

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 and light pink flowers scattered across the image. The sky is a clear, pale blue.

# **Washington State Economic and Revenue Forecast**

November 2016  
Volume XXXIX, No. 4



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# **Washington State Economic and Revenue Forecast**

Prepared by the  
Economic and Revenue Forecast Council

November 2016  
Volume XXXIX, No. 4

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# Preface

## **ERFC forecasting structure and schedule**

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

## **Forecast Procedure**

For each quarterly update, the staff of the Economic and Revenue Forecast Council, under the direction of the Executive Director, reviews (and if warranted, modifies) a national economic forecast prepared by Global Insight, Inc. A state economic forecast is then prepared using an econometric model that links Washington's economy to the national economy. After review by forecast workgroups; the Governor's Council of Economic Advisors; and the Economic and Revenue Forecast Council in public; 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 December 2, 2016.

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## Executive Summary

- **The national economy rebounded in the third quarter, but we believe the economic recovery will slow to a moderate pace.**
- **Employment growth remains positive but has slowed since last year.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 1.5% in 2016, unchanged from the previous forecast. After increasing to 2.2% in 2017, we expect growth to moderate as the recovery matures.**
- **The forecast for housing starts was the most significant change in the November forecast. The near-term forecast for housing starts is lower, the recovery is slower, and begins to plateau at a lower level than expected in September.**
- **Recent Washington employment and income growth have been stronger than expected in September and historical estimates for both were revised higher.**
- **The Washington housing construction forecast is lower due to slower household formation.**
- **As in September, we expect the Washington economy to continue to outperform the U.S. economy.**
- **Revenue collections since the September 2016 forecast have come in \$132 million over the forecasted amount.**
- **The forecast of General Fund-State (GF-S) revenue for the 2015-17 biennium was increased by \$215 million, the forecast for the 2017-19 biennium was increased by \$137 million, and the forecast for the 2019-21 biennium was increased by \$26 million.**
- **Forecast increases were once again mainly in retail sales and real estate excise taxes.**

## U.S. Economic Forecast

*The national economy has rebounded but we expect the recovery to slow to a moderate pace*

The national economy rebounded in the third quarter, growing 3.2% (SAAR). While we don't expect this pace of growth to continue, we believe the recovery will continue at a moderate pace. Job gains have slowed this year, although the unemployment rate is now at pre-recession levels. The housing market continues to improve at a slow pace. Oil prices have remained low, freeing up resources for consumers. Global economic growth remains weak, and geopolitical events have

added to risks abroad. As the current recovery approaches the seven-year mark, the duration alone has caused doubts as to whether the recovery will continue.

*The economic outlook is similar to the September forecast*

The economic outlook is similar to the September forecast. The Blue Chip Consensus GDP forecast, our starting point each forecast cycle, calls for real GDP growth of 1.5% in 2016, unchanged from the September forecast. Real GDP growth is expected to accelerate to 2.2% in 2017, also unchanged from the previous forecast. We expect growth to moderate as the recovery matures. The forecast calls for growth to slowly trend down to 2.0% through 2021. The September forecast expected growth to reach 2.1% in 2021.

*The outlook for employment is only minimally changed*

The forecast for employment is only minimally changed since the September forecast. Growth in payrolls is expected to be 1.7% this year after growing 2.1% in 2015. The September forecast had expected 1.8% growth for 2016. We expect employment growth to slow to 1.2% in 2017 and then average 0.8% through 2021 as the economy nears full employment. As a result of the steady job growth, we expect the unemployment rate to average 4.9% in 2016, down from 5.3% the year before. We expect the unemployment rate to average 4.7% for the rest of the forecast.

*The forecast for housing starts has been lowered*

The forecast for housing starts was the most significant change in the November forecast. The near-term forecast for housing starts is lower, the recovery is slower, and begins to plateau at a lower level than expected in September. The lower projection is due to slower household formation as well as labor shortages, tighter lending standards, a shortage of developed lots, and unfavorable regulatory treatment of loans for land development. The forecast calls for total housing starts to continue to grow throughout the forecast and reach 1.507 million in 2021, down from 1.656 million expected in September, and 27% below the peak in 2005.

## **Washington Economic Forecast**

*The Washington economy is expanding at a solid pace*

The Washington economy is expanding at a solid pace. In recent months, Washington employment has grown faster than expected in the September forecast and historical estimates were revised higher. Historical estimates for Washington personal income were revised up as well. Year-over-year growth in Washington exports continues to decline but may be turning around. Manufacturing activity is struggling to remain positive. Home prices are rising rapidly in the Seattle area but home construction has weakened. Seattle area consumer price inflation is well above the national average due to shelter cost inflation.

Overall, our forecast for Washington State is stronger than we expected in September as a result of higher employment and income but offsetting this is lower housing construction.

*The forecasts for Washington employment and income are higher but housing is lower*

Washington employment is expected to grow 2.9% this year, slightly better than the 2.8% growth rate in the September forecast and the highest rate since 2006. We expect employment growth to average 1.4% per year in 2017 through 2021 which is slightly better than the 1.3% per year assumed in September. Our forecast for nominal personal income growth this year is 4.7%, down slightly from the 4.8% expected in the September forecast. As in September, our forecast for nominal personal income growth in 2017 through 2021 averages 4.9% per year. We expect total housing units authorized by building permits to decline 0.6% this year to 40,100 units which is slightly lower than the 41,000 units in the September forecast. We expect permits to average 41,100 during the remainder of the forecast, which is also lower than the 43,800 expected in September. The forecast for Seattle area inflation is slightly higher than in the September forecast. We expect the all-items Seattle CPI to rise 2.4% this year compared to 2.3% in the September forecast. We also expect Seattle area inflation to average 2.4% per year in 2017 through 2021 compared to 2.3% in the September forecast.

## Revenue Forecast

*The revenue forecast has increased, due mainly to retail sales and real estate excise taxes*

Once again, revenue collections have come in higher than expected in the previous forecast. As was the case when the September forecast was released, most of the surplus revenue stemmed from retail sales and real estate excise taxes. The strengthening real estate market has prompted another increase in forecasted real estate excise taxes. Forecasted retail sales tax collections have also been increased, due to both stronger-than-expected collections and a slight increase in forecasted state personal income. Changes in forecasted revenue from other sources were slight, reflecting the small changes in the November economic forecast relative to the September forecast.

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

15-17: +\$215  
17-19: +\$137  
19-21: +\$26

Since the September forecast, revenue sources that are tracked monthly came in \$132.3 million higher than forecasted. There were no non-economic changes in expected revenue. Changes to the economic forecast resulted in an \$82.4 million increase to projected collections for the rest of the biennium. The total of these components was a \$214.6 million increase in projected revenue for the current 2015-17 biennium. The forecast for the 2017-19 biennium has been increased by \$136.6 million, and the forecast for the 2019-21 biennium has been increased by \$25.6 million. GF-S revenue is now forecasted to total \$37,979.7 million in the 2015-17 biennium, \$40,513.7 million in the 2017-19 biennium, and \$43,655.6 million in the 2019-21 biennium.

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

- **The national economy rebounded in the third quarter, but we believe the economic recovery will slow to a moderate pace.**
- **Employment growth remains positive but has slowed since last year.**
- **Construction activity is improving and the manufacturing sector has returned to growth.**
- **Headline inflation is low although energy prices are no longer declining.**
- **Improvement in consumer and business confidence has been sporadic.**
- **Weak foreign GDP growth and an appreciating U.S. dollar have hurt U.S. exports.**
- **Oil prices remain low.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 1.5% in 2016, unchanged from the previous forecast. After increasing to 2.2% in 2017, we expect growth to moderate as the recovery matures.**
- **The forecast for housing starts was the most significant change in the November forecast. The near-term forecast for housing starts is lower, the recovery is slower, and begins to plateau at a lower level than expected in September.**
- **A more robust recovery in housing remains the most significant upside risk. A slowdown in global growth is the major downside risk.**

### Current Conditions

*The national economy has rebounded but we expect the recovery to slow to a moderate pace*

The national economy rebounded in the third quarter, growing 3.2% (SAAR). While we don't expect this pace of growth to continue, we believe the recovery will continue at a moderate pace. Job gains have slowed this year, although the unemployment rate is now at pre-recession levels. The housing market continues to improve at a slow pace. Oil prices have remained low, freeing up resources for consumers. Global economic growth remains weak, and geopolitical events have added to risks abroad. As the current recovery approaches the seven-year mark, the duration alone has caused doubts as to whether the recovery will continue.

*U.S. real GDP rose 3.2% (SAAR) in the third quarter*

U.S. real GDP rose 3.2% (SAAR) in the third quarter of 2016 after growing 1.4% (SAAR) in the second quarter. Consumer spending slowed from the previous quarter but was still a driver of growth, increasing 2.8% (SAAR) and adding 1.9 points to GDP growth. Exports were particularly strong, growing 14.2% (SAAR) in the third quarter. Imports grew as well, but not enough to offset the robust gain from exports. Together, net exports contributed 0.9 points to GDP growth. Inventory investment added 0.5 points to growth ending five quarters of reducing GDP growth. Residential investment was weak, declining 4.4% (SAAR) and reducing overall GDP growth by 0.2 points. Nonresidential investment was flat as growth in structures was offset by a sharp decline in equipment investment. Government spending was also flat due to a reduction in state and local government spending which offset increases in both defense and nondefense federal spending.

*Wage and salary growth was strong at 6.7% (SAAR) in October*

Rising personal income is essential for consumer spending to continue improving. Personal income growth improved to 7.6% (SAAR) in October from 4.8% (SAAR) the month before. Personal income is now up 3.9% from a year ago. Personal income growth was strong in all major categories in October. The acceleration in personal income was led by strong growth in interest income which grew 24.4% (SAAR). Rental income growth improved to a robust 8.6% (SAAR). Rising home prices have enabled landlords to increase rent, boosting their income. Wages and salary growth was strong at 6.7% (SAAR) in October. Wage growth in the private sector improved to 7.4% (SAAR) while public sector wages grew 3.2% (SAAR). Over the past few years, private sector wages have increased faster than wages in the public sector. Transfer payment growth was also strong, at 5.9% (SAAR), with the largest increase coming from Social Security benefits, up 13.7% (SAAR). Proprietors' income growth slowed from 11.1% (SAAR) in September to a still strong rate of 5.7% (SAAR). Dividend income grew 4.5% (SAAR) as equity prices remain high. Unemployment insurance payments declined sharply at a 25.3% (SAAR) rate and was the only major category of income that declined in October.

*Employment growth is weaker than last year*

Employment growth has been inconsistent the past few months, but on average has been weaker than last year. Nonfarm payrolls increased by 178,000 in November. Monthly employment gains averaged 180,000 per month so far this year, the weakest growth since 2012. The November employment situation showed gains across most industries with the exception of retail trade (-8,300) and manufacturing (-4,000). The goods-producing sector increased 17,000 due to a 19,000 job gain in construction. Private service industries increased by 139,000 jobs over the month. The service sector showed strong gains in professional and business services (+63,000) and education and health (+44,000), and leisure and hospitality. Government employment increased 22,000 in November, mostly due to a 15,400 job increase in non-education local government.

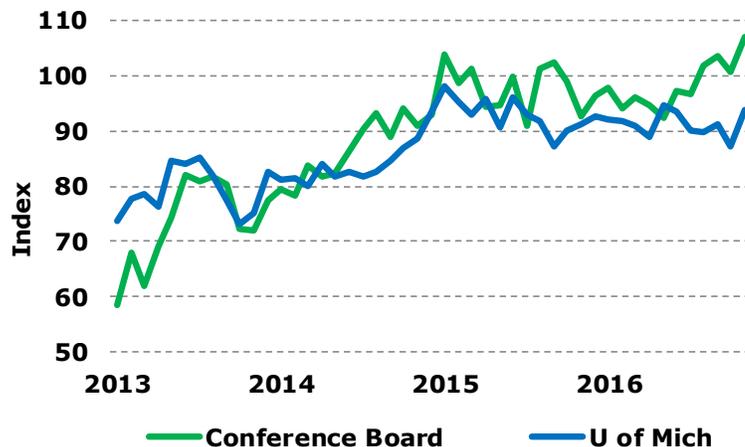
*The labor market recovery has continued*

The unemployment rate declined to a cyclical low 4.6% in November. This is down from 5.0% last November and 5.8% in November 2014. The decline in the unemployment rate was due to a combination of unemployed people getting jobs and some dropping out of the labor force altogether. The number of unemployed people fell another 387,000 in November and is down 524,000 since last year. The number of people in the labor force decreased 226,000 in November but is up 2,119,000 over the past year. The labor force participation rate has stopped declining over the past year after steadily falling since the onset of the 2007-09 recession. Labor force participation for November was 62.7%, up from 62.5% a year ago. The most comprehensive measure of underemployment, which includes those marginally attached to the labor force plus workers employed part time for economic reasons, has declined from 9.9% to 9.3% since last year.

*Improvement in consumer attitudes has been sporadic*

Improvement in consumer attitudes has been sporadic over the past few years and reflects continued uncertainty over the economy. The two primary measures of confidence have given divergent views recently (see Figure 1.1). In November, the Conference Board measure of consumer confidence improved to its highest level since 2007. Consumer confidence increased 6.3 points in November to 107.1. Consumer attitudes have improved substantially since the spring. Respondents to the survey have indicated they are more confident in their present condition helped by increased labor market optimism. Economic expectations have also been improving for the past several months. The University of Michigan Consumer Sentiment Index was strong in November as well, increasing 6.6 points to 93.8. The difference in the measures comes over the past year. While the Conference Board is pointing to confidence reaching post-recession highs, the University of Michigan measure has hovered around 90 points for the past two years.

**Figure 1.1: Conference Board Consumer Confidence and University of Michigan Consumer Sentiment**



Source: Conference Board, University of Michigan; data through November 2016

*Small business confidence has slowly improved*

Small business confidence has slowly improved the past few months, but remains lower than a year ago. After reaching a post-recession high of 100.3 in December 2014, the National Federation of Independent Business (NFIB) Index of Small Business Optimism reached a trough of 92.6 in March 2016. In October the index increased 0.8 points, but at 94.9 points remains lower than the October 2015 reading of 96.0 points. The level of the index is consistent with a slowly expanding economy. Of the ten index components, five improved, three declined, and two were unchanged. Small businesses' outlook for expansion improved this past month although their outlook for general business conditions deteriorated. Job openings increased as did hiring plans. Taxes and government regulation remain the largest concern for small businesses while financing is the least cited concern.

*Oil prices have risen but remain low*

Oil prices have risen since reaching a trough in January. Both West Texas Intermediate (WTI) and Brent crude oil were \$50 in October. In January, prices were \$32 per barrel for WTI and \$31 per barrel for Brent. With weak global demand and strong supply, prices are still below year-ago levels. U.S. crude production has fallen as prices have remained low. In September, U.S. field production of crude oil was 8.580 million barrels per day, down from 9.423 million barrels per day in September of last year. Internationally, OPEC appears to have given up the fight against U.S. production. Previously, OPEC had hoped that some of the more expensive drilling techniques being deployed in the U.S. would no longer be profitable and shut down. However, U.S. shale has become more economical to produce, with costs coming down to below \$40 per barrel in some cases. OPEC recently agreed to cut overall production by 1.2 million barrels a day. Member countries are under financial strain due to low global oil prices. However, the limit in output won't impact prices as much as in the past. OPEC controls less of the supply than they did decades ago. Any upward movement in prices would result in an increase in U.S. and Canadian shale production. The increase in North American oil production would likely offset the OPEC decline, mitigating any lasting price increase.

*Inflation remains low although energy prices are no longer declining*

Headline inflation has been very low the past two years as energy prices have fallen and remained low. However, energy prices are no longer declining. Energy prices increased 3.5% in October and were up 0.1% over last year, the first annual increase in over two years (see Figure 1.2). The headline Consumer Price Index (CPI) increased 0.4% over the month, resulting in an increase of 1.6% since last year. Food price inflation is nonexistent with prices not moving this month and down 0.4% since last year. Shelter costs have been the primary driver of higher overall prices. Shelter costs increased 0.4% in October and are now up 3.5% year over year. Core inflation, which excludes food and energy, increased 0.1% in October. On an annual basis, core inflation remains moderate at 2.1%.



**Figure 1.3: S&P Corelogic Case-Shiller Home Price, Composite-20**



Source: S&P Corelogic Case-Shiller Home Price; data through September 2016

*The manufacturing sector is once again expanding*

The manufacturing sector is once again expanding, although measures of strength are mixed. The Institute of Supply Management (ISM) Report on Business indicated that activity in the manufacturing sector improved in November to 53.2 from 51.9 (index levels above 50 indicate expansion). Manufacturing activity has been weak for the past year, with the ISM averaging 51.0 and hovering around the 50-point break-even mark. The past three months have averaged 52.2 points as the expansion in manufacturing has accelerated. Both the new orders and production components increased and are now at 53.0 and 56.0 points. The employment component declined but remains above 50 at 52.3. The latest G-17 report from the Federal Reserve, which measures manufacturing output, indicated an increase in October of 0.2%. The production of durable goods rose 0.4% with aerospace being the major exception. Nondurable goods output was unchanged. Manufacturing output is now 0.2% lower than last year. New orders for core capital goods (nondefense capital goods excluding aircraft) increased 0.4% in October after declining 1.4% the month before. Even with the increase, new orders are now 4.0% below year-ago levels.

*U.S. exports have been adversely affected by weak global growth and a strong dollar*

Weak global economic growth, combined with a strong U.S. dollar, has caused U.S. exports to fall. Measured against major U.S. trading partners, the value of the U.S. dollar has increased sharply since softening in the middle of the year. The value is now the highest in over a decade. The appreciation of the dollar is due to the U.S. economy leading other major economies in growth and a flight to safety due to ongoing global uncertainty. Global growth remains sluggish and many of our largest trading partners are hovering near recessionary territory. U.S. exports have declined in each of the past seven quarters on an annual basis. In the third quarter of 2016, exports were down 2.2% year over year. On a seasonally adjusted basis, however, it does

appear that the decline in U.S. exports is ending. U.S. exports increased 1.9% in the third quarter over the previous quarter. Much of the gain in exports was driven by unusually strong soybean exports due to a poor crop in South America. However, exports other than agriculture and transportation equipment increased 0.8%, the first increase in two years.

## Forecast

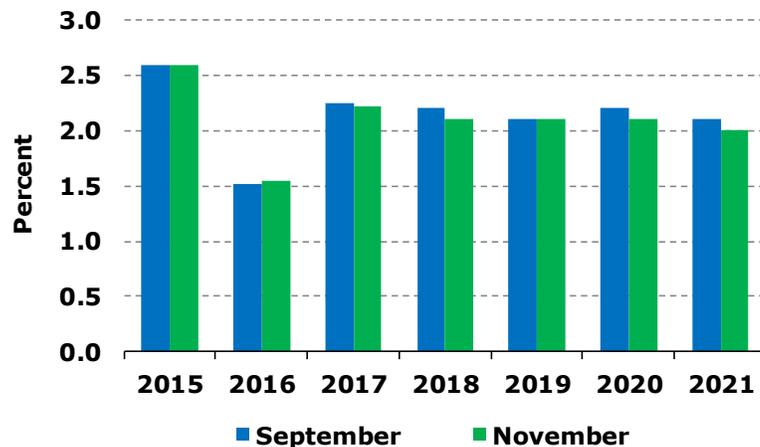
*Our forecast is based on the November Blue Chip Consensus forecast*

The economic forecast was based on a modified version of Global Insight's November 2016 Control forecast for the U.S. economy. Consistent with our standard practice, the U.S. real GDP forecast was adjusted to match the November Blue Chip Consensus GDP forecasts for 2016 and 2017. We also incorporated the latest long-term Blue Chip GDP forecast for 2018 through 2021. Our oil price forecast was adjusted to incorporate futures prices for both Brent crude oil and for West Texas Intermediate crude.

*Real GDP growth is slightly lower*

The economic outlook is similar to the September forecast. The Blue Chip Consensus GDP forecast, our starting point each forecast cycle, calls for real GDP growth of 1.5% in 2016, unchanged from the September forecast. Real GDP growth is expected to accelerate to 2.2% in 2017, also unchanged from the previous forecast. We expect growth to moderate as the recovery matures. The forecast calls for growth to slowly trend down to 2.0% through 2021. The September forecast expected growth to reach 2.1% in 2021 (see Figure 1.4).

**Figure 1.4: Real GDP Growth**



Source: BEA, November 2016 forecast; historical data through 2015

*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 2021, the recovery is forecasted to be at least 150 months. Through November, this recovery has already lasted 89 months.

Prior to this, the longest recovery was from the 1990-91 recession and lasted 120 months. The primary 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 the duration of recoveries from the point at which the previous employment peak was reached, this expansion appears more in line with other long post-war expansionary periods. The two longest post-war expansions had 96 and 95 months of additional employment growth after reaching the previous peak. We expect growth to continue through the end of the forecast in 2021, which would result in 92 months of employment gains after reaching the previous peak.

*Oil prices will remain low*

The forecast for oil prices is virtually unchanged since the September forecast. The refiner acquisition price of crude oil increased to \$43 per barrel in the third quarter of this year from a trough of \$42 in the first quarter. The forecast expects the increase in oil prices to continue. We expect prices to reach \$49 per barrel by the end of next year and \$55 per barrel by the end of 2021. We expected the same gradual price appreciation in the September forecast. While oil prices are expected to continue to rise, they will remain well below the levels seen earlier in the recovery. Low oil prices continue to affect U.S. oil production, although output may no longer be declining. Oil production was up 51,000 barrels per day in August from the month before. The number of drilling structures has also been increasing lately. The Baker Hughes rig count hit a modern low of 404 at the end of May and has since climbed to 593. A year ago the rig count was at 744 (see Figure 1.5).

**Figure 1.4: Baker Hughes Rig Count**



Source: Baker Hughes; data through November 2016

With oil prices declining, inflation (as measured by the implicit price deflator) was just 0.4% in 2015. While energy prices are

low, they are no longer declining and pulling inflation down. Rising housing costs have put upward pressure on inflation. We expect low to moderate inflation throughout the forecast. Absent the downward pressure from energy prices, inflation will move towards the Federal Reserve's goal of 2%. Inflation is expected to be 1.1% this year and then range from 1.8% to 2.0% per year from 2017 through 2021.

*Spending growth will outperform overall GDP growth in the near term*

Real consumer spending was weaker than expected in the third quarter of 2016, growing 2.1% (SAAR) compared to 2.9% (SAAR) expected in the previous forecast. We now expect real consumer spending to grow 2.6% this year compared to 2.7% in the September forecast. Low energy prices will continue to help consumers' purchasing power, although the impact so far has been low. Consumers remain more optimistic than earlier in the recovery. Rising home prices and a stronger stock market make consumers feel more confident in their financial situation. There are indications that wage growth is increasing. Unemployment continues to fall and more part-time workers are finding full-time jobs. We expect real spending growth to continue to slightly outpace overall real GDP growth next year. The forecast calls for real consumption growth of 2.4% in 2017 compared to 2.6% growth expected in September. Consumer spending growth is then expected to slow to 2.2% in 2018 and 2019 then to 2.1% in 2020 and 2021. In the September forecast, we expected consumption growth to slow to 2.2% in 2019 through 2021. We expect consumer spending to contribute 1.7 percentage points to real GDP growth on average for each year of the forecast through 2021.

*Disposable personal income growth is expected to slow*

Real disposable personal income growth is expected to slow in 2016 to 2.5% after growing 3.5% in each of the previous two years. The boost to real incomes from falling energy prices has ended. We expect growth to dip further to 2.0% in 2017. Growth is expected to remain moderate through 2021, averaging 2.4% per year. Nominal disposable income is expected to grow 3.6% this year, led by strong growth in rental income of 6.8% and in fringe benefits of 4.4%. Private sector wages and salaries are expected to grow 3.9%. Wage growth in the public sector will again lag, with growth of 2.9% in 2016. Total wages and salaries are expected to grow 3.7% this year after increasing 5.1% in 2015. The forecast then calls for growth in wages and salaries to average 4.1% in 2017 through 2021. Growth in government transfer payments is expected to increase throughout the forecast. We expect growth of 3.6% next year, and then an average of 5.3% per year in 2018 through 2021 as an increasingly older population results in rising Medicare and Social Security payments. Income will also 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 is only minimally changed*

The forecast for employment is only minimally changed since the September forecast. Growth in payrolls is expected to be 1.7% this year after growing 2.1% in 2015. The September forecast had expected 1.8% growth for 2016. We expect employment growth to slow to 1.2% in 2017 and then average 0.8% through 2021 as the economy nears full employment. As a result of the steady job growth, we expect the unemployment rate to average 4.9% in 2016, down from 5.3% the year before. We expect the unemployment rate to average 4.7% for the rest of the forecast. The continued strengthening of the labor market and corresponding fall in the unemployment rate will create an incentive for more and more marginally attached workers to begin looking for a job. We expect the decline in the labor force participation rate to end, with a trough of 61.2% in 2015. The labor force participation rate will grow as the economy reaches full employment, reaching a peak of 61.7% in 2018 through 2020. Going forward, the participation rate will resume its long term secular decline, and trend down for the remainder of the forecast.

*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. We expect the drag from weak government job growth to continue through 2019. Private sector employment is estimated to have reached 116.0 million in the first quarter of 2014, making up all of the jobs lost during the recession. We do not expect the job losses in the public sector to be made up until the second quarter of 2020. Federal government employment will continue to trend downward throughout the forecast. This will be more than offset by modest gains in state and local government employment, keeping total government employment growth positive. The forecast calls for total government employment to increase another 0.7% this year after growing 0.6% in 2015. Growth in government payrolls is expected to be uneven through 2021, averaging just 0.4%. We expect private sector job growth of 1.9% this year, after growing 2.4% in 2015. The forecast calls for private sector job growth of 1.4% in 2017 and then an average growth of 0.8% through 2021.

*Business investment is expected to decline this year*

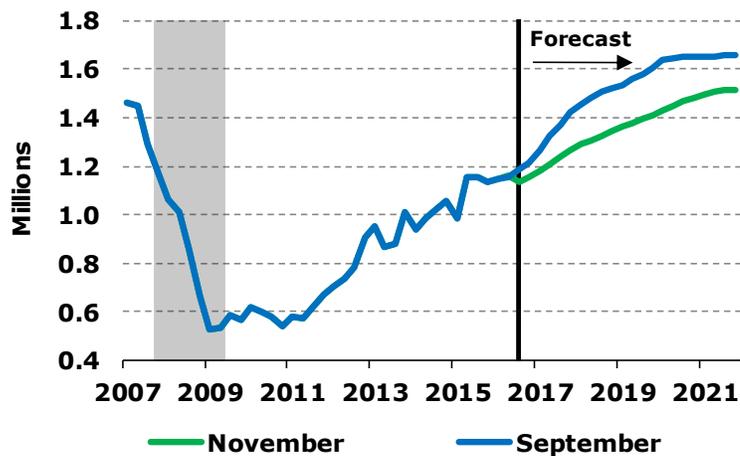
Real nonresidential fixed investment is expected to fall 0.1% this year, the first decline since the recovery began. The drop in oil prices, which is good for overall growth, lowers the incentive for additional investment by energy companies. The strong U.S. dollar has resulted in a drop in exports and brought the capital-intensive manufacturing sector to a standstill. The weak economic outlook abroad has also given businesses pause. On the plus side, service sector businesses are expanding and filling up office buildings. Total vacancy edged downward by 10 basis points in the third quarter. While vacancy rates are declining, it hasn't been enough to generate sufficient new construction to

offset the decline from the mining and petroleum industries. We expect real nonresidential construction to contract this year by 3.1%, after falling 4.4% in 2015. The forecast calls for growth to be positive in 2017 at 7.0% as the drag from low oil prices diminishes. The forecast then calls for growth to average 2.6% per year through 2021. Real equipment investment is expected to decline 2.2% this year. Starting in 2017, we expect positive 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. Real investment in equipment and software is expected to grow 3.8% next year. The forecast then calls for growth to average 4.4% through 2021. We expect overall real nonresidential fixed investment to grow 4.7% next year. We then expect growth to average 3.9% through 2021.

*The housing recovery will continue*

The forecast for housing starts was the most significant change in the November forecast. The near-term forecast for housing starts is lower, the recovery is slower, and begins to plateau at a lower level than expected in September (see Figure 1.6). The lower projection is due to slower household formation as well as labor shortages, tighter lending standards, a shortage of developed lots, and unfavorable regulatory treatment of loans for land development. The forecast calls for growth in single-family housing starts of 7.8% this year, compared to 9.2% in the September forecast. The forecast expects the growth in single-family housing starts to grow 6.9% next year and 9.7% in 2018. In September, we expected much more robust growth of 19.8% and 12.6% in 2017 and 2018. We expect growth to moderate and average 4.1% in 2019 through 2021. The forecast calls for the multi-family housing segment to decline 3.0% this year after

**Figure 1.6: U.S. Housing Starts, SAAR**



Source: U.S. Census Bureau, November 2016 forecast; historical data through 2016Q3

growing at double-digit rates in each of the past five years. We then expect multi-family housing unit growth to average 5.1% through 2021. In September, we expected 0.9% growth in the multi-family segment this year followed by average growth of 6.1% through 2021. The forecast calls for total housing starts to continue to grow throughout the forecast and reach 1.507 million in 2021, down from 1.656 million expected in September, and 27% below the peak in 2005.

*Weak foreign demand has weighed down export growth*

Economic growth of major foreign economies remains weak, although it appears to be slowly improving. The Canadian economy shrank 1.6% (SAAR) in the second quarter, but is expected to rebound to 3.2% (SAAR) growth in the third quarter. Low oil and other commodity prices have restrained Canadian growth. The latest Blue Chip forecast expects growth of just 1.2% this year in Canada followed by 1.9% growth in 2017. The Mexican economy has been hurt by low oil prices which have taken an enormous toll on government revenues. The country has also been restrained by tight fiscal and monetary policy. GDP growth is expected to slow to 2.1% this year from 2.3% in 2015. The recovery in the Eurozone remains weak with real GDP increasing 0.3% in the third quarter compared to the previous quarter. The latest Blue Chip forecast calls for 1.6% growth this year for the Eurozone followed by 1.4% growth in 2017. China, which is the largest U.S. export market outside of North America, continues to slow. Export demand for Chinese goods has weakened and the Chinese have had difficulty transitioning to a more domestic consumer driven economy. Chinese GDP growth in 2015 was 6.9%, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.6% this year and 6.3% in 2017. Japan's economy grew faster than expected in the third quarter, expanding 2.2% (SAAR) due to increased exports. The most recent Blue Chip forecast expects slow growth in the near term of 0.6% this year followed by 0.8% in 2017.

*Foreign trade is not likely to provide a boost to the U.S. economy*

Due to the modest economic growth of U.S. trading partners and strong dollar, foreign trade is not likely to provide a substantial boost to the U.S. economy. GDP growth of U.S. trading partners is the weakest since the recession. After growing 2.3% in 2015, the forecast calls for GDP of U.S. trading partners to grow 2.0% this year. The forecast then calls for GDP of U.S. trading partners to grow 2.4% in 2017 before averaging 2.9% growth through 2021. We expect real U.S. exports to grow just 0.4% this year due both to weak economic growth abroad and a strong U.S. dollar. The forecast calls for real export growth to improve and average 1.7% through 2021. Export growth is more than offset by increased imports in the forecast. Net exports are expected to reduce GDP growth by 0.1 percentage points on average through 2021.

*The fiscal policy outlook does not reflect any potential policy changes from a new administration*

The fiscal policy outlook was completed before the presidential election and thus does not reflect any potential policy changes. Aside from any impact from a new administration, Congress must pass a continuing resolution next month to continue uninterrupted government operations. This will likely occur and the risk of another government shutdown is low. There don't appear to be any near term pushes for new government spending or deficit reduction by the end of the year. The federal budget deficit has shrunk each year after peaking at \$1,329 billion in 2010. The forecast calls for 2015 to be the trough in the deficit at \$570 billion. We believe the cuts in real defense spending that started in 2011 will continue throughout the forecast. The forecast calls for real defense spending to decline 0.5% this year and then average a 0.4% decline through 2021. Real nondefense purchases are expected to grow the next two years before declining slowly through 2021. Combined real federal government spending will peak in 2017 then decline slowly throughout the forecast. State and local governments, having worked through the majority of their budget difficulties, will more than offset the decline in spending at the federal level. The forecast assumes 2014 was the trough in total real government purchases. We expect total real government spending to grow 0.9% this year and 0.5% in 2017. We then expect growth to average 0.1% per year from 2018 through 2021.

*The Fed is gradually tightening monetary policy*

The Federal Reserve is gradually tightening monetary policy after years of measures aimed at supporting the economy. Recent weakness in the economy has caused the Federal Reserve to keep this process slow. We continue to assume the Federal Reserve will raise the Federal funds rate only once this year, in December. The Fed's preferred measure of inflation remains below its target rate of 2% but has been slowly trending upward. Federal Reserve policymakers remain data driven, and there are a number of risks that could delay the rise in rates. They have avoided committing to any particular timing or pace of rate increases in order to maintain as much flexibility as possible. While the forecast assumes inflation will be low, it is still anticipated that the Fed will be comfortable raising rates. We expect rates to rise gradually before leveling off in the fourth quarter of 2019.

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 September forecast. The recovery is forecasted to be the longest on record, creating some concern. The outlook for U.S. trading partners remains weak. The level of uncertainty in the baseline

remains elevated, and downside risks once again outweigh upside risks.

### **Downside Risks**

- 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
- Breakdown in Greek debt, budget negotiations leads to default and exit from Eurozone
- Slowdown in economic growth and negative effects to financial markets due to Brexit
- Increasing geopolitical tensions negatively impact consumer confidence
- U.S. dollar appreciates further against other currencies, limiting exports
- Weak global growth persists, further impacting exports

### **Upside Risks**

- The housing sector improves faster than anticipated
- Oil prices decline further than expected
- 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 decline in U.S. dollar continues, making U.S. exports cheaper abroad
- Wage growth picks up faster than expected.

Table 1.1  
**U.S. Economic Forecast Summary**  
 Forecast 2017 to 2021

Fiscal Years

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	15,770.8	16,231.1	16,513.4	16,837.4	17,198.1	17,558.2	17,925.4	18,297.3
% Ch	2.1	2.9	1.7	2.0	2.1	2.1	2.1	2.1
Real Consumption	10,690.4	11,058.2	11,356.3	11,651.6	11,909.8	12,178.5	12,433.5	12,698.5
% Ch	2.0	3.4	2.7	2.6	2.2	2.3	2.1	2.1
Real Nonresidential Fixed Investment	2,090.3	2,188.0	2,195.3	2,244.3	2,345.6	2,433.6	2,537.5	2,634.1
% Ch	4.9	4.7	0.3	2.2	4.5	3.8	4.3	3.8
Real Residential Fixed Investment	495.1	531.0	588.2	588.5	616.3	633.5	650.3	671.0
% Ch	6.3	7.2	10.8	0.1	4.7	2.8	2.7	3.2
Real Personal Income	13,282.5	13,862.8	14,285.3	14,569.5	14,918.7	15,328.0	15,741.8	16,143.4
% Ch	1.2	4.4	3.0	2.0	2.4	2.7	2.7	2.6
Real Per Capita Income (\$/Person)	41,728	43,226	44,193	44,715	45,419	46,295	47,171	47,999
% Ch	0.4	3.6	2.2	1.2	1.6	1.9	1.9	1.8
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.084	1.093	1.100	1.117	1.138	1.158	1.179	1.203
% Ch	1.4	0.9	0.7	1.5	1.8	1.8	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.350	2.367	2.383	2.429	2.491	2.544	2.599	2.658
% Ch	1.6	0.7	0.7	2.0	2.5	2.1	2.2	2.3
Employment Cost Index (Dec. 2005=1.0)	1.193	1.221	1.248	1.279	1.317	1.358	1.402	1.450
% Ch	1.9	2.3	2.2	2.5	3.0	3.1	3.3	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,015.0	17,760.9	18,274.1	18,974.6	19,818.6	20,648.9	21,507.2	22,411.0
% Ch	3.8	4.4	2.9	3.8	4.4	4.2	4.2	4.2
Personal Income	14,394.7	15,155.4	15,719.9	16,274.8	16,971.6	17,746.7	18,563.8	19,414.5
% Ch	2.6	5.3	3.7	3.5	4.3	4.6	4.6	4.6
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.5	156.6	158.0	160.2	162.1	163.8	165.4	166.7
Total U.S. Employment	145.0	147.7	150.1	152.4	154.4	156.2	157.6	158.7
Unemployment Rate (%)	6.77	5.70	4.99	4.83	4.67	4.63	4.69	4.74
Nonfarm Payroll Employment	137.56	140.43	143.13	145.30	146.65	147.82	149.06	150.17
% Ch	1.7	2.1	1.9	1.5	0.9	0.8	0.8	0.7
Manufacturing	12.09	12.28	12.31	12.27	12.34	12.48	12.66	12.80
% Ch	0.9	1.6	0.3	-0.4	0.6	1.1	1.4	1.1
Durable Manufacturing	7.60	7.74	7.73	7.66	7.75	7.87	8.02	8.16
% Ch	1.1	1.9	-0.2	-0.8	1.2	1.5	1.9	1.7
Nondurable Manufacturing	4.49	4.54	4.58	4.60	4.59	4.61	4.64	4.65
% Ch	0.5	1.0	1.1	0.5	-0.4	0.5	0.7	0.1
Construction	5.99	6.31	6.57	6.72	6.86	7.01	7.18	7.35
% Ch	4.4	5.4	4.1	2.3	2.1	2.3	2.3	2.4
Service-Providing	118.61	120.97	123.51	125.64	126.74	127.61	128.49	129.27
% Ch	1.7	2.0	2.1	1.7	0.9	0.7	0.7	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	101.3	69.3	41.7	46.7	50.6	52.3	53.6	54.7
Personal Saving/Disposable Income (%)	5.3	5.6	5.9	5.5	5.5	5.8	6.2	6.3
Auto Sales (Millions)	7.6	7.7	7.2	6.7	6.7	6.6	6.7	6.8
% Ch	2.1	1.0	-5.8	-6.9	-0.8	-0.7	1.9	0.3
Housing Starts (Millions)	0.955	1.055	1.150	1.171	1.277	1.354	1.421	1.488
% Ch	8.9	10.5	9.0	1.8	9.0	6.0	4.9	4.7
Federal Budget Surplus (Billions)	-612.0	-592.4	-624.6	-694.7	-682.4	-746.2	-754.1	-743.9
Net Exports (Billions)	-489.5	-513.7	-511.0	-456.8	-432.2	-442.8	-437.7	-429.1
3-Month Treasury Bill Rate (%)	0.04	0.02	0.18	0.47	0.98	1.79	2.52	2.58
10-Year Treasury Note Yield (%)	2.71	2.23	2.02	1.85	2.39	2.96	3.50	3.50
Bond Index of 20 G.O. Munis. (%)	4.55	3.83	3.51	3.29	3.95	4.64	5.05	5.05
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.64	4.29	4.97	5.57	5.57

Table 1.2

**Forecast Analysis**

Comparison of Forecasts for 2015-17

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2015:2-2017:2		Average Rate (Percent) 2015:3 to 2017:2	
	<b>Real GDP</b>	<b>Implicit Price Deflator</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2012</b>				
September	2.9	1.9	2.17	5.92
November	2.9	1.6	2.56	6.08
<b>2013</b>				
March	2.9	1.6	1.71	5.68
June	2.8	1.5	1.98	5.63
September	2.9	1.5	2.13	5.66
November	2.7	1.5	2.12	5.67
<b>2014</b>				
February	2.7	1.3	2.13	5.75
June	2.8	1.4	2.13	5.78
September	2.8	1.5	1.96	5.59
November	2.8	1.6	1.72	5.48
<b>2015</b>				
February	2.8	1.7	1.69	5.19
June	2.8	1.7	1.29	4.73
September	2.7	1.5	0.84	4.38
November	2.5	1.6	0.82	4.35
<b>2016</b>				
February	2.2	1.1	0.56	4.09
June	2.0	1.5	0.43	3.91
September	1.8	1.4	0.36	3.76
November	1.8	1.3	0.32	3.72

Table 1.3  
**Forecast Analysis**  
 Comparison of Forecasts for 2017-19

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2		Average Rate (Percent) 2017:3 to 2019:2	
	<b>Real GDP</b>	<b>Implicit Price Deflator</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2014</b>				
February	2.6	1.3	3.72	6.57
June	2.6	1.5	3.73	6.63
September	2.6	1.6	3.51	6.15
November	2.5	1.9	3.53	6.14
<b>2015</b>				
February	2.5	1.8	3.53	5.71
June	2.5	1.8	3.48	5.75
September	2.5	1.8	2.66	5.16
November	2.3	1.8	2.67	5.23
<b>2016</b>				
February	2.3	1.8	2.28	5.02
June	2.1	1.9	2.09	4.97
September	2.1	1.7	1.63	4.85
November	2.1	1.8	1.39	4.63

Table 1.4

Fiscal Years

**Forecast Comparison**

Forecast 2016 to 2021

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>U.S.</b>							
<b>Real GDP</b>							
November Baseline	16231.1	16513.4	16837.4	17198.1	17558.2	17925.4	18297.3
% Ch	2.9	1.7	2.0	2.1	2.1	2.1	2.1
September Baseline	16231.1	16510.2	16836.8	17207.4	17571.5	17954.4	18340.5
% Ch	2.9	1.7	2.0	2.2	2.1	2.2	2.2
<b>Implicit Price Deflator</b>							
November Baseline	1.093	1.100	1.117	1.138	1.158	1.179	1.203
% Ch	0.9	0.7	1.5	1.8	1.8	1.9	2.0
September Baseline	1.093	1.100	1.117	1.136	1.156	1.177	1.200
% Ch	0.9	0.7	1.6	1.6	1.7	1.9	2.0
<b>Unemployment Rate</b>							
November Baseline	5.70	4.99	4.83	4.67	4.63	4.69	4.74
September Baseline	5.70	4.99	4.73	4.65	4.63	4.67	4.74
<b>Mortgage Rate</b>							
November Baseline	3.92	3.80	3.64	4.29	4.97	5.57	5.57
September Baseline	3.92	3.80	3.73	4.52	5.18	5.76	5.78
<b>3 Month T-Bill Rate</b>							
November Baseline	0.02	0.18	0.47	0.98	1.79	2.52	2.58
September Baseline	0.02	0.18	0.53	1.22	2.04	2.76	2.81



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

- **Recent Washington employment and income growth have been stronger than expected in September and historical estimates for both were revised higher.**
- **The Washington housing construction forecast is lower due to slower household formation.**
- **Seattle home prices continue to rise rapidly.**
- **Year-over-year growth in Washington exports continues to decline but may be turning around.**
- **Seattle area consumer price inflation is above the national average due to higher shelter cost inflation.**
- **As in September, we expect the Washington economy to continue to outperform the U.S. economy.**

### Current Conditions

*The Washington economy is expanding at a solid pace*

The Washington economy is expanding at a solid pace. In recent months, Washington employment has grown faster than expected in the September forecast and historical estimates were revised higher. Historical estimates for Washington personal income were revised up as well. Year-over-year growth in Washington exports continues to decline but may be turning around. Manufacturing activity is struggling to remain positive. Home prices are rising rapidly in the Seattle area but home construction has weakened. Seattle area consumer price inflation is well above the national average due to shelter cost inflation.

*Employment growth has been stronger than expected*

We have two months of new Washington employment data since the September forecast was released. Total nonfarm payroll employment rose 13,500 (seasonally adjusted) in September and October which was 7,500 more than the 6,000 expected in the September forecast. Manufacturing employment declined 2,700 in the last two months but this was better than the 3,400 reduction expected in the September forecast. The reason was the aerospace industry which was expected to lose 3,600 jobs

but instead lost only 2,100 jobs. Construction employment increased 1,900 and government payrolls expanded by 1,500 jobs in September and October. As is usually the case, the bulk of the job growth was in private, service-providing sectors which added 12,800 jobs in the last two months.

*Historical employment estimates were revised slightly higher*

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 raised the estimated level of total employment in August 2016 by 3,000 jobs (0.1%). As a result of the upward revision to history and stronger-than-expected growth, the total effect is 10,400 (0.3%) more jobs in October 2016 than expected in the September forecast.

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

Washington initial claims for unemployment insurance remained near the post-recession low in the most recent four-week period. The four-week moving average of seasonally adjusted claims decreased to 6,700 in the week ending November 28th from 6,900 in the previous week. While the current level of claims is slightly above the post-recession low of 6,500 reached in early October, it is below the minimum level of 7,200 reached during the last expansion. Claims have fallen 60% since the peak in early 2009.

*Average hourly earnings growth has slowed*

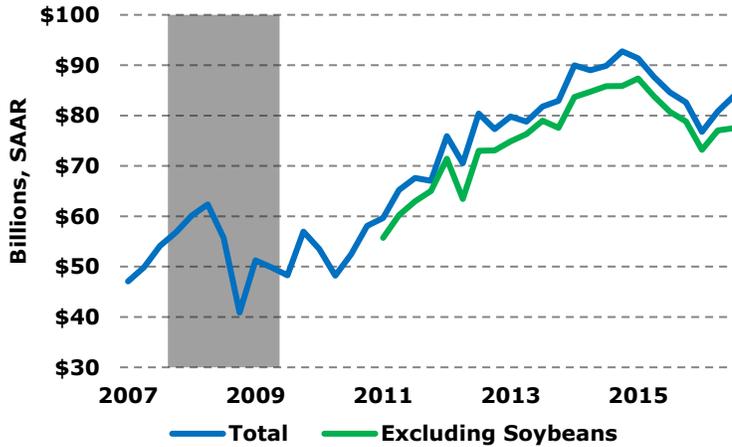
Recent average weekly earnings growth for Washington private sector employees has declined due to slower average hourly earnings growth. Private sector average weekly hours in the twelve months ending in October 2016 were up 0.7% over the twelve-month period ending in October 2015. This was an improvement compared to the previous twelve-month period during which average weekly hours were up 0.4%. However, average hourly earnings were up 2.9% in the most recent twelve-month period. One year ago average hourly earnings increased 4.1%. As a result of the decline in average hourly earnings growth, and despite the improvement in average weekly hours' growth, average weekly earnings growth declined to 3.6% from 4.5% a year ago.

*Exports are down on a strong dollar and weak global growth*

Third quarter 2016 Washington exports were down 2.9% from the third quarter of 2015. While this was the sixth consecutive year-over-year decline in exports, it was also the smallest. Transportation equipment exports (mostly Boeing planes) declined 7.7% over the year but exports of agricultural products increased 43.4%. Exports of all other commodities declined 4.3% over the year. The quarterly data suggest that exports may be finally turning around. Some of the strength in the third quarter was due to abnormally strong soybean exports. Although exports excluding soybeans are down more than 11% since the peak in the fourth quarter of 2014, they are up nearly 6% since the first quarter of 2016 (see Figure 2.1)

**Figure 2.1: Washington Exports**

*Washington exports may be turning around*



Source: Wiser Trade; data through 2016Q3

*Washington housing permits were weak in the third quarter*

Washington housing construction was weaker than expected in the third quarter of 2016. Washington housing units authorized by building permits averaged 38,400 units (SAAR) in the third quarter, down from 45,300 in the second quarter. The September forecast expected an average rate of 40,500 units in the third quarter. Multi-family permits averaged 17,900 units in the third quarter which was exactly the amount expected in the September forecast. Single-family permits, however, averaged 20,500 units in the third quarter which was 2,100 fewer than expected. The fourth quarter of 2016 got off to a stronger start, though mostly as a result of a surge in multi-family permits. In October, 52,700 units (SAAR) were permitted of which 21,200 were single family and 31,500 were multi-family.

*Seattle area home prices are up 11.1% over the year*

Seattle home prices continue to rise rapidly. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices rose 0.8% in August and 0.7% in September following four monthly increases that averaged just 0.4%. As we have been saying, we believe the slowdown in April through July was due to problems with the seasonal adjustment process. A more reliable measure is the over-the-year growth which shows an 11.1% increase in prices since the previous September, more than double the 5.1% increase in the Composite-20 index. Seattle home prices are up 52.9% since the November 2011 trough and prices now exceed the May 2007 peak by 6.2%.

The Institute of Supply Management - Western Washington Index (ISM-WW) remained in positive territory for the second consecutive month. The index, which measures conditions in the manufacturing sector, increased from 51.4 in September to 53.1 in October (index values above 50 indicate positive growth while values below 50 indicate contraction). The production, orders,

*Manufacturing is growing, but barely*

and inventories components all increased in October while the employment and deliveries components declined. Manufacturing has fluctuated around the 50 mark since mid-2015.

*Washington car and truck sales declined in October*

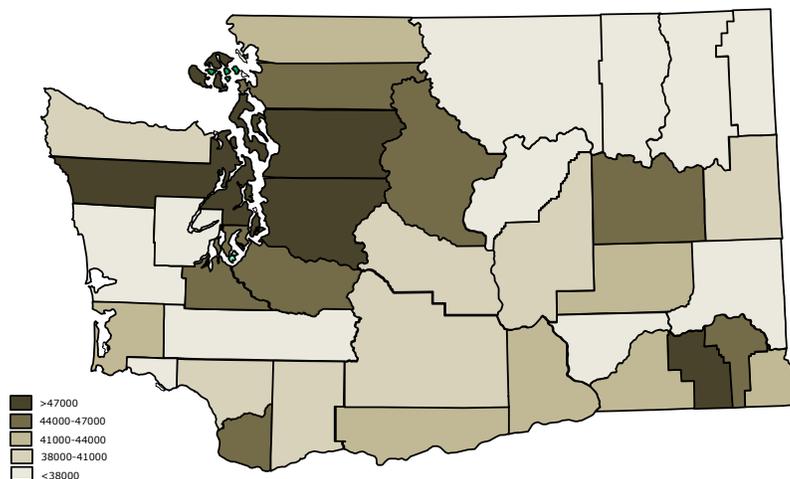
Washington car and truck sales declined slightly in October. Seasonally adjusted new vehicle registrations fell 1.0% in October following a 3.9% increase in September. Car and truck sales are down 8.5% since the post-recession peak in January and 0.2% over the year.

*Washington per capita income averaged \$51,900 in 2015*

In November, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released local area personal income data for U.S. counties and metropolitan areas in 2015. According to these estimates, per capita personal income in Washington counties ranged from \$31,700 in Ferry County to \$72,500 in King County (see Figure 2.2). Per capita personal income for Washington as a whole was \$51,900, well above the \$48,100 for the nation.

**Figure 2.2: Per Capita Personal Income**

*King County per capita personal income was the highest in the state*



Source: BEA; data through 2015

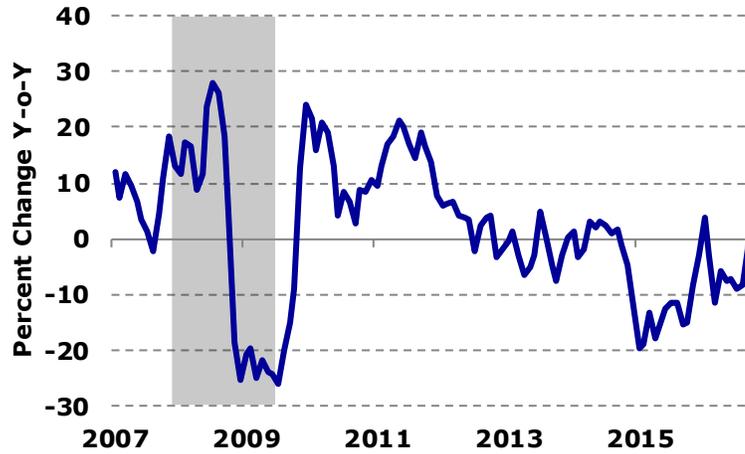
*Seattle area consumer price inflation is well above the national average*

Seattle area consumer price inflation is well above the national average. Over the last year, from October 2015 to October 2016, consumer prices in the Seattle area rose 2.4% compared to 1.6% for the U.S. city average. Core prices, which exclude food and energy, were up 2.6% in Seattle compared to 2.2% for the nation. The higher Seattle inflation is due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 5.7% compared to 3.5% for the nation. With shelter excluded, Seattle inflation was the same as the U.S. city average at 0.7% over the year. Until recently, lower energy costs have been helping to keep the headline rate down both nationally and in the Seattle area but this effect is ending. Seattle energy costs rose over the

year in October for only the second time in the past two years (see Figure 2.3).

*Seattle energy costs rose over the year in October*

**Figure 2.3: Seattle Energy Inflation**



Source: BLS; data through October 2016

## Washington State Forecast

*With the exception of housing construction, the national forecast is very similar to the forecast adopted in September*

The September Washington State forecast is based on a new national forecast that, with the exception of housing construction, is very similar to the forecast adopted in September. Real GDP growth averages 2.1%, down slightly from 2.2% in the September forecast. Real personal income growth is also very slightly lower than in September but offsetting that is slightly higher inflation. Employment growth averages 0.9% in the November forecast compared to 0.8% in September. The only significant change in the national forecast is housing construction. In our November forecast, starts are expected to plateau at 1.507 million units in 2021 compared to 1.656 million units in the September forecast. The weaker housing outlook is due mainly to the assumption of slower household formation. These revisions in the national forecast, including the weaker housing outlook, feed through to the state economic forecast.

*The forecasts for Washington employment and income are higher but housing is lower*

Overall, our forecast for Washington State is stronger than we expected in September as a result of higher employment and income but offsetting this is lower housing construction. Washington employment is expected to grow 2.9% this year, slightly better than the 2.8% growth rate in the September forecast and the highest rate since 2006. We expect employment growth to average 1.4% per year in 2017 through 2021 which is slightly better than the 1.3% per year assumed in September. Our forecast for nominal personal income growth this year is 4.7%, down slightly from the 4.8% expected in the September

forecast. As in September, our forecast for nominal personal income growth in 2017 through 2021 averages 4.9% per year. We expect total housing units authorized by building permits to decline 0.6% this year to 40,100 units which is slightly lower than the 41,000 units in the September forecast. We expect permits to average 41,100 during the remainder of the forecast, which is also lower than the 43,800 expected in September. The forecast for Seattle area inflation is slightly higher than in the September forecast. We expect the all-items Seattle CPI to rise 2.4% this year compared to 2.3% in the September forecast. We also expect Seattle area inflation to average 2.4% per year in 2017 through 2021 compared to 2.3% in the September forecast.

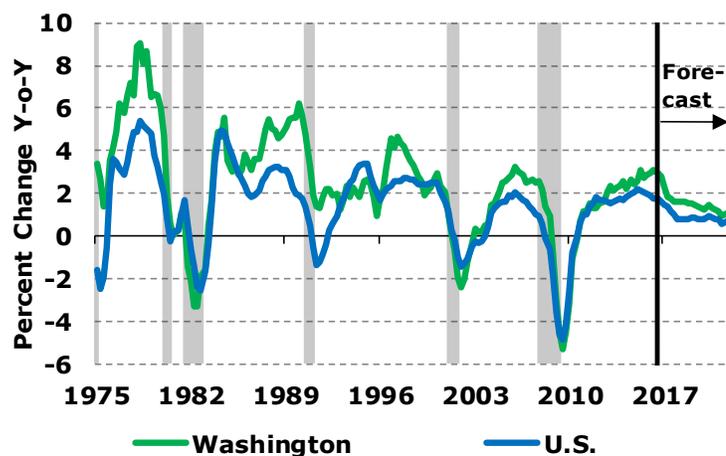
## Washington Payroll Employment

*Washington employment growth will slow*

Washington employment growth in 2015 was 2.8% which was the highest rate since 2006. Washington employment is expected to grow 2.9% this year, slightly better than the 2.8% growth rate in the September forecast. We expect the employment growth rate to slow in the coming years as the economy approaches full employment. Employment growth will also be constrained by baby boomers leaving the work force, further reducing labor force growth. We expect employment growth to average 1.4% per year in 2017 through 2021 which slightly better than the 1.3% per year assumed in September. Washington employment growth is expected to exceed the national average throughout the forecast (see Figure 2.4). On a calendar year basis, we expect 1.9% employment growth in 2017, 1.6% growth in 2018, 1.4% in 2019, 1.3% growth in 2020, and 1.1% growth in 2021.

**Figure 2.4: Employment Growth**

*Washington employment growth is expected to exceed the national average*



Source: Washington State Employment Security, BLS, ERFC; historical data through 2016Q3

*Aerospace cuts coming later than expected*

We have incorporated Boeing's stated intention to reduce its commercial airplane division employment by 4,000 by the middle of the year which we initially assumed would be by July. The actual decline through the middle of the year was smaller than this announcement implied. In the November forecast we have retained the overall decline implied by the announcement but have spread it over the remaining months of 2016. In 2017 through 2019 we expect a more gradual decline in aerospace employment similar to the assumption made in September. We project no change in aerospace employment in the final two years of the forecast. On an annual average basis we expect aerospace employment to decline 3.8% in 2016, 6.6% in 2017, 2.2% in 2018, 2.0% in 2019, and 0.8% in 2020 with no change in 2021.

*The software employment forecast is virtually unchanged*

Software employment grew only 0.7% in 2015 after absorbing a series of Microsoft layoffs during the latter part of 2014. We expect growth to rebound to 5.6% in 2016, compared to 5.7% in the September forecast. As in September, we expect more moderate growth through the remainder of the forecast. Software employment is expected to grow 2.5% in 2017, 0.8% in 2018, 0.9% in 2019, 1.0% in 2020, and 1.1% in 2021.

*Nonresidential construction is expected to slow*

Construction employment growth surged in the first quarter of 2016 but has slowed down in recent months. Our forecast for growth in 2016 is now 6.0%, up slightly from the 5.7% rate expected in the September forecast. We expect much slower growth next year, particularly in nonresidential construction. Construction employment is expected to slow to 2.0% in 2017 before picking up to 3.8% in 2018. We expect growth rates of 2.4% in 2019, 1.4% in 2020, and 1.2% in 2021. Even after ten years of growth, construction employment will still be 4,600 below its previous peak at the end of 2021.

*Retail trade employment is benefitting from strong growth in electronic shopping*

Washington retail trade employment growth has been much stronger than the national average during the last four years thanks largely to our outsized and rapidly growing electronic shopping sector. Retail trade employment grew at an average rate of 3.2% per year between 2011 and 2015 compared to 1.6% for the U.S. as a whole. Without the electronic shopping sector, which added 18,200 jobs in the four-year period, Washington retail trade employment would have grown at a 2.0% average annual rate. Even in Washington, retail employment growth is expected to slow due to technology and slower overall economic growth. Retail trade employment growth is expected to slow to 3.8% this year, 2.8% in 2017, 1.0% per year in 2018, 0.9% in 2019, 0.4% in 2020, and 0.2% in 2021.

## Washington Personal Income

*Washington personal income is currently higher than believed in September*

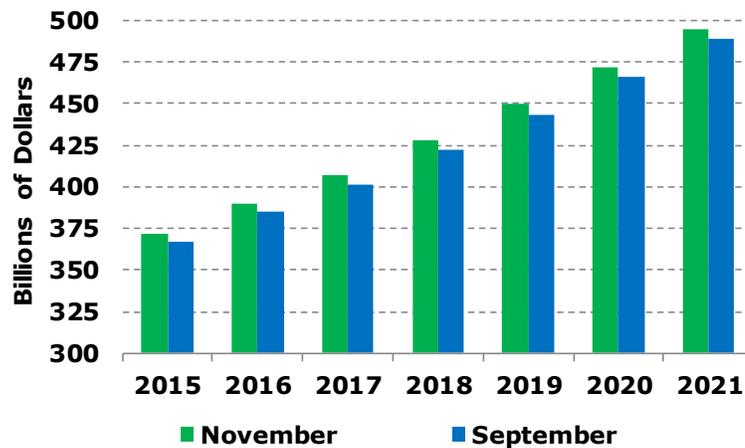
In September, the Bureau of Economic Analysis released estimates for state personal income through the second quarter of 2016. This release also reflected the results of the annual revision to the national income and product accounts (NIPA). We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) and other wage data through the second quarter. Our current estimate of Washington personal income in the second quarter of 2016 is \$388.3 billion which is \$5.1 billion (1.3%) higher than assumed in the September forecast. Wages and salaries were \$1.6 billion higher than believed in September and other sources of personal income were \$3.5 billion higher. The large increase in the estimate of nonwage income was due to the annual NIPA revision.

*Our forecast for nominal personal income growth is similar to the September forecast*

Our forecast for nominal personal income growth this year is 4.7%, down slightly from the 4.8% expected in the September forecast. As in September, our forecast for nominal personal income growth in 2017 through 2021 averages 4.9% per year. While our forecast for personal income growth is similar to the September forecast, the level is higher due to the annual revision to the NIPAs which raised the level of personal income last year by \$5.2 billion or 1.4% (see Figure 2.5). On an annual basis, we expect personal income to grow 4.5% in 2017, 5.1% in 2018, 5.1% in 2019, 5.0% in 2020, and 4.8% in 2021.

*The personal income forecast is higher than expected in September*

**Figure 2.5: Washington Personal Income**



Source: Bureau of Economic Analysis, ERFC; historical data through 2015

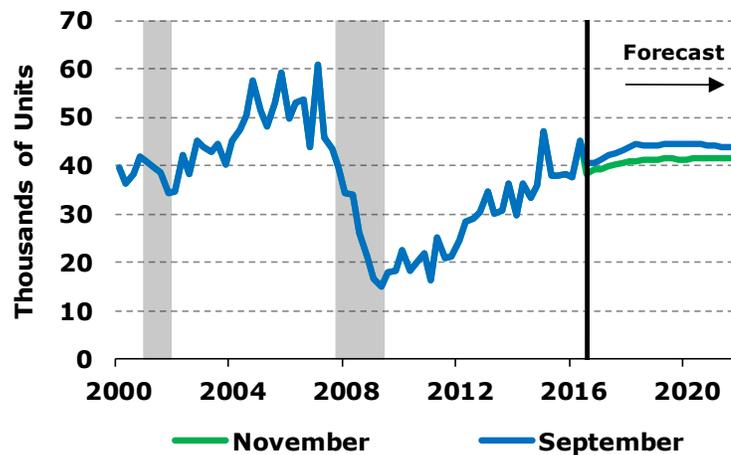
## Washington Building Permits

*The housing recovery in Washington is nearly complete*

The housing recovery in Washington is nearly complete. Multi-family housing has recovered from a low of only 4,000 units in 2009 to 20,600 in 2015. We believe 2015 was the peak in multi-family construction in this cycle and that permits will decline to 15,700 by 2021. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 19,800 in 2015. We expect single-family construction to continue to strengthen with the number of units rising to 26,000 by 2021. We expect total housing units authorized by building permits to decline 0.6% this year to 40,100 units and 0.3% next year to 40,000 units before rising 2.9% in 2018 to 41,100 units, 0.6% in 2019 to 41,400 units, 0.2% in 2020 to 41,500 units, and 0.4% in 2021 to 41,600 units. The November housing forecast is lower than in September (see Figure 2.6) due mainly to the expectation of slower household formation.

*The Washington housing construction forecast is lower than in September*

**Figure 2.6: Housing Construction**



Source: Census Bureau, ERFC; historical data through 2016Q3

## Seattle Consumer Price Index

*Rising energy costs will soon be adding to inflation*

After working to reduce overall inflation last year, rising energy costs will soon be adding to inflation once again. While the over-the-year decline in energy costs will reduce inflation again in 2016, energy costs will not affect overall inflation in 2017 and will add to inflation in 2018 through 2021. We expect the Seattle CPI to rise 2.4% this year, 2.8% in 2017, 2.4% in 2018, 2.2% in 2019, and 2.3% per year in 2020 and 2021.

*Rents are driving Seattle core inflation higher*

Core inflation (excluding food and energy) in Seattle was 2.6% in 2015 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 much faster in Seattle than in the U.S. city average. Inflation

data so far this year indicate core prices will rise this year to 2.2% nationally and 3.1% in the Seattle area. We expect core inflation in Seattle to moderate as shelter costs stabilize. Our forecast for core Seattle inflation is 2.9% in 2017, 2.2% in 2018, 2.1% in 2019, 2.1% in 2020, and 2.2% in 2021.

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 prepared in accordance with state law*

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

### Optimistic

*The optimistic scenario features a pickup in productivity growth, an increase in household formation, and stronger global growth*

In the optimistic scenario, real GDP grows faster than the baseline throughout the forecast period as an explosion of new technologies encourages more investment, leading to stronger productivity growth. With higher business investment increasing productivity, wage gains accelerate. A tightening labor market gives wages an extra boost, however, causing inflation to pick up. With a stronger outlook, both consumer and business confidence improve, and the stock market sees strong gains. Thanks to healthy income gains and increased household formation, consumer spending and housing continue to fuel growth. Housing starts climb rapidly and real consumer spending growth accelerates. Meanwhile, economic conditions in the rest of the world begin to improve with the help of structural reforms implemented by some struggling economies and the European Central Bank's quantitative easing.

*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 flattens in mid-2017 then gradually rises through 2021 rather than continuing to fall 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 migrants from other states are attracted by the strong local economy. The recovery in construction employment is much stronger than in the baseline forecast with employment in the sector exceeding the previous peak in the fourth quarter of 2018. By the end of 2021, Washington nonfarm payroll employment is higher by 167,700 jobs than in the baseline forecast and Washington personal income is \$56.3 billion higher.

## Pessimistic

*In the pessimistic scenario, the U.S. economy suffers a two-quarter recession*

In the pessimistic scenario, the U.S. economy suffers a two-quarter recession during the fourth quarter of 2017 and the first quarter of 2018, as domestic and global political risks trigger uncertainty and challenge business confidence. This is accompanied by faltering productivity and a U.S. stock market crash that shatters consumer confidence. In this scenario, the United Kingdom's pullout from the European Union leads to uncertainty that causes economic conditions in the rest of the world to worsen. The dollar, already a safe-haven currency, soars further. It peaks in the first quarter of 2018, diminishing the competitiveness of U.S. exports and worsening the trade deficit. Meanwhile, productivity continues to decline. With the supply side of the economy growing very slowly, modest but stronger demand-side growth exerts upward pressure on both wage and price inflation. Core inflation climbs well above the Federal Reserve's 2% target in the second half of 2017, prompting the central bank to raise interest rates more aggressively. Both consumer and business confidence deteriorate, and the stock market plummets. The U.S. economy contracts at annual rates of 1.5% and 2.0% in the fourth quarter of 2017 and the first quarter of 2018. Unemployment climbs through 2018, reaching an eventual peak of 6.2%.

*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. 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 declines in 2017 through 2021 rather than rising as in the baseline. The relatively weak local economy puts downward pressure on Washington wages and the Seattle CPI; offsetting this is the higher national inflation assumed in the pessimistic U.S. forecast. The net effect is that nominal Washington wages are about the same in the pessimistic alternative as they are in the baseline forecast and the Seattle CPI is actually a little higher. By the end of 2021, Washington nonfarm payroll employment is 172,000 lower than in the baseline forecast and Washington personal income is \$21.7 billion lower.

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

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

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

*The Governor’s Council of Economic Advisors’ national forecast is slightly weaker than the baseline*

At the national level, the GCEA outlook for real GDP growth averages 1.9% per year in 2016 through 2021 compared to 2.0% in the baseline forecast. The GCEA forecast of real consumer spending growth is also slightly lower at 2.2% compared to 2.3%. The GCEA inflation forecast is a little higher than the baseline forecast by just enough to offset the lower real growth. Consistent with their weaker real growth forecast, the Council members’ mortgage rate forecast is generally lower than the baseline forecast at 4.5% compared to 4.8% on average. The GCEA oil price forecast is slightly higher than the baseline forecast averaging \$54 compared to \$53.

*The GCEA members also expect slightly weaker Washington growth*

The GCEA scenario for Washington is also slightly weaker than the baseline forecast. Their real personal income growth forecast averages 3.0% per year in 2016 through 2021 compared to the baseline forecast of 3.1%. Their inflation forecast is slightly higher than ours, however, so their nominal personal income forecast is even closer to ours. At an average rate of 1.5% per year, the Council members’ forecast for total employment growth over the six-year period is also slightly lower than the baseline forecast of 1.7% per year. The GCEA forecasts for manufacturing employment growth and construction employment growth are both weaker than in the baseline forecast. The Council members’ housing permit forecast is slightly higher than ours, averaging 42,500 units per year through 2021 compared to 41,000 in the baseline forecast. At the end of 2021, the GCEA forecast for Washington nonfarm payroll employment is 38,100 (1.1%) lower than in the baseline forecast and Washington personal income is \$1.4 (0.3%) billion lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1  
**Washington Economic Forecast Summary**  
 Forecast 2017 to 2021

Fiscal Years

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	316.650	333.849	346.087	356.740	366.901	378.870	390.618	402.113
% Ch	2.3	5.4	3.7	3.1	2.8	3.3	3.1	2.9
Real Wage and Salary Disb.	162.191	170.803	180.782	188.463	193.779	199.165	204.203	209.499
% Ch	3.5	5.3	5.8	4.2	2.8	2.8	2.5	2.6
Real Nonwage Income	154.459	163.046	165.305	168.277	173.122	179.705	186.415	192.615
% Ch	1.1	5.6	1.4	1.8	2.9	3.8	3.7	3.3
Real Per Capita Income (\$/Person)	45,110	46,901	47,900	48,684	49,381	50,304	51,196	52,058
% Ch	1.1	4.0	2.1	1.6	1.4	1.9	1.8	1.7
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.084	1.093	1.100	1.117	1.138	1.158	1.179	1.203
% Ch	1.4	0.9	0.7	1.5	1.8	1.8	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.437	2.473	2.521	2.589	2.658	2.716	2.776	2.840
% Ch	1.4	1.5	1.9	2.7	2.6	2.2	2.2	2.3
Average Nonfarm Annual Wage	55,912	57,965	60,048	62,091	63,997	65,966	67,992	70,340
% Ch	2.9	3.7	3.6	3.4	3.1	3.1	3.1	3.5
Avg. Hourly Earnings-Mfg. (\$/Hour)	24.75	25.28	25.99	27.13	27.88	28.65	29.50	30.41
% Ch	2.3	2.1	2.8	4.4	2.7	2.8	3.0	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	343.162	364.967	380.840	398.499	417.401	438.667	460.656	483.605
% Ch	3.8	6.4	4.3	4.6	4.7	5.1	5.0	5.0
Disposable Personal Income	302.084	319.888	333.686	349.447	365.258	383.132	401.068	419.693
% Ch	3.1	5.9	4.3	4.7	4.5	4.9	4.7	4.6
Per Capita Income (\$/Person)	48,886	51,272	52,710	54,382	56,176	58,242	60,375	62,607
% Ch	2.6	4.9	2.8	3.2	3.3	3.7	3.7	3.7
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,468.1	3,517.0	3,584.2	3,684.9	3,762.3	3,829.2	3,890.3	3,943.8
Total Washington Employment	3,243.3	3,312.8	3,378.6	3,486.3	3,572.9	3,642.4	3,701.2	3,752.0
Unemployment Rate (%)	6.48	5.81	5.74	5.39	5.04	4.88	4.86	4.86
Nonfarm Payroll Employment	3,021.2	3,102.8	3,193.1	3,271.0	3,324.8	3,375.4	3,420.9	3,460.8
% Ch	2.4	2.7	2.9	2.4	1.6	1.5	1.3	1.2
Manufacturing	287.5	290.1	290.6	283.3	282.8	285.1	288.1	291.8
% Ch	0.9	0.9	0.2	-2.5	-0.2	0.8	1.0	1.3
Durable Manufacturing	209.4	210.8	209.9	201.7	201.1	202.4	204.2	207.0
% Ch	0.4	0.6	-0.4	-3.9	-0.3	0.7	0.9	1.4
Aerospace	94.7	94.2	92.9	86.7	83.4	81.7	80.4	80.3
% Ch	-1.7	-0.5	-1.4	-6.6	-3.9	-2.0	-1.6	-0.1
Nondurable Manufacturing	78.1	79.3	80.7	81.7	81.7	82.7	83.9	84.8
% Ch	2.3	1.6	1.8	1.2	0.1	1.2	1.5	1.0
Construction	153.7	168.0	178.1	185.4	191.0	197.2	200.7	203.3
% Ch	6.8	9.3	6.0	4.1	3.0	3.3	1.8	1.3
Service-Providing	2,573.8	2,638.4	2,718.2	2,795.9	2,844.6	2,886.5	2,925.5	2,959.0
% Ch	2.3	2.5	3.0	2.9	1.7	1.5	1.3	1.1
Software Publishers	55.0	55.5	57.5	60.2	60.8	61.3	61.9	62.6
% Ch	3.9	1.0	3.5	4.8	0.9	0.9	0.9	1.1
Nonfarm Payroll Employment, EOP*	3,040.9	3,135.4	3,233.1	3,291.4	3,343.7	3,393.1	3,441.5	3,474.5
% Ch*	2.2	3.1	3.1	1.8	1.6	1.5	1.4	1.0
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.305	38.642	39.799	39.196	40.705	41.313	41.397	41.625
% Ch	7.0	16.0	3.0	-1.5	3.8	1.5	0.2	0.6
Single-Family	17.408	18.691	21.539	21.503	23.434	24.695	25.392	25.898
% Ch	-6.3	7.4	15.2	-0.2	9.0	5.4	2.8	2.0
Multi-Family	15.897	19.951	18.260	17.694	17.271	16.618	16.005	15.727
% Ch	26.7	25.5	-8.5	-3.1	-2.4	-3.8	-3.7	-1.7
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.64	4.29	4.97	5.57	5.57

\*End of Period, for use in the Budget Stabilization Account calculation

Table 2.2  
**Comparison of Alternative Forecasts**

Fiscal Years

	2016	2017	2018	2019	2020	2021
<b>U.S.</b>						
<b>Real GDP, Percent Change</b>						
Optimistic	1.7	2.2	2.7	3.0	2.7	2.6
Baseline	1.7	2.0	2.1	2.1	2.1	2.1
Pessimistic	1.7	1.3	-0.3	1.1	2.6	2.4
<b>Implicit Price Deflator, Percent Change</b>						
Optimistic	0.7	1.7	2.0	1.8	2.1	2.1
Baseline	0.7	1.5	1.8	1.8	1.9	2.0
Pessimistic	0.7	1.9	3.2	2.9	2.6	2.5
<b>Mortgage Rate, Percent</b>						
Optimistic	3.80	3.77	4.60	5.35	5.98	5.88
Baseline	3.80	3.64	4.29	4.97	5.57	5.57
Pessimistic	3.80	3.65	3.87	3.57	3.60	4.21
<b>3 Month T-Bill Rate, Percent</b>						
Optimistic	0.18	0.68	1.32	2.11	2.83	2.80
Baseline	0.18	0.47	0.98	1.79	2.52	2.58
Pessimistic	0.18	0.61	1.06	0.39	0.48	1.02
<b>Washington</b>						
<b>Real Personal Income, Percent Change</b>						
Optimistic	3.7	4.4	5.0	5.4	5.1	4.4
Baseline	3.7	3.1	2.8	3.3	3.1	2.9
Pessimistic	3.7	1.7	0.1	0.6	2.3	2.3
<b>Personal Income, Percent Change</b>						
Optimistic	4.3	6.2	7.1	7.3	7.2	6.6
Baseline	4.3	4.6	4.7	5.1	5.0	5.0
Pessimistic	4.3	3.7	3.3	3.5	5.0	4.8
<b>Employment, Percent Change</b>						
Optimistic	2.9	2.8	2.5	2.5	2.4	2.0
Baseline	2.9	2.4	1.6	1.5	1.3	1.2
Pessimistic	2.9	2.0	0.1	0.0	0.7	0.7
<b>Housing Permits, Thousands of Authorized Units</b>						
Optimistic	39.8	39.7	43.2	46.3	48.6	50.4
Baseline	39.8	39.2	40.7	41.3	41.4	41.6
Pessimistic	39.8	38.4	36.1	34.8	34.1	34.4

Table 2.3

Calendar Years

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

	2016	2017	2018	2019	2020	2021
<b>U.S.</b>						
<b>Real GDP</b>						
<i>Growth</i>						
ERFC	1.5	2.2	2.1	2.1	2.1	2.0
GCEA Average	1.6	1.6	1.7	2.3	2.3	2.0
<b>Real Consumption</b>						
<i>Growth</i>						
ERFC	2.6	2.4	2.2	2.2	2.1	2.1
GCEA Average	2.6	2.0	1.8	2.1	2.2	2.1
<b>Implicit Price Deflator, PCE</b>						
<i>Growth</i>						
ERFC	1.1	1.8	1.8	1.8	1.9	2.0
GCEA Average	1.2	1.9	2.0	2.0	1.9	1.9
<b>Mortgage Rate</b>						
<i>Percent</i>						
ERFC	3.6	3.9	4.7	5.3	5.6	5.6
GCEA Average	3.7	4.0	4.4	4.8	5.1	5.2
<b>Oil Price (Brent)</b>						
<i>Dollars per barrel</i>						
ERFC	43.3	49.9	53.4	55.4	57.1	58.7
GCEA Average	44.2	51.2	54.6	56.5	58.4	59.3
<b>Washington State</b>						
<b>Real Personal Income</b>						
<i>Growth</i>						
ERFC	3.5	2.7	3.2	3.2	3.1	2.8
GCEA Average	3.3	2.6	2.9	3.2	3.0	2.7
<b>Wage and Salary Employment</b>						
<i>Growth</i>						
ERFC	2.9	1.9	1.6	1.4	1.3	1.1
GCEA Average	2.7	1.5	1.2	1.3	1.3	1.1
<b>Manufacturing Employment</b>						
<i>Growth</i>						
ERFC	-1.0	-2.0	0.7	0.9	1.2	1.2
GCEA Average	-0.7	-1.3	-0.1	0.1	0.1	0.4
<b>Construction Employment</b>						
<i>Growth</i>						
ERFC	6.0	2.0	3.8	2.4	1.4	1.2
GCEA Average	5.7	2.2	1.3	2.2	1.7	1.7
<b>Housing Permits</b>						
<i>Thousands of authorized units</i>						
ERFC	40.1	40.0	41.1	41.4	41.5	41.6
GCEA Average	40.2	40.6	41.7	43.5	44.5	44.7
<b>Washington Average Annual Wage</b>						
<i>Growth</i>						
ERFC	4.0	3.0	3.2	3.1	3.2	3.5
GCEA Average	3.2	3.1	3.3	3.3	3.2	3.3

Table 2.4  
**Forecast Analysis**  
 Comparison of Forecasts for 2015-17

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2015:2-2017:2			Average Annual Rate (Thousands) 2015:3 to 2017:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2012</b>				
September	1.7	5.1	3.1	38.5
November	1.7	4.9	3.2	38.4
<b>2013</b>				
March	1.7	5.1	3.5	41.6
June	1.7	5.0	3.5	42.2
September	1.6	5.1	3.5	40.6
November	1.7	5.1	3.6	40.6
<b>2014</b>				
February	1.8	5.2	3.9	40.8
June	1.7	5.7	4.3	40.5
September	1.7	5.9	4.3	40.4
November	1.8	6.1	4.4	38.8
<b>2015</b>				
February	2.0	6.1	4.2	38.8
June	1.8	5.5	3.7	40.2
September	1.8	5.2	3.6	39.1
November	1.6	4.8	3.2	39.2
<b>2016</b>				
February	1.6	4.3	3.1	38.6
June	2.0	4.2	2.7	40.3
September	2.3	4.4	3.0	40.4
November	2.5	4.4	3.1	39.5

Table 2.5  
**Forecast Analysis**  
 Comparison of Forecasts for 2017-19

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2			Average Annual Rate (Thousands) 2017:3 to 2019:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2014</b>				
February	1.3	4.9	3.5	42.5
June	1.2	5.3	3.8	43.0
September	1.3	5.4	3.8	43.1
November	1.1	5.5	3.6	43.2
<b>2015</b>				
March	1.3	5.4	3.6	43.1
June	1.4	5.6	3.8	44.2
September	1.3	5.4	3.6	43.9
November	1.4	5.4	3.5	44.0
<b>2016</b>				
February	1.2	5.0	3.2	43.3
June	1.2	5.1	3.2	43.7
September	1.4	5.1	3.3	43.8
November	1.5	5.1	3.2	41.0

Table 2.6

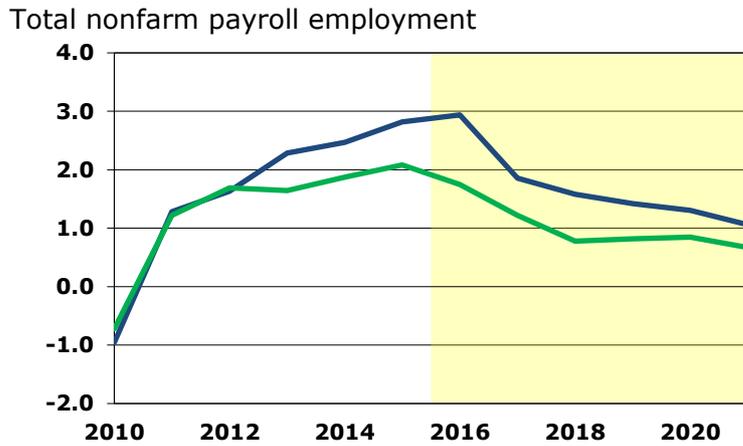
Fiscal Years

**Forecast Comparison**

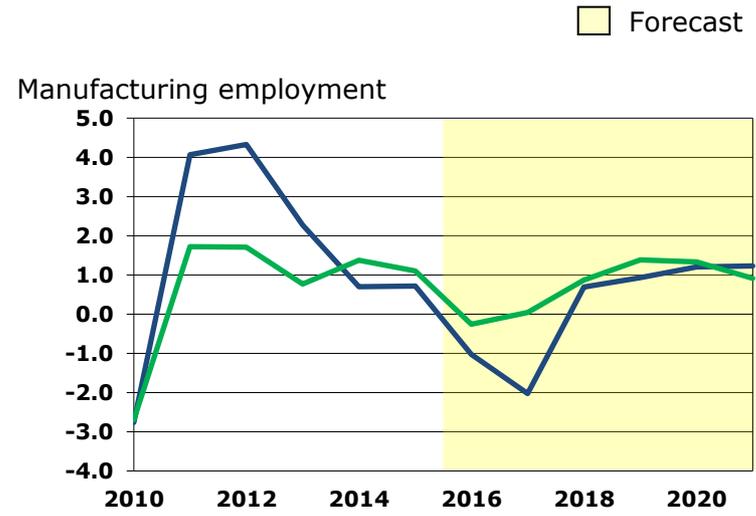
Forecast 2016 to 2021

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Washington</b>							
<b>Real Personal Income</b>							
November Baseline	333.849	346.087	356.740	366.901	378.870	390.618	402.113
% Ch	5.4	3.7	3.1	2.8	3.3	3.1	2.9
September Baseline	328.507	341.964	351.709	362.454	374.447	386.414	398.047
% Ch	4.8	4.1	2.8	3.1	3.3	3.2	3.0
<b>Personal Income</b>							
November Baseline	364.967	380.840	398.499	417.401	438.667	460.656	483.605
% Ch	6.4	4.3	4.6	4.7	5.1	5.0	5.0
September Baseline	359.127	376.299	393.041	411.706	432.701	454.843	477.690
% Ch	5.7	4.8	4.4	4.7	5.1	5.1	5.0
<b>Employment</b>							
November Baseline	3102.8	3193.1	3271.0	3324.8	3375.4	3420.9	3460.8
% Ch	2.7	2.9	2.4	1.6	1.5	1.3	1.2
September Baseline	3102.8	3194.1	3261.8	3309.3	3354.6	3395.0	3431.2
% Ch	2.7	2.9	2.1	1.5	1.4	1.2	1.1
<b>Housing Permits</b>							
November Baseline	38.642	39.799	39.196	40.705	41.313	41.397	41.625
% Ch	16.0	3.0	-1.5	3.8	1.5	0.2	0.6
September Baseline	38.642	39.799	41.095	43.440	44.238	44.449	44.194
% Ch	16.0	3.0	3.3	5.7	1.8	0.5	-0.6

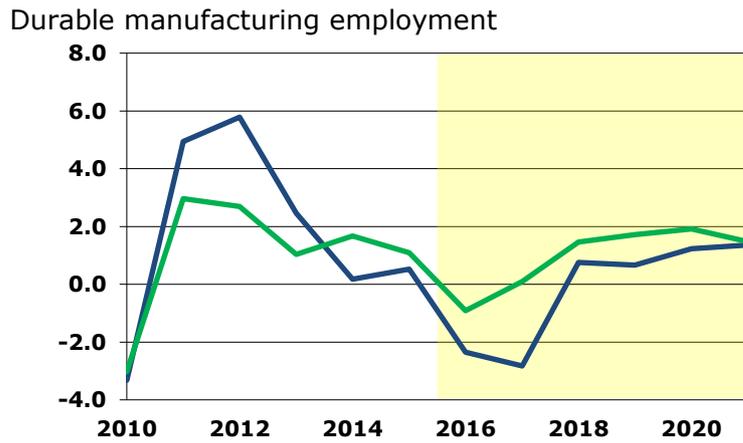
Figure 2.7: Comparison of Washington and U.S. Economic Forecasts  
(Percent change)



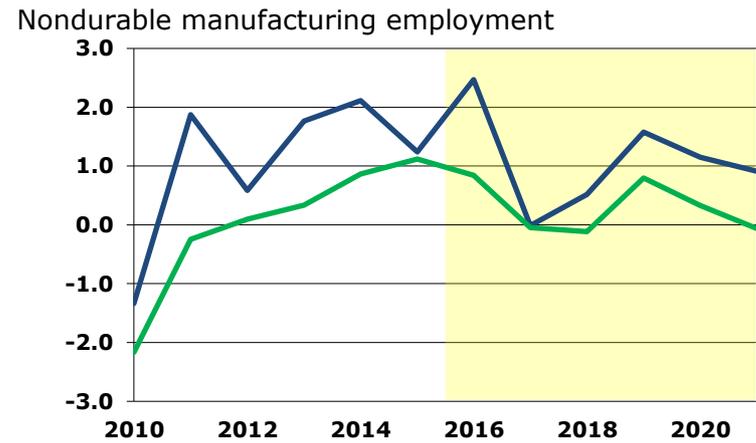
Source: WA State Employment Security Dept. 2015, ERFC 2021



Source: WA State Employment Security Dept. 2015, ERFC 2021



Source: WA State Employment Security Dept. 2015, ERFC 2021



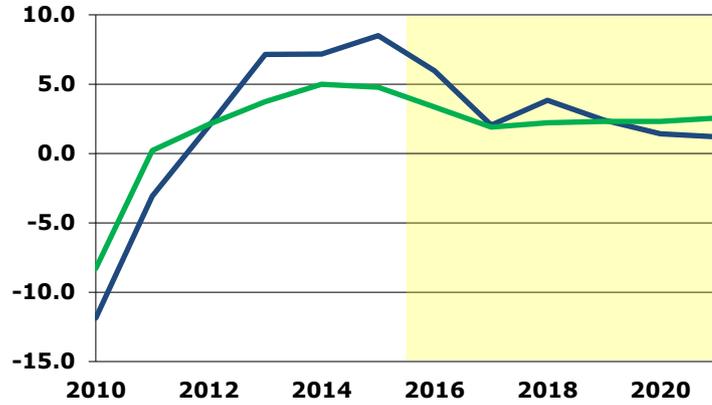
Source: WA State Employment Security Dept. 2015, ERFC 2021

■ Washington      ■ U.S.

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

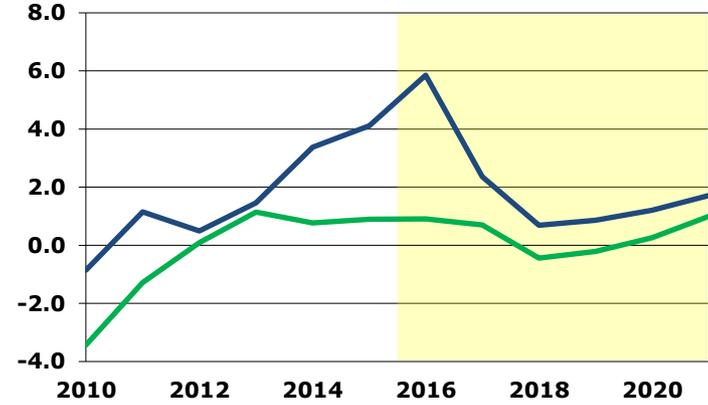
Forecast

Construction employment



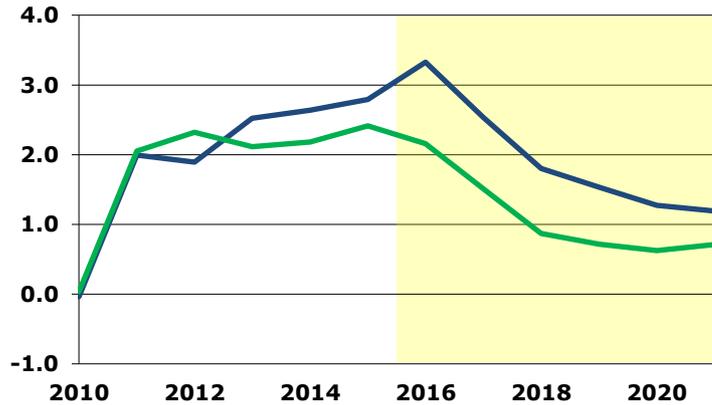
Source: WA State Employment Security Dept. 2015, ERFC 2021

Information employment



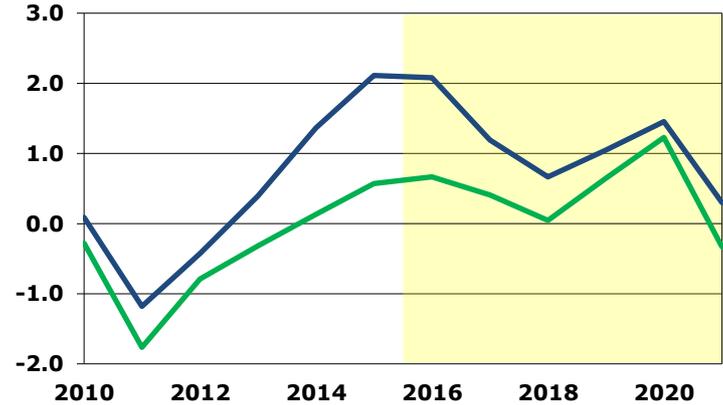
Source: WA State Employment Security Dept. 2015, ERFC 2021

Other private employment



Source: WA State Employment Security Dept. 2015, ERFC 2021

Government employment



Source: WA State Employment Security Dept. 2015, ERFC 2021

Washington

U.S.

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

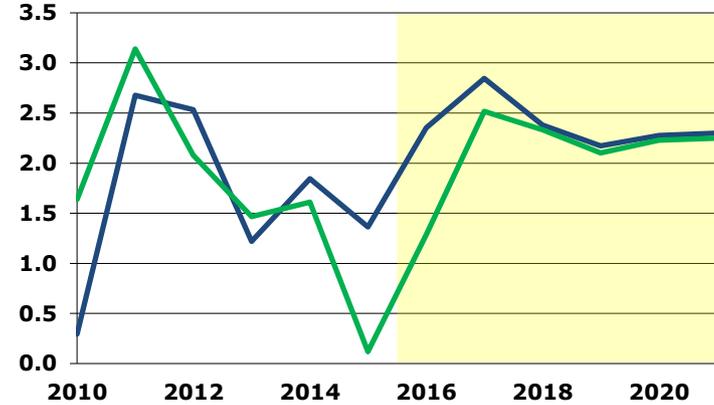
Forecast

Real personal income



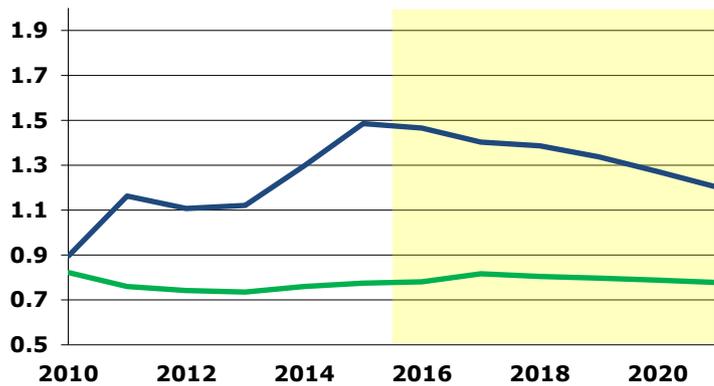
Source: Bureau of Economic Analysis 2015, ERFC 2021

Consumer price indices



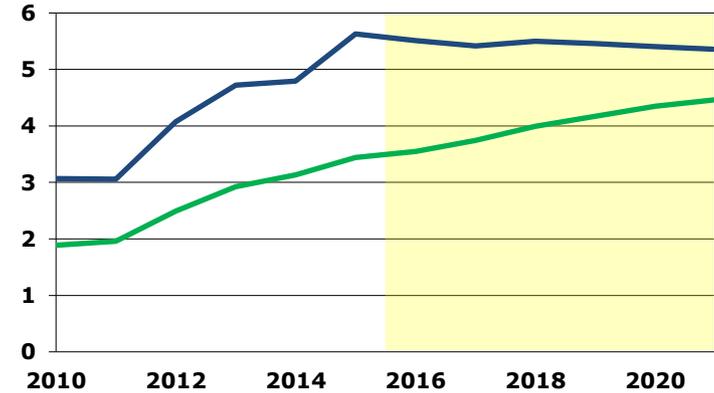
Source: Bureau of Labor Statistics 2015, ERFC 2021

Population



Source: Office of Financial Management/Census Bureau 2015, ERFC 2021

New Housing Units Per 1,000 population (level)



Source: Census Bureau 2015, ERFC 2021

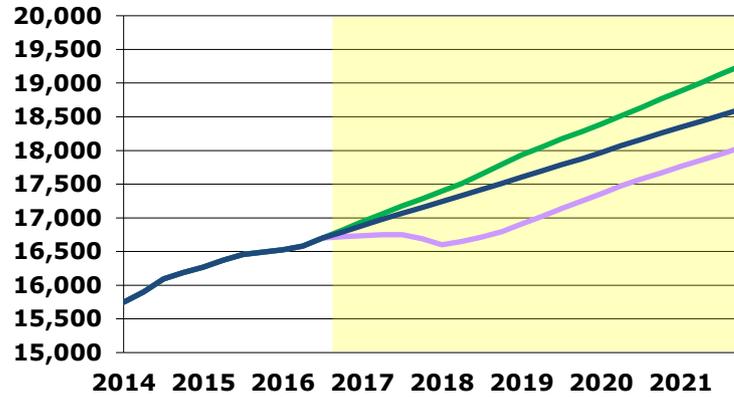
Washington

U.S.

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

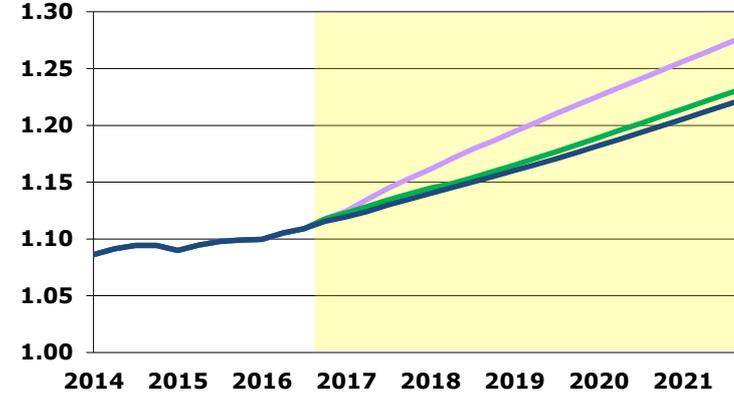
Forecast

Real GDP, billions of chained 2009 dollars



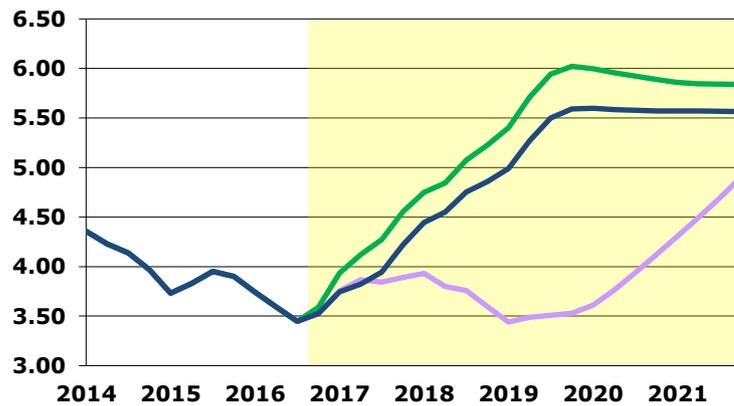
Source: Bureau of Economic Analysis 2016 Q3, ERFC 2021

Implicit price deflator, index 2009 = 1.0



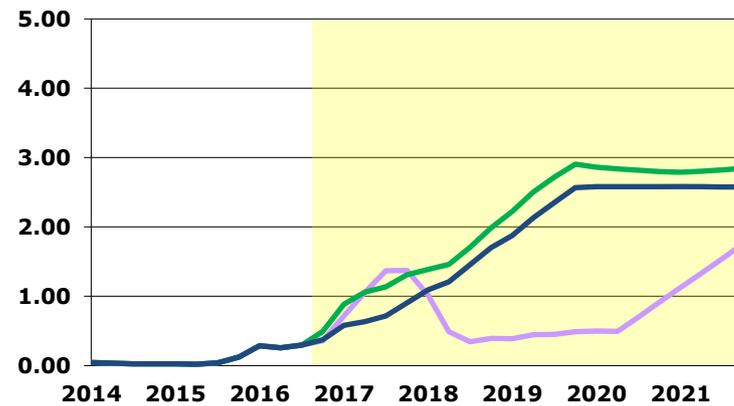
Source: Bureau of Economic Analysis 2016 Q3, ERFC 2021

Mortgage rate, percent



Source: Freddie Mac 2016 Q3, ERFC 2021

Three month T-bill rate, percent



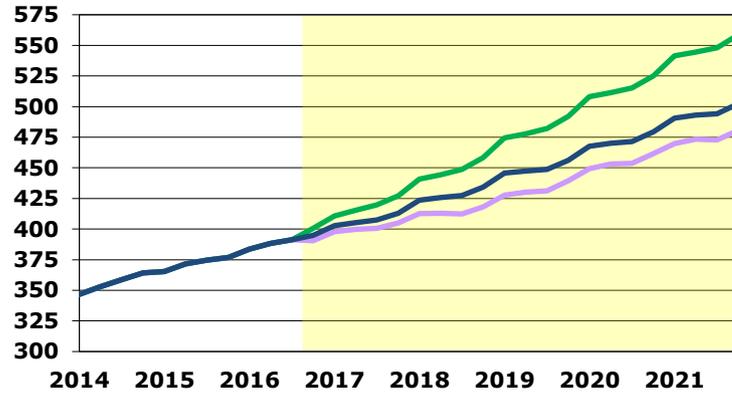
Source: Federal Reserve Board 2016 Q3, ERFC 2021

■ Baseline      ■ Optimistic      ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

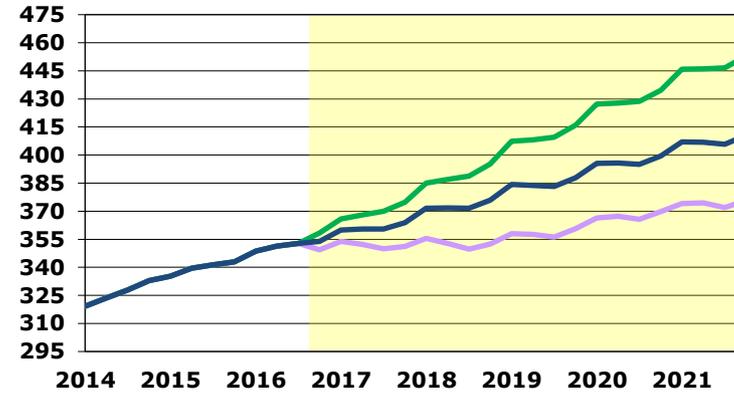
Forecast

Personal income, billions of dollars



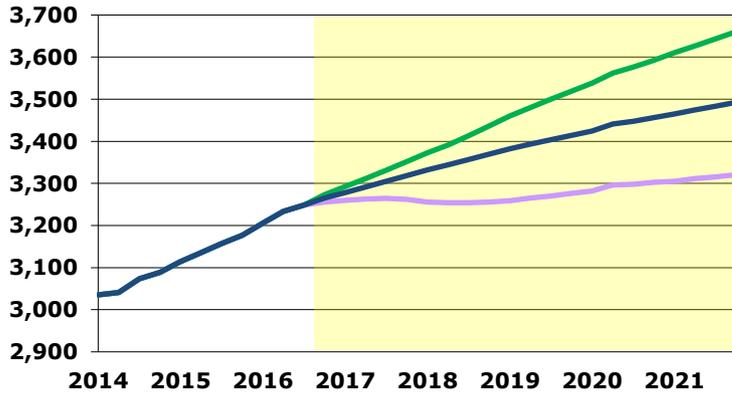
Source: Bureau of Economic Analysis 2015 Q4, ERFC 2021

Real personal income, billions of chained 2009 dollars



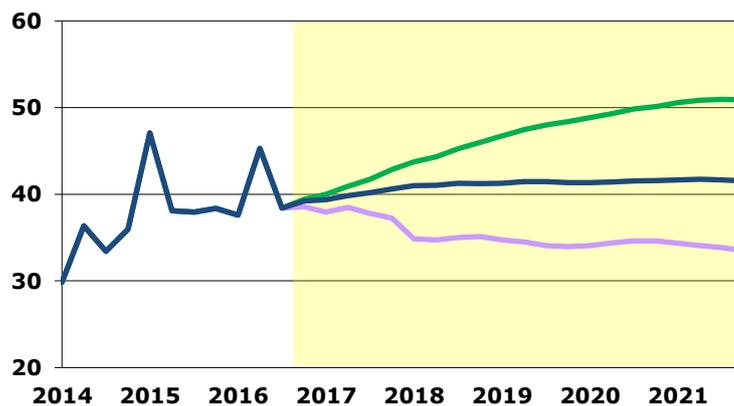
Source: Bureau of Economic Analysis 2015 Q4, ERFC 2021

Total nonfarm payroll employment, thousands



Source: WA State Employment Security 2016 Q3, ERFC 2021

Housing permits, thousands



Source: Census Bureau 2016 Q3, ERFC 2021

■ Baseline      ■ Optimistic      ■ Pessimistic

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## Chapter 3: Washington State Revenue Forecast Summary

- **Revenue collections since the September 2016 forecast have come in \$132 million over the forecasted amount.**
- **The forecast of General Fund-State (GF-S) revenue for the 2015-17 biennium was increased by \$215 million, the forecast for the 2017-19 biennium was increased by \$137 million, and the forecast for the 2019-21 biennium was increased by \$26 million.**
- **Forecast increases were once again mainly in retail sales and real estate excise taxes.**

### Overview

*The revenue forecast has increased, due mainly to retail sales and real estate excise taxes*

Once again, revenue collections have come in higher than expected in the previous forecast. As was the case when the September forecast was released, most of the surplus revenue stemmed from retail sales and real estate excise taxes. The strengthening real estate market has prompted another increase in forecasted real estate excise taxes. Forecasted retail sales tax collections have also been increased, due to both stronger-than-expected collections and a slight increase in forecasted state personal income. Changes in forecasted revenue from other sources were slight, reflecting the small changes in the November economic forecast relative to the September forecast.

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

*15-17: +\$215  
17-19: +\$137  
19-21: +\$26*

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2015-17 through 2019-21 biennia. Since the September forecast, revenue sources that are tracked monthly came in \$132.3 million higher than forecasted. There were no non-economic changes in expected revenue. Changes to the economic forecast resulted in an \$82.4 million increase to projected collections for the rest of the biennium. The total of these components was a \$214.6 million increase in projected revenue for the current 2015-17 biennium. The forecast for the 2017-19 biennium has been increased by \$136.6 million, and the forecast for the 2019-21 biennium has been increased by \$25.6 million. GF-S revenue is now forecasted to total \$37,979.7

million in the 2015-17 biennium, \$40,513.7 million in the 2017-19 biennium, and \$43,655.6 million in the 2019-21 biennium.

*GF-S forecast (\$millions):*

2015-17:  
\$37,980

2017-19:  
\$40,514

2019-21:  
\$43,656

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

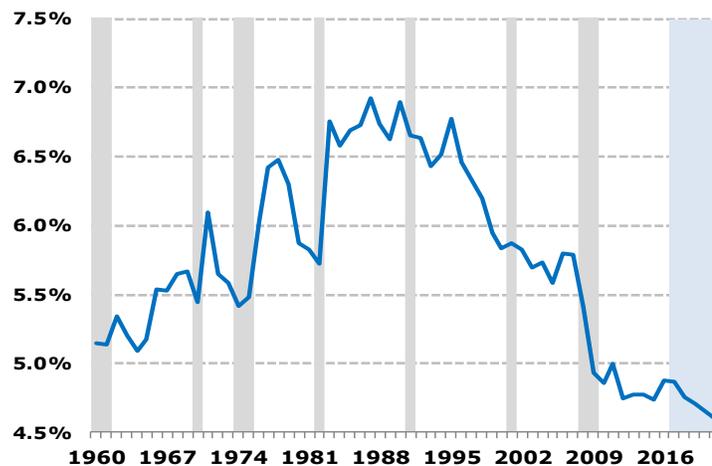
	<b>2015-17 Biennium</b>	<b>2017-19 Biennium</b>	<b>2019-21 Biennium</b>
Collection Experience	\$132.3	NA	NA
Non-Economic Change	\$0.0	\$0.0	\$0.0
Forecast Change	\$82.4	\$136.6	\$25.6
<b>Total Change</b>	<b>\$214.6</b>	<b>\$136.6</b>	<b>\$25.6</b>

*The ratio of collections to income is at historical lows*

As can be seen in Figure 3.1, the amount of GF-S revenue that is collected relative to state personal income is forecasted to reach its lowest levels in ERFC records. 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 income growth and then decreased slightly in FY 2015. The ratio then spiked in FY 2016 due to revenue increases stemming from legislative changes. The ratio, however, is expected to resume its downward trend from FY 2017 through the end of the forecast period in FY 2021. This forecast is shown in the blue shaded area in the figure. In fiscal year 2021, GF-S revenues are projected to be 4.6% of personal income.

**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 2016

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 2015-17 biennium can be found in Table 3.5 (cash) and Table 3.6 (GAAP). Forecast changes for the 2017-19 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 2019 can be found in Table 3.9.

## Recent Collection Experience

Collections were \$132 million (4.7%) more than the September 2016 forecast

Revenue collections from the Department of Revenue (DOR), Department of Licensing, and Administrative Office of the Courts are tracked monthly. In the period since the September forecast, total revenue from the above sources came in \$132.3 million (4.7%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$83.4 million (3.4%) above the forecast. Revenue from other DOR tax sources was \$48.8 million (12.9%) above the forecast.

Much of the forecast variance was due to an October spike in sales of large commercial properties

Most of the positive variance in non-Revenue Act collections was due to real estate excise taxes (REET) which came in \$33.7 million (23.0%) higher than forecasted. Most of the surplus REET collections occurred in October, due to a \$1.4 billion spike in sales of large commercial properties. Property tax receipts came in \$6.2 million (12.1%) higher than forecasted. Cigarette tax receipts came in \$1.8 million (2.6%) higher than forecasted and liquor sales and liter tax receipts came in \$25,000 (0.1%) lower than forecasted. Transfers of unclaimed property into the GF-S were \$2.8 million (6.6%) higher than forecasted. All other DOR revenue sources came in \$4.4 million (15.4%) higher than forecasted. Revenue from the Department of Licensing was \$0.6 million (65.9%) higher than forecasted and revenue from the Administrative Office of the Courts was \$0.6 million (4.7%) lower than forecasted.

**Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the September 2016 forecast, cash basis, millions of dollars)**

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$83.4	3.4%
Non-Revenue Act	\$48.8	12.9%
Subtotal	\$132.3	4.7%
Department of Licensing		
Administrative Office of the Courts	(\$0.6)	-4.7%
<b>Total*</b>	<b>\$132.3</b>	<b>4.7%</b>

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

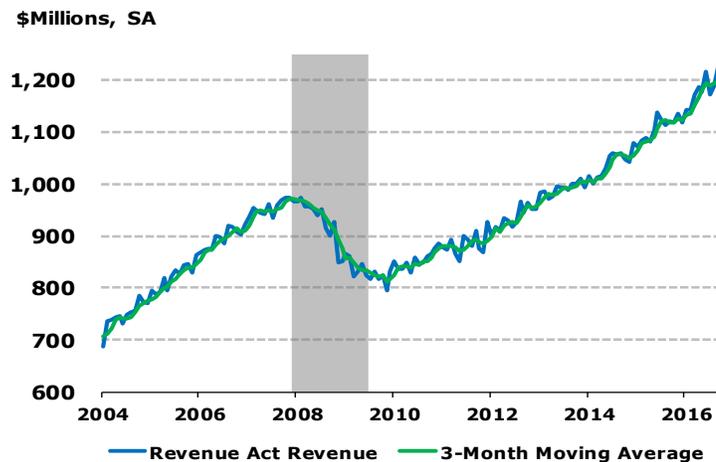
Source: ERFC; Period: September 11 - November 10, 2016

*Adjusted Revenue Act collections were up 9.9% year over year in the most recent collection period and up 8.4% 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. Growth was aided by a temporary increase in the business and occupation tax rate paid by service industries that took effect in May 2010. This temporary increase expired on July 1, 2013. As can be seen in the figure, collections have been very strong for the last two collection periods. Adjusted for large one-time audit payments and refunds, year-over-year growth was 9.9% in the October 11 – November 10, 2016 collection period and 8.4% in the previous period. Due to a lower 3.3% growth rate in August 11 – September 10 collections, however, adjusted year-over-year growth in collections representing third quarter 2016 activity (August 11 – November 10, 2016) was only 7.2%. Collections growth for adjusted second quarter activity (May 11 – August 10) was 7.6%, the same growth rate as collections for first quarter activity (February 11 – May 10 collections).

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

*Adjusted Revenue Act collections increased in the last two collection periods after a decline in the previous period*

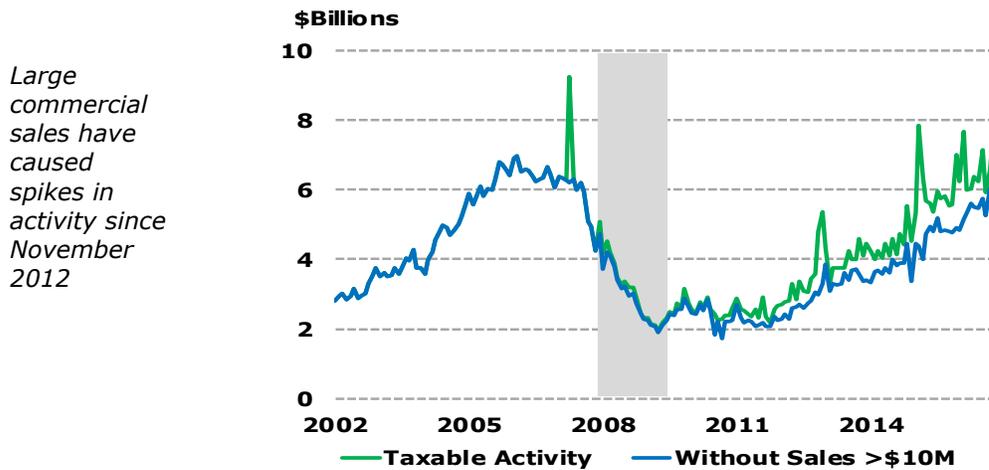


Source: ERFC; Data through November 10, 2016 preliminary allocation  
\*Adjusted for large payments/refunds and payment pattern change

*Sales of large commercial properties spiked after the September forecast*

Much of the large positive variance in REET collections was due to stronger-than-expected sales of large commercial property. Sales of property worth \$10 million or more totaled \$2.0 billion in the two months since the last forecast. 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 September forecast. The increases in taxable activity have stemmed mostly from increased sale prices rather than an increased number of sales.

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



Source: ERFC; data through October 2016

## Revenue Forecasts by Source

### Department of Revenue

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

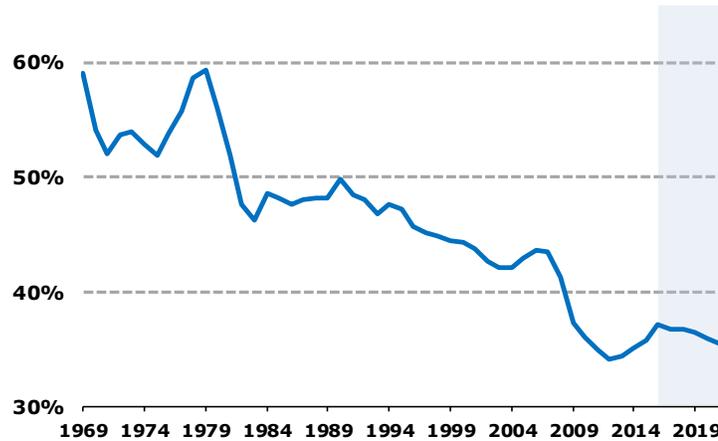
The Department of Revenue (DOR) collects and administers the majority of Washington’s GF-S revenue, accounting for 95% of total GF-S revenue in FY 2016. The largest tax sources administered by the DOR are the retail sales tax, business and occupation tax, property tax, use tax, cigarette tax and real 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 48.1% of GF-S revenue in FY 2016. 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 2016, reaching 37.1% of personal income. From FY 2016 on, however, the share is expected to continue to decline through FY 2021, reaching 35.6% in that year. 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 2016, forecast through FY 2021

*Retail sales tax receipt growth forecast:*

*FY17: 5.2%  
FY18: 3.7%  
FY19: 4.4%  
FY20: 3.9%  
FY21: 3.8%*

The growth rate of taxable retail activity improved from 4.1% in FY 2012 to 6.7% in FY 2013, due mainly to increasing construction activity. Continued growth in construction, along with the newly-revoked sales tax exemption on wired home phone lines, brought growth in taxable activity of 6.4% in FY 2014. Construction and auto sales brought growth to 8.1% in FY 2015. The abovementioned legislative changes coupled with continued but slower growth in construction and auto sales boosted growth in FY 2016 taxable activity to 8.4%. Growth is forecasted to dip to 3.8% in FY 2017 due to the relatively elevated level of FY 2016 activity. Growth is then expected to return to 4.4% in FY 2018 and FY 2019 before slowing through the end of the forecast period, reaching 3.8% growth in FY 2021 (see Table 3.4). Due to the lag between taxable activity and collections and the presence of tax deferrals, credits, refunds, and payments of past due taxes, the growth in actual collections differs from the growth in taxable activity. Growth in collections for FY 2016 was 8.8%. Growth is forecasted at 5.2% in FY 2017, 3.7% in FY 2018, 4.4% in FY 2019, 3.9% in FY 2020 and 3.8% in FY 2021.

*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 19.5% of GF-S revenue in FY 2016. 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:*

*FY17: 4.2%  
FY18: 4.8%  
FY19: 5.2%  
FY20: 4.9%  
FY21: 4.9%*

In FY 2013, B&O tax receipts grew by 5.8%. The expiration of a temporary increase in the B&O service tax rate on July 1, 2013, in addition to several large refunds, caused receipts to shrink by 1.8% in FY 2014. Growth in FY 2015, also affected by large refunds, was 4.1%. Growth in FY 2016 was 7.3%, due largely to legislative changes from the 2015 session. Growth is forecasted to decrease to 4.2% in FY 2017 before increasing to 4.8% in FY 2018 and 5.2% in FY 2019. Growth is forecasted at 4.9% in FY 2020 and FY 2021.

*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 11.0% of total revenue in FY 2016. Although the tax goes into the GF-S, it is dedicated to the funding of basic education. By law, the total state tax levy on existing property can only increase by the lesser of 1% per year or the rate of inflation as measured by the year-over-year change in the U.S. Implicit Price Deflator in the second quarter of the year preceding the levy, unless a greater increase is approved by the voters. The year-to-year growth in the total amount levied, however, can exceed the aforementioned limits due to the value of new construction, property improvements, and other additions to real property assessed by the state. Collections can also grow faster or slower than the rate of assessment growth due to the payment of past due taxes or nonpayment of current taxes.

*Property tax growth forecast:*

*FY17: 1.9%  
FY18: 2.6%  
FY19: 2.7%  
FY20: 2.7%  
FY21: 2.6%*

Property tax collections grew by 2.3% in FY 2015. Second quarter 2015 year-over-year inflation of less than 1% restrained the growth rate of the calendar year 2016 levy, keeping collections growth to 2.1% in FY 2016 and expected growth of 1.9% in FY 2017. Forecasted inflation of over 1% in the second quarter of 2016 plus forecasted increases in the level of new construction boosts growth to 2.6% in FY 2018. Growth is expected at 2.7% in FY 2019 and FY 2020, with growth of 2.6% in FY 2021.

*REET was the fourth largest GF-S source in FY 2016*

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2016, accounting for 4.8% 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:*

*FY17: 0.5%*  
*FY18: -9.5%*  
*FY19: 2.0%*  
*FY20: 3.3%*  
*FY21: 3.1%*

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 have slowed somewhat in FY 2017, the residential market has picked up the slack, resulting in an expected further 0.5% increase in REET for the current fiscal year. The decline in large commercial sales is expected to accelerate in FY 2018, resulting in a 9.5% decrease in collections despite continued residential sales growth. Growth in total collections is then forecasted to resume at 2.0% in FY 2019, 3.3% in FY 2020 and 3.1% in FY 2021.

*Use tax was the fifth largest GF-S source in FY 2016*

The state use tax was the fifth largest GF-S revenue source in FY 2016 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:*

*FY17: 1.4%*  
*FY18: 0.2%*  
*FY19: 4.0%*  
*FY20: 3.9%*  
*FY21: 3.6%*

Use tax receipts grew by 7.8% in FY 2014, boosted by strong sales of used vehicles and a temporary increase in payments from the manufacturing sector in the 4<sup>th</sup> quarter of 2013. Despite a reduction in collections from the manufacturing sector, increases in construction and used vehicle sales brought growth to 6.4% in FY 2015. A large audit payment plus the legislated elimination of certain tax exemptions boosted growth to 7.1% in FY 2016. Coming off of FY 2016's high level, collections are forecasted to increase by only 1.4% in FY 2017 and 0.2% in FY 2018. Growth is then expected to occur at more normal levels of 4.0% in FY 2019, 3.9% in FY 2020 and 3.6% in FY 2021.

*Public utility taxes were the sixth largest GF-S source in FY 2016*

Public utility taxes were the sixth largest DOR source of GF-S revenue in FY 2016, bringing in 2.2% 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:*

*FY17: 3.2%*  
*FY18: 5.4%*  
*FY19: 4.4%*  
*FY20: 4.0%*  
*FY21: 4.6%*

Public utility tax receipts decreased by 3.2% in FY 2015 due to low and declining natural gas and electricity prices and moderate weather. Increases in electricity prices in some markets brought growth of 4.5% in FY 2016. FY 2017 growth is forecasted to slow to 3.2% due to FY 2016's elevated level. Other increases in projected utility prices bring expected growth of 5.4% in FY 2018, slowing to 4.4% in FY 2019 and 4.0% in FY 2020 and then increasing to 4.6% in FY 2021.

*The cigarette tax was the seventh largest GF-S source in FY 2016*

The state tax on cigarettes was the seventh largest DOR GF-S revenue source in FY 2016 at 2.1% 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:*

*FY17: -2.7%  
FY18: -3.0%  
FY19: -2.6%  
FY20: -2.9%  
FY21: -2.3%*

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. FY 2014 receipts decreased by 3.6%. The decline in collections paused in FY 2015, bringing revenues to a level 1.7% above that of FY 2014. Despite an increase in tax enforcement established in the 2015 legislative session, collections decreased by 1.8% in FY 2016. Collections are forecasted to decrease by 2.7% in FY 2017, 3.0% in FY 2018, 2.6% in FY 2019, 2.9% in FY 2020 and 2.3% in FY 2021.

## **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 and appropriated annually.

*Change in GF-S forecast of total cannabis-related revenue by biennium (millions):  
15-17: \$2.8  
17-19: \$3.2  
19-21: \$2.6*

Distributions of cannabis excise taxes to the GF-S totaled \$15.3 million in the 2013-15 biennium. Forecasted GF-S distributions and fees for the 2015-17 biennium are now expected to total \$149.1 million, \$2.8 million more than forecasted in September. GF-S distributions are forecasted at \$240.9 million in the 2017-19 biennium, an increase of \$3.2 million from the September forecast, and \$274.2 million in the 2019-21 biennium, an

increase of \$2.6 million. Details of the forecasted distributions from the account can be found in Table 3.18.

## Department of Licensing

*Forecast  
change by  
biennium  
(millions):*

15-17: \$0.5  
17-19: \$0.0  
19-21: \$0.0

The majority of GF-S revenue collected by the Department of Licensing is from firearm and event licenses, watercraft excise tax, and boat registration fees. The department's forecast of revenue for the 2015-17 biennium has been increased \$0.5 million to \$37.9 million. The department's forecast for the 2017-19 biennium is unchanged at \$36.9 million and the forecast for the 2019-21 biennium is unchanged at \$36.8 million.

## The Office of Financial Management (Other Agencies)

*Forecast  
change by  
biennium  
(millions):*

15-17: \$2.6  
17-19: \$2.1  
19-21: \$2.5

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 Department of Licensing, the Liquor and Cannabis Board, the Insurance Commissioner, the Washington State Lottery, and the State Treasurer. The office's forecast for the 2015-17 biennium was increased \$2.6 million to \$216.5 million. The forecast for the 2017-19 biennium was increased \$2.1 million to \$213.3 million and the forecast for the 2019-21 biennium was increased \$2.5 million to \$205.7 million. The bulk of the forecast increases came from increases in actual and expected future payments under the Tobacco Master Settlement Agreement.

## State Treasurer

*Forecast  
change by  
biennium  
(millions):*

15-17: \$1.2  
17-19: \$0.1  
19-21: \$0.0

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's forecast for the 2015-17 biennium has been increased \$1.2 million to \$17.3 million due to forecasted slight increases in average fund balances and interest rates. The forecast for the 2017-19 biennium has been increased \$0.1 million to \$28.8 million and the forecast for the 2019-21 biennium was unchanged at \$64.8 million.

## Insurance Commissioner

*Forecast  
change by  
biennium  
(millions):*

15-17: \$0.6  
17-19: \$1.0  
19-21: \$1.8

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 office's forecast of revenue for the 2015-17 biennium has been increased \$0.6 million to \$1,051.3 million. The forecast for the 2017-19 biennium has been increased \$0.1 million to \$1,131.9 million and the forecast for the 2019-21 biennium has been increased \$1.8 million to \$1,210.3 million.

## Liquor and Cannabis Board

*Forecast  
change by  
biennium  
(millions):*

15-17: \$1.0  
17-19: \$4.8  
19-21: \$3.9

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 LCB GF-S revenue for the 2015-17 biennium has been increased \$1.0 million to \$371.0 million. The forecast of revenue for the 2017-19 biennium has been increased \$4.8 million to \$487.9 million and the forecast for the 2019-21 biennium has been increased \$3.9 million to \$538.7 million.

## Lottery Commission

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

15-17: \$4.4  
17-19: \$1.1  
19-21: \$1.1

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 gets transferred to the GF-S. The forecast of transfers into the GF-S for the 2015-17 biennium has been increased \$4.4 million to \$31.4 million. Forecasted transfers for the 2017-19 biennium have been increased \$1.1 million to \$35.8 million and forecasted transfers to the GF-S for the 2019-21 biennium have been increased \$1.1 million to \$44.9 million.

*OPA forecast  
change by  
biennium  
(millions):*

15-17: \$2.5  
17-19: -\$2.2  
19-21: -\$0.1

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 2015-17 biennium has been increased \$2.5 million to \$266.5 million. The forecast for the 2017-19 biennium has been decreased \$2.2 million to \$251.5 million and the forecast for the 2019-21 biennium has been decreased \$0.1 million to \$253.3 million.

## Administrative Office of the Courts

*Forecast  
change by  
biennium  
(millions):*

15-17: -\$1.0  
17-19: -\$3.5  
19-21: -\$5.0

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast of transfers to the GF-S for the 2015-17 biennium has been decreased \$1.1 million to \$157.2 million and the forecast for the 2017-19 biennium has been decreased \$3.5 million to \$151.2 million. The forecast of transfers for the 2019-21 biennium has been decreased \$5.0 million to \$155.2 million.

## Track Record for the 2015-17 Biennium

*The November 2016 forecast is \$1.03 billion (2.8%) higher than it was when the initial biennial budget in 2015 was adopted*

Table 3.10 summarizes the historical changes to the GF-S revenue forecast for the 2015-17 biennium. The September 2012 forecast was the initial forecast for the biennium. The November 2016 forecast for the biennium is \$2.46 billion (6.9%) higher than the initial forecast. Non-economic changes have increased the forecast by \$499 million (1.4%). Excluding non-economic changes, the current forecast is \$1.96 billion (5.5%) higher than the initial forecast. The June 2015 forecast, coupled with the \$193 million in legislative and budget-driven revenue changes passed in the 2015 special legislative sessions, was the basis for the initial budget for the 2015-17 biennium. The November 2016 forecast is \$1.03 billion (2.8%) higher than that sum.

## Track Record for the 2017-19 Biennium

*The November 2016 forecast is \$1.8 billion (4.7%) higher than the initial February 2014 forecast*

Table 3.11 summarizes the historical changes to the GF-S revenue forecast for the 2017-19 biennium. The February 2014 forecast was the initial forecast for the biennium. The November 2016 forecast is \$1.80 billion (4.7%) higher than the initial forecast. Non-economic changes have increased the forecast by \$399 million (1.0%). Excluding non-economic changes, the current forecast is \$1.40 billion (3.6%) 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 2015-17 and 2017-19 biennia are presented in Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for both 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 Biennium

*The forecast implies GF-S reserves of \$2.10 billion at the end of the 2015-17 biennium and \$2.13 billion in reserves for GF-S, ELTA and OPA*

Table 3.12 shows the budgetary balance sheet for the 2015-17 biennium as prepared by the Office of Financial Management and the House and Senate fiscal committees. The balance sheet shows not only projected GF-S spending and resources but also total projected spending and resources for the GF-S plus the other main non-transportation state-funded accounts: the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). As shown in the table, the GF-S beginning fund balance for the 2015-17 biennium is \$990.9 million and the total estimated beginning balance for GF-S, ELTA and OPA is \$1,011.2 million. Based on the November 2016 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$899.3 million at the end of the 2015-17 biennium and GF-S, ELTA and OPA reserves are projected to be \$935.3 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,196.7 million, bringing total projected GF-S reserves to \$2,096.1 million. Projected combined reserves for the ELTA and OPA are \$36.0 million, for total projected reserves of \$2,132.1 million for GF-S, ELTA and OPA at the end of the 2015-17 biennium.

## Alternative Forecasts for the 2015-17 and 2017-19 Biennia

*Optimistic scenario (billions):*

*15-17: +\$0.8  
17-19: +\$3.1*

*Pessimistic scenario:*

*15-17: -\$0.8  
17-19: -\$3.0*

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 2015-17 biennium are shown in Table 3.13 and those of the 2017-19 biennium are shown in Table 3.14. For the 2015-17 biennium, the optimistic forecast generates \$38,811.0 million in GF-S revenue, \$831.3 million (2.2%) more than the baseline scenario, while the pessimistic forecast produces \$37,137.0 million in revenue, \$842.7 million (2.2%) less than the baseline. For the 2017-19 biennium, the optimistic forecast generates \$43,570.8 million in GF-S revenue, \$3,057.1 million (7.5%) more than the baseline scenario, while the pessimistic forecast produces \$37,560.9 million in revenue, \$2,952.8 million (7.3%) less than the baseline.

## Near General Fund Forecasts for the 2015-17–2019-21 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 legislation also added revenue from solid waste taxes beginning

*Near  
General  
Fund  
Forecast  
(millions):*

*2015-17:  
\$38,438.0*

*2017-19:  
\$41,033.0*

*2019-21:*

in FY 2016. All of these added revenue sources will cease to be transferred into the ELTA beginning in FY 2020. The Near General Fund forecast for the 2015-17 biennium is \$38,438.0 million, \$219.9 million more than the September 2016 forecast. The forecast of Near General Fund revenue for the 2017-19 biennium is \$41,033.0 million, \$134.4 million more than the September forecast, and the forecast for the 2019-21 biennium is \$44,012.9 million, \$22.6 million more than the September forecast. 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)

<b>Biennium</b>	<b>Current Dollars</b>	<b>Percent Change</b>	<b>2009 Chained Dollars</b>	<b>Percent Change</b>
1961-63	\$817.1		\$4,300.0	
1963-65	866.2	6.0%	4,439.3	3.2%
1965-67	1,128.6	30.3%	5,565.5	25.4%
1967-69	1,440.5	27.6%	6,658.6	19.6%
1969-71	1,732.7	20.3%	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%	15,008.4	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%	24,520.3	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%	30,930.9	7.0%
2015-17 <sup>F</sup>	37,979.7	12.8%	34,256.1	10.8%
2017-19 <sup>F</sup>	40,513.7	6.7%	35,301.1	3.1%
2019-21 <sup>F</sup>	43,655.6	7.8%	36,657.8	3.8%

<sup>F</sup> November 2016 Forecast.

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

Source: Department of Revenue, the Office of Financial Management and the Economic and Revenue Forecast Council 's June 2016 forecast.

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

<b>Fiscal Year</b>	<b>Amount</b>	<b>Percent Change</b>
1979	22,309	5.6%
1980	24,057	7.8%
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 <sup>F</sup>	146,483	3.8%
2018 <sup>F</sup>	152,950	4.4%
2019 <sup>F</sup>	159,606	4.4%
2020 <sup>F</sup>	165,631	3.8%
2021 <sup>F</sup>	171,876	3.8%

<sup>F</sup> November 2016 forecast

Source: ERF

\* 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).

Table 3.5

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

2015-17 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2016 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$18,264.8	0.0	\$56.2	\$18,321.0	\$56.2
Business & Occupation	7,395.5	0.0	12.6	7,408.2	12.6
Use	1,258.5	0.0	21.6	1,280.1	21.6
Public Utility	813.1	0.0	0.7	813.8	0.7
Liquor Sales/Liter	511.8	0.0	0.4	512.2	0.4
Cigarette	773.7	0.0	(1.2)	772.5	(1.2)
Property (State Levy)	4,138.7	0.0	(4.7)	4,134.0	(4.7)
Real Estate Excise	1,721.6	0.0	53.0	1,774.6	53.0
Timber Excise	4.7	0.0	(0.0)	4.7	(0.0)
Other	1,009.3	0.0	66.7	1,076.1	66.7
Subtotal	35,891.8	0.0	205.4	36,097.2	205.4
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.4	0.0	0.5	37.9	0.5
<b>Insurance Commissioner</b>					
Insurance Premiums	1,050.7	0.0	0.6	1,051.3	0.6
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	312.6	0.0	1.7	314.3	1.7
Beer & Wine Surtax	57.4	0.0	(0.6)	56.7	(0.6)
<b>Lottery Commission</b>					
Lottery Revenue	27.0	0.0	4.4	31.4	4.4
<b>State Treasurer</b>					
Interest Earnings	16.1	0.0	1.2	17.3	1.2
<b>Office of Financial Management</b>					
Other Agencies	213.9	0.0	2.6	216.5	2.6
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	158.2	0.0	(1.0)	157.2	(1.0)
<b>Total General Fund-State *</b>	<b>\$37,765.1</b>	<b>\$0.0</b>	<b>\$214.6</b>	<b>\$37,979.7</b>	<b>\$214.6</b>

<sup>1</sup> Forecast for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council September 21, 2016<sup>2</sup> Forecast for the 2015-17 biennium, adopted November 16, 2016

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

Source: ERFC, Department of Licensing, 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**

2015-17 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2016 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$18,310.3	\$0.0	\$56.2	\$18,366.5	\$56.2
Business & Occupation	7,416.7	0.0	12.6	7,429.3	12.6
Use	1,251.1	0.0	21.6	1,272.7	21.6
Public Utility	809.9	0.0	0.7	810.6	0.7
Liquor Sales/Liter	513.5	0.0	0.4	513.9	0.4
Cigarette	773.9	0.0	(1.2)	772.7	(1.2)
Property (State Levy)	4,139.6	0.0	(4.7)	4,134.9	(4.7)
Real Estate Excise	1,723.4	0.0	53.0	1,776.5	53.0
Timber Excise	4.7	0.0	(0.1)	4.6	(0.1)
Other	1,013.1	0.0	66.7	1,079.8	66.7
Subtotal	35,956.3	0.0	205.3	36,161.6	205.3
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.4	0.0	0.5	37.8	0.5
<b>Insurance Commissioner</b>					
Insurance Premiums	1,050.7	0.0	0.6	1,051.3	0.6
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	312.6	0.5	1.2	314.3	1.7
Beer & Wine Surtax	57.4	0.0	(0.6)	56.7	(0.6)
<b>Lottery Commission</b>					
Lottery Revenue	45.6	0.0	0.4	46.0	0.4
<b>State Treasurer</b>					
Interest Earnings	15.8	0.0	1.3	17.1	1.3
<b>Office of Financial Management</b>					
Other	213.9	0.0	2.6	216.5	2.6
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	158.2	0.0	(1.0)	157.2	(1.0)
<b>Total General Fund-State *</b>	<b>\$37,847.9</b>	<b>\$0.5</b>	<b>\$210.2</b>	<b>\$38,058.5</b>	<b>\$210.6</b>

<sup>1</sup> Forecast for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council September 21, 2016<sup>2</sup> Forecast for the 2015-17 biennium, adopted November 16, 2016

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

Source: ERFC, Department of Licensing, 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**

2017-19 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2016 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$19,800.8	0.0	\$118.7	\$19,919.4	\$118.7
Business & Occupation	8,113.8	0.0	12.1	8,125.8	12.1
Use	1,332.0	0.0	(14.5)	1,317.4	(14.5)
Public Utility	895.6	0.0	(5.0)	890.6	(5.0)
Liquor Sales/Liter	532.2	0.0	(0.0)	532.2	(0.0)
Cigarette	727.9	0.0	1.4	729.3	1.4
Property (State Levy)	4,350.1	0.0	(8.0)	4,342.1	(8.0)
Real Estate Excise	1,615.1	0.0	11.7	1,626.8	11.7
Timber Excise	4.5	0.0	(0.1)	4.5	(0.1)
Other	925.0	0.0	14.7	939.7	14.7
Subtotal	38,296.9	0.0	130.9	38,427.8	130.9
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	36.9	0.0	0.0	37.0	0.0
<b>Insurance Commissioner</b>					
Insurance Premiums	1,130.9	0.0	1.0	1,131.9	1.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	425.8	0.0	5.7	431.5	5.7
Beer & Wine Surtax	57.3	0.0	(0.9)	56.4	(0.9)
<b>Lottery Commission</b>					
Lottery Revenue	34.6	0.0	1.1	35.8	1.1
<b>State Treasurer</b>					
Interest Earnings	28.6	0.0	0.1	28.8	0.1
<b>Office of Financial Management</b>					
Other	211.2	0.0	2.1	213.3	2.1
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	154.7	0.0	(3.5)	151.2	(3.5)
<b>Total General Fund-State *</b>	<b>\$40,377.1</b>	<b>\$0.0</b>	<b>\$136.6</b>	<b>\$40,513.7</b>	<b>\$136.6</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 21, 2016<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 16, 2016

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

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

Table 3.8

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

2017-19 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sept. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2016 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$19,800.8	\$0.0	\$118.7	\$19,919.4	\$118.7
Business & Occupation Use	8,113.8	0.0	12.1	8,125.8	12.1
Public Utility	1,332.0	0.0	(14.5)	1,317.4	(14.5)
Liquor Sales/Liter	895.6	0.0	(5.0)	890.6	(5.0)
Cigarette	532.2	0.0	(0.0)	532.2	(0.0)
Property (State Levy)	727.9	0.0	1.4	729.3	1.4
Real Estate Excise	4,350.1	0.0	(8.0)	4,342.1	(8.0)
Timber Excise	1,615.1	0.0	11.7	1,626.8	11.7
Other	4.5	0.0	(0.1)	4.5	(0.1)
Subtotal	925.0	0.0	14.7	939.7	14.7
	38,297.0	0.0	130.9	38,427.9	130.9
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	36.9	0.0	0.0	37.0	0.0
<b>Insurance Commissioner</b>					
Insurance Premiums	1,130.9	0.0	1.0	1,131.9	1.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	425.8	0.0	5.7	431.5	5.7
Beer & Wine Surtax	57.3	0.0	(0.9)	56.4	(0.9)
<b>Lottery Commission</b>					
Lottery Revenue	35.8	0.0	1.2	37.0	1.2
<b>State Treasurer</b>					
Interest Earnings	29.8	0.0	0.0	29.8	0.0
<b>Office of Financial Management</b>					
Other	211.2	0.0	2.1	213.3	2.1
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	154.7	0.0	(3.5)	151.2	(3.5)
<b>Total General Fund-State *</b>	<b>\$40,379.4</b>	<b>\$0.0</b>	<b>\$136.5</b>	<b>\$40,515.9</b>	<b>\$136.5</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 21, 2016<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 16, 2016

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

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

Table 3.9

**November 2016 General Fund-State history and forecast  
2015-17 to 2019-21 biennia; cash basis**  
(Millions of Dollars)

<b>Forecast by Source</b>	<b>Fiscal 2016</b>	<b>Fiscal 2017</b>	<b>2015-17 Biennium</b>	<b>Fiscal 2018</b>	<b>Fiscal 2019</b>	<b>2017-19 Biennium</b>	<b>Fiscal 2020</b>	<b>Fiscal 2021</b>	<b>2019-21 Biennium</b>
<b>State Taxes</b>									
Retail sales**	\$8,927.3	\$9,393.6	\$18,321.0	\$9,744.4	\$10,175.1	\$19,919.4	\$10,569.1	\$10,975.3	\$21,544.4
Business & occupation	3,628.4	3,779.7	7,408.2	3,959.6	4,166.2	8,125.8	4,369.3	4,582.6	8,951.9
Use**	635.8	644.4	1,280.1	645.7	671.8	1,317.4	697.6	722.9	1,420.5
Public Utility	400.5	413.3	813.8	435.6	455.0	890.6	473.2	495.0	968.3
Liquor sales/liter	252.9	259.4	512.2	263.3	268.9	532.2	275.0	281.1	556.1
Beer & wine surtax	29.1	27.6	56.7	28.2	28.2	56.4	28.3	28.4	56.7
Cigarette	400.6	390.1	790.7	378.0	368.5	746.5	358.0	350.1	708.1
Tobacco products	51.6	50.3	101.9	50.3	50.7	101.1	51.1	51.6	102.7
Cannabis Excise Taxes	48.1	95.7	143.8	112.4	124.0	236.4	131.6	138.1	269.7
Property (state school levy)	2,047.1	2,087.0	4,134.0	2,142.0	2,200.1	4,342.1	2,259.5	2,319.2	4,578.8
Leasehold Excise Tax	32.9	32.2	65.1	32.0	31.9	63.9	32.1	32.3	64.4
Public utility district	51.2	51.8	102.9	52.4	53.0	105.4	54.0	55.1	109.1
Brokered Natural Gas	21.4	22.0	43.4	20.9	21.0	41.9	21.2	21.5	42.7
Real estate excise***	885.1	889.5	1,774.6	805.4	821.4	1,626.8	848.3	874.9	1,723.1
Timber excise	2.8	1.9	4.7	2.2	2.3	4.5	2.3	2.4	4.7
Estate/inheritance	0.3	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Boat excise	13.8	13.2	27.0	13.2	13.2	26.4	13.2	13.2	26.4
Insurance premiums	510.1	541.1	1,051.3	556.3	575.6	1,131.9	592.9	617.3	1,210.3
Penalties and interest on past due taxes	178.9	249.2	428.1	153.9	159.8	313.7	166.0	172.5	338.4
Other	56.6	56.1	112.7	57.0	35.8	92.8	36.5	37.2	73.7
<b>Total Taxes</b>	<b>18,174.7</b>	<b>18,998.1</b>	<b>37,172.8</b>	<b>19,452.8</b>	<b>20,222.4</b>	<b>39,675.2</b>	<b>20,979.4</b>	<b>21,770.7</b>	<b>42,750.1</b>
<b>State Non-Tax Sources</b>									
Licenses, permits, fees	141.9	144.8	286.6	146.5	149.1	295.7	151.8	154.7	306.6
Liquor & Cannabis fees	81.7	88.8	170.5	95.5	99.6	195.2	103.7	108.5	212.3
Earnings on investments	7.3	10.0	17.3	8.7	20.1	28.8	30.9	34.0	64.8
Administrative Office of the Courts	80.8	76.3	157.2	75.5	75.8	151.2	76.9	78.3	155.2
Transfers of unclaimed property	70.7	62.9	133.5	64.1	65.3	129.4	66.6	67.8	134.4
Other revenue & transfers	21.7	20.2	41.9	16.6	21.8	38.3	16.6	15.6	32.2
<b>Total Non-Tax</b>	<b>404.0</b>	<b>402.9</b>	<b>806.9</b>	<b>406.8</b>	<b>431.7</b>	<b>838.5</b>	<b>446.5</b>	<b>459.0</b>	<b>905.5</b>
<b>Total General Fund-State *</b>	<b>\$18,578.7</b>	<b>\$19,401.1</b>	<b>\$37,979.7</b>	<b>\$19,859.6</b>	<b>\$20,654.1</b>	<b>\$40,513.7</b>	<b>\$21,425.9</b>	<b>\$22,229.7</b>	<b>\$43,655.6</b>

\* Detail may not add to totals due to rounding

\*\*GFS portion after Initiative 900 transfer

\*\*\*Includes penalties and interest

Table 3.10

**Track Record for the 2015-17 General Fund-State Cash Forecast**

September 2012 through November 2016

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis</u></b>
<b>September 2012<sup>#</sup></b>	\$34,102	\$1,416				\$35,518
<b>Changes to Forecast</b>						
November 2012	(196)	33	(163)	0	(163)	35,355
March 2013	(92)	44	(49)	0	(49)	35,306
June 2013	56	2	58	(7) <sup>#1</sup>	51	35,357
September 2013	95	(2)	93	249 <sup>#2</sup>	342	35,699
November 2013	(47)	3	(44)	(41) <sup>#3</sup>	(85)	35,615
February 2014	5	26	31	51 <sup>#4</sup>	82	35,697
June 2014	194	40	233	5 <sup>#5</sup>	238	35,935
September 2014	168	(25)	143	0	143	36,078
November 2014	239	3	241	0	241	36,319
February 2015	108	22	129	0	129	36,449
June 2015	201	70	270	39 <sup>#6</sup>	309	36,758
September 2015	80	60	139	193 <sup>#7</sup>	333	37,091
November 2015	107	(8)	99	15 <sup>#8</sup>	113	37,204
February 2016	(101)	33	(67)	0	(67)	37,137
June 2016	330	(32)	298	(5) <sup>#9</sup>	294	37,431
September 2016	327	8	334	0	334	37,765
November 2016	205	9	215	0	215	37,980
<b>Total change***:</b>						
From September 2012	1,678	284	1,962	499	2,461	
Percent change	4.9	20.1	5.5	1.4	6.9	

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

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

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

<sup>#</sup> First official forecast for the 2015-17 biennium.<sup>#1</sup> Transfer of GF-S funds to Child and Family Reinvestment Account<sup>#2</sup> Legislative and budget-driven revenue changes from 2013 second special session<sup>#3</sup> Re-classification of prior period adjustments as non-revenue resources<sup>#4</sup> Cannabis excise taxes and fees plus retail sales and B&O taxes on cannabis production and sales resulting from Initiative 502<sup>#5</sup> Sum of legislative and budget-driven revenue changes from the 2014 regular legislative session<sup>#6</sup> Legislative revenue changes from 2015 regular legislative session<sup>#7</sup> Legislative and budget driven revenue changes from 2015 special legislative sessions<sup>#8</sup> Sum of large expected audit payments<sup>#9</sup> Legislative and budget-driven revenue changes from the 2016 regular and first special legislative sessions plus \$3.3 million AG settlement

Table 3.11

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

February 2014 through November 2016

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis#</u></b>
<b>February 2014 ##</b>	\$36,887	\$1,823				\$38,710
<b>Changes to Forecast</b>						
June 2014	265	50	315	(1) #1	313	39,023
September 2014	227	(63)	164	0	164	39,188
November 2014	388	26	415	0	415	39,602
February 2015	126	28	154	0	154	39,757
June 2015	257	64	321	122 #2	443	40,200
September 2015	4	47	52	286 #3	338	40,538
November 2015	35	(5)	30	0	30	40,567
February 2016	(449)	7	(442)	0	(442)	40,125
June 2016	187	(53)	134	(8) #4	126	40,252
September 2016	135	(10)	125	0	125	40,377
November 2016	131	6	137	0	137	40,514
<b>Total change***:</b>						
From February 2014	1,308	96	1,405	399	1,804	
Percent change	3.5	5.3	3.6	1.0	4.7	

\* 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

Table 3.12

**2015-17 Enacted Budget Balance Sheet**  
**General Fund-State (GFS), Education Legacy Trust Account (ELTA),**  
**Opportunity Pathways Account (OPA) and Budget Stabilization Account**  
Dollars in Millions

	2015-17		
	GFS	ELTA and OPA	TOTAL
<b>RESOURCES</b>			
<b>Beginning Fund Balance</b>	<b>990.9</b>	<b>20.3</b>	<b>1,011.2</b>
September 2016 Revenue Forecast	37,765.1	717.0	38,482.1
November 2016 Revenue Forecast Change	214.6	7.8	222.4
<b>Current Revenue Totals</b>	<b>37,979.7</b>	<b>724.8</b>	<b>38,704.5</b>
Transfer to Budget Stabilization Account (1% of GSR)	(377.8)		(377.8)
Transfer to Budget Stabilization Account (EORG)	(526.3)		(526.3)
Transfer from BSA (EORG)	75.0		75.0
CAFR Adjustment	(8.3)	(10.0)	(18.3)
Other Enacted Fund Transfers	207.4		207.4
Actual/Assumed Prior Period Adjustments	87.6		87.6
<b>Total Resources (including beginning fund balance)</b>	<b>38,428.2</b>	<b>735.1</b>	<b>39,163.3</b>
<b>EXPENDITURES</b>			
<b>2015-17 Biennium</b>			
Enacted Budget	37,754.4	699.1	38,453.5
Actual/Assumed Reversions	(225.5)	-	(225.5)
	-		-
<b>Total Expenditures</b>	<b>37,528.9</b>	<b>699.1</b>	<b>38,228.0</b>
<b>RESERVES</b>			
<b>Projected Ending Balance (GFS + ELTA + OPA)</b>	<b>899.3</b>	<b>36.0</b>	<b>935.3</b>
<b>Budget Stabilization Account</b>			
Budget Stabilization Account Beginning Balance	513.1		513.1
Plus Transfers from General Fund, Interest Earnings and Adjustments	911.1		911.1
Less 2016 Appropriations From BSA: Fires	(189.5)		(189.5)
Actual 2016 Reversions	37.0		37.0
Less Transfers Out to GFS (Extraordinary Revenue)	(75.0)		(75.0)
<b>Projected Budget Stabilization Account Ending Balance</b>	<b>1,196.7</b>		<b>1,196.7</b>
<b>Total Reserves (Near General Fund plus Budget Stabilization)</b>	<b>2,096.1</b>	<b>36.0</b>	<b>2,132.1</b>

Table 3.13

**Alternative forecasts compared to the baseline forecast  
2015-17 biennium**

(cash basis, millions of dollars)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$18,812.8	\$18,321.0	\$17,826.8
Business & Occupation Use	7,606.6	7,408.2	7,215.2
Public Utility	1,317.0	1,280.1	1,241.4
Property (school levy)	835.5	813.8	791.2
Real Estate Excise	4,139.4	4,134.0	4,128.2
Other	1,784.3	1,774.6	1,746.2
Subtotal	2,383.5	2,365.5	2,354.4
	36,879.1	36,097.2	35,303.4
<b>Department of Licensing</b>			
	38.2	37.9	37.5
<b>Insurance Commissioner<sup>1</sup></b>			
	1,078.3	1,051.3	1,024.2
<b>Lottery Commission</b>			
	33.0	31.4	29.9
<b>State Treasurer - Interest earnings</b>			
	22.9	17.3	11.1
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>			
	383.6	371.0	359.0
<b>Office of Financial Management</b>			
Other agencies	217.6	216.5	215.4
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	158.3	157.2	156.5
<b>Total General Fund - State*</b>	<b>\$38,811.0</b>	<b>\$37,979.7</b>	<b>\$37,137.0</b>
<b>Difference from November 2016 Baseline</b>	<b>\$831.3</b>		<b>(\$842.7)</b>

1 Insurance premiums, General Fund-State portion.

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

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

Source: ERFC, Department of Licensing, 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  
2017-19 biennium**

(cash basis, millions of dollars)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$21,703.5	\$19,919.4	\$18,273.4
Business & Occupation Use	8,800.5	8,125.8	7,495.7
Public Utility	1,428.3	1,317.4	1,194.7
Property (school levy)	954.3	890.6	848.0
Real Estate Excise	4,363.0	4,342.1	4,318.8
Other	1,878.1	1,626.8	1,316.3
Subtotal	2,237.3	2,205.7	2,138.8
	41,364.9	38,427.8	35,585.7
<b>Department of Licensing</b>			
	37.7	37.0	36.2
<b>Insurance Commissioner<sup>1</sup></b>			
	1,188.5	1,131.9	1,075.3
<b>Lottery Commission</b>			
	37.5	35.8	34.0
<b>State Treasurer - Interest earnings</b>			
	51.9	28.8	8.0
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>			
	512.1	487.9	468.2
<b>Office of Financial Management</b>			
Other agencies	219.7	213.3	206.9
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	158.6	151.2	146.6
<b>Total General Fund - State*</b>	<b>\$43,570.8</b>	<b>\$40,513.7</b>	<b>\$37,560.9</b>
<b>Difference from November 2016 Baseline</b>	<b>\$3,057.1</b>		<b>(\$2,952.8)</b>

1 Insurance premiums, General Fund-State portion.

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

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

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

Table 3.15

**Lottery transfers by fund**November 2016 Forecast  
(cash basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2010	126.4	12.9	5.1	9.2	0.0	95.6	0.3	3.3	0.0	0.0	0.0
2011	137.2	8.6	5.3	9.6	0.0	9.4	0.3	4.5	99.5	0.0	0.0
2009-11 Biennium	263.6	21.5	10.4	18.8	0.0	105.0	0.5	7.9	99.5	0.0	0.0
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	158.8	14.3	0.0	12.2	0.0	0.0	0.3	3.6	127.4	0.0	0.0
2015-17 Biennium	330.3	31.4	0.0	23.8	0.0	0.0	0.7	6.9	266.5	0.0	0.0
2018	157.9	16.1	0.0	12.6	0.0	0.0	0.3	3.6	124.7	0.0	0.0
2019	164.0	19.7	0.0	13.1	0.0	0.0	0.3	3.6	126.7	0.0	0.0
2017-19 Biennium	321.9	35.8	0.0	25.8	0.0	0.0	0.7	7.3	251.5	0.0	0.0
2020	166.6	21.6	0.0	13.7	0.0	0.0	0.3	3.6	126.8	0.0	0.0
2021	168.0	23.3	0.0	14.2	0.0	0.0	0.3	3.6	126.5	0.0	0.0
2019-21 Biennium	334.6	44.9	0.0	27.9	0.0	0.0	0.7	7.3	253.3	0.0	0.0

Table 3.16

**Lottery transfers by fund**November 2016 Forecast  
(GAAP basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2010	129.4	12.9	5.1	9.2	0.0	97.4	0.3	4.6	0.0	0.0	0.0
2011	138.2	7.0	5.3	9.6	0.0	0.0	0.3	3.7	112.3	0.0	0.0
2009-11 Biennium	267.6	19.9	10.4	18.8	0.0	97.4	0.5	8.3	112.3	0.0	0.0
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	157.1	14.0	0.0	12.2	0.0	0.0	0.3	3.6	126.0	0.0	0.0
2015-17 Biennium	332.6	46.0	0.0	23.8	0.0	0.0	0.7	6.5	254.7	0.0	0.0
2018	159.9	17.3	0.0	12.6	0.0	0.0	0.3	3.6	125.5	0.0	0.0
2019	162.8	19.7	0.0	13.1	0.0	0.0	0.3	3.6	125.5	0.0	0.0
2017-19 Biennium	322.7	37.0	0.0	25.8	0.0	0.0	0.7	7.3	251.0	0.0	0.0
2020	165.4	21.6	0.0	13.7	0.0	0.0	0.3	3.6	125.6	0.0	0.0
2021	167.9	23.3	0.0	14.2	0.0	0.0	0.3	3.6	125.9	0.0	0.0
2019-21 Biennium	333.3	44.9	0.0	27.9	0.0	0.0	0.7	7.3	251.5	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)

November 2016 - 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 1997	\$9,449	5.8%			\$9,449	5.8%			\$9,449	5.8%
FY 1998	\$10,057	6.4%			\$10,057	6.4%			\$10,057	6.4%
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%
Forecast:										
FY 2017	\$19,401	4.4%	\$244	13.4%	\$19,645	4.5%	\$127	-8.5%	\$19,772	4.4%
FY 2018	\$19,860	2.4%	\$248	1.7%	\$20,107	2.4%	\$125	-2.1%	\$20,232	2.3%
FY 2019	\$20,654	4.0%	\$272	9.7%	\$20,926	4.1%	\$127	1.6%	\$21,052	4.1%
FY 2020	\$21,426	3.7%	\$177	-35.0%	\$21,603	3.2%	\$127	0.0%	\$21,729	3.2%
FY 2021	\$22,230	3.8%	\$181	2.2%	\$22,410	3.7%	\$127	-0.2%	\$22,537	3.7%
<b>Biennial Totals</b>										
<b>05-07 Biennium</b>	<b>\$29,785</b>	<b>17.3%</b>	<b>\$381</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>
<b>07-09 Biennium</b>	<b>\$29,817</b>	<b>0.1%</b>	<b>\$437</b>	<b>14.8%</b>	<b>\$30,254</b>	<b>0.3%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,254</b>	<b>0.3%</b>
<b>09-11 Biennium</b>	<b>\$28,218</b>	<b>-5.4%</b>	<b>\$269</b>	<b>-38.5%</b>	<b>\$28,487</b>	<b>-5.8%</b>	<b>\$99</b>	<b>NA</b>	<b>\$28,586</b>	<b>-5.5%</b>
<b>11-13 Biennium</b>	<b>\$30,657</b>	<b>8.6%</b>	<b>\$215</b>	<b>-19.9%</b>	<b>\$30,872</b>	<b>8.4%</b>	<b>\$244</b>	<b>145.2%</b>	<b>\$31,116</b>	<b>8.8%</b>
<b>13-15 Biennium</b>	<b>\$33,666</b>	<b>9.8%</b>	<b>\$405</b>	<b>88.0%</b>	<b>\$34,071</b>	<b>10.4%</b>	<b>\$234</b>	<b>-4.1%</b>	<b>\$34,305</b>	<b>10.2%</b>
<b>15-17 Biennium</b>	<b>\$37,980</b>	<b>12.8%</b>	<b>\$458</b>	<b>13.2%</b>	<b>\$38,438</b>	<b>12.8%</b>	<b>\$267</b>	<b>13.9%</b>	<b>\$38,705</b>	<b>12.8%</b>
<b>17-19 Biennium</b>	<b>\$40,514</b>	<b>6.7%</b>	<b>\$519</b>	<b>13.3%</b>	<b>\$41,033</b>	<b>6.8%</b>	<b>\$251</b>	<b>-5.6%</b>	<b>\$41,284</b>	<b>6.7%</b>
<b>19-21 Biennium</b>	<b>\$43,656</b>	<b>7.8%</b>	<b>\$357</b>	<b>-31.2%</b>	<b>\$44,013</b>	<b>7.3%</b>	<b>\$253</b>	<b>0.7%</b>	<b>\$44,266</b>	<b>7.2%</b>

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

Table 3.18  
**Forecasted distribution of excise tax and license fees from cannabis sales**  
 November 2016  
 Thousands of dollars

Fiscal year	Total of cannabis excise taxes plus license fees	Administrative expenses 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	\$303,603	\$9,201	\$294,402	\$27,786	\$7,500	\$345	\$147,201	\$12,979	\$511	\$98,080
2018	\$352,340	\$9,201	\$343,139	\$27,786	\$9,750	\$1,702	\$171,570	\$17,157	\$511	\$114,664
2019	\$378,094	\$9,201	\$368,893	\$27,786	\$9,750	\$1,702	\$184,446	\$18,445	\$511	\$126,253
2020	\$394,999	\$9,201	\$385,798	\$27,786	\$9,750	\$1,702	\$192,899	\$19,290	\$511	\$133,860
2021	\$409,496	\$9,201	\$400,295	\$27,786	\$9,750	\$1,702	\$200,148	\$20,015	\$511	\$140,384
<b>Biennial totals</b>										
2013-15	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269
2015-17	\$471,654	\$17,752	\$453,902	\$40,600	\$15,000	\$690	\$226,951	\$20,770	\$762	\$149,129
2017-19	\$730,434	\$18,402	\$712,032	\$55,572	\$19,500	\$3,404	\$356,016	\$35,602	\$1,022	\$240,916
2019-21	\$804,495	\$18,402	\$786,093	\$55,572	\$19,500	\$3,404	\$393,046	\$39,305	\$1,022	\$274,244

\*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 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	15,982.3	16,397.2	16,649.8	17,018.9	17,376.3	17,741.2	18,113.8	18,476.1
% Ch	2.4	2.6	1.5	2.2	2.1	2.1	2.1	2.0
Real Consumption	10,868.9	11,214.7	11,504.0	11,782.9	12,042.1	12,307.0	12,565.5	12,829.4
% Ch	2.9	3.2	2.6	2.4	2.2	2.2	2.1	2.1
Real Nonresidential Fixed Investment	2,155.6	2,200.2	2,197.3	2,300.6	2,387.3	2,485.2	2,587.9	2,676.8
% Ch	6.0	2.1	-0.1	4.7	3.8	4.1	4.1	3.4
Real Residential Fixed Investment	505.4	564.5	588.1	603.9	624.9	642.4	660.2	681.0
% Ch	3.5	11.7	4.2	2.7	3.5	2.8	2.8	3.2
Real Personal Income	13,567.7	14,112.9	14,417.7	14,731.7	15,120.6	15,534.8	15,947.0	16,335.7
% Ch	3.7	4.0	2.2	2.2	2.6	2.7	2.7	2.4
Real Per Capita Income (\$/Person)	42,464	43,831	44,431	45,031	45,851	46,734	47,600	48,384
% Ch	2.9	3.2	1.4	1.3	1.8	1.9	1.9	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.091	1.095	1.107	1.127	1.148	1.168	1.191	1.215
% Ch	1.5	0.4	1.1	1.8	1.8	1.8	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.367	2.370	2.400	2.461	2.518	2.571	2.629	2.688
% Ch	1.6	0.1	1.3	2.5	2.3	2.1	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.206	1.233	1.263	1.298	1.337	1.380	1.426	1.474
% Ch	2.0	2.3	2.4	2.8	3.0	3.2	3.4	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,393.1	18,036.7	18,564.2	19,399.2	20,230.5	21,071.6	21,958.6	22,864.3
% Ch	4.2	3.7	2.9	4.5	4.3	4.2	4.2	4.1
Personal Income	14,809.8	15,458.5	15,966.2	16,605.4	17,353.0	18,148.0	18,989.8	19,841.9
% Ch	5.2	4.4	3.3	4.0	4.5	4.6	4.6	4.5
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.9	157.1	159.3	161.2	163.0	164.6	166.2	167.2
Total U.S. Employment	146.3	148.8	151.4	153.5	155.4	156.9	158.2	159.1
Unemployment Rate (%)	6.17	5.28	4.90	4.72	4.63	4.66	4.71	4.79
Nonfarm Payroll Employment	138.94	141.83	144.31	146.07	147.21	148.42	149.68	150.67
% Ch	1.9	2.1	1.7	1.2	0.8	0.8	0.8	0.7
Manufacturing	12.18	12.32	12.29	12.29	12.40	12.57	12.74	12.85
% Ch	1.4	1.1	-0.3	0.0	0.9	1.4	1.3	0.9
Durable Manufacturing	7.67	7.76	7.69	7.69	7.81	7.94	8.09	8.21
% Ch	1.7	1.1	-0.9	0.1	1.5	1.7	1.9	1.5
Nondurable Manufacturing	4.51	4.56	4.60	4.60	4.59	4.63	4.64	4.64
% Ch	0.9	1.1	0.8	0.0	-0.1	0.8	0.3	-0.1
Construction	6.15	6.44	6.66	6.79	6.94	7.10	7.26	7.45
% Ch	5.0	4.8	3.3	1.9	2.2	2.3	2.3	2.6
Service-Providing	119.71	122.25	124.67	126.30	127.15	128.02	128.93	129.62
% Ch	1.8	2.1	2.0	1.3	0.7	0.7	0.7	0.5
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	93.3	48.7	42.6	48.9	51.5	52.9	54.2	55.3
Personal Saving/Disposable Income (%)	5.6	5.8	5.7	5.4	5.7	6.0	6.2	6.3
Auto Sales (Millions)	7.7	7.5	6.8	6.7	6.6	6.7	6.8	6.8
% Ch	1.6	-2.5	-9.1	-2.1	-1.2	1.0	1.5	0.1
Housing Starts (Millions)	1.001	1.108	1.152	1.225	1.318	1.387	1.458	1.507
% Ch	7.8	10.7	3.9	6.3	7.6	5.3	5.1	3.4
Federal Budget Surplus (Billions)	-612.9	-569.7	-680.3	-676.7	-717.5	-756.4	-743.7	-758.5
Net Exports (Billions)	-508.8	-522.0	-482.5	-440.1	-436.6	-442.6	-432.8	-424.5
3-Month Treasury Bill Rate (%)	0.03	0.05	0.30	0.71	1.36	2.23	2.58	2.58
10-Year Treasury Note Yield (%)	2.54	2.14	1.77	2.11	2.68	3.29	3.51	3.49
Bond Index of 20 G.O. Munis. (%)	4.24	3.66	3.22	3.55	4.40	4.90	5.06	5.04
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.58	3.93	4.65	5.34	5.58	5.57

Table A1.2  
**U.S. Economic Forecast Summary**  
Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	16,525.0	16,583.1	16,702.1	16,789.2	16,881.6	16,976.8	17,066.5	17,150.7
% Ch , Annual Rate	0.8	1.4	2.9	2.1	2.2	2.3	2.1	2.0
Real Consumption	11,365.2	11,484.9	11,545.8	11,620.2	11,686.6	11,753.9	11,816.6	11,874.5
% Ch , Annual Rate	1.6	4.3	2.1	2.6	2.3	2.3	2.1	2.0
Real Nonresidential Fixed Investment	2,179.7	2,185.0	2,191.2	2,233.1	2,262.0	2,291.0	2,313.8	2,335.7
% Ch , Annual Rate	-3.4	1.0	1.1	7.9	5.3	5.2	4.0	3.8
Real Residential Fixed Investment	600.7	588.7	579.3	583.9	590.7	600.3	609.2	615.3
% Ch , Annual Rate	7.8	-7.8	-6.2	3.2	4.8	6.6	6.1	4.0
Real Personal Income	14,313.2	14,380.5	14,467.4	14,509.6	14,603.2	14,697.9	14,769.5	14,856.2
% Ch , Annual Rate	1.0	1.9	2.4	1.2	2.6	2.6	2.0	2.4
Real Per Capita Income (\$/Person)	44,244	44,367	44,537	44,576	44,773	44,973	45,101	45,275
% Ch , Annual Rate	0.4	1.1	1.5	0.4	1.8	1.8	1.1	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.105	1.109	1.115	1.119	1.124	1.130	1.135
% Ch , Annual Rate	0.3	2.0	1.4	2.3	1.4	1.7	2.1	1.8
U.S. Consumer Price Index (1982-84=1.0)	2.379	2.394	2.404	2.425	2.437	2.452	2.470	2.484
% Ch , Annual Rate	-0.3	2.5	1.6	3.6	2.1	2.4	3.0	2.4
Employment Cost Index (Dec. 2005=1.0)	1.252	1.260	1.266	1.273	1.284	1.293	1.302	1.312
% Ch , Annual Rate	2.9	2.6	1.9	2.4	3.2	3.0	2.9	3.0
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	18,281.6	18,450.1	18,651.2	18,873.9	19,081.7	19,291.6	19,511.0	19,712.4
% Ch , Annual Rate	1.3	3.7	4.4	4.9	4.5	4.5	4.6	4.2
Personal Income	15,740.1	15,893.2	16,046.8	16,184.9	16,345.8	16,521.9	16,690.5	16,863.4
% Ch , Annual Rate	1.3	3.9	3.9	3.5	4.0	4.4	4.1	4.2
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	158.8	158.8	159.6	160.0	160.4	161.0	161.4	161.9
Total U.S. Employment	151.0	151.0	151.7	152.0	152.7	153.3	153.7	154.2
Unemployment Rate (%)	4.93	4.87	4.93	4.88	4.78	4.72	4.69	4.68
Nonfarm Payroll Employment	143.53	143.98	144.61	145.12	145.57	145.92	146.24	146.54
% Ch , Annual Rate	1.9	1.3	1.7	1.4	1.3	1.0	0.9	0.8
Manufacturing	12.32	12.29	12.28	12.26	12.25	12.28	12.31	12.33
% Ch , Annual Rate	0.1	-0.9	-0.4	-0.6	-0.4	1.2	0.7	0.7
Durable Manufacturing	7.72	7.69	7.67	7.66	7.65	7.68	7.71	7.74
% Ch , Annual Rate	-0.6	-1.7	-1.0	-0.9	-0.5	1.7	1.7	1.6
Nondurable Manufacturing	4.59	4.60	4.61	4.60	4.60	4.61	4.60	4.59
% Ch , Annual Rate	1.3	0.4	0.6	-0.1	-0.1	0.3	-1.0	-0.7
Construction	6.64	6.65	6.65	6.70	6.74	6.77	6.80	6.84
% Ch , Annual Rate	5.8	0.5	0.6	2.8	2.2	2.1	1.7	2.1
Service-Providing	123.85	124.35	124.99	125.48	125.91	126.18	126.44	126.66
% Ch , Annual Rate	2.0	1.6	2.1	1.6	1.4	0.9	0.8	0.7
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	33.2	45.4	44.9	46.8	46.7	48.6	49.7	50.4
Personal Saving/Disposable Income (%)	6.1	5.7	5.7	5.4	5.5	5.4	5.3	5.4
Auto Sales (Millions)	7.1	6.8	6.8	6.7	6.7	6.7	6.7	6.7
% Ch , Annual Rate	-20.7	-16.3	2.8	-4.3	-2.8	-0.5	2.2	0.6
Housing Starts (Millions)	1.151	1.159	1.138	1.158	1.179	1.209	1.241	1.269
% Ch , Annual Rate	6.0	2.8	-7.1	6.9	7.8	10.5	11.1	9.2
Federal Budget Surplus (Billions)	-668.3	-664.5	-702.0	-686.4	-700.8	-689.7	-662.8	-653.3
Net Exports (Billions)	-507.4	-492.4	-458.6	-471.6	-451.7	-445.4	-433.8	-429.6
3-Month Treasury Bill Rate (%)	0.29	0.26	0.30	0.37	0.58	0.63	0.72	0.91
10-Year Treasury Note Yield (%)	1.92	1.75	1.56	1.85	1.97	2.01	2.12	2.34
Bond Index of 20 G.O. Munis. (%)	3.36	3.26	2.90	3.34	3.45	3.46	3.50	3.80
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.53	3.74	3.82	3.94	4.22

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	17,243.7	17,331.5	17,421.2	17,508.8	17,606.8	17,696.0	17,788.7	17,873.5
% Ch , Annual Rate	2.2	2.1	2.1	2.0	2.3	2.0	2.1	1.9
Real Consumption	11,941.0	12,007.3	12,074.9	12,145.3	12,216.9	12,277.1	12,337.5	12,396.6
% Ch , Annual Rate	2.3	2.2	2.3	2.4	2.4	2.0	2.0	1.9
Real Nonresidential Fixed Investment	2,355.3	2,377.6	2,397.3	2,419.2	2,445.1	2,472.8	2,498.5	2,524.4
% Ch , Annual Rate	3.4	3.8	3.4	3.7	4.3	4.6	4.2	4.2
Real Residential Fixed Investment	619.0	621.6	627.5	631.4	635.0	639.9	645.5	649.1
% Ch , Annual Rate	2.4	1.7	3.8	2.5	2.3	3.1	3.6	2.2
Real Personal Income	14,974.9	15,074.0	15,167.7	15,266.0	15,391.4	15,486.7	15,581.9	15,679.2
% Ch , Annual Rate	3.2	2.7	2.5	2.6	3.3	2.5	2.5	2.5
Real Per Capita Income (\$/Person)	45,546	45,755	45,948	46,154	46,441	46,636	46,830	47,030
% Ch , Annual Rate	2.4	1.9	1.7	1.8	2.5	1.7	1.7	1.7
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.140	1.145	1.150	1.155	1.160	1.165	1.171	1.176
% Ch , Annual Rate	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.498	2.512	2.525	2.538	2.551	2.564	2.578	2.592
% Ch , Annual Rate	2.3	2.1	2.1	2.1	2.1	2.0	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.322	1.332	1.342	1.352	1.363	1.374	1.385	1.397
% Ch , Annual Rate	3.0	3.1	3.1	3.1	3.3	3.2	3.2	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	19,924.7	20,126.4	20,333.6	20,537.5	20,760.2	20,964.4	21,177.5	21,384.4
% Ch , Annual Rate	4.4	4.1	4.2	4.1	4.4	4.0	4.1	4.0
Personal Income	17,072.0	17,260.5	17,444.6	17,635.0	17,859.0	18,048.3	18,242.1	18,442.6
% Ch , Annual Rate	5.0	4.5	4.3	4.4	5.2	4.3	4.4	4.5
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	162.4	162.8	163.2	163.7	164.0	164.5	164.9	165.2
Total U.S. Employment	154.7	155.1	155.6	156.0	156.3	156.7	157.1	157.4
Unemployment Rate (%)	4.65	4.63	4.62	4.62	4.63	4.66	4.67	4.69
Nonfarm Payroll Employment	146.76	147.04	147.36	147.68	147.99	148.27	148.56	148.84
% Ch , Annual Rate	0.6	0.8	0.9	0.9	0.9	0.7	0.8	0.8
Manufacturing	12.35	12.38	12.41	12.46	12.50	12.54	12.59	12.64
% Ch , Annual Rate	0.7	1.0	0.9	1.6	1.5	1.2	1.5	1.8
Durable Manufacturing	7.76	7.79	7.81	7.85	7.89	7.92	7.95	8.00
% Ch , Annual Rate	1.3	1.4	1.1	2.1	1.8	1.5	1.8	2.5
Nondurable Manufacturing	4.58	4.59	4.60	4.61	4.62	4.62	4.63	4.64
% Ch , Annual Rate	-0.3	0.3	0.7	0.9	0.9	0.8	0.9	0.7
Construction	6.88	6.92	6.96	6.99	7.03	7.07	7.12	7.16
% Ch , Annual Rate	2.6	2.2	2.4	2.0	2.2	2.4	2.7	2.2
Service-Providing	126.82	127.02	127.27	127.50	127.73	127.92	128.12	128.30
% Ch , Annual Rate	0.5	0.7	0.8	0.7	0.7	0.6	0.6	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	50.9	51.4	51.7	52.2	52.5	52.8	53.1	53.4
Personal Saving/Disposable Income (%)	5.6	5.7	5.7	5.7	5.9	6.0	6.1	6.1
Auto Sales (Millions)	6.7	6.6	6.6	6.6	6.6	6.7	6.7	6.7
% Ch , Annual Rate	-3.8	-3.4	-0.1	1.0	0.8	2.0	2.4	2.5
Housing Starts (Millions)	1.291	1.307	1.326	1.347	1.364	1.379	1.394	1.409
% Ch , Annual Rate	7.0	5.0	6.2	6.3	5.4	4.5	4.3	4.5
Federal Budget Surplus (Billions)	-700.9	-712.8	-720.9	-735.5	-763.1	-765.4	-750.8	-746.2
Net Exports (Billions)	-429.9	-435.5	-439.9	-441.1	-443.3	-447.0	-442.2	-438.1
3-Month Treasury Bill Rate (%)	1.09	1.21	1.46	1.70	1.88	2.13	2.35	2.57
10-Year Treasury Note Yield (%)	2.50	2.58	2.76	2.88	3.00	3.20	3.45	3.52
Bond Index of 20 G.O. Munis. (%)	4.15	4.36	4.50	4.57	4.67	4.83	5.02	5.06
30-Year Fixed Mortgage Rate (%)	4.45	4.55	4.75	4.86	4.99	5.27	5.50	5.59

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	17,968.1	18,071.2	18,161.3	18,254.5	18,343.7	18,429.5	18,520.6	18,610.4
% Ch , Annual Rate	2.1	2.3	2.0	2.1	2.0	1.9	2.0	2.0
Real Consumption	12,466.5	12,533.5	12,597.0	12,664.9	12,734.1	12,798.0	12,860.8	12,924.8
% Ch , Annual Rate	2.3	2.2	2.0	2.2	2.2	2.0	2.0	2.0
Real Nonresidential Fixed Investment	2,550.8	2,576.2	2,601.4	2,623.4	2,645.3	2,666.6	2,687.5	2,707.7
% Ch , Annual Rate	4.2	4.0	4.0	3.4	3.4	3.3	3.2	3.0
Real Residential Fixed Investment	650.3	656.2	664.2	669.9	672.7	677.4	684.9	689.0
% Ch , Annual Rate	0.8	3.7	5.0	3.4	1.7	2.8	4.5	2.4
Real Personal Income	15,802.9	15,903.3	15,996.2	16,085.4	16,199.7	16,292.3	16,379.3	16,471.4
% Ch , Annual Rate	3.2	2.6	2.4	2.3	2.9	2.3	2.2	2.3
Real Per Capita Income (\$/Person)	47,308	47,516	47,700	47,874	48,120	48,302	48,467	48,646
% Ch , Annual Rate	2.4	1.8	1.6	1.5	2.1	1.5	1.4	1.5
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.182	1.188	1.194	1.200	1.206	1.212	1.218	1.224
% Ch , Annual Rate	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.607	2.621	2.636	2.650	2.666	2.680	2.695	2.710
% Ch , Annual Rate	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.408	1.420	1.432	1.444	1.456	1.468	1.480	1.493
% Ch , Annual Rate	3.4	3.4	3.4	3.4	3.2	3.4	3.4	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	21,616.1	21,850.7	22,069.6	22,298.0	22,528.4	22,747.9	22,975.5	23,205.5
% Ch , Annual Rate	4.4	4.4	4.1	4.2	4.2	4.0	4.1	4.1
Personal Income	18,679.8	18,890.7	19,092.9	19,295.7	19,529.9	19,739.4	19,942.9	20,155.5
% Ch , Annual Rate	5.2	4.6	4.4	4.3	4.9	4.4	4.2	4.3
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	165.6	166.0	166.4	166.6	166.8	167.1	167.3	167.5
Total U.S. Employment	157.7	158.1	158.4	158.6	158.8	159.0	159.1	159.3
Unemployment Rate (%)	4.70	4.70	4.71	4.73	4.75	4.78	4.81	4.83
Nonfarm Payroll Employment	149.16	149.69	149.83	150.02	150.28	150.55	150.80	151.06
% Ch, Annual Rate	0.9	1.4	0.4	0.5	0.7	0.7	0.7	0.7
Manufacturing	12.69	12.71	12.76	12.79	12.82	12.84	12.87	12.88
% Ch, Annual Rate	1.4	0.7	1.3	1.2	0.9	0.7	0.8	0.5
Durable Manufacturing	8.05	8.07	8.11	8.14	8.17	8.20	8.23	8.25
% Ch, Annual Rate	2.2	1.3	1.9	1.7	1.4	1.2	1.5	1.1
Nondurable Manufacturing	4.64	4.64	4.65	4.65	4.65	4.65	4.64	4.63
% Ch, Annual Rate	0.1	-0.2	0.3	0.2	0.1	-0.3	-0.5	-0.5
Construction	7.20	7.24	7.28	7.33	7.37	7.42	7.47	7.52
% Ch, Annual Rate	2.0	2.2	2.6	2.5	2.3	2.6	3.0	2.8
Service-Providing	128.53	129.00	129.05	129.15	129.34	129.53	129.70	129.89
% Ch, Annual Rate	0.7	1.5	0.1	0.3	0.6	0.6	0.5	0.6
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	53.7	54.0	54.3	54.6	54.9	55.2	55.4	55.7
Personal Saving/Disposable Income (%)	6.2	6.2	6.2	6.2	6.4	6.3	6.3	6.4
Auto Sales (Millions)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
% Ch, Annual Rate	3.0	-1.2	1.2	-1.8	0.1	-0.1	1.6	2.3
Housing Starts (Millions)	1.431	1.449	1.470	1.481	1.495	1.507	1.513	1.513
% Ch, Annual Rate	6.3	5.2	5.8	3.0	3.9	3.1	1.7	0.0
Federal Budget Surplus (Billions)	-757.8	-761.5	-734.2	-721.3	-757.5	-762.7	-755.5	-758.2
Net Exports (Billions)	-433.7	-436.7	-433.2	-427.6	-428.0	-427.5	-423.1	-419.4
3-Month Treasury Bill Rate (%)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
10-Year Treasury Note Yield (%)	3.52	3.51	3.50	3.50	3.50	3.49	3.49	3.48
Bond Index of 20 G.O. Munis. (%)	5.07	5.06	5.06	5.05	5.05	5.04	5.04	5.04
30-Year Fixed Mortgage Rate (%)	5.60	5.59	5.58	5.57	5.57	5.57	5.57	5.56

Table A1.3  
**Washington Economic Forecast Summary**  
Forecast 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	325.856	339.740	351.673	361.164	372.699	384.760	396.495	407.548
% Ch	5.2	4.3	3.5	2.7	3.2	3.2	3.1	2.8
Real Wage and Salary Disb.	166.477	175.110	185.212	190.828	196.336	201.699	206.851	212.080
% Ch	4.9	5.2	5.8	3.0	2.9	2.7	2.6	2.5
Real Nonwage Income	159.379	164.631	166.461	170.336	176.363	183.060	189.644	195.468
% Ch	5.5	3.3	1.1	2.3	3.5	3.8	3.6	3.1
Real Per Capita Income (\$/Person)	46,111	47,373	48,329	48,948	49,820	50,754	51,645	52,453
% Ch	3.8	2.7	2.0	1.3	1.8	1.9	1.8	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.091	1.095	1.107	1.127	1.148	1.168	1.191	1.215
% Ch	1.5	0.4	1.1	1.8	1.8	1.8	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.460	2.494	2.552	2.625	2.687	2.746	2.808	2.873
% Ch	1.8	1.4	2.4	2.8	2.4	2.2	2.3	2.3
Average Nonfarm Annual Wage	57,173	58,744	61,073	62,927	64,924	66,963	69,122	71,551
% Ch	4.3	2.7	4.0	3.0	3.2	3.1	3.2	3.5
Avg. Hourly Earnings-Mfg. (\$/Hour)	25.16	25.52	26.57	27.51	28.25	29.06	29.96	30.88
% Ch	3.4	1.4	4.1	3.5	2.7	2.9	3.1	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	355.677	372.125	389.439	407.094	427.717	449.473	472.140	495.013
% Ch	6.8	4.6	4.7	4.5	5.1	5.1	5.0	4.8
Disposable Personal Income	312.758	325.456	341.625	356.635	373.962	392.075	410.209	429.314
% Ch	6.6	4.1	5.0	4.4	4.9	4.8	4.6	4.7
Per Capita Income (\$/Person)	50,330	51,888	53,518	55,171	57,174	59,289	61,497	63,709
% Ch	5.4	3.1	3.1	3.1	3.6	3.7	3.7	3.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,489.6	3,540.3	3,637.9	3,727.2	3,796.6	3,860.3	3,918.6	3,966.6
Total Washington Employment	3,276.8	3,339.9	3,431.7	3,534.5	3,609.4	3,672.5	3,728.3	3,772.7
Unemployment Rate (%)	6.10	5.66	5.67	5.17	4.93	4.86	4.86	4.89
Nonfarm Payroll Employment	3,059.6	3,145.8	3,238.2	3,298.4	3,350.5	3,398.1	3,442.5	3,479.0
% Ch	2.5	2.8	2.9	1.9	1.6	1.4	1.3	1.1
Manufacturing	288.7	290.7	287.8	281.9	283.9	286.5	290.0	293.5
% Ch	0.7	0.7	-1.0	-2.0	0.7	0.9	1.2	1.2
Durable Manufacturing	210.0	211.1	206.1	200.3	201.8	203.1	205.6	208.4
% Ch	0.2	0.5	-2.3	-2.8	0.8	0.7	1.2	1.4
Aerospace	94.2	93.9	90.3	84.4	82.5	80.9	80.3	80.3
% Ch	-1.9	-0.4	-3.8	-6.6	-2.2	-2.0	-0.8	0.0
Nondurable Manufacturing	78.7	79.7	81.7	81.6	82.1	83.4	84.3	85.1
% Ch	2.1	1.2	2.5	0.0	0.5	1.6	1.1	0.9
Construction	159.7	173.2	183.6	187.3	194.5	199.2	202.1	204.5
% Ch	7.2	8.5	6.0	2.0	3.8	2.4	1.4	1.2
Service-Providing	2,605.0	2,675.5	2,760.6	2,822.7	2,865.6	2,905.8	2,943.8	2,974.2
% Ch	2.4	2.7	3.2	2.2	1.5	1.4	1.3	1.0
Software Publishers	55.6	56.0	59.1	60.6	61.1	61.6	62.2	62.9
% Ch	3.3	0.7	5.6	2.5	0.8	0.9	1.0	1.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.898	40.374	40.117	39.992	41.140	41.382	41.477	41.646
% Ch	2.8	19.1	-0.6	-0.3	2.9	0.6	0.2	0.4
Single-Family	17.905	19.797	21.722	22.506	24.175	25.077	25.679	25.984
% Ch	-2.7	10.6	9.7	3.6	7.4	3.7	2.4	1.2
Multi-Family	15.993	20.577	18.396	17.486	16.965	16.304	15.798	15.662
% Ch	9.8	28.7	-10.6	-4.9	-3.0	-3.9	-3.1	-0.9
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.58	3.93	4.65	5.34	5.58	5.57

Table A1.4  
**Washington Economic Forecast Summary**  
Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	348.742	351.339	352.744	353.866	359.850	360.499	360.484	363.823
% Ch, Annual Rate	6.9	3.0	1.6	1.3	6.9	0.7	0.0	3.8
Real Wage and Salary Disb.	183.709	185.128	185.742	186.270	191.160	190.679	189.728	191.743
% Ch, Annual Rate	12.6	3.1	1.3	1.1	10.9	-1.0	-2.0	4.3
Real Nonwage Income	165.033	166.211	167.002	167.597	168.690	169.820	170.756	172.080
% Ch, Annual Rate	1.0	2.9	1.9	1.4	2.6	2.7	2.2	3.1
Real Per Capita Income (\$/Person)	48,181	48,368	48,392	48,377	49,025	48,943	48,771	49,053
% Ch, Annual Rate	5.4	1.6	0.2	-0.1	5.5	-0.7	-1.4	2.3
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.105	1.109	1.115	1.119	1.124	1.130	1.135
% Ch, Annual Rate	0.3	2.0	1.4	2.3	1.4	1.7	2.1	1.8
Seattle Cons. Price Index (1982-84=1.0)	2.527	2.541	2.558	2.584	2.600	2.616	2.634	2.650
% Ch, Annual Rate	2.3	2.2	2.8	4.1	2.4	2.5	2.9	2.4
Average Nonfarm Annual Wage	60,716	61,038	61,158	61,381	62,989	62,837	62,588	63,295
% Ch, Annual Rate	8.5	2.1	0.8	1.5	10.9	-1.0	-1.6	4.6
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.02	26.41	26.81	27.05	27.24	27.42	27.60	27.78
% Ch, Annual Rate	3.7	6.2	6.2	3.6	2.9	2.6	2.6	2.7
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	383.500	388.288	391.245	394.723	402.792	405.237	407.370	412.978
% Ch, Annual Rate	7.2	5.1	3.1	3.6	8.4	2.5	2.1	5.6
Disposable Personal Income	336.411	340.765	343.128	346.194	353.397	355.070	356.621	361.454
% Ch, Annual Rate	8.4	5.3	2.8	3.6	8.6	1.9	1.8	5.5
Per Capita Income (\$/Person)	52,983	53,455	53,673	53,962	54,875	55,016	55,114	55,680
% Ch, Annual Rate	5.7	3.6	1.6	2.2	6.9	1.0	0.7	4.2
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,604.1	3,626.9	3,636.2	3,684.2	3,700.8	3,718.5	3,736.0	3,753.4
Total Washington Employment	3,395.2	3,417.1	3,429.3	3,485.2	3,505.2	3,525.4	3,544.4	3,563.1
Unemployment Rate (%)	5.80	5.79	5.69	5.40	5.29	5.19	5.13	5.07
Nonfarm Payroll Employment	3,205.5	3,233.1	3,249.0	3,265.4	3,278.3	3,291.4	3,304.9	3,318.9
% Ch, Annual Rate	3.7	3.5	2.0	2.0	1.6	1.6	1.6	1.7
Manufacturing	290.7	290.1	287.6	282.6	281.2	281.8	282.2	282.5
% Ch, Annual Rate	0.5	-0.8	-3.4	-6.8	-2.0	0.9	0.5	0.5
Durable Manufacturing	209.4	208.1	206.0	200.9	199.6	200.0	200.5	200.9
% Ch, Annual Rate	-1.8	-2.4	-3.9	-9.5	-2.6	0.8	1.0	0.8
Aerospace	92.6	91.6	90.9	86.3	85.2	84.6	84.1	83.6
% Ch, Annual Rate	-2.5	-4.2	-3.1	-18.7	-5.0	-2.5	-2.5	-2.5
Nondurable Manufacturing	81.3	82.0	81.6	81.7	81.6	81.8	81.7	81.6
% Ch, Annual Rate	6.7	3.5	-2.0	0.3	-0.5	1.1	-0.6	-0.3
Construction	181.0	183.5	184.2	185.6	185.4	186.2	187.6	190.0
% Ch, Annual Rate	13.7	5.6	1.4	3.2	-0.4	1.8	3.0	5.3
Service-Providing	2,727.5	2,753.2	2,770.8	2,790.8	2,805.2	2,817.0	2,828.6	2,839.9
% Ch, Annual Rate	3.4	3.8	2.6	2.9	2.1	1.7	1.7	1.6
Software Publishers	57.9	58.7	59.7	60.2	60.5	60.6	60.6	60.7
% Ch, Annual Rate	6.3	5.7	7.0	3.5	1.7	0.7	0.2	0.7
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	37.584	45.283	38.399	39.203	39.366	39.817	40.169	40.616
% Ch, Annual Rate	-8.0	110.7	-48.3	8.6	1.7	4.7	3.6	4.5
Single-Family	22.287	22.612	20.488	21.500	21.758	22.264	22.754	23.247
% Ch, Annual Rate	18.3	6.0	-32.6	21.3	4.9	9.6	9.1	9.0
Multi-Family	15.298	22.671	17.911	17.703	17.608	17.553	17.415	17.369
% Ch, Annual Rate	-34.5	382.4	-61.0	-4.6	-2.1	-1.2	-3.1	-1.1
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.53	3.74	3.82	3.94	4.22

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	371.539	371.759	371.557	375.940	384.206	383.775	383.216	387.841
% Ch, Annual Rate	8.8	0.2	-0.2	4.8	9.1	-0.4	-0.6	4.9
Real Wage and Salary Disb.	197.520	196.126	194.474	197.225	203.457	201.504	199.409	202.427
% Ch, Annual Rate	12.6	-2.8	-3.3	5.8	13.3	-3.8	-4.1	6.2
Real Nonwage Income	174.019	175.633	177.083	178.716	180.749	182.271	183.807	185.414
% Ch, Annual Rate	4.6	3.8	3.3	3.7	4.6	3.4	3.4	3.5
Real Per Capita Income (\$/Person)	49,920	49,779	49,583	49,999	50,928	50,705	50,468	50,914
% Ch, Annual Rate	7.3	-1.1	-1.6	3.4	7.6	-1.7	-1.9	3.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.140	1.145	1.150	1.155	1.160	1.165	1.171	1.176
% Ch, Annual Rate	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.666	2.680	2.695	2.709	2.724	2.738	2.753	2.768
% Ch, Annual Rate	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.2
Average Nonfarm Annual Wage	65,267	64,840	64,304	65,286	67,438	66,837	66,216	67,363
% Ch, Annual Rate	13.1	-2.6	-3.3	6.2	13.9	-3.5	-3.7	7.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.97	28.16	28.35	28.54	28.75	28.96	29.17	29.39
% Ch, Annual Rate	2.7	2.7	2.7	2.8	2.9	2.9	2.9	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	423.570	425.685	427.334	434.279	445.804	447.253	448.639	456.196
% Ch, Annual Rate	10.7	2.0	1.6	6.7	11.0	1.3	1.2	6.9
Disposable Personal Income	370.647	372.312	373.522	379.368	389.319	390.320	391.206	397.454
% Ch, Annual Rate	10.6	1.8	1.3	6.4	10.9	1.0	0.9	6.5
Per Capita Income (\$/Person)	56,911	57,000	57,026	57,757	59,093	59,092	59,084	59,887
% Ch, Annual Rate	9.1	0.6	0.2	5.2	9.6	0.0	-0.1	5.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,771.5	3,788.3	3,804.9	3,821.7	3,837.3	3,852.9	3,868.1	3,882.9
Total Washington Employment	3,583.1	3,600.8	3,618.4	3,635.4	3,650.5	3,665.5	3,680.1	3,694.0
Unemployment Rate (%)	5.00	4.95	4.90	4.88	4.87	4.87	4.86	4.86
Nonfarm Payroll Employment	3,331.8	3,343.7	3,356.7	3,369.6	3,382.0	3,393.1	3,403.4	3,414.0
% Ch, Annual Rate	1.6	1.4	1.6	1.5	1.5	1.3	1.2	1.3
Manufacturing	283.0	283.6	284.1	284.9	285.5	286.1	286.8	287.6
% Ch, Annual Rate	0.7	0.8	0.7	1.1	0.9	0.8	0.9	1.2
Durable Manufacturing	201.3	201.7	201.9	202.3	202.6	202.9	203.2	203.8
% Ch, Annual Rate	0.8	0.7	0.4	0.9	0.6	0.5	0.6	1.1
Aerospace	83.2	82.7	82.3	81.9	81.5	81.1	80.7	80.3
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Nondurable Manufacturing	81.7	81.9	82.2	82.5	82.9	83.2	83.5	83.9
% Ch, Annual Rate	0.5	1.0	1.4	1.7	1.7	1.6	1.7	1.6
Construction	192.4	193.8	195.3	196.6	197.9	199.0	199.6	200.5
% Ch, Annual Rate	5.2	2.8	3.2	2.8	2.6	2.2	1.1	1.9
Service-Providing	2,850.0	2,859.9	2,870.9	2,881.6	2,892.0	2,901.5	2,910.5	2,919.3
% Ch, Annual Rate	1.4	1.4	1.5	1.5	1.5	1.3	1.2	1.2
Software Publishers	60.8	61.0	61.1	61.3	61.4	61.5	61.7	61.8
% Ch, Annual Rate	0.8	1.0	0.9	1.0	0.8	0.8	0.9	1.0
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	41.005	41.029	41.284	41.242	41.277	41.448	41.464	41.338
% Ch, Annual Rate	3.9	0.2	2.5	-0.4	0.3	1.7	0.2	-1.2
Single-Family	23.692	24.043	24.355	24.610	24.822	24.992	25.177	25.319
% Ch, Annual Rate	7.9	6.1	5.3	4.3	3.5	2.8	3.0	2.3
Multi-Family	17.313	16.986	16.929	16.632	16.456	16.455	16.288	16.019
% Ch, Annual Rate	-1.3	-7.3	-1.3	-6.8	-4.2	0.0	-4.0	-6.4
30-Year Fixed Mortgage Rate (%)	4.45	4.55	4.75	4.86	4.99	5.27	5.50	5.59

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	395.620	395.797	395.017	399.545	406.978	406.914	405.791	410.509
% Ch, Annual Rate	8.3	0.2	-0.8	4.7	7.7	-0.1	-1.1	4.7
Real Wage and Salary Disb.	208.204	206.774	204.598	207.828	213.526	212.042	209.698	213.053
% Ch, Annual Rate	11.9	-2.7	-4.1	6.5	11.4	-2.8	-4.3	6.6
Real Nonwage Income	187.416	189.023	190.419	191.717	193.452	194.872	196.093	197.456
% Ch, Annual Rate	4.4	3.5	3.0	2.8	3.7	3.0	2.5	2.8
Real Per Capita Income (\$/Person)	51,771	51,632	51,372	51,804	52,610	52,447	52,151	52,606
% Ch, Annual Rate	6.9	-1.1	-2.0	3.4	6.4	-1.2	-2.2	3.5
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.182	1.188	1.194	1.200	1.206	1.212	1.218	1.224
% Ch, Annual Rate	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.784	2.800	2.816	2.832	2.849	2.865	2.881	2.897
% Ch, Annual Rate	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Average Nonfarm Annual Wage	69,444	68,946	68,398	69,701	71,808	71,454	70,800	72,144
% Ch, Annual Rate	12.9	-2.8	-3.1	7.8	12.7	-2.0	-3.6	7.8
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.61	29.84	30.07	30.30	30.52	30.76	30.99	31.23
% Ch, Annual Rate	3.1	3.1	3.2	3.1	2.9	3.1	3.1	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	467.642	470.146	471.489	479.283	490.641	493.008	494.076	502.327
% Ch, Annual Rate	10.4	2.2	1.1	6.8	9.8	1.9	0.9	6.8
Disposable Personal Income	406.959	408.654	409.338	415.883	425.895	427.654	428.350	435.360
% Ch, Annual Rate	9.9	1.7	0.7	6.6	10.0	1.7	0.7	6.7
Per Capita Income (\$/Person)	61,196	61,331	61,317	62,142	63,425	63,544	63,497	64,372
% Ch, Annual Rate	9.0	0.9	-0.1	5.5	8.5	0.8	-0.3	5.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,897.6	3,912.4	3,926.1	3,938.2	3,949.9	3,961.0	3,972.2	3,983.4
Total Washington Employment	3,707.9	3,722.6	3,735.6	3,747.1	3,757.8	3,767.6	3,777.6	3,787.7
Unemployment Rate (%)	4.87	4.85	4.85	4.85	4.86	4.88	4.90	4.91
Nonfarm Payroll Employment	3,424.6	3,441.5	3,447.7	3,455.9	3,465.2	3,474.5	3,483.5	3,492.7
% Ch, Annual Rate	1.2	2.0	0.7	1.0	1.1	1.1	1.0	1.1
Manufacturing	288.7	289.4	290.4	291.4	292.4	293.1	293.9	294.8
% Ch, Annual Rate	1.4	0.9	1.4	1.4	1.3	1.0	1.2	1.1
Durable Manufacturing	204.6	205.2	206.0	206.8	207.4	208.0	208.8	209.5
% Ch, Annual Rate	1.7	1.1	1.5	1.5	1.3	1.2	1.5	1.4
Aerospace	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	84.0	84.2	84.4	84.7	84.9	85.1	85.1	85.3
% Ch, Annual Rate	0.8	0.6	1.3	1.2	1.2	0.6	0.4	0.5
Construction	201.1	201.8	202.4	203.0	203.6	204.2	204.8	205.4
% Ch, Annual Rate	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.1
Service-Providing	2,928.2	2,943.8	2,948.3	2,954.8	2,962.6	2,970.5	2,978.0	2,985.8
% Ch, Annual Rate	1.2	2.1	0.6	0.9	1.1	1.1	1.0	1.1
Software Publishers	62.0	62.1	62.3	62.5	62.6	62.8	63.0	63.2
% Ch, Annual Rate	1.1	0.9	1.1	1.1	1.1	1.1	1.1	1.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	41.354	41.433	41.531	41.588	41.668	41.714	41.669	41.530
% Ch, Annual Rate	0.2	0.8	0.9	0.6	0.8	0.4	-0.4	-1.3
Single-Family	25.462	25.611	25.765	25.876	25.937	26.014	26.020	25.963
% Ch, Annual Rate	2.3	2.4	2.4	1.7	1.0	1.2	0.1	-0.9
Multi-Family	15.892	15.822	15.765	15.712	15.731	15.701	15.649	15.568
% Ch, Annual Rate	-3.1	-1.7	-1.4	-1.3	0.5	-0.8	-1.3	-2.1
30-Year Fixed Mortgage Rate (%)	5.60	5.59	5.58	5.57	5.57	5.57	5.57	5.56

Table A2.1  
**U.S. Nonagricultural Employment by Industry (Millions)**  
Forecast 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	138.94	141.83	144.31	146.07	147.21	148.42	149.68	150.67
% Ch	1.9	2.1	1.7	1.2	0.8	0.8	0.8	0.7
Manufacturing	12.18	12.32	12.29	12.29	12.40	12.57	12.74	12.85
% Ch	1.4	1.1	-0.3	0.0	0.9	1.4	1.3	0.9
Durable Manufacturing	7.67	7.76	7.69	7.69	7.81	7.94	8.09	8.21
% Ch	1.7	1.1	-0.9	0.1	1.5	1.7	1.9	1.5
Wood Products	0.37	0.38	0.38	0.39	0.42	0.44	0.46	0.48
% Ch	5.2	2.1	0.9	2.0	6.4	5.2	4.9	4.0
Primary and Fabricated Metals	1.85	1.85	1.80	1.81	1.83	1.86	1.90	1.94
% Ch	1.4	0.0	-2.7	0.3	1.1	1.5	2.4	2.2
Computer and Electronic Products	1.05	1.05	1.04	1.04	1.07	1.08	1.09	1.09
% Ch	-1.5	0.1	-1.1	0.2	2.9	1.0	0.5	0.3
Machinery and Electrical Equipment	1.50	1.51	1.47	1.46	1.49	1.52	1.55	1.58
% Ch	1.8	0.1	-2.6	-0.4	1.7	2.3	2.3	1.7
Transportation Equipment	1.56	1.60	1.61	1.58	1.56	1.59	1.62	1.64
% Ch	3.3	2.6	0.5	-1.8	-1.2	1.8	2.3	0.9
Other Durables	1.34	1.37	1.39	1.42	1.45	1.46	1.47	1.48
% Ch	1.7	2.5	1.4	2.0	2.1	0.9	0.7	1.0
Nondurable Manufacturing	4.51	4.56	4.60	4.60	4.59	4.63	4.64	4.64
% Ch	0.9	1.1	0.8	0.0	-0.1	0.8	0.3	-0.1
Food Manufacturing	1.48	1.51	1.53	1.54	1.57	1.60	1.62	1.64
% Ch	0.7	1.4	1.6	0.9	1.5	1.9	1.3	1.2
Paper and Paper Products	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.36
% Ch	-1.2	-0.2	-0.5	-0.8	-1.1	0.1	0.1	0.0
Other Nondurables	2.65	2.68	2.70	2.69	2.66	2.67	2.66	2.64
% Ch	1.2	1.2	0.6	-0.5	-0.9	0.3	-0.2	-0.8
Natural Resources and Mining	0.89	0.82	0.70	0.69	0.72	0.73	0.74	0.76
% Ch	3.2	-7.9	-14.9	-0.5	3.9	1.2	2.0	2.0
Construction	6.15	6.44	6.66	6.79	6.94	7.10	7.26	7.45
% Ch	5.0	4.8	3.3	1.9	2.2	2.3	2.3	2.6
Trade, Transportation, and Utilities	26.38	26.91	27.34	27.50	27.43	27.42	27.36	27.29
% Ch	2.0	2.0	1.6	0.6	-0.3	0.0	-0.2	-0.3
Wholesale Trade	5.81	5.87	5.93	5.96	5.97	6.01	6.05	6.09
% Ch	1.4	1.1	0.9	0.5	0.1	0.7	0.7	0.7
Retail Trade	15.35	15.64	15.94	16.01	15.90	15.83	15.72	15.61
% Ch	1.9	1.9	2.0	0.4	-0.7	-0.4	-0.7	-0.7
Trans., Warehousing, and Utilities	5.21	5.40	5.46	5.53	5.56	5.58	5.59	5.60
% Ch	3.2	3.7	1.2	1.2	0.6	0.3	0.2	0.1
Information	2.73	2.75	2.78	2.80	2.78	2.78	2.78	2.81
% Ch	0.8	0.9	0.9	0.7	-0.4	-0.2	0.3	1.0
Publishing Industries	0.73	0.73	0.73	0.71	0.70	0.68	0.67	0.66
% Ch	-0.8	-0.2	0.0	-1.5	-2.7	-2.2	-1.8	-1.5
Other Information	2.00	2.03	2.05	2.08	2.09	2.10	2.12	2.16
% Ch	1.3	1.3	1.2	1.5	0.3	0.5	0.9	1.8
Financial Activities	7.98	8.12	8.29	8.37	8.31	8.28	8.24	8.24
% Ch	1.1	1.9	2.0	1.0	-0.7	-0.4	-0.5	0.1
Professional and Business Services	19.06	19.66	20.23	20.89	21.66	22.24	22.77	23.26
% Ch	2.9	3.1	2.9	3.2	3.7	2.7	2.4	2.2
Education and Health Services	21.44	22.05	22.69	23.13	23.35	23.54	23.73	23.91
% Ch	1.7	2.9	2.9	1.9	0.9	0.8	0.8	0.8
Leisure and Hospitality	14.69	15.12	15.50	15.69	15.77	15.85	15.92	16.05
% Ch	3.1	2.9	2.5	1.2	0.5	0.5	0.4	0.8
Other Services	5.57	5.62	5.70	5.69	5.60	5.51	5.47	5.45
% Ch	1.5	1.0	1.3	-0.1	-1.5	-1.6	-0.8	-0.3
Federal Government	2.73	2.75	2.79	2.81	2.77	2.73	2.86	2.69
% Ch	-1.3	0.7	1.3	0.8	-1.3	-1.5	4.6	-6.0
State and Local Government	19.14	19.25	19.36	19.43	19.48	19.66	19.81	19.91
% Ch	0.3	0.6	0.6	0.4	0.2	0.9	0.8	0.5

Table A2.2  
**U.S. Nonagricultural Employment by Industry (Millions)**  
 Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	143.53	143.98	144.61	145.12	145.57	145.92	146.24	146.54
% Ch, Annual Rate	1.9	1.3	1.7	1.4	1.3	1.0	0.9	0.8
Manufacturing	12.32	12.29	12.28	12.26	12.25	12.28	12.31	12.33
% Ch, Annual Rate	0.1	-0.9	-0.4	-0.6	-0.4	1.2	0.7	0.7
Durable Manufacturing	7.72	7.69	7.67	7.66	7.65	7.68	7.71	7.74
% Ch, Annual Rate	-0.6	-1.7	-1.0	-0.9	-0.5	1.7	1.7	1.6
Wood Products	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.40
% Ch, Annual Rate	-0.9	-0.4	0.0	1.1	-5.0	9.1	8.3	7.8
Primary and Fabricated Metals	1.82	1.81	1.80	1.79	1.79	1.81	1.81	1.82
% Ch, Annual Rate	-1.9	-2.9	-2.3	-0.9	0.3	2.7	1.8	1.5
Computer and Electronic Products	1.04	1.04	1.04	1.03	1.03	1.04	1.04	1.05
% Ch, Annual Rate	0.3	-1.3	-2.2	-0.8	-1.5	2.6	3.2	3.0
Machinery and Electrical Equipment	1.48	1.47	1.46	1.45	1.45	1.46	1.46	1.47
% Ch, Annual Rate	-2.2	-3.7	-1.2	-2.1	-1.0	1.3	2.6	1.5
Transportation Equipment	1.61	1.61	1.61	1.60	1.60	1.58	1.57	1.56
% Ch, Annual Rate	-0.1	0.4	0.2	-2.1	-1.3	-3.2	-3.2	-1.6
Other Durables	1.39	1.39	1.39	1.39	1.40	1.41	1.42	1.43
% Ch, Annual Rate	1.8	-1.2	0.4	1.2	1.7	4.0	3.4	2.5
Nondurable Manufacturing	4.59	4.60	4.61	4.60	4.60	4.61	4.60	4.59
% Ch, Annual Rate	1.3	0.4	0.6	-0.1	-0.1	0.3	-1.0	-0.7
Food Manufacturing	1.52	1.53	1.54	1.54	1.53	1.54	1.55	1.55
% Ch, Annual Rate	3.0	2.0	2.4	0.2	-0.7	2.6	0.8	0.7
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	-0.2	-1.3	-1.9	-1.6	0.9	-0.4	-1.9	-1.7
Other Nondurables	2.70	2.70	2.70	2.70	2.70	2.69	2.68	2.67
% Ch, Annual Rate	0.6	-0.2	0.0	-0.1	0.1	-0.8	-1.8	-1.4
Natural Resources and Mining	0.73	0.70	0.68	0.68	0.68	0.69	0.70	0.71
% Ch, Annual Rate	-19.2	-18.1	-8.3	-2.1	1.6	2.6	6.7	9.9
Construction	6.64	6.65	6.65	6.70	6.74	6.77	6.80	6.84
% Ch, Annual Rate	5.8	0.5	0.6	2.8	2.2	2.1	1.7	2.1
Trade, Transportation, and Utilities	27.23	27.30	27.38	27.45	27.52	27.51	27.50	27.47
% Ch, Annual Rate	2.3	1.1	1.1	1.1	1.1	-0.2	-0.1	-0.4
Wholesale Trade	5.92	5.92	5.93	5.95	5.96	5.96	5.96	5.96
% Ch, Annual Rate	1.4	0.4	0.5	1.5	0.7	-0.1	-0.1	-0.3
Retail Trade	15.88	15.93	15.97	16.00	16.05	16.02	16.01	15.97
% Ch, Annual Rate	3.5	1.3	1.2	0.8	1.0	-0.6	-0.3	-0.8
Trans., Warehousing, and Utilities	5.43	5.45	5.47	5.49	5.51	5.53	5.53	5.54
% Ch, Annual Rate	-0.1	1.2	1.6	1.5	1.6	0.8	0.5	0.5
Information	2.77	2.77	2.78	2.79	2.81	2.80	2.78	2.79
% Ch, Annual Rate	1.6	-0.7	1.2	1.4	3.1	-1.3	-1.9	0.8
Publishing Industries	0.73	0.73	0.73	0.72	0.72	0.72	0.71	0.70
% Ch, Annual Rate	1.0	-0.3	1.0	-2.4	0.6	-3.0	-4.7	-2.8
Other Information	2.05	2.04	2.05	2.06	2.08	2.08	2.08	2.09
% Ch, Annual Rate	1.8	-0.8	1.3	2.7	4.0	-0.7	-0.9	2.1
Financial Activities	8.22	8.27	8.31	8.35	8.38	8.38	8.37	8.35
% Ch, Annual Rate	1.9	2.4	2.3	1.6	1.6	0.1	-0.7	-1.0
Professional and Business Services	20.01	20.14	20.31	20.46	20.57	20.76	21.00	21.21
% Ch, Annual Rate	1.8	2.6	3.4	3.0	2.2	3.7	4.7	4.2
Education and Health Services	22.47	22.62	22.76	22.91	23.02	23.11	23.16	23.22
% Ch, Annual Rate	2.7	2.7	2.5	2.5	2.1	1.5	0.9	1.1
Leisure and Hospitality	15.41	15.47	15.55	15.58	15.63	15.68	15.72	15.73
% Ch, Annual Rate	2.7	1.5	2.1	0.9	1.1	1.4	0.9	0.4
Other Services	5.67	5.68	5.70	5.73	5.74	5.70	5.67	5.65
% Ch, Annual Rate	1.6	0.8	1.4	1.5	0.9	-2.3	-2.2	-1.7
Federal Government	2.77	2.78	2.80	2.81	2.81	2.81	2.81	2.80
% Ch, Annual Rate	1.0	1.8	2.6	1.6	0.5	0.4	-0.6	-1.1
State and Local Government	19.30	19.33	19.40	19.42	19.42	19.43	19.43	19.44
% Ch, Annual Rate	0.6	0.6	1.5	0.3	0.2	0.0	0.1	0.1

Table A2.2 (continued)  
**U.S. Nonagricultural Employment by Industry (Millions)**  
Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	146.76	147.04	147.36	147.68	147.99	148.27	148.56	148.84
% Ch, Annual Rate	0.6	0.8	0.9	0.9	0.9	0.7	0.8	0.8
Manufacturing	12.35	12.38	12.41	12.46	12.50	12.54	12.59	12.64
% Ch, Annual Rate	0.7	1.0	0.9	1.6	1.5	1.2	1.5	1.8
Durable Manufacturing	7.76	7.79	7.81	7.85	7.89	7.92	7.95	8.00
% Ch, Annual Rate	1.3	1.4	1.1	2.1	1.8	1.5	1.8	2.5
Wood Products	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.45
% Ch, Annual Rate	5.9	5.2	4.0	5.6	5.0	5.0	5.8	6.1
Primary and Fabricated Metals	1.82	1.83	1.83	1.83	1.84	1.85	1.86	1.87
% Ch, Annual Rate	1.1	0.7	0.0	1.2	2.0	1.7	1.8	2.9
Computer and Electronic Products	1.06	1.07	1.07	1.08	1.08	1.08	1.08	1.08
% Ch, Annual Rate	3.4	2.9	2.3	2.1	0.0	0.0	0.5	0.8
Machinery and Electrical Equipment	1.47	1.48	1.49	1.50	1.51	1.51	1.52	1.54
% Ch, Annual Rate	1.1	2.3	1.3	2.5	2.5	2.3	2.4	3.1
Transportation Equipment	1.56	1.55	1.56	1.57	1.57	1.58	1.59	1.60
% Ch, Annual Rate	-1.5	-1.0	0.9	2.3	1.5	1.8	2.9	3.1
Other Durables	1.44	1.44	1.45	1.45	1.46	1.46	1.46	1.46
% Ch, Annual Rate	1.9	1.8	0.7	1.6	1.4	0.2	0.0	0.8
Nondurable Manufacturing	4.58	4.59	4.60	4.61	4.62	4.62	4.63	4.64
% Ch, Annual Rate	-0.3	0.3	0.7	0.9	0.9	0.8	0.9	0.7
Food Manufacturing	1.56	1.56	1.57	1.58	1.59	1.59	1.60	1.61
% Ch, Annual Rate	1.6	1.8	1.9	2.1	1.8	1.8	1.8	1.7
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-1.6	-0.7	-0.1	0.3	0.1	0.2	0.4	0.4
Other Nondurables	2.66	2.66	2.66	2.66	2.67	2.67	2.67	2.67
% Ch, Annual Rate	-1.2	-0.4	0.1	0.3	0.5	0.3	0.3	0.2
Natural Resources and Mining	0.72	0.72	0.72	0.72	0.73	0.73	0.73	0.73
% Ch, Annual Rate	2.6	1.3	1.2	1.1	1.2	0.8	1.7	1.8
Construction	6.88	6.92	6.96	6.99	7.03	7.07	7.12	7.16
% Ch, Annual Rate	2.6	2.2	2.4	2.0	2.2	2.4	2.7	2.2
Trade, Transportation, and Utilities	27.43	27.43	27.43	27.43	27.43	27.42	27.43	27.42
% Ch, Annual Rate	-0.6	0.1	-0.1	0.0	0.0	-0.1	0.2	-0.1
Wholesale Trade	5.95	5.96	5.97	5.98	5.99	6.00	6.02	6.02
% Ch, Annual Rate	0.0	0.6	0.7	0.6	0.8	0.7	0.8	0.5
Retail Trade	15.93	15.90	15.89	15.87	15.86	15.84	15.83	15.81
% Ch, Annual Rate	-1.2	-0.6	-0.4	-0.3	-0.3	-0.6	-0.2	-0.5
Trans., Warehousing, and Utilities	5.55	5.57	5.57	5.57	5.57	5.58	5.58	5.58
% Ch, Annual Rate	0.6	1.4	0.2	0.1	0.2	0.3	0.3	0.2
Information	2.79	2.78	2.78	2.79	2.78	2.78	2.77	2.77
% Ch, Annual Rate	-0.1	-2.1	0.6	0.9	-0.6	-0.6	-0.5	0.0
Publishing Industries	0.70	0.70	0.69	0.69	0.69	0.68	0.68	0.67
% Ch, Annual Rate	-2.5	-1.8	-2.1	-2.0	-2.6	-2.5	-2.1	-1.9
Other Information	2.09	2.08	2.09	2.10	2.10	2.10	2.10	2.10
% Ch, Annual Rate	0.7	-2.1	1.6	1.9	0.0	0.1	0.1	0.6
Financial Activities	8.33	8.31	8.30	8.30	8.30	8.29	8.27	8.25
% Ch, Annual Rate	-1.0	-0.5	-0.5	-0.3	-0.1	-0.3	-0.8	-0.8
Professional and Business Services	21.42	21.59	21.75	21.88	22.03	22.17	22.31	22.44
% Ch, Annual Rate	3.9	3.3	3.0	2.5	2.8	2.5	2.5	2.4
Education and Health Services	23.28	23.33	23.37	23.41	23.49	23.53	23.56	23.61
% Ch, Annual Rate	1.0	0.8	0.7	0.8	1.3	0.7	0.5	0.8
Leisure and Hospitality	15.72	15.75	15.78	15.82	15.82	15.83	15.86	15.88
% Ch, Annual Rate	-0.4	0.8	0.9	1.1	-0.1	0.4	0.7	0.5
Other Services	5.63	5.61	5.60	5.58	5.55	5.53	5.50	5.48
% Ch, Annual Rate	-1.3	-1.2	-1.0	-1.3	-1.8	-1.9	-1.8	-1.8
Federal Government	2.79	2.78	2.77	2.76	2.75	2.74	2.73	2.72
% Ch, Annual Rate	-1.7	-1.6	-1.4	-1.5	-1.4	-1.5	-1.5	-1.4
State and Local Government	19.44	19.44	19.49	19.53	19.58	19.64	19.69	19.73
% Ch, Annual Rate	0.1	0.0	0.9	0.9	1.0	1.2	0.9	0.9

Table A2.2 (continued)

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

Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	149.16	149.69	149.83	150.02	150.28	150.55	150.80	151.06
% Ch, Annual Rate	0.9	1.4	0.4	0.5	0.7	0.7	0.7	0.7
Manufacturing	12.69	12.71	12.76	12.79	12.82	12.84	12.87	12.88
% Ch, Annual Rate	1.4	0.7	1.3	1.2	0.9	0.7	0.8	0.5
Durable Manufacturing	8.05	8.07	8.11	8.14	8.17	8.20	8.23	8.25
% Ch, Annual Rate	2.2	1.3	1.9	1.7	1.4	1.2	1.5	1.1
Wood Products	0.45	0.46	0.46	0.47	0.47	0.47	0.48	0.48
% Ch, Annual Rate	4.5	3.7	5.0	4.9	4.1	2.9	3.4	3.4
Primary and Fabricated Metals	1.89	1.89	1.90	1.92	1.93	1.93	1.95	1.96
% Ch, Annual Rate	2.8	2.0	2.0	2.6	2.2	1.8	2.4	2.2
Computer and Electronic Products	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
% Ch, Annual Rate	1.2	-0.1	0.1	0.3	0.1	0.4	0.8	0.6
Machinery and Electrical Equipment	1.54	1.55	1.56	1.57	1.57	1.58	1.58	1.59
% Ch, Annual Rate	2.4	1.4	2.2	1.9	1.6	1.4	1.9	1.7
Transportation Equipment	1.61	1.62	1.63	1.63	1.64	1.64	1.64	1.64
% Ch, Annual Rate	2.4	1.5	2.3	1.0	0.9	0.9	0.4	-1.2
Other Durables	1.46	1.47	1.47	1.48	1.48	1.48	1.49	1.49
% Ch, Annual Rate	1.0	0.4	1.4	1.2	0.8	0.7	1.4	1.3
Nondurable Manufacturing	4.64	4.64	4.65	4.65	4.65	4.65	4.64	4.63
% Ch, Annual Rate	0.1	-0.2	0.3	0.2	0.1	-0.3	-0.5	-0.5
Food Manufacturing	1.61	1.61	1.62	1.63	1.63	1.64	1.64	1.64
% Ch, Annual Rate	1.0	0.7	1.6	1.4	1.6	1.0	0.7	0.8
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-0.1	-0.3	0.3	0.1	0.1	-0.2	-0.4	-0.3
Other Nondurables	2.67	2.66	2.66	2.66	2.65	2.65	2.64	2.63
% Ch, Annual Rate	-0.5	-0.7	-0.4	-0.6	-0.8	-1.1	-1.3	-1.3
Natural Resources and Mining	0.74	0.74	0.75	0.75	0.76	0.76	0.76	0.76
% Ch, Annual Rate	2.3	2.0	2.1	2.7	2.4	1.7	1.0	1.3
Construction	7.20	7.24	7.28	7.33	7.37	7.42	7.47	7.52
% Ch, Annual Rate	2.0	2.2	2.6	2.5	2.3	2.6	3.0	2.8
Trade, Transportation, and Utilities	27.40	27.36	27.35	27.33	27.31	27.30	27.28	27.27
% Ch, Annual Rate	-0.2	-0.6	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2
Wholesale Trade	6.04	6.04	6.06	6.07	6.08	6.09	6.10	6.10
% Ch, Annual Rate	1.0	0.3	0.8	0.8	0.7	0.6	0.5	0.4
Retail Trade	15.78	15.73	15.70	15.67	15.64	15.62	15.59	15.58
% Ch, Annual Rate	-0.8	-1.1	-0.8	-0.8	-0.9	-0.5	-0.6	-0.5
Trans., Warehousing, and Utilities	5.59	5.59	5.59	5.59	5.60	5.60	5.60	5.59
% Ch, Annual Rate	0.4	-0.2	0.3	0.2	0.2	0.1	-0.2	-0.2
Information	2.78	2.78	2.79	2.79	2.80	2.81	2.82	2.82
% Ch, Annual Rate	0.3	0.2	1.4	0.9	0.9	1.3	1.0	0.7
Publishing Industries	0.67	0.67	0.67	0.66	0.66	0.66	0.66	0.65
% Ch, Annual Rate	-1.4	-2.3	-1.5	-1.6	-1.4	-1.3	-1.3	-1.4
Other Information	2.11	2.11	2.12	2.13	2.14	2.15	2.16	2.17
% Ch, Annual Rate	0.9	1.0	2.4	1.8	1.6	2.1	1.7	1.4
Financial Activities	8.25	8.23	8.23	8.23	8.24	8.24	8.24	8.24
% Ch, Annual Rate	-0.4	-0.8	0.1	0.1	0.1	0.3	0.1	-0.2
Professional and Business Services	22.57	22.69	22.83	22.97	23.09	23.19	23.31	23.46
% Ch, Annual Rate	2.4	2.1	2.6	2.5	2.0	1.8	2.1	2.5
Education and Health Services	23.67	23.68	23.74	23.81	23.86	23.90	23.93	23.96
% Ch, Annual Rate	1.0	0.3	1.0	1.1	0.9	0.6	0.5	0.6
Leisure and Hospitality	15.88	15.89	15.94	15.97	16.01	16.05	16.07	16.08
% Ch, Annual Rate	0.0	0.3	1.1	0.9	0.8	1.0	0.5	0.3
Other Services	5.48	5.47	5.47	5.47	5.46	5.46	5.45	5.44
% Ch, Annual Rate	0.0	-0.5	-0.1	-0.1	-0.1	-0.4	-0.6	-1.0
Federal Government	2.74	3.10	2.87	2.72	2.70	2.69	2.68	2.68
% Ch, Annual Rate	3.0	63.9	-26.2	-19.1	-3.9	-1.0	-0.9	-0.8
State and Local Government	19.77	19.80	19.83	19.85	19.87	19.89	19.92	19.94
% Ch, Annual Rate	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.5

Table A2.3  
**Washington Nonagricultural Employment by Industry (Thousands)**  
Forecast 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	3,059.6	3,145.8	3,238.2	3,298.4	3,350.5	3,398.1	3,442.5	3,479.0
% Ch	2.5	2.8	2.9	1.9	1.6	1.4	1.3	1.1
Manufacturing	288.7	290.7	287.8	281.9	283.9	286.5	290.0	293.5
% Ch	0.7	0.7	-1.0	-2.0	0.7	0.9	1.2	1.2
Durable Manufacturing	210.0	211.1	206.1	200.3	201.8	203.1	205.6	208.4
% Ch	0.2	0.5	-2.3	-2.8	0.8	0.7	1.2	1.4
Wood Products	13.4	13.3	13.0	12.9	13.4	13.7	14.1	14.3
% Ch	3.0	-1.1	-1.9	-1.2	3.7	2.7	2.5	1.7
Primary and Fabricated Metals	25.6	25.7	24.9	25.0	25.4	25.9	26.8	27.5
% Ch	2.5	0.2	-3.0	0.4	1.7	2.1	3.1	2.8
Computer and Electronic Products	20.0	20.0	19.8	19.8	20.9	21.4	21.8	22.1
% Ch	-1.0	-0.1	-0.6	0.0	5.4	2.4	1.7	1.4
Machinery and Electrical Equipment	20.8	20.8	20.4	20.8	22.0	23.5	25.1	26.7
% Ch	4.9	0.1	-2.2	1.8	5.9	6.9	6.9	6.2
Aerospace	94.2	93.9	90.3	84.4	82.5	80.9	80.3	80.3
% Ch	-1.9	-0.4	-3.8	-6.6	-2.2	-2.0	-0.8	0.0
Other Transportation Equip.	9.7	10.2	10.2	10.0	9.7	9.5	9.2	8.9
% Ch	-0.7	5.3	0.0	-2.0	-3.1	-2.1	-2.7	-3.1
Other Durables	26.2	27.2	27.4	27.5	27.9	28.2	28.5	28.7
% Ch	2.1	3.9	0.7	0.2	1.8	1.0	0.8	0.9
Nondurable Manufacturing	78.7	79.7	81.7	81.6	82.1	83.4	84.3	85.1
% Ch	2.1	1.2	2.5	0.0	0.5	1.6	1.1	0.9
Food Manufacturing	36.4	36.5	37.5	37.8	38.2	38.7	39.0	39.2
% Ch	1.9	0.3	2.8	0.9	0.9	1.5	0.7	0.6
Paper and Paper Products	8.0	8.0	7.6	7.2	7.0	7.0	6.9	6.8
% Ch	-1.2	-0.5	-4.8	-5.6	-2.3	-0.9	-0.9	-1.1
Other Nondurables	34.3	35.2	36.5	36.6	36.9	37.7	38.4	39.0
% Ch	3.2	2.6	3.8	0.2	0.7	2.2	2.0	1.6
Natural Resources and Mining	6.2	6.3	6.3	6.4	6.5	6.6	6.6	6.7
% Ch	1.7	1.6	0.1	1.5	0.6	1.6	1.3	1.0
Construction	159.7	173.2	183.6	187.3	194.5	199.2	202.1	204.5
% Ch	7.2	8.5	6.0	2.0	3.8	2.4	1.4	1.2
Trade, Transportation, and Utilities	569.9	589.0	608.0	621.8	628.5	634.6	638.2	640.5
% Ch	3.4	3.4	3.2	2.3	1.1	1.0	0.6	0.4
Wholesale Trade	130.0	132.6	134.6	136.2	138.2	140.3	142.0	143.5
% Ch	2.4	2.1	1.4	1.2	1.5	1.5	1.2	1.0
Retail Trade	342.1	355.1	368.6	378.7	382.4	385.8	387.2	387.8
% Ch	3.7	3.8	3.8	2.8	1.0	0.9	0.4	0.2
Trans., Warehousing, and Utilities	97.8	101.3	104.8	106.9	107.9	108.5	109.0	109.2
% Ch	4.0	3.5	3.5	2.0	1.0	0.6	0.4	0.3
Information	109.8	114.3	121.0	123.9	124.7	125.8	127.3	129.5
% Ch	3.4	4.1	5.9	2.4	0.7	0.9	1.2	1.7
Software Publishers	55.6	56.0	59.1	60.6	61.1	61.6	62.2	62.9
% Ch	3.3	0.7	5.6	2.5	0.8	0.9	1.0	1.1
Other Publishing Industries	6.6	6.2	5.9	5.7	5.3	4.9	4.5	4.2
% Ch	-4.9	-6.8	-3.5	-4.1	-7.7	-7.4	-7.1	-6.9
Other Information	47.6	52.2	56.0	57.6	58.4	59.4	60.6	62.4
% Ch	4.8	9.6	7.2	2.9	1.4	1.6	2.1	3.0
Financial Activities	145.1	147.6	151.4	152.8	152.0	151.4	150.2	149.8
% Ch	1.0	1.7	2.6	0.9	-0.5	-0.4	-0.8	-0.3
Professional and Business Services	372.0	388.2	402.0	417.8	436.2	450.8	464.3	476.8
% Ch	3.0	4.3	3.6	3.9	4.4	3.4	3.0	2.7
Education and Health Services	446.7	449.1	463.9	477.0	486.2	494.7	502.5	509.9
% Ch	1.5	0.5	3.3	2.8	1.9	1.8	1.6	1.5
Leisure and Hospitality	296.9	309.4	321.3	327.6	331.7	335.5	338.9	342.6
% Ch	3.4	4.2	3.8	2.0	1.2	1.2	1.0	1.1
Other Services	113.8	115.6	119.0	120.8	121.6	122.1	122.9	123.9
% Ch	2.3	1.5	3.0	1.6	0.6	0.5	0.7	0.8
Federal Government	71.3	73.2	74.4	75.1	74.7	74.1	76.8	73.6
% Ch	-0.5	2.6	1.7	0.9	-0.6	-0.8	3.7	-4.2
State and Local Government	479.4	489.2	499.6	505.7	510.0	516.8	522.6	527.6
% Ch	1.6	2.0	2.1	1.2	0.9	1.3	1.1	1.0

Table A2.4  
**Washington Nonagricultural Employment by Industry (Thousands)**  
Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	3,205.5	3,233.1	3,249.0	3,265.4	3,278.3	3,291.4	3,304.9	3,318.9
% Ch, Annual Rate	3.7	3.5	2.0	2.0	1.6	1.6	1.6	1.7
Manufacturing	290.7	290.1	287.6	282.6	281.2	281.8	282.2	282.5
% Ch, Annual Rate	0.5	-0.8	-3.4	-6.8	-2.0	0.9	0.5	0.5
Durable Manufacturing	209.4	208.1	206.0	200.9	199.6	200.0	200.5	200.9
% Ch, Annual Rate	-1.8	-2.4	-3.9	-9.5	-2.6	0.8	1.0	0.8
Wood Products	13.2	13.1	13.0	12.8	12.6	12.8	13.0	13.1
% Ch, Annual Rate	-2.0	-0.8	-3.1	-6.2	-6.4	6.1	5.4	5.0
Primary and Fabricated Metals	25.3	25.0	24.7	24.7	24.7	24.9	25.1	25.2
% Ch, Annual Rate	-3.5	-5.0	-5.0	0.9	0.3	3.6	2.3	2.0
Computer and Electronic Products	20.0	20.0	19.8	19.5	19.5	19.7	20.0	20.2
% Ch, Annual Rate	0.1	0.7	-3.6	-6.0	-1.5	4.7	5.7	5.5
Machinery and Electrical Equipment	20.6	20.6	20.2	20.2	20.3	20.6	20.9	21.2
% Ch, Annual Rate	-0.5	-0.8	-7.4	0.7	2.0	5.2	7.2	5.6
Aerospace	92.6	91.6	90.9	86.3	85.2	84.6	84.1	83.6
% Ch, Annual Rate	-2.5	-4.2	-3.1	-18.7	-5.0	-2.5	-2.5	-2.5
Other Transportation Equip.	10.3	10.3	10.0	10.1	10.1	10.0	9.9	9.9
% Ch, Annual Rate	-1.5	-1.1	-10.8	2.4	0.8	-3.3	-2.4	-2.9
Other Durables	27.4	27.5	27.4	27.3	27.3	27.4	27.5	27.7
% Ch, Annual Rate	0.1	1.3	-1.1	-1.7	-0.9	1.9	2.1	2.1
Nondurable Manufacturing	81.3	82.0	81.6	81.7	81.6	81.8	81.7	81.6
% Ch, Annual Rate	6.7	3.5	-2.0	0.3	-0.5	1.1	-0.6	-0.3
Food Manufacturing	37.3	37.6	37.2	37.9	37.7	37.9	37.9	37.9
% Ch, Annual Rate	8.2	3.4	-4.5	7.8	-2.2	2.4	-0.2	-0.2
Paper and Paper Products	7.8	7.8	7.7	7.3	7.3	7.2	7.2	7.1
% Ch, Annual Rate	-6.3	1.0	-4.5	-20.7	0.1	-1.5	-3.3	-3.0
Other Nondurables	36.3	36.6	36.8	36.5	36.6	36.7	36.6	36.6
% Ch, Annual Rate	8.2	4.1	1.3	-2.3	1.1	0.3	-0.5	0.1
Natural Resources and Mining	6.2	6.3	6.3	6.4	6.4	6.4	6.4	6.4
% Ch, Annual Rate	-1.3	3.0	2.9	5.7	-0.6	1.0	-0.5	-1.5
Construction	181.0	183.5	184.2	185.6	185.4	186.2	187.6	190.0
% Ch, Annual Rate	13.7	5.6	1.4	3.2	-0.4	1.8	3.0	5.3
Trade, Transportation, and Utilities	598.4	606.5	611.6	615.4	619.0	620.9	622.9	624.5
% Ch, Annual Rate	2.6	5.6	3.4	2.5	2.4	1.2	1.3	1.0
Wholesale Trade	133.8	134.5	134.8	135.1	135.6	136.0	136.4	136.9
% Ch, Annual Rate	1.6	2.2	0.7	1.1	1.4	1.1	1.3	1.4
Retail Trade	361.7	367.6	371.0	374.0	376.8	378.1	379.5	380.4
% Ch, Annual Rate	4.3	6.6	3.7	3.3	3.0	1.4	1.5	1.0
Trans., Warehousing, and Utilities	102.8	104.4	105.9	106.2	106.5	106.8	107.0	107.2
% Ch, Annual Rate	-1.8	6.2	5.9	1.2	1.3	0.9	0.8	0.9
Information	118.8	120.4	122.0	122.9	123.8	123.8	123.7	124.2
% Ch, Annual Rate	5.6	5.6	5.4	2.7	3.2	0.1	-0.4	1.5
Software Publishers	57.9	58.7	59.7	60.2	60.5	60.6	60.6	60.7
% Ch, Annual Rate	6.3	5.7	7.0	3.5	1.7	0.7	0.2	0.7
Other Publishing Industries	6.0	5.9	6.0	5.9	5.9	5.8	5.6	5.5
% Ch, Annual Rate	-3.6	-4.9	3.7	-1.9	-1.9	-7.9	-11.0	-7.8
Other Information	54.9	55.8	56.4	56.7	57.4	57.5	57.5	58.0
% Ch, Annual Rate	6.0	6.7	3.9	2.4	5.3	0.4	0.1	3.3
Financial Activities	150.0	151.2	151.9	152.5	153.0	153.0	152.8	152.5
% Ch, Annual Rate	2.9	3.1	1.9	1.4	1.4	0.0	-0.5	-0.6
Professional and Business Services	396.5	400.6	403.3	407.6	410.6	415.0	420.4	425.3
% Ch, Annual Rate	3.0	4.2	2.7	4.3	3.0	4.4	5.3	4.8
Education and Health Services	458.7	462.3	465.1	469.7	473.1	476.0	478.2	480.7
% Ch, Annual Rate	4.8	3.2	2.4	4.1	3.0	2.4	1.9	2.1
Leisure and Hospitality	317.8	320.7	322.1	324.5	325.8	327.1	328.3	329.3
% Ch, Annual Rate	3.7	3.7	1.7	3.1	1.5	1.7	1.5	1.2
Other Services	117.6	118.8	119.3	120.2	120.7	120.8	120.9	121.0
% Ch, Annual Rate	4.6	4.2	1.9	3.1	1.5	0.3	0.3	0.5
Federal Government	74.2	74.5	74.2	74.9	75.0	75.2	75.2	75.1
% Ch, Annual Rate	1.1	1.5	-1.5	3.6	0.9	0.8	0.0	-0.5
State and Local Government	495.5	498.3	501.4	503.2	504.3	505.2	506.2	507.2
% Ch, Annual Rate	2.7	2.2	2.5	1.5	0.8	0.7	0.8	0.8

Table A2.4 (continued)

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

Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,331.8	3,343.7	3,356.7	3,369.6	3,382.0	3,393.1	3,403.4	3,414.0
% Ch, Annual Rate	1.6	1.4	1.6	1.5	1.5	1.3	1.2	1.3
Manufacturing	283.0	283.6	284.1	284.9	285.5	286.1	286.8	287.6
% Ch, Annual Rate	0.7	0.8	0.7	1.1	0.9	0.8	0.9	1.2
Durable Manufacturing	201.3	201.7	201.9	202.3	202.6	202.9	203.2	203.8
% Ch, Annual Rate	0.8	0.7	0.4	0.9	0.6	0.5	0.6	1.1
Wood Products	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9
% Ch, Annual Rate	3.3	2.7	1.6	3.0	2.5	2.6	3.3	3.5
Primary and Fabricated Metals	25.3	25.4	25.4	25.5	25.7	25.8	26.0	26.2
% Ch, Annual Rate	1.8	1.0	0.1	1.9	2.8	2.3	2.2	4.0
Computer and Electronic Products	20.5	20.8	21.0	21.2	21.3	21.3	21.4	21.5
% Ch, Annual Rate	6.1	5.3	4.4	4.2	0.9	0.9	1.6	2.1
Machinery and Electrical Equipment	21.5	21.8	22.1	22.5	22.9	23.3	23.7	24.1
% Ch, Annual Rate	5.0	6.7	5.4	7.1	7.2	6.9	7.0	8.0
Aerospace	83.2	82.7	82.3	81.9	81.5	81.1	80.7	80.3
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Other Transportation Equip.	9.8	9.7	9.7	9.6	9.5	9.5	9.4	9.4
% Ch, Annual Rate	-4.4	-4.3	-0.2	-1.7	-2.7	-1.8	-2.5	-2.6
Other Durables	27.8	27.9	28.0	28.1	28.2	28.2	28.3	28.3
% Ch, Annual Rate	2.0	1.7	0.8	1.3	1.2	0.8	0.6	0.9
Nondurable Manufacturing	81.7	81.9	82.2	82.5	82.9	83.2	83.5	83.9
% Ch, Annual Rate	0.5	1.0	1.4	1.7	1.7	1.6	1.7	1.6
Food Manufacturing	38.0	38.1	38.2	38.4	38.5	38.7	38.8	38.9
% Ch, Annual Rate	1.1	1.3	1.5	1.8	1.4	1.3	1.4	1.3
Paper and Paper Products	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9
% Ch, Annual Rate	-2.9	-1.9	-1.2	-0.7	-0.9	-0.8	-0.5	-0.5
Other Nondurables	36.7	36.8	36.9	37.1	37.4	37.6	37.8	38.0
% Ch, Annual Rate	0.5	1.3	1.7	2.0	2.5	2.3	2.4	2.3
Natural Resources and Mining	6.4	6.4	6.5	6.5	6.5	6.5	6.6	6.6
% Ch, Annual Rate	1.3	1.6	1.5	2.0	1.3	1.5	1.8	1.2
Construction	192.4	193.8	195.3	196.6	197.9	199.0	199.6	200.5
% Ch, Annual Rate	5.2	2.8	3.2	2.8	2.6	2.2	1.1	1.9
Trade, Transportation, and Utilities	625.8	627.7	629.4	631.1	632.7	633.9	635.4	636.5
% Ch, Annual Rate	0.8	1.2	1.1	1.1	1.0	0.8	0.9	0.7
Wholesale Trade	137.4	137.9	138.5	139.0	139.6	140.1	140.5	140.9
% Ch, Annual Rate	1.5	1.6	1.7	1.6	1.6	1.4	1.2	1.2
Retail Trade	380.9	381.9	382.9	383.8	384.7	385.3	386.2	386.8
% Ch, Annual Rate	0.5	1.0	1.0	1.0	0.9	0.6	1.0	0.6
Trans., Warehousing, and Utilities	107.5	107.9	108.1	108.2	108.3	108.5	108.6	108.7
% Ch, Annual Rate	1.1	1.4	0.5	0.5	0.5	0.6	0.5	0.4
Information	124.5	124.4	124.8	125.3	125.5	125.7	125.9	126.2
% Ch, Annual Rate	0.9	-0.4	1.4	1.6	0.6	0.6	0.7	1.0
Software Publishers	60.8	61.0	61.1	61.3	61.4	61.5	61.7	61.8
% Ch, Annual Rate	0.8	1.0	0.9	1.0	0.8	0.8	0.9	1.0
Other Publishing Industries	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7
% Ch, Annual Rate	-7.4	-6.4	-6.9	-6.8	-8.1	-7.9	-7.5	-7.1
Other Information	58.3	58.1	58.5	58.9	59.1	59.2	59.4	59.7
% Ch, Annual Rate	1.9	-1.2	2.7	3.1	1.1	1.1	1.2	1.7
Financial Activities	152.3	152.1	151.9	151.8	151.8	151.6	151.2	150.8
% Ch, Annual Rate	-0.7	-0.5	-0.4	-0.2	0.0	-0.5	-1.2	-1.0
Professional and Business Services	430.1	434.4	438.4	441.9	445.6	449.1	452.6	456.0
% Ch, Annual Rate	4.6	4.0	3.7	3.2	3.4	3.2	3.1	3.0
Education and Health Services	483.1	485.2	487.2	489.3	491.9	493.8	495.6	497.6
% Ch, Annual Rate	2.0	1.8	1.7	1.7	2.1	1.6	1.4	1.6
Leisure and Hospitality	329.9	331.0	332.2	333.5	334.1	335.0	336.0	336.9
% Ch, Annual Rate	0.8	1.4	1.4	1.5	0.8	1.0	1.2	1.0
Other Services	121.2	121.4	121.7	121.9	122.0	122.1	122.2	122.3
% Ch, Annual Rate	0.7	0.7	0.8	0.6	0.4	0.3	0.3	0.3
Federal Government	74.9	74.8	74.6	74.5	74.3	74.2	74.0	73.9
% Ch, Annual Rate	-1.0	-0.9	-0.8	-0.8	-0.7	-0.8	-0.8	-0.8
State and Local Government	508.1	509.0	510.7	512.4	514.1	516.0	517.7	519.2
% Ch, Annual Rate	0.8	0.6	1.3	1.3	1.4	1.5	1.3	1.2

Table A2.4 (continued)

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

Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,424.6	3,441.5	3,447.7	3,455.9	3,465.2	3,474.5	3,483.5	3,492.7
% Ch, Annual Rate	1.2	2.0	0.7	1.0	1.1	1.1	1.0	1.1
Manufacturing	288.7	289.4	290.4	291.4	292.4	293.1	293.9	294.8
% Ch, Annual Rate	1.4	0.9	1.4	1.4	1.3	1.0	1.2	1.1
Durable Manufacturing	204.6	205.2	206.0	206.8	207.4	208.0	208.8	209.5
% Ch, Annual Rate	1.7	1.1	1.5	1.5	1.3	1.2	1.5	1.4
Wood Products	14.0	14.0	14.1	14.2	14.2	14.3	14.3	14.4
% Ch, Annual Rate	2.1	1.5	2.6	2.5	1.8	0.7	1.2	1.2
Primary and Fabricated Metals	26.5	26.6	26.8	27.1	27.2	27.4	27.6	27.8
% Ch, Annual Rate	3.7	2.5	2.8	3.4	2.8	2.2	2.9	2.6
Computer and Electronic Products	21.7	21.7	21.8	21.9	21.9	22.0	22.1	22.2
% Ch, Annual Rate	2.7	0.7	1.1	1.4	1.2	1.5	2.2	2.0
Machinery and Electrical Equipment	24.6	24.9	25.3	25.7	26.1	26.5	26.9	27.3
% Ch, Annual Rate	7.1	5.6	6.8	6.4	6.0	5.7	6.4	6.2
Aerospace	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.3	9.2	9.2	9.1	9.0	9.0	8.9	8.8
% Ch, Annual Rate	-2.8	-2.9	-2.8	-3.0	-3.2	-3.3	-3.3	-3.3
Other Durables	28.4	28.4	28.5	28.6	28.6	28.7	28.7	28.8
% Ch, Annual Rate	0.8	0.5	1.1	1.1	0.8	0.7	0.9	0.9
Nondurable Manufacturing	84.0	84.2	84.4	84.7	84.9	85.1	85.1	85.3
% Ch, Annual Rate	0.8	0.6	1.3	1.2	1.2	0.6	0.4	0.5
Food Manufacturing	38.9	38.9	39.0	39.1	39.2	39.2	39.2	39.2
% Ch, Annual Rate	0.2	-0.2	1.1	0.9	1.1	0.2	-0.1	0.0
Paper and Paper Products	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.8
% Ch, Annual Rate	-1.2	-1.4	-0.7	-0.9	-0.9	-1.3	-1.5	-1.4
Other Nondurables	38.2	38.3	38.5	38.7	38.8	39.0	39.1	39.2
% Ch, Annual Rate	1.8	1.6	1.9	1.8	1.7	1.3	1.2	1.4
Natural Resources and Mining	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.7
% Ch, Annual Rate	1.3	1.2	1.4	1.2	0.9	0.7	1.0	0.7
Construction	201.1	201.8	202.4	203.0	203.6	204.2	204.8	205.4
% Ch, Annual Rate	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.1
Trade, Transportation, and Utilities	637.4	637.7	638.5	639.1	639.6	640.3	640.8	641.4
% Ch, Annual Rate	0.6	0.2	0.5	0.4	0.3	0.4	0.3	0.3
Wholesale Trade	141.5	141.8	142.2	142.7	143.0	143.4	143.7	143.9
% Ch, Annual Rate	1.5	0.9	1.2	1.2	1.1	1.0	0.8	0.7
Retail Trade	387.1	387.0	387.2	387.4	387.4	387.7	387.9	388.2
% Ch, Annual Rate	0.2	0.0	0.2	0.1	0.0	0.3	0.3	0.3
Trans., Warehousing, and Utilities	108.9	108.9	109.0	109.1	109.2	109.3	109.3	109.3
% Ch, Annual Rate	0.5	0.2	0.4	0.4	0.3	0.2	0.0	0.0
Information	126.6	127.0	127.6	128.1	128.7	129.3	129.8	130.3
% Ch, Annual Rate	1.3	1.1	2.0	1.7	1.7	1.9	1.7	1.5
Software Publishers	62.0	62.1	62.3	62.5	62.6	62.8	63.0	63.2
% Ch, Annual Rate	1.1	0.9	1.1	1.1	1.1	1.1	1.1	1.1
Other Publishing Industries	4.6	4.6	4.5	4.4	4.3	4.2	4.2	4.1
% Ch, Annual Rate	-6.4	-8.1	-6.7	-7.0	-6.6	-6.7	-6.7	-7.1
Other Information	60.0	60.3	60.8	61.3	61.7	62.2	62.6	63.0
% Ch, Annual Rate	2.1	2.2	3.6	3.0	2.8	3.3	2.9	2.5
Financial Activities	150.6	150.1	150.1	150.0	149.9	149.9	149.8	149.6
% Ch, Annual Rate	-0.6	-1.1	-0.2	-0.2	-0.2	0.0	-0.4	-0.6
Professional and Business Services	459.4	462.4	466.0	469.4	472.4	475.1	478.1	481.6
% Ch, Annual Rate	3.0	2.7	3.1	3.0	2.5	2.3	2.6	2.9
Education and Health Services	499.8	501.2	503.4	505.6	507.5	509.2	510.6	512.1
% Ch, Annual Rate	1.8	1.1	1.7	1.8	1.6	1.3	1.1	1.2
Leisure and Hospitality	337.5	338.3	339.4	340.4	341.4	342.4	343.1	343.7
% Ch, Annual Rate	0.7	0.9	1.3	1.2	1.1	1.2	0.9	0.7
Other Services	122.5	122.8	123.1	123.3	123.6	123.8	124.0	124.1
% Ch, Annual Rate	1.0	0.8	0.9	0.9	0.8	0.7	0.6	0.4
Federal Government	73.8	82.2	77.0	74.3	73.7	73.6	73.6	73.5
% Ch, Annual Rate	-0.5	54.1	-22.9	-13.5	-2.9	-0.5	-0.4	-0.3
State and Local Government	520.7	522.0	523.3	524.5	525.8	527.0	528.2	529.5
% Ch, Annual Rate	1.1	1.0	1.0	0.9	0.9	1.0	0.9	1.0

Table A3.1  
**U.S. Personal Income by Component (Billions of Dollars)**  
Forecast 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	14,809.8	15,458.5	15,966.2	16,605.4	17,353.0	18,148.0	18,989.8	19,841.9
% Ch	5.2	4.4	3.3	4.0	4.5	4.6	4.6	4.5
Total Wage and Salary Disbursements	7,476.3	7,854.8	8,146.8	8,491.4	8,834.4	9,190.8	9,576.4	9,981.1
% Ch	5.1	5.1	3.7	4.2	4.0	4.0	4.2	4.2
Nonwage Personal Income	7,333.4	7,603.7	7,819.5	8,114.0	8,518.6	8,957.2	9,413.4	9,860.9
% Ch	5.4	3.7	2.8	3.8	5.0	5.1	5.1	4.8
Supplements to Wages and Salaries	1,777.1	1,838.2	1,910.0	1,980.5	2,038.8	2,099.5	2,162.8	2,227.1
% Ch	3.0	3.4	3.9	3.7	2.9	3.0	3.0	3.0
Proprietor's Income	1,337.7	1,376.8	1,413.3	1,480.4	1,550.9	1,607.8	1,669.2	1,746.3
% Ch	4.1	2.9	2.7	4.7	4.8	3.7	3.8	4.6
Farm	68.5	40.0	29.3	28.8	30.4	31.0	31.7	35.5
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,269.2	1,336.8	1,384.0	1,451.6	1,520.4	1,576.8	1,637.5	1,710.7
% Ch	6.0	5.3	3.5	4.9	4.7	3.7	3.8	4.5
Less: Contribution For Govt. Soc. Ins.	1,154.9	1,203.5	1,245.3	1,294.5	1,351.5	1,404.8	1,463.9	1,527.3
% Ch	4.6	4.2	3.5	4.0	4.4	3.9	4.2	4.3
Dividends/Int./Rent	2,833.1	2,913.5	2,966.2	3,072.9	3,245.0	3,452.3	3,678.1	3,875.2
% Ch	8.0	2.8	1.8	3.6	5.6	6.4	6.5	5.4
Transfer Payments	2,540.4	2,678.7	2,775.2	2,874.7	3,035.4	3,202.4	3,367.2	3,539.6
% Ch	4.6	5.4	3.6	3.6	5.6	5.5	5.1	5.1

Table A3.2

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

Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	15,740.1	15,893.2	16,046.8	16,184.9	16,345.8	16,521.9	16,690.5	16,863.4
% Ch, Annual Rate	1.3	3.9	3.9	3.5	4.0	4.4	4.1	4.2
Total Wage and Salary Disbursements	8,011.3	8,104.3	8,198.9	8,272.6	8,358.1	8,451.0	8,537.5	8,619.1
% Ch, Annual Rate	-0.7	4.7	4.8	3.6	4.2	4.5	4.2	3.9
Nonwage Personal Income	7,728.8	7,788.9	7,847.9	7,912.2	7,987.7	8,070.8	8,153.0	8,244.3
% Ch, Annual Rate	3.3	3.1	3.1	3.3	3.9	4.2	4.1	4.6
Supplements to Wages and Salaries	1,881.3	1,900.8	1,919.8	1,938.1	1,955.5	1,973.5	1,989.3	2,003.7
% Ch, Annual Rate	2.9	4.2	4.1	3.9	3.6	3.7	3.2	2.9
Proprietor's Income	1,403.9	1,407.8	1,415.5	1,426.0	1,447.3	1,471.6	1,492.4	1,510.2
% Ch, Annual Rate	0.9	1.1	2.2	3.0	6.1	6.9	5.8	4.8
Farm	32.3	29.8	28.4	26.7	27.2	28.4	29.5	30.0
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,371.6	1,378.0	1,387.1	1,399.3	1,420.1	1,443.2	1,463.0	1,480.1
% Ch, Annual Rate	2.6	1.9	2.7	3.6	6.1	6.7	5.6	4.8
Less: Contribution For Govt. Soc. Ins.	1,229.0	1,239.7	1,250.7	1,261.7	1,274.7	1,288.1	1,301.3	1,313.7
% Ch, Annual Rate	1.6	3.5	3.6	3.6	4.2	4.3	4.2	3.9
Dividends/Int./Rent	2,928.7	2,956.3	2,977.6	3,002.3	3,029.2	3,056.7	3,083.3	3,122.4
% Ch, Annual Rate	2.2	3.8	2.9	3.4	3.6	3.7	3.5	5.2
Transfer Payments	2,744.0	2,763.6	2,785.8	2,807.6	2,830.5	2,857.1	2,889.3	2,921.9
% Ch, Annual Rate	5.4	2.9	3.3	3.2	3.3	3.8	4.6	4.6

Table A3.2 (continued)

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

Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	17,072.0	17,260.5	17,444.6	17,635.0	17,859.0	18,048.3	18,242.1	18,442.6
% Ch, Annual Rate	5.0	4.5	4.3	4.4	5.2	4.3	4.4	4.5
Total Wage and Salary Disbursements	8,706.2	8,790.9	8,877.4	8,963.2	9,055.9	9,144.6	9,235.0	9,327.5
% Ch, Annual Rate	4.1	3.9	4.0	3.9	4.2	4.0	4.0	4.1
Nonwage Personal Income	8,365.8	8,469.6	8,567.2	8,671.8	8,803.2	8,903.6	9,007.1	9,115.1
% Ch, Annual Rate	6.0	5.1	4.7	5.0	6.2	4.6	4.7	4.9
Supplements to Wages and Salaries	2,018.8	2,031.2	2,045.6	2,059.7	2,078.7	2,092.6	2,106.3	2,120.3
% Ch, Annual Rate	3.1	2.5	2.9	2.8	3.7	2.7	2.6	2.7
Proprietor's Income	1,525.6	1,544.0	1,559.6	1,574.3	1,589.5	1,602.8	1,614.1	1,625.0
% Ch, Annual Rate	4.1	4.9	4.1	3.8	3.9	3.4	2.9	2.7
Farm	29.7	30.5	30.7	30.9	31.3	31.1	31.1	30.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,495.9	1,513.6	1,528.9	1,543.4	1,558.1	1,571.7	1,583.0	1,594.4
% Ch, Annual Rate	4.3	4.8	4.1	3.8	3.9	3.5	2.9	2.9
Less: Contribution For Govt. Soc. Ins.	1,335.7	1,346.5	1,356.7	1,367.1	1,389.4	1,399.3	1,409.5	1,420.8
% Ch, Annual Rate	6.9	3.3	3.1	3.1	6.7	2.9	2.9	3.3
Dividends/Int./Rent	3,170.1	3,222.7	3,265.7	3,321.5	3,369.6	3,422.0	3,478.3	3,539.4
% Ch, Annual Rate	6.3	6.8	5.5	7.0	5.9	6.4	6.7	7.2
Transfer Payments	2,987.0	3,018.3	3,052.9	3,083.4	3,154.7	3,185.6	3,217.9	3,251.2
% Ch, Annual Rate	9.2	4.3	4.7	4.1	9.6	4.0	4.1	4.2

Table A3.2 (continued)

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

Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,679.8	18,890.7	19,092.9	19,295.7	19,529.9	19,739.4	19,942.9	20,155.5
% Ch, Annual Rate	5.2	4.6	4.4	4.3	4.9	4.4	4.2	4.3
Total Wage and Salary Disbursements	9,428.5	9,526.8	9,624.9	9,725.4	9,829.7	9,929.2	10,031.2	10,134.1
% Ch, Annual Rate	4.4	4.2	4.2	4.2	4.4	4.1	4.2	4.2
Nonwage Personal Income	9,251.3	9,363.9	9,468.0	9,570.2	9,700.2	9,810.3	9,911.7	10,021.4
% Ch, Annual Rate	6.1	5.0	4.5	4.4	5.5	4.6	4.2	4.5
Supplements to Wages and Salaries	2,141.1	2,155.5	2,169.9	2,184.7	2,205.9	2,219.2	2,233.9	2,249.4
% Ch, Annual Rate	4.0	2.7	2.7	2.8	3.9	2.4	2.7	2.8
Proprietor's Income	1,641.3	1,661.3	1,677.9	1,696.4	1,717.4	1,738.1	1,756.4	1,773.1
% Ch, Annual Rate	4.1	5.0	4.0	4.5	5.0	4.9	4.3	3.9
Farm	31.0	31.1	32.0	32.8	34.4	35.2	36.0	36.5
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,610.3	1,630.2	1,645.9	1,663.6	1,682.9	1,703.0	1,720.4	1,736.6
% Ch, Annual Rate	4.1	5.0	3.9	4.4	4.7	4.8	4.2	3.8
Less: Contribution For Govt. Soc. Ins.	1,446.6	1,457.8	1,469.0	1,482.4	1,510.1	1,521.4	1,533.0	1,544.7
% Ch, Annual Rate	7.4	3.1	3.1	3.7	7.7	3.0	3.1	3.1
Dividends/Int./Rent	3,597.1	3,654.3	3,706.2	3,754.7	3,803.3	3,854.4	3,897.6	3,945.5
% Ch, Annual Rate	6.7	6.5	5.8	5.3	5.3	5.5	4.6	5.0
Transfer Payments	3,318.4	3,350.6	3,383.1	3,416.9	3,483.7	3,519.9	3,556.8	3,598.1
% Ch, Annual Rate	8.5	3.9	3.9	4.1	8.1	4.2	4.3	4.7

Table A3.3  
**Washington Personal Income by Component (Billions of Dollars)**  
Forecast 2016 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	355.677	372.125	389.439	407.094	427.717	449.473	472.140	495.013
% Ch	6.8	4.6	4.7	4.5	5.1	5.1	5.0	4.8
Total Wage and Salary Disbursements	181.710	191.805	205.102	215.092	225.314	235.616	246.309	257.588
% Ch	6.5	5.6	6.9	4.9	4.8	4.6	4.5	4.6
Manufacturing	21.773	21.799	21.848	22.067	22.823	23.639	24.653	25.770
% Ch	5.9	0.1	0.2	1.0	3.4	3.6	4.3	4.5
Durable Manufacturing	17.667	17.591	17.407	17.504	18.087	18.675	19.462	20.350
% Ch	6.5	-0.4	-1.0	0.6	3.3	3.3	4.2	4.6
Nondurable Manufacturing	4.106	4.208	4.441	4.563	4.736	4.964	5.191	5.420
% Ch	3.7	2.5	5.5	2.7	3.8	4.8	4.6	4.4
Nonmanufacturing	153.167	163.012	175.927	185.491	194.702	203.910	213.297	223.154
% Ch	7.0	6.4	7.9	5.4	5.0	4.7	4.6	4.6
Other Private Wages	1.111	1.135	1.274	1.271	1.314	1.355	1.398	1.442
% Ch	2.9	2.1	12.3	-0.2	3.4	3.1	3.2	3.2
Farm Wages	1.534	1.756	1.810	1.887	1.975	2.063	2.156	2.253
% Ch	-2.5	14.5	3.1	4.3	4.7	4.4	4.5	4.5
Military Wages	4.125	4.103	4.243	4.376	4.500	4.649	4.805	4.968
% Ch	-4.3	-0.6	3.4	3.1	2.8	3.3	3.4	3.4
Nonwage Personal Income	173.967	180.320	184.337	192.002	202.403	213.857	225.831	237.425
% Ch	7.1	3.7	2.2	4.2	5.4	5.7	5.6	5.1
Supplements to Wages and Salaries	42.724	43.783	46.825	48.767	50.598	52.367	54.167	55.973
% Ch	3.0	2.5	6.9	4.1	3.8	3.5	3.4	3.3
Proprietor's Income	27.307	30.359	30.770	31.978	33.298	34.412	35.643	37.174
% Ch	2.2	11.2	1.4	3.9	4.1	3.3	3.6	4.3
Farm	1.260	2.497	1.524	1.234	1.078	0.998	0.962	0.965
% Ch	...	...	...	...	...	...	...	...
Nonfarm	26.047	27.862	29.246	30.745	32.220	33.414	34.682	36.208
% Ch	3.7	7.0	5.0	5.1	4.8	3.7	3.8	4.4
Less: Contribution For Govt. Soc. Ins.	30.402	31.799	34.024	35.498	37.281	38.884	40.600	42.380
% Ch	4.9	4.6	7.0	4.3	5.0	4.3	4.4	4.4
Plus: Residence Adjustment	3.203	3.657	3.818	4.002	4.172	4.352	4.548	4.754
% Ch	-2.1	14.2	4.4	4.8	4.2	4.3	4.5	4.5
Dividends/Int./Rent	75.706	77.925	79.578	82.970	88.126	94.263	100.914	106.778
% Ch	9.6	2.9	2.1	4.3	6.2	7.0	7.1	5.8
Transfer Payments	55.429	56.395	57.370	59.783	63.492	67.347	71.160	75.127
% Ch	8.8	1.7	1.7	4.2	6.2	6.1	5.7	5.6
State U.I. Benefits	1.052	0.972	0.963	0.836	0.687	0.643	0.634	0.654
% Ch	-39.0	-7.6	-0.9	-13.2	-17.8	-6.5	-1.4	3.3
Other Transfers	54.377	55.423	56.406	58.947	62.805	66.705	70.526	74.472
% Ch	10.5	1.9	1.8	4.5	6.5	6.2	5.7	5.6

Table A3.4  
**Washington Personal Income by Component (Billions of Dollars)**  
Forecast 2016 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	383.500	388.288	391.245	394.723	402.792	405.237	407.370	412.978
% Ch, Annual Rate	7.2	5.1	3.1	3.6	8.4	2.5	2.1	5.6
Total Wage and Salary Disbursements	202.019	204.598	206.015	207.776	213.972	214.342	214.405	217.649
% Ch, Annual Rate	12.9	5.2	2.8	3.5	12.5	0.7	0.1	6.2
Manufacturing	21.292	22.125	22.201	21.774	21.779	21.987	22.168	22.334
% Ch, Annual Rate	-9.2	16.6	1.4	-7.5	0.1	3.9	3.3	3.0
Durable Manufacturing	16.890	17.686	17.752	17.298	17.279	17.434	17.584	17.719
% Ch, Annual Rate	-13.8	20.2	1.5	-9.8	-0.5	3.6	3.5	3.1
Nondurable Manufacturing	4.402	4.439	4.449	4.476	4.501	4.553	4.584	4.615
% Ch, Annual Rate	11.3	3.4	0.9	2.4	2.2	4.8	2.7	2.8
Nonmanufacturing	173.329	175.220	176.500	178.658	184.716	184.837	184.678	187.732
% Ch, Annual Rate	15.6	4.4	3.0	5.0	14.3	0.3	-0.3	6.8
Other Private Wages	1.383	1.229	1.239	1.246	1.255	1.266	1.277	1.287
% Ch, Annual Rate	162.2	-37.7	3.4	2.1	3.0	3.6	3.4	3.3
Farm Wages	1.787	1.799	1.819	1.834	1.854	1.876	1.898	1.919
% Ch, Annual Rate	2.1	2.7	4.7	3.3	4.3	4.9	4.7	4.6
Military Wages	4.228	4.225	4.255	4.264	4.367	4.376	4.385	4.377
% Ch, Annual Rate	8.1	-0.2	2.9	0.8	10.1	0.8	0.8	-0.7
Nonwage Personal Income	181.482	183.691	185.230	186.947	188.821	190.895	192.965	195.329
% Ch, Annual Rate	1.3	5.0	3.4	3.8	4.1	4.5	4.4	5.0
Supplements to Wages and Salaries	46.083	46.571	47.064	47.583	48.040	48.545	49.014	49.468
% Ch, Annual Rate	14.8	4.3	4.3	4.5	3.9	4.3	3.9	3.8
Proprietor's Income	30.446	30.741	30.849	31.043	31.392	31.817	32.188	32.515
% Ch, Annual Rate	-6.7	3.9	1.4	2.5	4.6	5.5	4.7	4.1
Farm	1.582	1.622	1.499	1.392	1.315	1.255	1.205	1.160
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	28.864	29.120	29.350	29.651	30.078	30.563	30.983	31.355
% Ch, Annual Rate	6.4	3.6	3.2	4.2	5.9	6.6	5.6	4.9
Less: Contribution For Govt. Soc. Ins.	33.587	33.839	34.158	34.512	34.890	35.294	35.703	36.105
% Ch, Annual Rate	15.6	3.0	3.8	4.2	4.5	4.7	4.7	4.6
Plus: Residence Adjustment	3.732	3.801	3.851	3.890	3.935	3.982	4.025	4.066
% Ch, Annual Rate	-3.4	7.6	5.4	4.2	4.6	4.9	4.4	4.0
Dividends/Int./Rent	78.248	79.312	79.986	80.768	81.609	82.471	83.312	84.489
% Ch, Annual Rate	2.5	5.5	3.4	4.0	4.2	4.3	4.1	5.8
Transfer Payments	56.560	57.106	57.639	58.174	58.734	59.373	60.130	60.897
% Ch, Annual Rate	2.2	3.9	3.8	3.8	3.9	4.4	5.2	5.2
State U.I. Benefits	0.965	0.941	0.974	0.974	0.906	0.851	0.811	0.776
% Ch, Annual Rate	-1.8	-9.5	14.9	0.0	-25.2	-22.0	-17.7	-16.2
Other Transfers	55.595	56.165	56.665	57.200	57.828	58.522	59.319	60.121
% Ch, Annual Rate	2.3	4.2	3.6	3.8	4.5	4.9	5.6	5.5

Table A3.4 (continued)

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

Forecast 2016 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	423.570	425.685	427.334	434.279	445.804	447.253	448.639	456.196
% Ch, Annual Rate	10.7	2.0	1.6	6.7	11.0	1.3	1.2	6.9
Total Wage and Salary Disbursements	225.181	224.576	223.668	227.830	236.076	234.833	233.453	238.104
% Ch, Annual Rate	14.6	-1.1	-1.6	7.7	15.3	-2.1	-2.3	8.2
Manufacturing	22.530	22.726	22.915	23.119	23.321	23.526	23.737	23.972
% Ch, Annual Rate	3.6	3.5	3.4	3.6	3.5	3.6	3.6	4.0
Durable Manufacturing	17.872	18.018	18.154	18.302	18.446	18.593	18.743	18.917
% Ch, Annual Rate	3.5	3.3	3.0	3.3	3.2	3.2	3.3	3.8
Nondurable Manufacturing	4.659	4.708	4.761	4.817	4.875	4.933	4.994	5.055
% Ch, Annual Rate	3.8	4.3	4.6	4.8	4.9	4.9	5.0	5.0
Nonmanufacturing	194.925	194.080	192.937	196.866	204.754	203.260	201.621	206.006
% Ch, Annual Rate	16.2	-1.7	-2.3	8.4	17.0	-2.9	-3.2	9.0
Other Private Wages	1.299	1.309	1.319	1.329	1.340	1.350	1.360	1.370
% Ch, Annual Rate	3.7	3.1	3.2	3.0	3.4	3.0	2.9	3.0
Farm Wages	1.943	1.964	1.986	2.007	2.030	2.052	2.073	2.095
% Ch, Annual Rate	5.1	4.4	4.5	4.3	4.8	4.4	4.2	4.3
Military Wages	4.483	4.497	4.511	4.509	4.630	4.645	4.661	4.660
% Ch, Annual Rate	10.1	1.2	1.3	-0.2	11.2	1.3	1.4	-0.1
Nonwage Personal Income	198.389	201.109	203.666	206.449	209.728	212.420	215.187	218.093
% Ch, Annual Rate	6.4	5.6	5.2	5.6	6.5	5.2	5.3	5.5
Supplements to Wages and Salaries	50.004	50.378	50.803	51.209	51.787	52.183	52.554	52.943
% Ch, Annual Rate	4.4	3.0	3.4	3.2	4.6	3.1	2.9	3.0
Proprietor's Income	32.817	33.162	33.462	33.748	34.044	34.313	34.533	34.758
% Ch, Annual Rate	3.8	4.3	3.7	3.5	3.6	3.2	2.6	2.6
Farm	1.118	1.089	1.063	1.040	1.023	1.004	0.990	0.976
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	31.699	32.073	32.400	32.708	33.021	33.309	33.543	33.782
% Ch, Annual Rate	4.5	4.8	4.1	3.9	3.9	3.5	2.8	2.9
Less: Contribution For Govt. Soc. Ins.	36.791	37.124	37.445	37.766	38.428	38.731	39.023	39.353
% Ch, Annual Rate	7.8	3.7	3.5	3.5	7.2	3.2	3.0	3.4
Plus: Residence Adjustment	4.107	4.150	4.193	4.237	4.283	4.328	4.374	4.422
% Ch, Annual Rate	4.2	4.2	4.2	4.2	4.4	4.3	4.4	4.4
Dividends/Int./Rent	85.906	87.456	88.750	90.390	91.826	93.374	95.031	96.819
% Ch, Annual Rate	6.9	7.4	6.1	7.6	6.5	6.9	7.3	7.7
Transfer Payments	62.345	63.088	63.903	64.631	66.216	66.952	67.717	68.503
% Ch, Annual Rate	9.9	4.9	5.3	4.6	10.2	4.5	4.6	4.7
State U.I. Benefits	0.729	0.699	0.668	0.652	0.645	0.643	0.640	0.642
% Ch, Annual Rate	-21.9	-15.5	-16.8	-9.3	-4.1	-0.9	-1.9	0.8
Other Transfers	61.615	62.388	63.235	63.979	65.571	66.309	67.077	67.862
% Ch, Annual Rate	10.3	5.1	5.5	4.8	10.3	4.6	4.7	4.8

Table A3.4 (continued)

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

Forecast 2016 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	467.642	470.146	471.489	479.283	490.641	493.008	494.076	502.327
% Ch, Annual Rate	10.4	2.2	1.1	6.8	9.8	1.9	0.9	6.8
Total Wage and Salary Disbursements	246.107	245.616	244.207	249.305	257.420	256.905	255.321	260.706
% Ch, Annual Rate	14.1	-0.8	-2.3	8.6	13.7	-0.8	-2.4	8.7
Manufacturing	24.247	24.502	24.787	25.075	25.354	25.622	25.909	26.196
% Ch, Annual Rate	4.7	4.3	4.7	4.7	4.5	4.3	4.5	4.5
Durable Manufacturing	19.140	19.344	19.567	19.795	20.014	20.229	20.463	20.696
% Ch, Annual Rate	4.8	4.3	4.7	4.7	4.5	4.4	4.7	4.6
Nondurable Manufacturing	5.108	5.158	5.220	5.280	5.340	5.394	5.446	5.500
% Ch, Annual Rate	4.2	4.0	4.9	4.7	4.7	4.1	3.9	4.1
Nonmanufacturing	213.574	212.776	211.031	215.806	223.478	222.643	220.718	225.778
% Ch, Annual Rate	15.5	-1.5	-3.2	9.4	15.0	-1.5	-3.4	9.5
Other Private Wages	1.382	1.393	1.403	1.414	1.426	1.437	1.448	1.458
% Ch, Annual Rate	3.4	3.4	3.0	3.2	3.4	3.0	3.1	3.0
Farm Wages	2.120	2.145	2.167	2.191	2.217	2.241	2.265	2.289
% Ch, Annual Rate	4.8	4.7	4.3	4.5	4.7	4.3	4.4	4.4
Military Wages	4.784	4.800	4.818	4.819	4.946	4.963	4.982	4.984
% Ch, Annual Rate	11.0	1.3	1.5	0.1	10.9	1.4	1.5	0.1
Nonwage Personal Income	221.535	224.530	227.282	229.978	233.221	236.102	238.755	241.621
% Ch, Annual Rate	6.5	5.5	5.0	4.8	5.8	5.0	4.6	4.9
Supplements to Wages and Salaries	53.553	53.979	54.361	54.774	55.398	55.764	56.159	56.571
% Ch, Annual Rate	4.7	3.2	2.9	3.1	4.6	2.7	2.9	3.0
Proprietor's Income	35.081	35.492	35.815	36.185	36.593	37.011	37.376	37.715
% Ch, Annual Rate	3.8	4.8	3.7	4.2	4.6	4.6	4.0	3.7
Farm	0.968	0.960	0.959	0.959	0.964	0.965	0.966	0.967
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	34.113	34.532	34.855	35.226	35.630	36.046	36.410	36.748
% Ch, Annual Rate	4.0	5.0	3.8	4.3	4.7	4.8	4.1	3.8
Less: Contribution For Govt. Soc. Ins.	40.094	40.435	40.746	41.125	41.911	42.221	42.537	42.852
% Ch, Annual Rate	7.7	3.5	3.1	3.8	7.9	3.0	3.0	3.0
Plus: Residence Adjustment	4.473	4.522	4.573	4.624	4.677	4.728	4.780	4.833
% Ch, Annual Rate	4.7	4.5	4.6	4.6	4.6	4.4	4.5	4.5
Dividends/Int./Rent	98.519	100.205	101.743	103.188	104.638	106.151	107.448	108.875
% Ch, Annual Rate	7.2	7.0	6.3	5.8	5.7	5.9	5.0	5.4
Transfer Payments	70.003	70.767	71.536	72.332	73.826	74.671	75.529	76.480
% Ch, Annual Rate	9.0	4.4	4.4	4.5	8.5	4.7	4.7	5.1
State U.I. Benefits	0.643	0.631	0.631	0.630	0.636	0.649	0.661	0.671
% Ch, Annual Rate	1.0	-7.6	0.1	-0.7	4.2	8.4	7.5	6.1
Other Transfers	69.360	70.136	70.906	71.703	73.190	74.022	74.868	75.809
% Ch, Annual Rate	9.1	4.6	4.5	4.6	8.6	4.6	4.7	5.1

Table A4.1  
**Selected Inflation Indicators**  
(Deflator 2009=1; CPI 1982-84=1)

	Price Deflator*		U.S. CPI#		Seattle CPI+	
	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	0.233	4.2	0.405	4.2	0.382	2.1
1972	0.241	3.4	0.418	3.3	0.393	2.9
1973	0.254	5.4	0.444	6.3	0.418	6.4
1974	0.280	10.4	0.493	11.0	0.464	11.0
1975	0.303	8.3	0.538	9.1	0.511	10.2
1976	0.320	5.5	0.569	5.8	0.540	5.5
1977	0.341	6.5	0.606	6.5	0.583	8.0
1978	0.365	7.0	0.652	7.6	0.640	9.9
1979	0.397	8.9	0.726	11.3	0.709	10.8
1980	0.440	10.7	0.824	13.5	0.827	16.7
1981	0.478	8.8	0.909	10.4	0.916	10.8
1982	0.505	5.5	0.965	6.2	0.978	6.7
1983	0.526	4.3	0.996	3.2	0.993	1.5
1984	0.546	3.8	1.039	4.4	1.030	3.8
1985	0.566	3.5	1.076	3.5	1.056	2.5
1986	0.578	2.2	1.097	1.9	1.066	1.0
1987	0.596	3.2	1.136	3.6	1.092	2.4
1988	0.620	3.9	1.183	4.1	1.128	3.3
1989	0.646	4.3	1.239	4.8	1.181	4.7
1990	0.674	4.3	1.307	5.4	1.268	7.3
1991	0.696	3.3	1.362	4.2	1.341	5.8
1992	0.715	2.6	1.403	3.0	1.390	3.7
1993	0.733	2.5	1.445	3.0	1.429	2.8
1994	0.748	2.1	1.482	2.6	1.478	3.4
1995	0.764	2.1	1.524	2.8	1.522	3.0
1996	0.780	2.1	1.569	2.9	1.575	3.4
1997	0.793	1.7	1.605	2.3	1.630	3.5
1998	0.799	0.8	1.630	1.5	1.677	2.9
1999	0.811	1.5	1.666	2.2	1.728	3.0
2000	0.831	2.5	1.722	3.4	1.792	3.7
2001	0.847	1.9	1.770	2.8	1.857	3.6
2002	0.859	1.3	1.799	1.6	1.893	2.0
2003	0.876	2.0	1.840	2.3	1.924	1.6
2004	0.897	2.4	1.889	2.7	1.947	1.2
2005	0.923	2.9	1.953	3.4	2.002	2.8
2006	0.947	2.7	2.016	3.2	2.076	3.7
2007	0.971	2.5	2.073	2.9	2.157	3.9
2008	1.001	3.1	2.153	3.8	2.247	4.2
2009	1.000	-0.1	2.146	-0.3	2.260	0.6
2010	1.016	1.7	2.181	1.6	2.267	0.3
2011	1.041	2.5	2.249	3.1	2.327	2.7
2012	1.061	1.9	2.296	2.1	2.386	2.5
2013	1.075	1.3	2.330	1.5	2.416	1.2
2014	1.091	1.5	2.367	1.6	2.460	1.8
2015	1.095	0.4	2.370	0.1	2.494	1.4
Forecast						
2016	1.107	1.1	2.400	1.3	2.552	2.4
2017	1.127	1.8	2.461	2.5	2.625	2.8
2018	1.148	1.8	2.518	2.3	2.687	2.4
2019	1.168	1.8	2.571	2.1	2.746	2.2
2020	1.191	1.9	2.629	2.2	2.808	2.3
2021	1.215	2.0	2.688	2.2	2.873	2.3

\* Chain-Weight Implicit Price Deflator 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 Implicit Price Deflator 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  
**Chain-Weighted Price Indices**  
(2009=100)

	Services		Food		Fuels		Gasoline	
	<u>Index</u>	<u>Percent Change</u>						
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	148.3	-0.4	144.0	-3.8
2015	113.1	2.0	111.0	1.1	105.5	-28.8	106.2	-26.3

Forecast

2016	115.8	2.3	110.0	-0.9	88.9	-15.8	94.1	-11.3
2017	118.6	2.5	110.6	0.6	99.3	11.7	100.1	6.4
2018	121.4	2.3	112.9	2.1	104.5	5.3	105.3	5.1
2019	124.3	2.4	115.4	2.2	108.7	4.0	107.8	2.4
2020	127.4	2.5	117.9	2.1	113.2	4.2	110.7	2.6
2021	130.6	2.5	120.3	2.1	118.0	4.2	113.6	2.6

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	90.0	54.6	86.9
<b>Forecast</b>						
2017	7299.9	116.2	1.6	91.6	55.9	80.5
2018	7410.6	110.7	1.5	93.2	56.5	74.0
2019	7511.9	101.3	1.4	94.4	57.4	64.2
2020	7604.0	92.1	1.2	95.4	58.3	55.1
2021	7690.7	86.7	1.1	96.0	59.3	50.0

\* As of April 1 of Each Year

Source: Office of Financial Management

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

	<b>2012</b>	<b>2013</b>	<b>Actual 2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>
Total Population	6817.8	6882.4	6968.2	7061.4	7183.7	7299.9	7410.6	7511.9	7604.0	7690.7
Percent Change	0.7	0.9	1.2	1.3	1.7	1.6	1.5	1.4	1.2	1.1
Age 17 and Under	1572.6	1577.2	1588.4	1602.8	1625.8	1647.3	1667.2	1685.4	1703.9	1721.0
Percent of Total	23.1	22.9	22.8	22.7	22.6	22.6	22.5	22.4	22.4	22.4
Age 6-18	1137.5	1141.1	1151.0	1162.2	1178.6	1193.0	1207.1	1219.0	1229.1	1241.3
Percent of Total	16.7	16.6	16.5	16.5	16.4	16.3	16.3	16.2	16.2	16.1
Age 18 and Over	5245.2	5305.2	5379.8	5458.7	5557.9	5652.5	5743.4	5826.4	5900.1	5969.6
Percent of Total	76.9	77.1	77.2	77.3	77.4	77.4	77.5	77.6	77.6	77.6
Age 21 and Over	4965.3	5029.2	5107.4	5187.1	5283.8	5375.1	5462.7	5543.8	5618.6	5689.9
Percent of Total	72.8	73.1	73.3	73.5	73.6	73.6	73.7	73.8	73.9	74.0
Age 20-34	1413.1	1426.9	1445.8	1458.8	1482.6	1502.6	1519.7	1534.6	1544.2	1551.6
Percent of Total	20.7	20.7	20.7	20.7	20.6	20.6	20.5	20.4	20.3	20.2
Age 18-64	4349.5	4365.7	4396.9	4431.0	4484.6	4531.8	4571.2	4603.1	4623.7	4641.6
Percent of Total	63.8	63.4	63.1	62.7	62.4	62.1	61.7	61.3	60.8	60.4
Age 65 and Over	895.6	939.5	982.8	1027.7	1073.3	1120.7	1172.2	1223.4	1276.5	1328.1
Percent of Total	13.1	13.7	14.1	14.6	14.9	15.4	15.8	16.3	16.8	17.3

\* As of April 1 of Each Year

Source: Office of Financial Management

Table A6.1

**Summary of National and State Indicators**

<b>Indicator</b>	<b>Latest Data</b>	<b>Indication*</b>
U.S. Leading Index	October 2016	+
U.S. Real GDP Growth	3rd quarter 2016	+
U.S. ISM Index	November 2016	+
U.S. Employment Y-O-Y%Δ	November 2016	-
U.S. Unemployment Rate	November 2016	+
U.S. Fed Funds Target	November 2016	unchanged
U.S. Consumer Confidence	November 2016	+
U.S. Consumer Sentiment	November 2016	+
U.S. Light Vehicle Sales	November 2016	-
U.S. CPI Y-O-Y%Δ	October 2016	-
U.S. Home Prices Y-O-Y%Δ	September 2016	unchanged
S&P 500 Index	November 2016	+
WA Leading Index	October 2016	-
WA ISM-WW Index	October 2016	+
WA Employment Y-O-Y%Δ	October 2016	+
WA Aerospace Empl. Y-O-Y%Δ	October 2016	-
WA Unemployment Rate	October 2016	+
WA Help Wanted Index	November 2016	-
WA Business Cycle Indicator	October 2016	+
WA Initial Unemploy. Claims	November 2016	+
WA Housing Permits	October 2016	+
WA Weekly Hours in Mfg.	October 2016	+
WA New Vehicle Registration	October 2016	-
WA In-Migration	October 2016	+
WA Exports-Total Y-O-Y%Δ	3rd quarter 2016	-
WA Exports- w/o Trans. Equip. Y-O-Y%Δ	3rd quarter 2016	+
Seattle CPI Y-O-Y%Δ	October 2016	-
Seattle Home Prices Y-O-Y%Δ	September 2016	-
WA Construction Activity Index	October 2016	-

\*Change from the previous reading

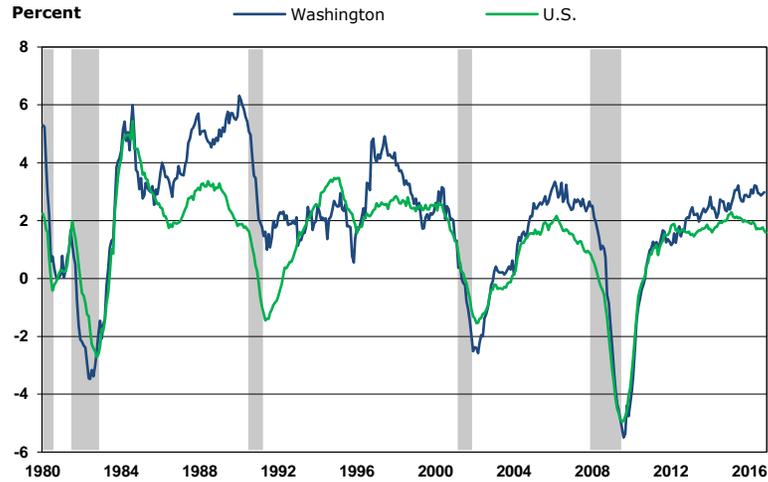
Table A6.2  
**Washington Business Indicators**  
 Historical Data

	<b>WA Index of Leading Indicators</b>	<b>U.S. Index of Leading Indicators</b>	<b>WA State Business Cycle Indicator</b>	<b>WA State Construction Index</b>	<b>WA State Help Wanted Index</b>	<b>WA Purchasing Management Index</b>	<b>U.S. Purchasing Management Index</b>
<b>2013:01</b>	114.5	109.1	40.5	93.3	128.7	60.2	52.3
<b>2013:02</b>	114.8	109.5	39.0	95.0	127.2	56.3	53.1
<b>2013:03</b>	114.0	109.2	39.2	95.5	118.8	65.4	51.5
<b>2013:04</b>	114.3	110.0	38.0	93.4	120.2	59.5	50.0
<b>2013:05</b>	114.3	110.2	39.0	93.0	120.0	53.7	50.0
<b>2013:06</b>	114.3	110.4	39.7	92.9	121.0	61.0	52.5
<b>2013:07</b>	114.5	110.8	41.6	96.4	118.6	60.3	54.9
<b>2013:08</b>	115.1	111.6	41.9	95.1	118.7	53.8	56.3
<b>2013:09</b>	115.2	112.5	41.5	93.0	116.6	52.7	56.0
<b>2013:10</b>	114.6	112.8	42.6	94.9	112.7	54.2	56.6
<b>2013:11</b>	116.1	113.8	43.2	93.2	118.2	61.1	57.0
<b>2013:12</b>	116.4	113.8	43.9	97.9	118.2	62.3	56.5
<b>2014:01</b>	115.8	113.7	44.8	94.6	118.2	63.5	51.8
<b>2014:02</b>	115.6	114.3	43.2	92.1	118.5	68.7	54.3
<b>2014:03</b>	116.4	115.4	43.8	94.2	118.6	63.6	54.4
<b>2014:04</b>	117.2	115.8	46.1	97.5	120.6	53.7	55.3
<b>2014:05</b>	117.4	116.5	46.9	95.8	118.7	59.6	55.6
<b>2014:06</b>	118.5	117.2	47.2	97.4	121.0	67.0	55.7
<b>2014:07</b>	118.8	118.4	48.7	97.8	121.3	50.1	56.4
<b>2014:08</b>	118.8	118.5	48.6	97.9	121.6	62.9	58.1
<b>2014:09</b>	118.5	119.2	48.9	98.8	114.3	60.3	56.1
<b>2014:10</b>	119.2	119.9	48.8	100.6	119.0	57.6	57.9
<b>2014:11</b>	119.9	120.5	51.1	101.6	128.0	63.1	57.6
<b>2014:12</b>	119.6	121.0	51.8	102.8	122.0	53.3	55.1
<b>2015:01</b>	119.3	121.2	53.4	98.2	127.6	66.6	53.5
<b>2015:02</b>	120.5	120.9	58.0	107.2	137.2	65.9	52.9
<b>2015:03</b>	120.0	121.5	57.8	101.0	138.8	64.1	51.5
<b>2015:04</b>	120.3	122.2	58.6	99.9	135.7	60.4	51.5
<b>2015:05</b>	120.6	122.8	58.8	98.2	139.0	60.3	52.8
<b>2015:06</b>	120.8	122.9	58.9	99.8	136.0	51.4	53.5
<b>2015:07</b>	120.6	122.8	59.9	100.2	141.0	53.6	52.7
<b>2015:08</b>	120.1	122.8	58.6	99.1	139.1	48.0	51.1
<b>2015:09</b>	118.9	122.6	58.0	95.2	126.6	48.0	50.2
<b>2015:10</b>	120.0	123.2	59.3	99.6	132.4	46.1	50.1
<b>2015:11</b>	120.3	123.7	59.9	100.4	134.3	50.0	48.6
<b>2015:12</b>	119.6	123.3	62.8	97.3	130.7	54.5	48.0
<b>2016:01</b>	119.2	123.0	64.6	98.0	128.7	57.2	48.2
<b>2016:02</b>	119.7	123.0	65.9	100.0	124.9	55.4	49.5
<b>2016:03</b>	120.4	123.0	63.9	101.0	128.9	55.7	51.8
<b>2016:04</b>	121.4	123.6	64.1	102.7	130.9	50.8	50.8
<b>2016:05</b>	122.1	123.4	67.0	102.0	148.2	49.2	51.3
<b>2016:06</b>	122.1	123.7	67.3	101.1	151.3	49.1	53.2
<b>2016:07</b>	122.6	124.3	68.2	101.4	156.3	50.8	52.6
<b>2016:08</b>	122.3	124.1	66.3	98.9	153.1	47.7	49.4
<b>2016:09</b>	122.6	124.4	67.1	103.1	143.4	51.4	51.5
<b>2016:10</b>	122.3	124.5	67.9	99.0	152.3	53.1	51.9
<b>2016:11</b>					148.8		53.2

# Figure A7.1: Washington State Economic Indicators

## Year-over-Year Employment Growth

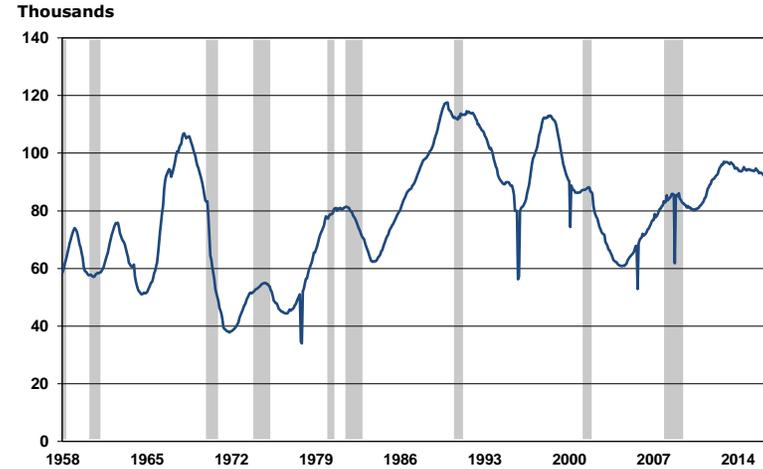
January 1980 to November 2016



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

## Washington Aircraft and Parts Employment

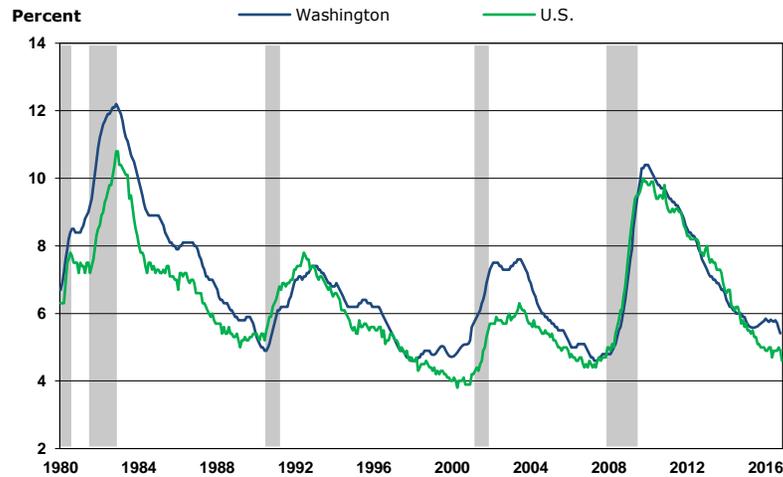
January 1958 to October 2016



\* Source: Bureau of Labor Statistics, ERFC

## Unemployment Rate, S.A.

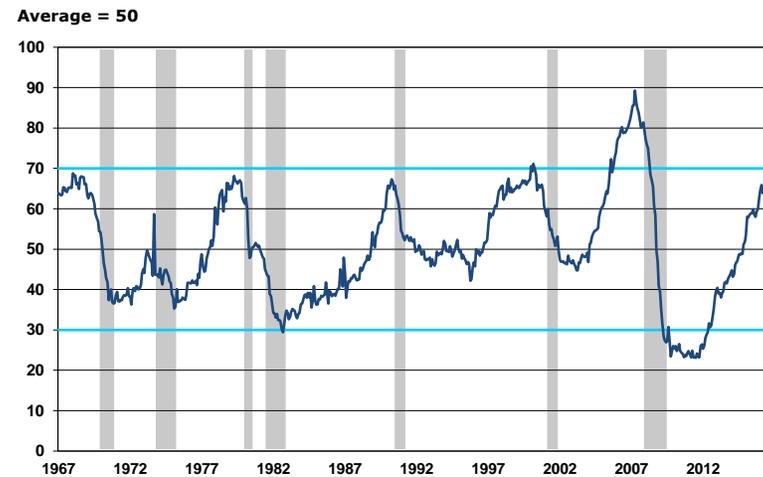
January 1980 to November 2016



\* Source: Bureau of Labor Statistics

## Washington Business Cycle Indicator

January 1968 to October 2016



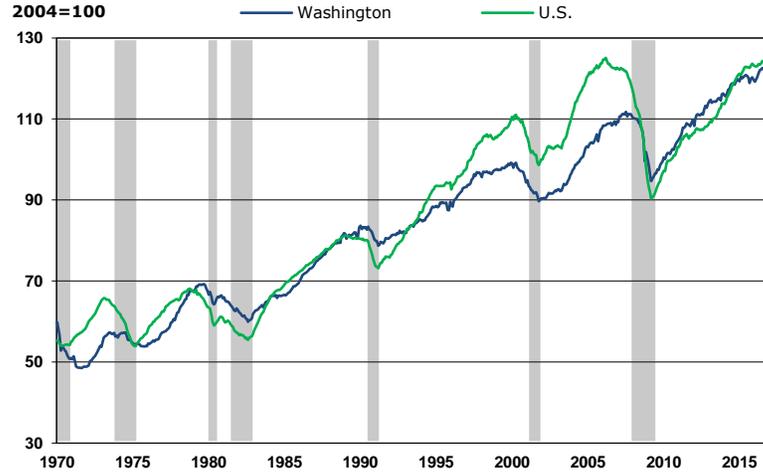
\* Source: ERFC

\* Shaded areas correspond with national recessions.

# Figure A7.2: Washington State Leading Indicators

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

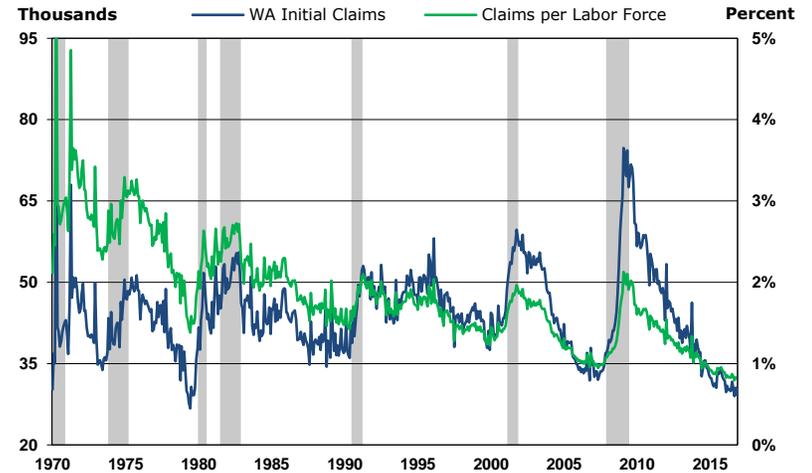
January 1970 to October 2016



\* The Conference Board, ERFC

## Washington Initial Claims for Unemployment Insurance

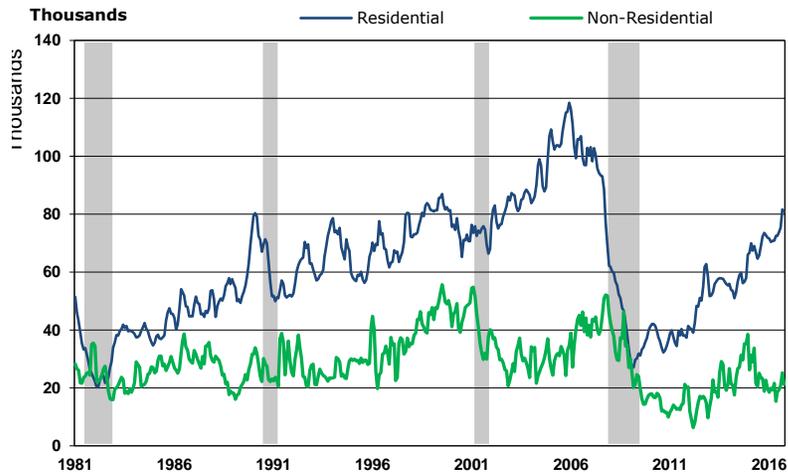
January 1970 to November, S.A.



\* Source: WA State Employment Security, ERFC

## Square Footage of Construction Projects in WA State

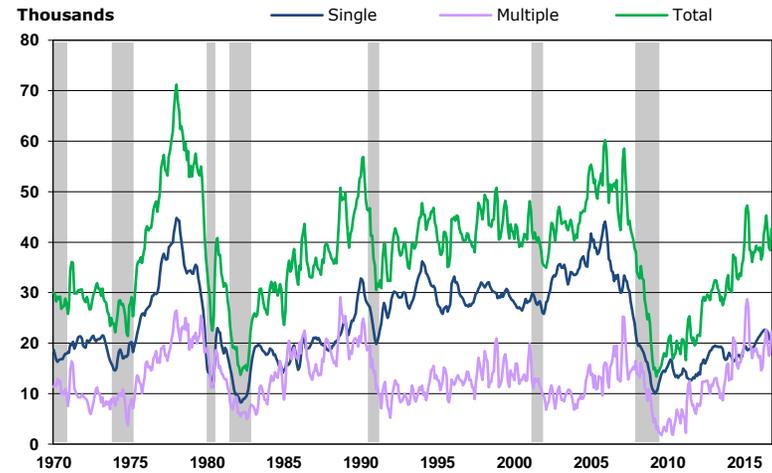
January 1981 to October 2016, 3mma, SAAR



\* Source: McGraw-Hill Construction, ERFC

## Housing Units Authorized in Washington State

January 1970 to October 2016, 3mma, SAAR



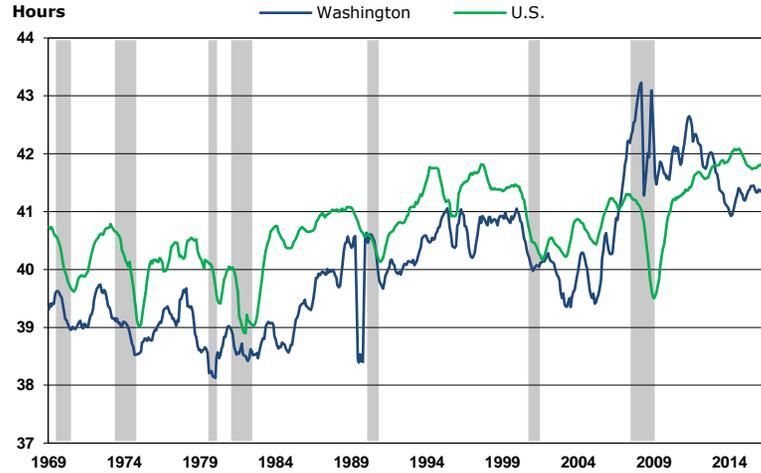
\* Source: Census Bureau, ERFC

\* Shaded areas correspond with national recessions.

# Figure A7.3: Other State Economic Indicators

## Average Weekly Hours in Manufacturing

June 1969 to November 2016, 6-Mo. Moving Average, S.A.



\* Bureau of Labor Statistics, ERFC

## Washington Driver's License In-Migration

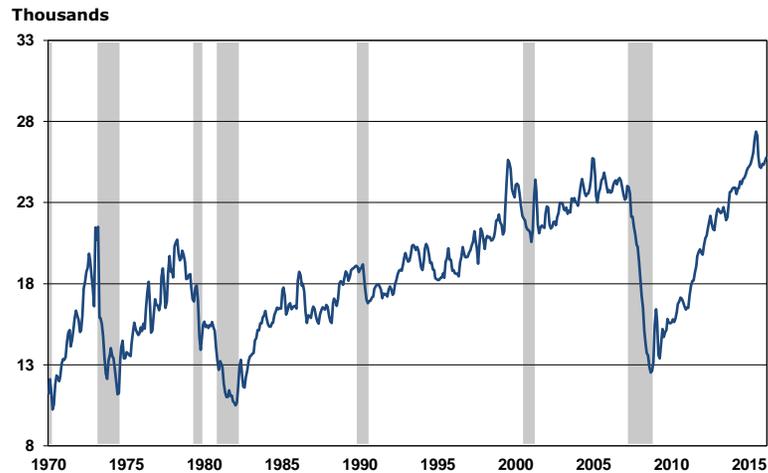
January 1988 to October 2016, 12-Month Moving Average



\* Source: WA State Department of Licensing, ERFC

## New Car and Truck Registrations in Washington

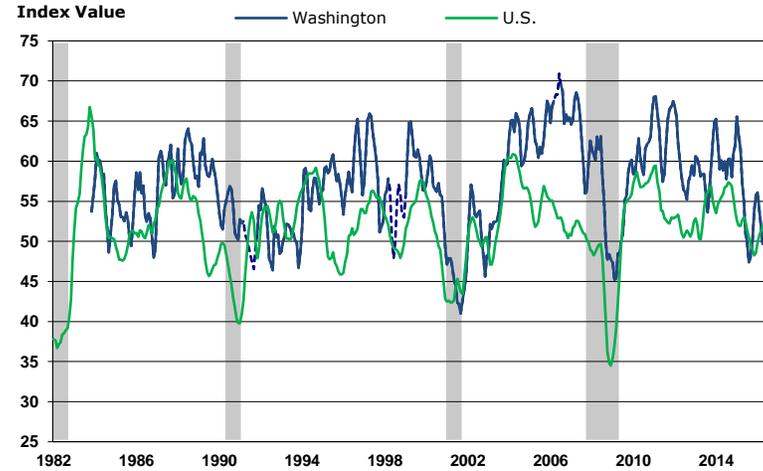
September 1970 to October 2016, 3-Month Moving Average, S.A.



\* Source: WA State Department of Licensing, ERFC

## Institute for Supply Management Index

March 1982 to November 2016, 3-Month Moving Average, S.A.



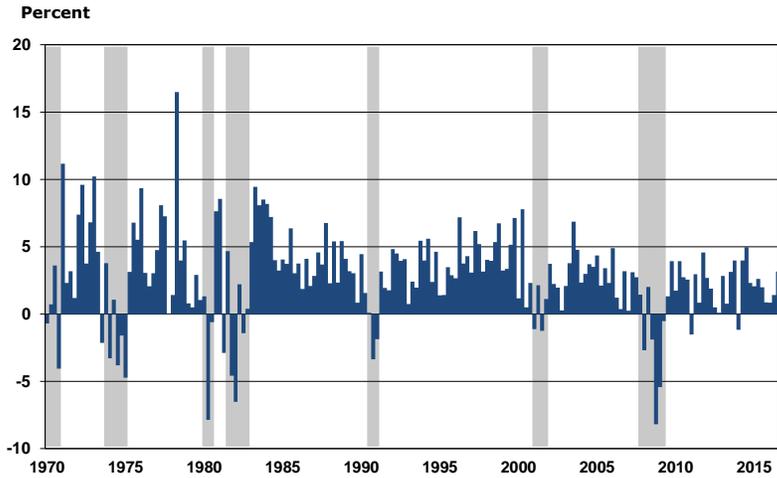
\* Source: Institute for Supply Management, ISM-WW, ERFC

\* Shaded areas correspond with national recessions.

# Figure A7.4: Other Economic Indicators

## Quarterly U.S. Real GDP Growth

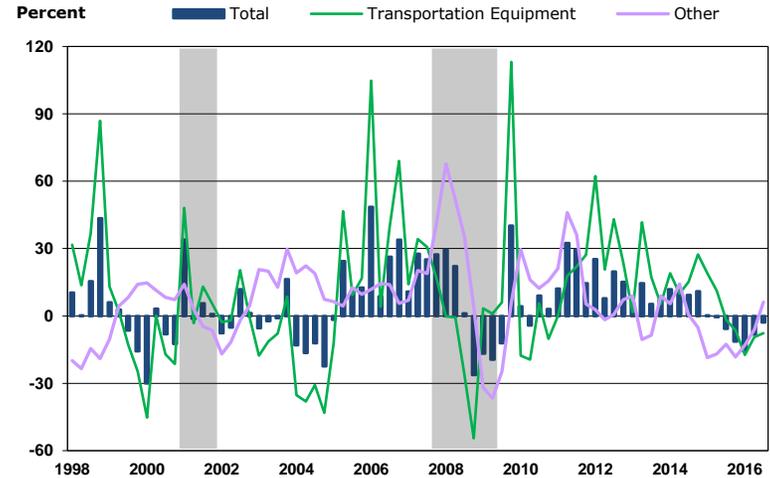
1970Q1 to 2016Q3, SAAR



\* Source: Bureau of Economic Analysis

## Washington State Export Composition

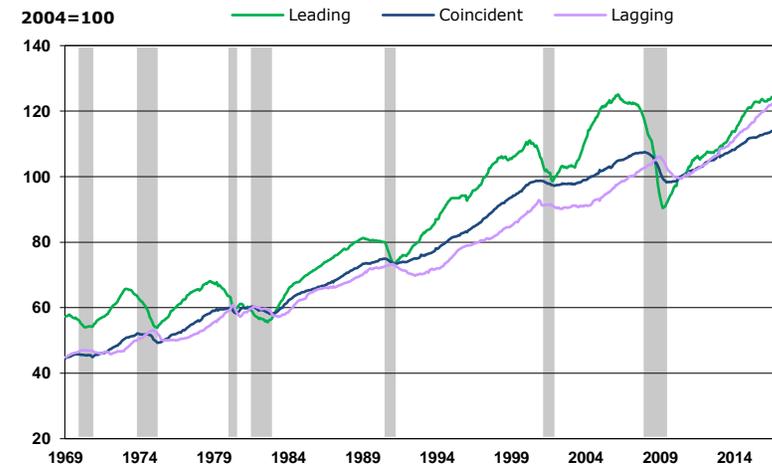
1998Q1 to 2016Q3, Year-over-year percent change



\* Source: WISER

## U.S. Economic Indicators

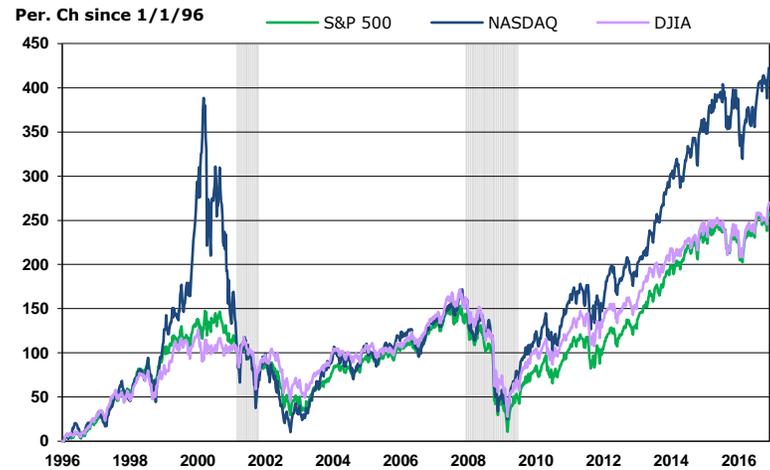
January 1969 to October 2016



\* Source: The Conference Board

## National Stock Indexes

January 1, 1996 to November 28, 2016



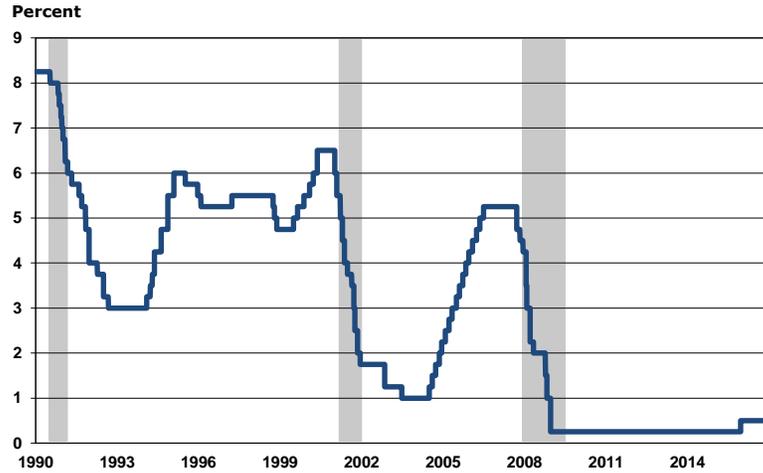
\* Source: ERFC

\* Shaded areas correspond with national recessions.

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

## Federal Funds Target Rate

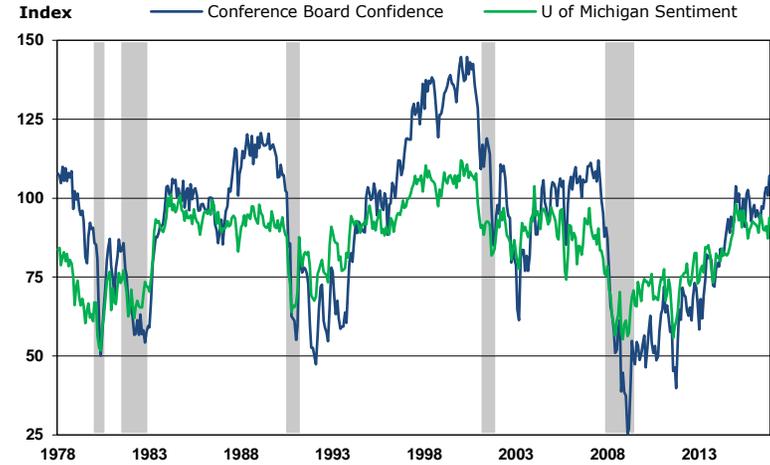
January 1, 1990 to December 1, 2016



\* Federal Reserve

## Consumer Confidence

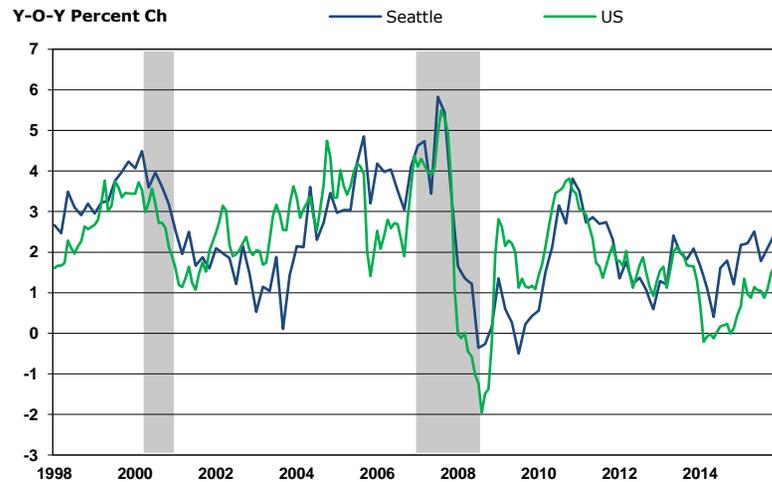
March 1978 to November 2016



\* Source: The Conference Board, University of Michigan

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

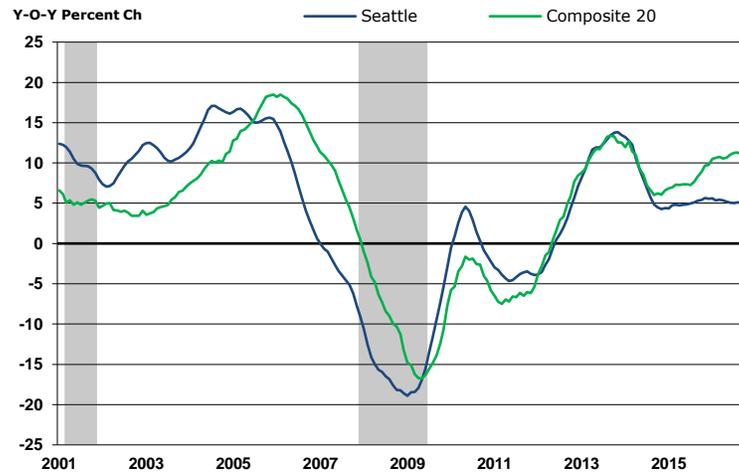
December 1998 to October 2016



\* Source: Bureau of Labor Statistics

## Case Shiller Home Price Index

January 2001 to September 2016, SA



\* Source: Case Shiller, ERFC

\* Shaded areas correspond with national recessions.

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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.