Mfg.	December 2017	-
WA New Vehicle Registration	January 2018	-
WA In-Migration	January 2018	-
WA Exports-Total YOY%Δ	4th quarter 2017	+
WA Exports- w/o Trans. Equip. YOY%Δ	4th quarter 2017	-
Seattle CPI YOY%Δ	December 2017	-
Seattle Home Prices YOY%Δ	December 2017	unchanged
WA Construction Activity Index	December 2017	+

*Change from the previous reading

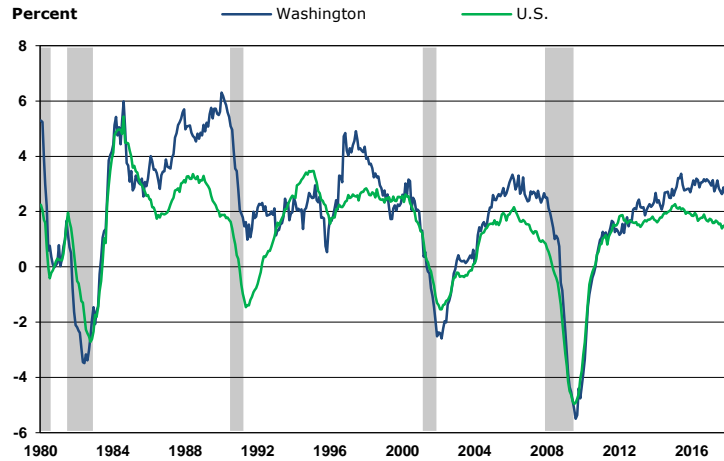
Table A6.2
Washington Business Indicators
 Historical Data

	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	114.3	92.0	44.3	94.9	118.2	63.5	51.8
2014:02	114.1	92.5	43.1	93.1	118.5	68.7	54.3
2014:03	114.9	93.4	43.7	93.8	118.6	63.6	54.4
2014:04	115.5	93.5	46.0	97.1	120.6	53.7	55.3
2014:05	115.7	94.0	46.7	95.8	118.7	59.6	55.6
2014:06	116.9	94.7	47.1	97.3	121.0	67.0	55.7
2014:07	117.0	95.2	48.8	97.3	121.3	50.1	56.4
2014:08	117.2	95.5	49.0	98.0	121.6	62.9	58.1
2014:09	116.8	96.1	49.1	98.6	114.3	60.3	56.1
2014:10	117.4	96.4	49.0	100.8	119.0	57.6	57.9
2014:11	118.1	96.8	51.4	101.8	128.0	63.1	57.6
2014:12	117.8	97.3	51.7	102.9	122.0	53.3	55.1
2015:01	117.4	97.4	52.8	98.6	127.6	66.6	53.5
2015:02	118.6	97.4	57.8	108.6	137.2	65.9	52.9
2015:03	118.1	97.9	57.6	100.4	138.8	64.1	51.5
2015:04	118.3	98.4	58.5	99.5	135.7	60.4	51.5
2015:05	118.6	98.8	58.6	98.3	139.0	60.3	52.8
2015:06	119.0	99.3	58.9	99.6	136.0	51.4	53.5
2015:07	118.7	99.1	60.1	99.7	141.0	53.6	52.7
2015:08	118.4	99.1	59.2	99.5	139.1	48.0	51.1
2015:09	117.1	99.0	58.2	94.9	126.6	48.0	50.2
2015:10	118.2	99.4	59.7	99.6	132.4	46.1	50.1
2015:11	118.5	99.8	60.3	100.5	134.3	50.0	48.6
2015:12	118.0	99.6	62.8	98.5	130.7	54.5	48.0
2016:01	117.6	99.3	64.3	100.7	128.7	57.2	48.2
2016:02	117.8	99.2	66.0	101.6	124.9	55.4	49.7
2016:03	118.7	99.2	64.1	104.7	128.9	55.7	51.7
2016:04	119.4	99.7	64.8	103.3	130.9	50.8	50.7
2016:05	120.4	99.5	67.4	106.4	148.2	49.2	51.0
2016:06	120.4	99.8	67.8	104.1	151.3	49.1	52.8
2016:07	120.7	100.2	68.9	102.8	156.3	50.8	52.3
2016:08	120.7	100.2	67.3	102.5	153.1	47.7	49.4
2016:09	121.0	100.4	67.7	106.7	143.4	51.4	51.7
2016:10	120.8	100.5	69.2	102.5	152.3	53.1	52.0
2016:11	120.5	100.7	70.9	103.7	148.8	53.3	53.5
2016:12	120.1	101.2	71.8	103.0	149.2	47.3	54.5
2017:01	120.5	101.8	70.9	100.5	152.5	54.2	56.0
2017:02	119.8	102.1	70.1	99.9	140.1	48.6	57.7
2017:03	120.9	102.6	72.7	101.2	143.4	59.2	57.2
2017:04	121.7	102.8	71.7	107.3	143.3	59.2	54.8
2017:05	121.7	103.2	73.6	100.7	149.2	45.0	54.9
2017:06	122.4	103.8	72.9	103.3	145.4	50.0	57.8
2017:07	122.7	104.1	72.7	104.5	139.5	47.0	56.3
2017:08	123.0	104.5	73.3	105.6	135.1	58.2	58.8
2017:09	123.0	104.5	74.4	100.8	140.4	57.5	60.8
2017:10	123.9	106.0	75.3	107.3	132.7	51.8	58.7
2017:11	123.0	106.4	77.7	97.1	134.7	65.0	58.2
2017:12	124.6	107.0	76.0	106.1	138.6	65.8	59.7
2018:01		108.1			136.8	60.8	59.1

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

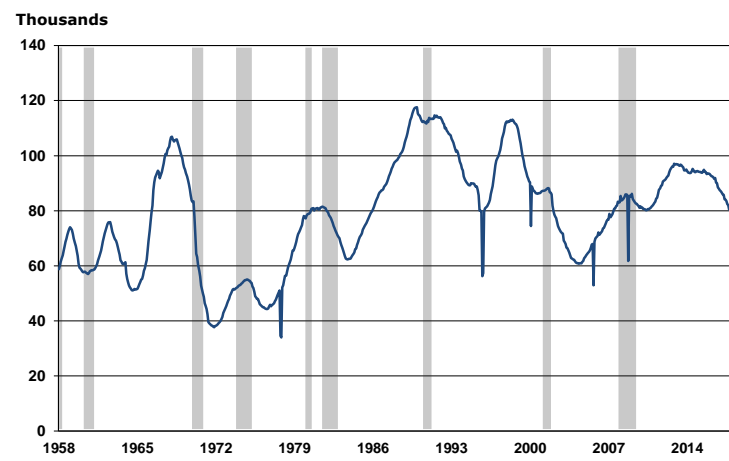
January 1980 to January 2018



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

Washington Aircraft and Parts Employment

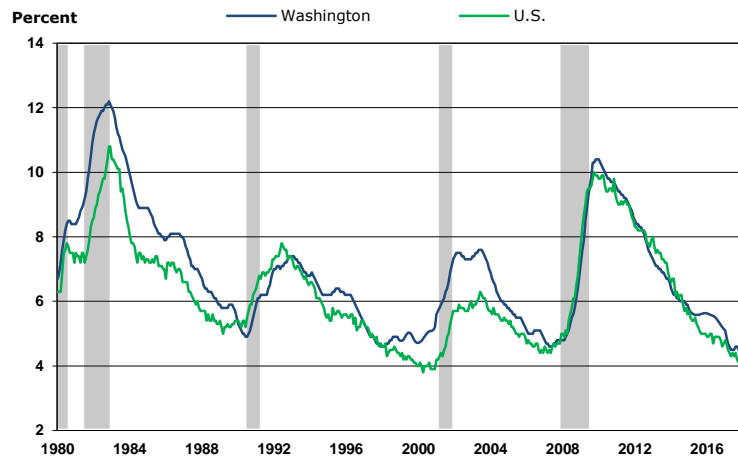
January 1958 to January 2018



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

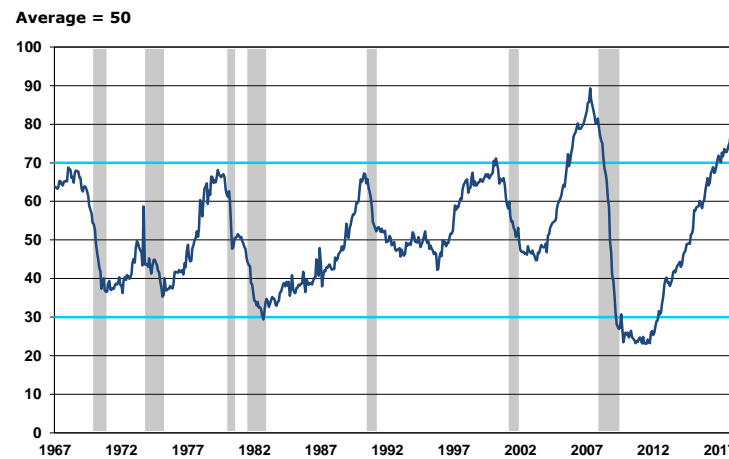
January 1980 to January 2018



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to December 2017



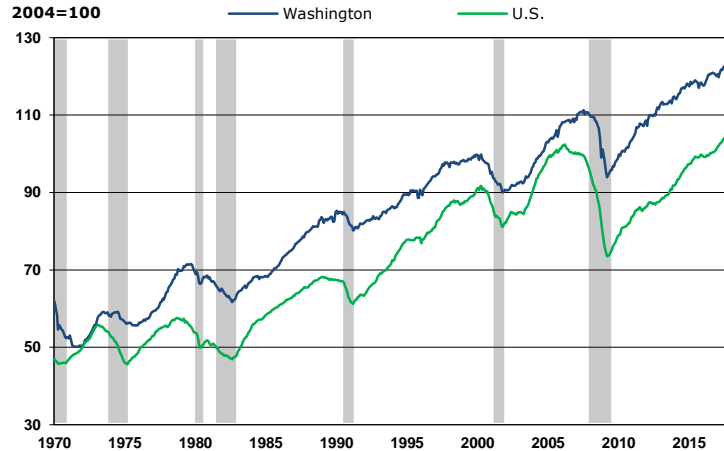
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

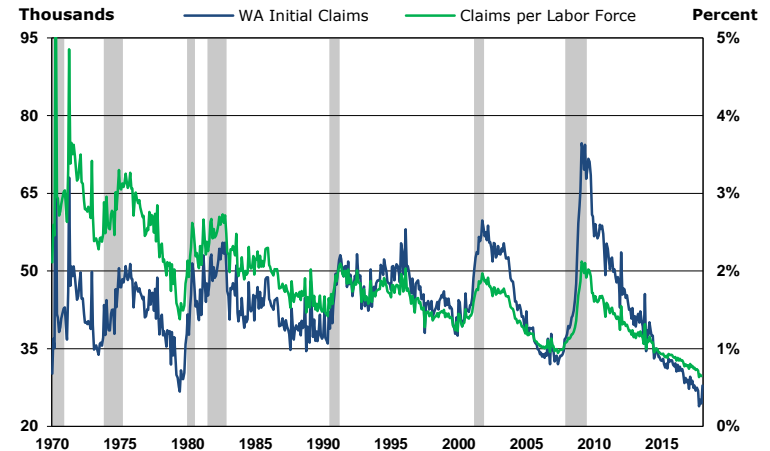
January 1970 to January 2018



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

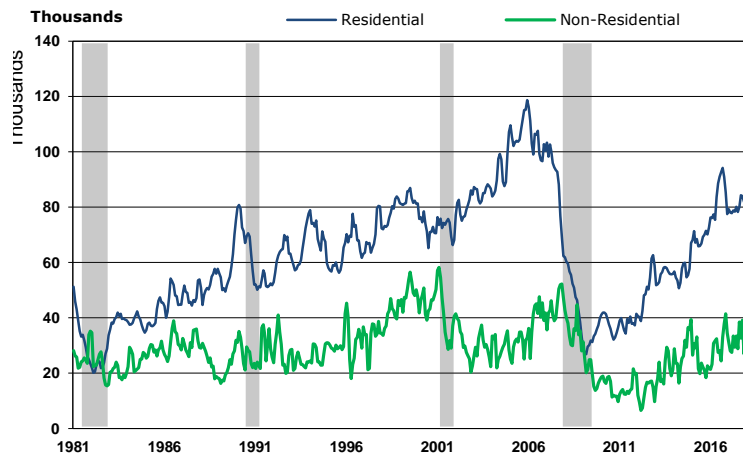
January 1970 to January 2018, S.A.



* Source: WA State Employment Security, ERFC

Square Footage of Construction Projects in WA State

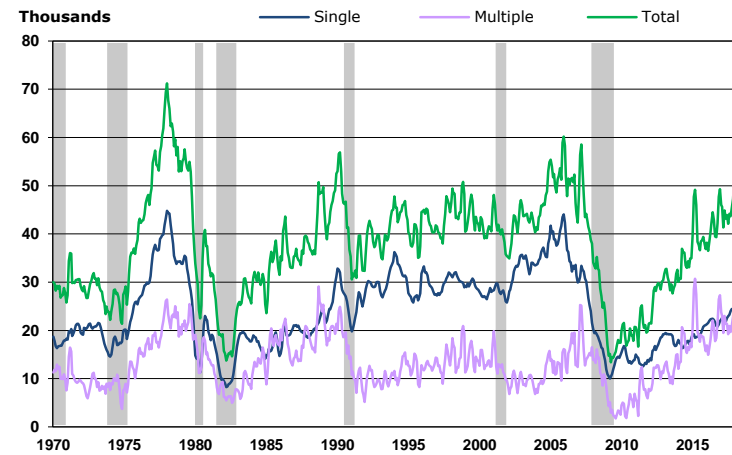
January 1981 to January 2018, 3mma, SAAR



* Source: McGraw-Hill Construction, ERFC

Housing Units Authorized in Washington State

January 1970 to January 2018, 3mma, SAAR



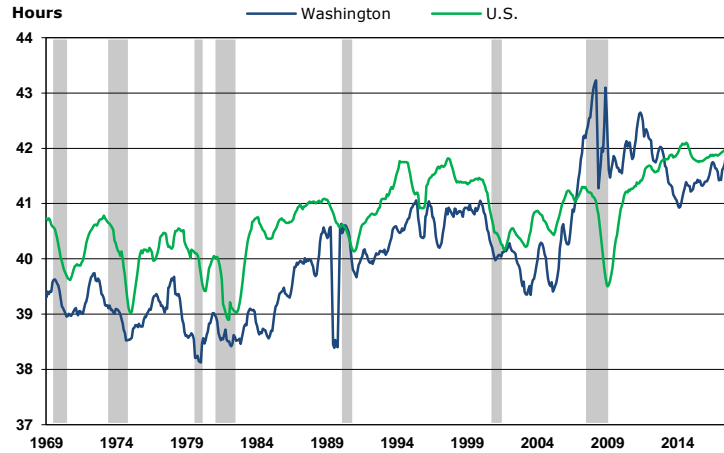
* Source: Census Bureau, ERFC

* Shaded areas correspond with national recessions.

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

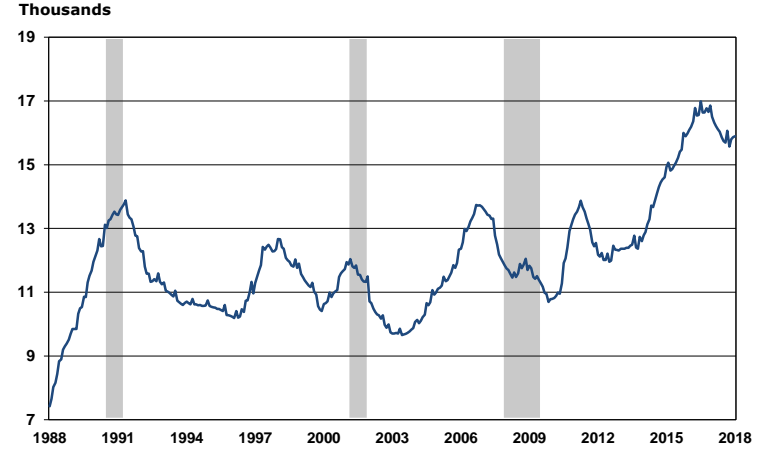
June 1969 to January 2018, 6-Mo. Moving Average, S.A.



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

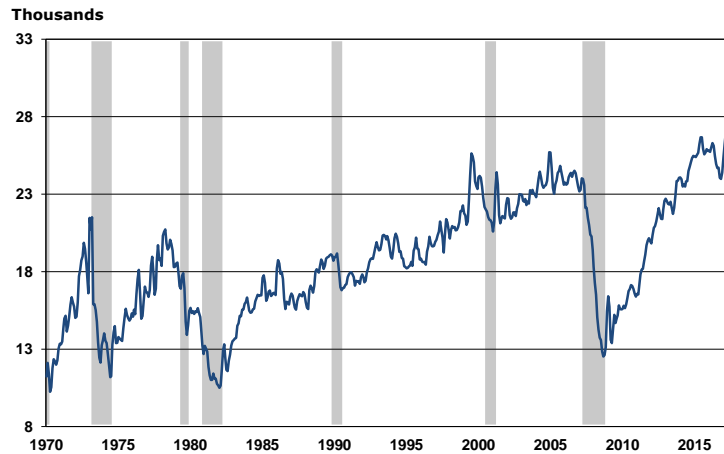
January 1988 to January 2018, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

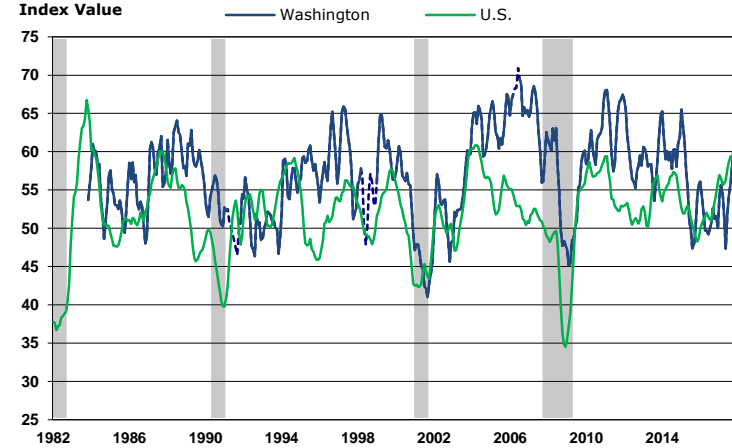
September 1970 to January 2018, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

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



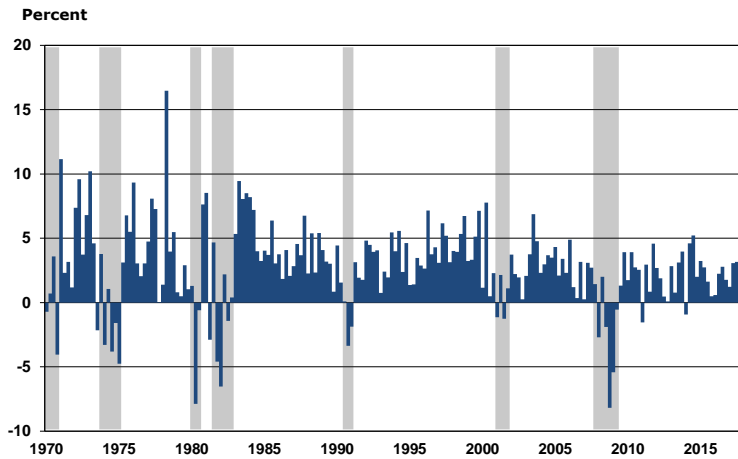
* Source: Institute for Supply Management, ISM-WW, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

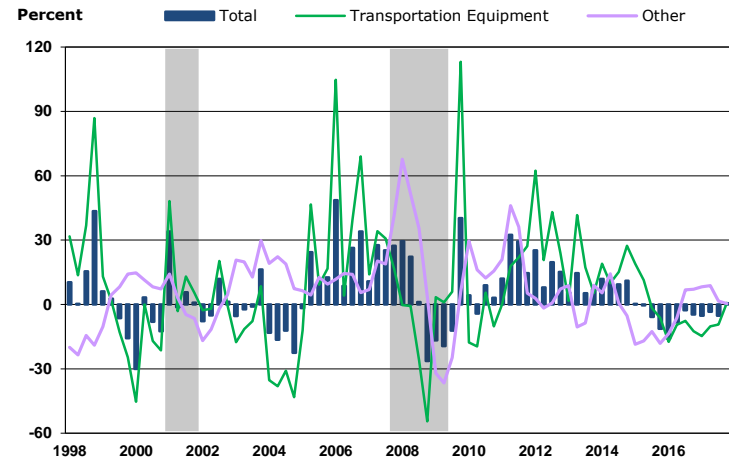
1970Q1 to 2017Q4, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

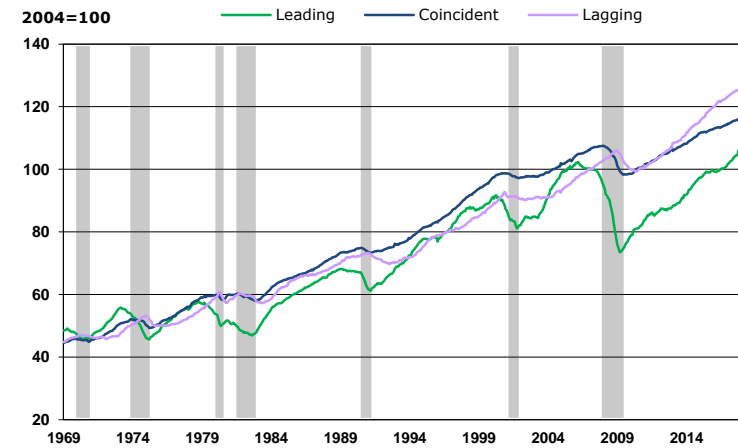
1998Q1 to 2017Q4, Year-over-year percent change



* Source: WISER

U.S. Economic Indicators

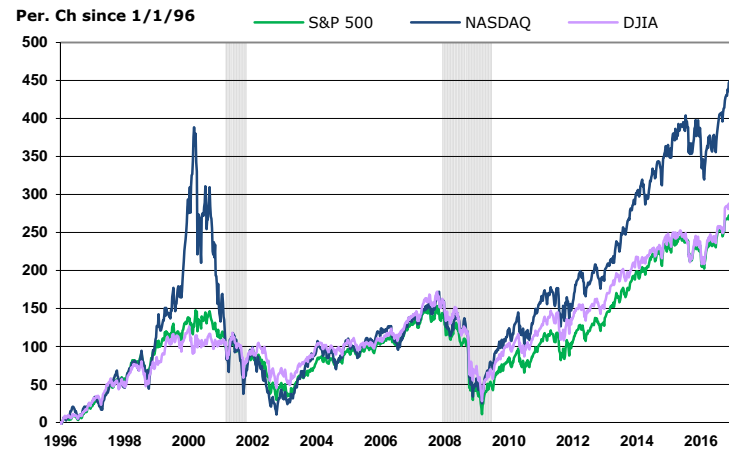
January 1969 to February 2018



* Source: The Conference Board

National Stock Indexes

January 1, 1996 to February 23, 2018



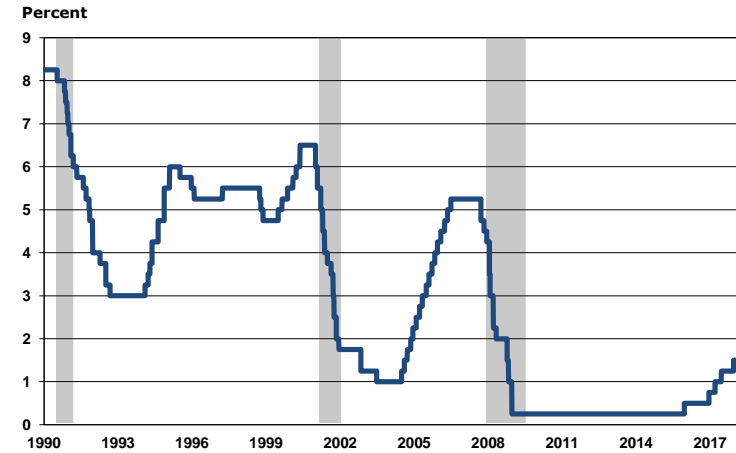
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

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

Federal Funds Target Rate

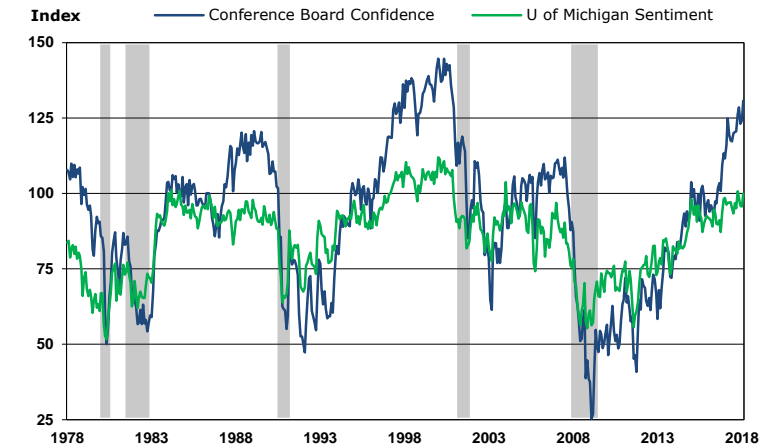
January 1, 1990 to February 27, 2018



* Federal Reserve

Consumer Confidence

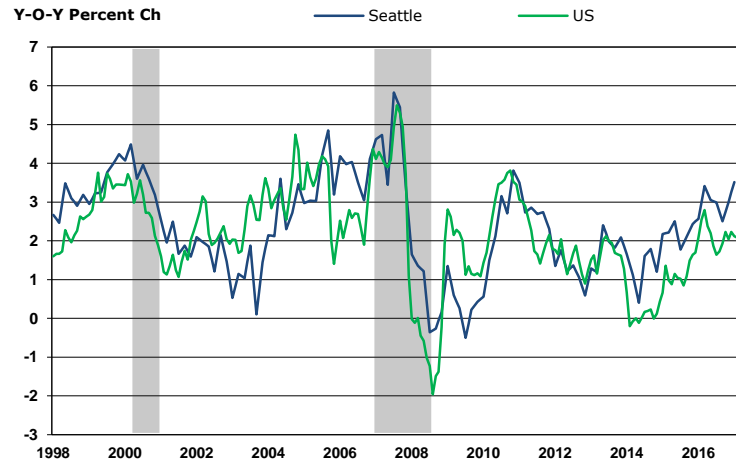
March 1978 to February 2018



* Source: The Conference Board, University of Michigan

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

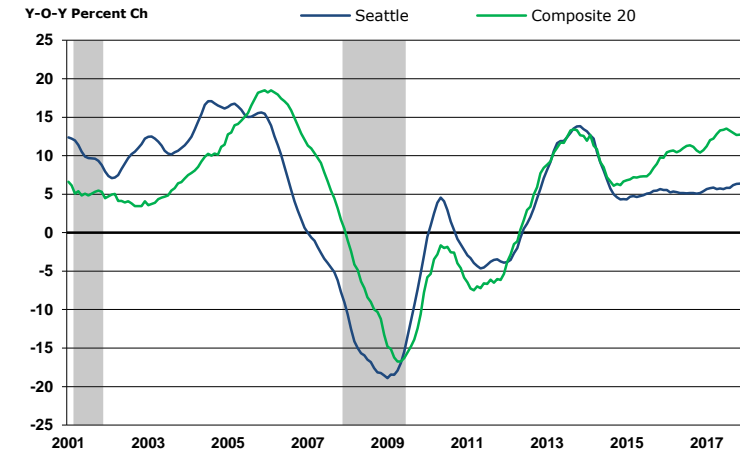
December 1998 to January 2018



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to December 2017, SA



* Source: Case Shiller, ERFC

* Shaded areas correspond with national recessions.
Appendix

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Glossary

Biennium: The state's two years budget cycle.

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

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

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

Fiscal Year: The state's budget year. Washington State's fiscal year runs from July 1 through June 30. Fiscal year 2016, for example, ran from July 1, 2015 through June 30, 2016.

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

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

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

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

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

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

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

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

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

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

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

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