

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

# **Washington State Economic and Revenue Forecast**

March 2017  
Volume XL, No. 1



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# **Washington State Economic and Revenue Forecast**

Prepared by the  
Economic and Revenue Forecast Council

March 2017  
Volume XL, No. 1

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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 March 31, 2017.

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## Executive Summary

- **The national economy continues to expand at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter pushing 2016 growth to 1.6%.**
- **Employment growth has been strong the past two months.**
- **Consumer and business confidence has improved.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 2.3% in 2017, up from 2.2% in November. Real GDP growth is expected to increase to 2.4% in 2018. We expect growth to moderate as the recovery matures.**
- **This is our first forecast since the November presidential election and thus the first to incorporate potential fiscal policy changes.**
- **Recent Washington employment and income growth have been stronger than expected and historical estimates for both were revised higher.**
- **Retail trade employment is benefitting from strong growth in electronic shopping but we expect more aerospace job cuts in 2017.**
- **Seattle home prices continue to rise very rapidly; Washington housing construction came down to earth after a fourth quarter spike.**
- **Revenue collections since the November 2016 forecast have come in \$163 million over the forecasted amount.**
- **The forecast of General Fund-State (GF-S) revenue for the 2015-17 biennium was increased by \$247 million, the forecast for the 2017-19 biennium was increased by \$303 million, and the forecast for the 2019-21 biennium was increased by \$186 million.**
- **Forecast increases were once again mainly in retail sales and real estate excise taxes.**

## U.S. Economic Forecast

*The national economy continues to expand at a moderate pace*

The national economy continues to expand at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter pushing 2016 growth to 1.6%. Job gains have picked up the past two months and the unemployment rate is at pre-recession levels. Consumer and business confidence have improved and are now at cyclical highs. 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, however, 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 slightly higher*

The economic outlook is slightly stronger than the November forecast. Our March forecast calls for real GDP growth of 2.3% in 2017, up from 2.2% in November. Real GDP growth is expected to increase to 2.4% in 2018, up from 2.1% in the previous forecast. We expect growth to moderate as the recovery matures. The forecast calls for growth to average 2.0% from 2019 through 2021. The November forecast expected growth to average 2.1% from 2019 through 2021.

*The fiscal policy outlook now includes potential policy changes*

This is our first forecast since the November presidential election and thus the first to incorporate potential fiscal policy changes to the outlook. While several proposals for healthcare reform are being discussed, no legislation has passed, so we have not incorporated any related changes to the forecast. The forecast does include a \$25 billion annual increase in infrastructure spending beginning in 2018. Also included are lower personal and corporate federal tax rates, consistent with the House Republican plan. A suspension of the debt limit will expire this month and the Treasury will need to use "extraordinary measures" to fund government operations.

## **Washington Economic Forecast**

*The Washington economy is expanding at a rapid pace*

The Washington economy is expanding at a rapid pace. In recent months, Washington employment has grown faster than expected in the November forecast and historical estimates were revised higher. Historical estimates for Washington personal income were revised upward as well. Overall Washington exports continue to decline due to transportation equipment but other exports may be turning around. Manufacturing activity continues to struggle. Home prices are rising rapidly in the Seattle area but home construction has weakened after a fourth quarter spike. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*Overall, our forecast for Washington State is stronger than we expected in November*

Overall, our forecast for Washington State is stronger than we expected in November. Washington employment is expected to grow 2.3% this year, up from 1.9% in the November forecast. We expect employment growth to average 1.4% per year in 2018 through 2021, which is slightly higher than the 1.3% rate assumed in November. Our forecast for nominal personal income growth this year is 5.0%, up from 4.5% in the November forecast. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, up slightly from the 5.0% rate in the November forecast. We expect total housing units authorized by building permits to decline 5.3% this year to

40,900 units, which is slightly higher than the 40,000 units in the November forecast. We expect permits to average 40,800 during the remainder of the forecast, which is slightly lower than the 41,400 expected in November. As in November, we expect the all-items Seattle CPI to rise 2.8% this year. We expect Seattle area inflation to average 2.2% per year in 2018 through 2021 compared to 2.3% in the November 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 November 2016 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 March 2017 economic forecast relative to the November 2016 forecast.

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

15-17: +\$247  
17-19: +\$303  
19-21: +\$186

Since the November 2016 forecast, revenue sources that are tracked monthly came in \$162.7 million higher than forecasted. There were no non-economic changes in expected revenue. Changes to the economic forecast resulted in an \$84.7 million increase to projected collections for the rest of the biennium. The total of these components was a \$247.4 million increase in projected revenue for the current 2015-17 biennium. The forecast for the 2017-19 biennium has been increased by \$303.0 million, and the forecast for the 2019-21 biennium has been increased by \$186.0 million. GF-S revenue is now forecasted to total \$38,227.1 million in the 2015-17 biennium, \$40,816.7 million in the 2017-19 biennium, and \$43,841.6 million in the 2019-21 biennium.

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

- **The national economy continues to expand at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter pushing 2016 growth to 1.6%.**
- **Employment growth has been strong the past two months.**
- **Consumer and business confidence has improved.**
- **The manufacturing sector has gained momentum and construction continues to grow.**
- **Headline inflation is starting to pick up.**
- **Exports are no longer declining. Foreign growth has stabilized and the dollar is no longer appreciating.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 2.3% in 2017, up from 2.2% in November. Real GDP growth is expected to increase to 2.4% in 2018. We expect growth to moderate as the recovery matures.**
- **This is our first forecast since the November presidential election and thus the first to incorporate potential fiscal policy changes.**
- **The increase in business and consumer confidence leading to more hiring and spending is the most significant upside risk. A slowdown in global growth is the major downside risk.**

### Current Conditions

*The national economy continues to expand at a moderate pace*

The national economy continues to expand at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter pushing 2016 growth to 1.6%. Job gains have picked up the past two months and the unemployment rate is at pre-recession levels. Consumer and business confidence have improved and are now at cyclical highs. 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, however, 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 2.1% (SAAR) in the fourth quarter*

U.S. real GDP rose 2.1% (SAAR) in the fourth quarter of 2016 after growing 3.5% (SAAR) in the third quarter. Consumer spending accelerated from the previous quarter, increasing 3.5% (SAAR) and adding 2.4 points to GDP growth. Spending on durable goods was particularly strong, growing 11.4% (SAAR) in the fourth quarter. Inventory investment was also a large contributor, adding 1.0 point to overall growth. Residential investment rebounded from a two-quarter decline and grew 9.6% (SAAR), adding 0.35 points to GDP growth. Nonresidential investment grew 0.9% (SAAR) with growth in equipment and intellectual products being partially offset by a decline in structures. Government spending was mostly flat, growing just 0.2% (SAAR) in the fourth quarter. Small increases in state and local government spending and federal nondefense spending were mostly offset by a reduction in national defense.

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

Personal income grew 4.3% (SAAR) in February from 5.6% (SAAR) the month before. Personal income is now up 4.6% from a year ago. Rental income was again strong, increasing 10.1% (SAAR). The tight rental market has enabled landlords to increase rent, boosting their income. Wage and salary growth was strong at 6.0% (SAAR) in February. Wage growth in the private sector improved to 6.4% (SAAR) while public sector wages grew 3.7% (SAAR). Over the past few years, private sector wages have increased faster than wages in the public sector. Transfer payment growth slowed to 2.0% (SAAR), due to a decline in unemployment insurance benefits. Proprietors' income growth was weak at 1.4% (SAAR) in the February but is up 3.6% since last year. Interest income was up 3.6% (SAAR). Dividend income fell 0.1% (SAAR), the fourth consecutive month of decline.

*Employment growth has been strong the past two months*

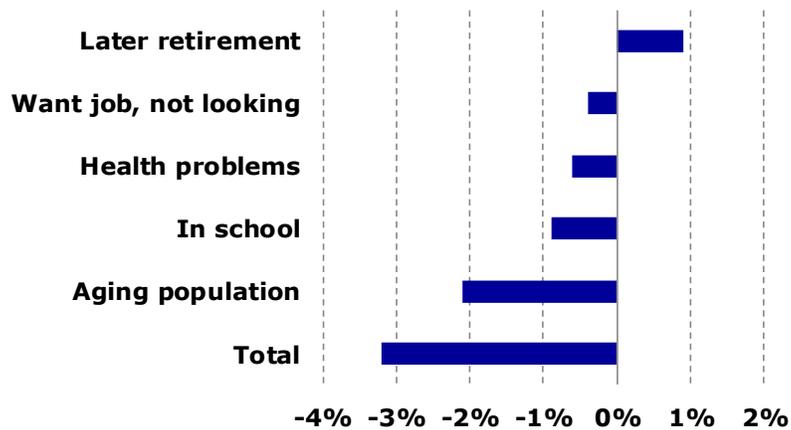
Employment growth has been strong the past two months. Nonfarm payrolls increased by 235,000 in February following a 238,000 increase in January. The February employment situation showed gains across most industries with the exception of retail trade (-26,000). The goods-producing sector increased 95,000 due largely to a 58,000-job gain in construction. The relatively mild winter likely gave a boost to construction. Private service-providing industries increased by 132,000 jobs over the month with strong gains in professional and business services (+37,000) and education and health (+62,000). Government employment increased 8,000 in February, due to gains at the local government level.

*The labor market recovery has continued*

The unemployment rate has hovered around 4.7% the past five months. The decline in the unemployment rate since the end of the recession was due to a combination of unemployed people getting jobs and some dropping out of the labor force altogether. Labor force participation appears to have finally reached a trough after declining throughout the recession and recovery. From the fourth quarter of 2007 to the fourth quarter of 2016, the labor force participation rate declined by 3.2 percentage points (see

Figure 1.1). Most of this decline was due to an aging population reaching retirement age. This was partially offset by older adults postponing retirement. Young adults are also staying in school longer. The decline in the labor force from people giving up looking for work during this time frame was only 0.4 percentage points. This implies that the structural unemployment component from the previous recession was quite small.

**Figure 1.1: Components of Change in Labor Force Participation Rate**



Source: U.S. Bureau of Labor Statistics, Federal Reserve Bank of Atlanta; data from 2007Q4 to 2016Q4

*Improvement in consumer attitudes has been sporadic*

Consumer attitudes have improved in recent months. The two primary measures of confidence have both indicated that consumers are more optimistic. In March, the Conference Board measure of consumer confidence improved to its highest level since 2000. Consumer confidence jumped 9.5 points in February to 125.6. Consumer attitudes as measured by the Conference Board have improved substantially since the fall. Respondents to the survey have indicated they are more confident in both their present condition and their future prospects. The University of Michigan Consumer Sentiment Index increased in February as well, but by only 0.6 points. While the Conference Board is pointing to confidence reaching multi-year highs, the University of Michigan measure has only increased modestly since the fall. The Conference Board survey is normally sensitive to labor market conditions and may have been affected more by strong employment gains the past two months.

*Small business confidence has improved*

Small business confidence has improved dramatically since October 2016 (see Figure 1.2). After averaging below 94 for the first ten months of the year, the National Federation of Independent Business (NFIB) Index of Small Business Optimism has been above 105 in each of the past three months. In February, the index declined 0.6 points, but remains near its 10-year high of 105.9 reaching in January. The level of the index is

just below the all-time high of 107.4 reached in November 2004 (data back to 1986). Small business expectations of general business conditions, expansion, sales, and earnings have all increased sharply. Actual earnings and sales of small businesses have improved as well, but to a much smaller degree. Actual employment changes have also turned positive. Taxes remain the most cited concern for small businesses. Quality of labor is now the second most cited concern, surpassing government regulation.

**Figure 1.2: National Federation of Independent Business Index of Small Business Optimism**



Source: National Federation of Independent Business; data through February 2017

*Oil prices have risen but remain low*

Oil prices have trended upward since the beginning of last year. West Texas Intermediate (WTI) reached \$53 per barrel in February, up from \$30 a year ago. Brent crude oil was \$55 per barrel in February, up from \$32 last year. U.S. crude production has stabilized as prices have firmed. In December, U.S. field production of crude oil was 8.8 million barrels per day, up from the recent trough of 8.6 million barrels in September, but still down from 9.2 million barrels a year ago. Crude oil inventories increased in recent months. For the week ending March 17, crude inventories were at 533 million barrels, up from 495 million barrels at the end of January. Internationally, the impact of Organization of Petroleum Exporting Countries' (OPEC) attempt to reduce supply appears limited. Previously, OPEC had hoped that some of the more expensive drilling techniques deployed in the U.S. would no longer be profitable and would be shut down. Imports of crude oil have generally been increasing as many OPEC producers increased shipments ahead of their stated supply cut. Even if OPEC members can maintain the discipline of supply quotas, U.S. production is likely to ramp up, keeping prices in check.

*Inflation has slowly started to pick up*

With energy prices no longer falling, headline inflation has been increasing (see Figure 1.2). Energy prices fell 1.0% in February but remain 15.6% higher than a year ago. The headline Consumer Price Index (CPI) increased 0.1% over the month, resulting in an increase of 2.8% since last year. Food price inflation is nonexistent with prices rising 0.2% this month but unchanged since last year. Shelter costs have been the primary driver of higher overall prices. Shelter costs increased 0.3% in February and are now up 3.5% year over year. Core inflation, which excludes food and energy, increased 0.2% in February. On an annual basis, core inflation remains moderate at 2.2%.

**Figure 1.3: Consumer Price Index**



Source: U.S. Bureau of Labor Statistics; data through February 2017

*New home construction continues to trend up*

New home construction continues to trend upward at a steady pace. Housing starts increased in February to 1.288 million units (SAAR) from 1.251 million units (SAAR) in January. Starts are now up 6.2% since last year. Single-family starts increased by 6.5% and are up 3.2% from last year. Multi-family starts fell 3.7% but remain 13.0% higher than a year ago. The multi-family segment, while somewhat sporadic, appears to have fully recovered from the housing downturn. Single-family starts remain significantly below the average of the last decade. Housing permits remains on a trend similar to that of starts. Total permits fell 6.0% in February but remain 4.6% above a year ago. Single-family permits are up 13.5% while multi-family permits are down 10.5% since last year. Homebuilder confidence has surged in recent months. The National Association of Homebuilders (NAHB) Housing Market Index, which measures confidence of homebuilders, increased 6 points from last month to 71 and is at a 12-year high (readings above 50 indicate a positive view of conditions). While builders are confident, there remain headwinds that suggest a surge in activity is unlikely. Rising material costs, higher mortgage rates, lack of building lots, and shortages of labor will keep growth from taking off.

*Home price appreciation has strengthened in recent months*

Home price appreciation has strengthened in recent months. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.9% over the month in January. Home prices are now 5.7% higher than a year ago. Home prices appear to be settling into a consistent growth pattern, averaging 5.1% annual growth over the past two and a half years. Prices have increased 37.6% since the trough of the recession, and are now only 6.2% below their previous peak. Rising prices encourage new construction and are contributing to the increase in homebuilder confidence. Home price appreciation also enables previously underwater homeowners to sell their homes and trade up for more expensive houses. Mortgage rates have increased but are still low at 4.2%. Lending standards are no longer easing, but instead are neutral. Continued positive wage growth should also help keep homes affordable.

*The manufacturing sector has gained momentum*

The manufacturing sector has gained momentum in recent months. The Institute of Supply Management (ISM) Report on Business indicated that activity in the manufacturing sector improved in February to 57.7 from 56.0 (index levels above 50 indicate expansion). Both the new orders and production components increased and are now at 65.1 and 62.9 points. The latest G-17 report from the Federal Reserve, which measures manufacturing output, indicated an increase in February of 0.5%. The production of durable goods rose 0.6% with furniture products being the major exception. Nondurable goods output increased 0.4%. Manufacturing output is now 0.8% higher than last year. New orders for core capital goods (nondefense capital goods excluding aircraft) increased 4.1% in February after increasing 5.3% the month before. New orders are now 0.1% above year-ago levels.

*U.S. exports have returned to growth*

Over-the-year U.S. exports grew in the fourth quarter of 2016 for the first time in two years. Global economic growth remains weak, but major economies are no longer declining. The U.S. dollar has stopped appreciating although it remains strong. Measured against major U.S. trading partners, the value of the U.S. dollar is 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. In the fourth quarter of 2016, exports were up 2.2% year over year. Exports to the U.S. two top trading partners remain weak. Exports to Canada declined 3.4% while exports to Mexico were up just 0.6%. Exports to China and Japan, our third and fourth largest trading partners, increased 13.4% and 13.2% respectively.

## **Forecast**

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

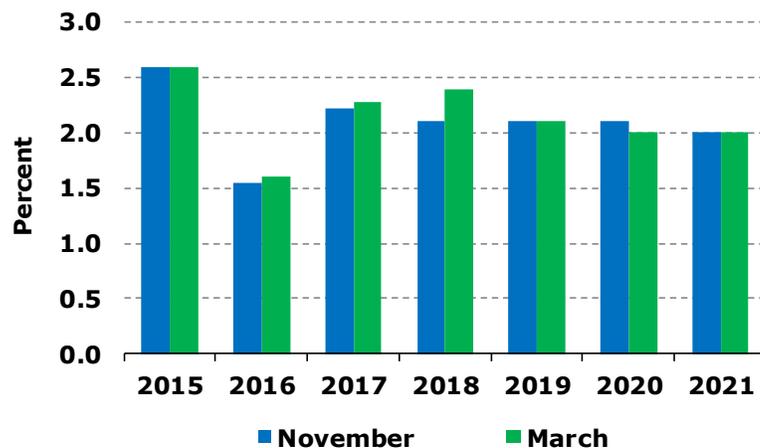
The economic forecast was based on a modified version of the March IHS-Markit (formerly Global Insight) Control forecast for the U.S. economy. Consistent with our standard practice, the

U.S. real GDP forecast was adjusted to match the March Blue Chip Consensus GDP forecasts for 2017 and 2018. We also matched the latest long-term Blue Chip GDP forecast for 2019 through 2021. Our oil price forecast was adjusted to reflect futures prices for both Brent crude oil and for West Texas Intermediate crude.

*The economic outlook is slightly higher*

The economic outlook is slightly stronger than the November forecast. Our March forecast calls for real GDP growth of 2.3% in 2017, up from 2.2% in November. Real GDP growth is expected to increase to 2.4% in 2018, up from 2.1% in the previous forecast. We expect growth to moderate as the recovery matures. The forecast calls for growth to average 2.0% from 2019 through 2021. The November forecast expected growth to average 2.1% from 2019 through 2021 (see Figure 1.4).

**Figure 1.4: Real GDP Growth**



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

*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 February, this recovery has already lasted 92 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 employment peak.

*Oil prices will remain low*

The oil price forecast was changed by only a small amount since the November forecast. Prices are slightly higher in 2017 and slightly lower thereafter compared to the previous forecast. The refiner acquisition price of crude oil increased to \$47 per barrel in the fourth quarter of this year from a trough of \$42 in the first quarter. The forecast calls for oil prices to rise to \$50 in the current quarter before gradually declining. We expect prices to decline slightly and stay at \$49 per barrel through the middle of 2020. Going forward, we expect little change in prices, with the refiner's acquisition price reaching \$51 per barrel by the end of 2021. Oil prices 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 in the U.S. has hovered around 8.8 million barrels per day the past three months. 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 of 2016 and has since climbed to 789. A year ago the rig count was 476.

Inflation (as measured by the implicit price deflator for personal consumption expenditures) was just 1.1% in 2016, helped by a decline in energy prices. While energy prices will remain 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%. We expect inflation to be 1.7% this year and then range from 1.5% to 1.9% per year from 2018 through 2021.

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

Real consumer spending was stronger than expected in the fourth quarter of 2016, growing 3.0% (SAAR) compared to 2.5% (SAAR) expected in the previous forecast. The forecast for real consumption is also stronger. We now expect real consumer spending to grow 2.6% this year compared to 2.4% in the November forecast. Consumer optimism has strengthened in recent months. 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 2.6% in 2018 compared to 2.2% growth expected in November. The March forecast assumes a federal tax cut which boosts disposable personal income in 2018. Consumer spending growth is then expected to slow to 2.3% in 2019, 2.2% in 2020, and 2.1% in 2021. In the November forecast, we expected consumption growth to slow to 2.2% in 2019 and to 2.1% in 2020 and 2021.

We expect consumer spending to contribute 1.8 percentage points to real GDP growth on average for each year of the forecast through 2021, up from an assumed 1.7 percentage point contribution in November.

*Disposable personal income growth is expected to slow*

Real disposable personal income growth was slightly stronger than expected in 2016, coming in at 2.8% compared to 2.5% assumed in November. Real disposable personal income growth is expected to slow this year to 2.3%. The boost to real incomes from falling energy prices has ended. Growth is expected to increase to 3.5% in 2018 due to the assumption of modest tax cuts. We expect growth to moderate to 2.6% in 2019. Growth is expected to dip further in 2020 and 2021 to 2.1% per year. Nominal disposable income is projected to grow 4.0% this year, led by strong growth in rental income of 6.5%. Interest income is expected to grow 5.1% in 2017 as the Federal Reserve slowly tightens monetary policy. Private sector wages and salaries are forecasted to grow 4.8%. Wage growth in the public sector will again lag, with growth of 2.5% in 2017. Total wages and salaries are expected to grow 4.4% this year after increasing 4.3% in 2016. The forecast then calls for growth in wages and salaries to average 4.1% in 2018 through 2021. Growth in government transfer payments is estimated to be 3.4% this year. We expect growth to pick up an average of 5.2% per year in 2018 through 2021 as an increasingly older population results in rising Medicare and Social Security payments. Income will be boosted in the latter part of the forecast by rising interest income, as interest rates return to pre-recession levels, as well as by dividend income.

*The outlook for employment has been slightly raised*

The forecast for employment is slightly higher than in the November forecast. Growth in payrolls is anticipated to be 1.6% this year after growing 1.8% in 2016. The November forecast had expected 1.7% growth for 2016. We expect employment growth to slow to 1.1% in 2018 and then to average 0.6% through 2021 as the economy nears full employment. Due to the steady job growth, we expect the unemployment rate to average 4.6% in 2017, down from 4.9% the year before. We expect the unemployment rate to decline through 2018 and then slowly rise through 2021. 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 temporarily end, with a trough of 61.1% in 2017. The labor force participation rate will grow as the economy reaches full employment, reaching a peak of 61.4% in 2019 and 2020. Going forward, the participation rate will resume its long-term secular decline.

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

Employment growth in nonfarm payrolls has been led by private sector hiring throughout the recovery as the public sector has been weighed down by budget concerns. While state and local governments have largely worked through their budgetary issues and have started hiring again, the pace of hiring has been slow. Federal government employment is expected to peak this year and then decline throughout the forecast except for the temporary hiring of census workers in 2020. The declines in federal government jobs will be offset by modest gains in state and local government employment, keeping total government employment growth flat over the next two years. The forecast calls for total government employment to increase 0.8% in 2019 and 1.3% in 2020. Growth in government payrolls is estimated to then fall 0.3% in 2021 due to weak gains in state and local government and census worker declines at the federal level. We expect private sector job growth of 1.9% this year, after growing by the same amount in 2016. The forecast calls for private sector job growth of 1.4% in 2018 and then an average growth of 0.7% through 2021.

*Business investment is expected to rebound this year*

Real nonresidential fixed investment is expected to grow 5.0% this year after falling 0.1% in 2016. The drop in oil prices, which is good for overall growth, lowered the incentive for additional investment by energy companies. The capital-intensive manufacturing sector is beginning to firm up after the strong U.S. dollar resulted in a drop in exports. Service sector businesses are expanding and filling up office buildings. Office vacancy rates edged downward by 20 basis points in the fourth quarter. We expect real nonresidential construction to rebound this year, growing 6.6%, as the drag from low oil prices diminishes. The forecast calls for growth to remain strong in 2018 at 4.5%. We then expect growth to average 2.3% per year through 2021. Real equipment investment is expected to grow 4.6% this year after declining 4.6% in 2016. 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. The forecast calls for growth of 5.9% in 2018, trending down to 3.0% by 2021. We expect overall real nonresidential fixed investment to grow 5.1% next year. We then expect growth to average 3.3% through 2021.

*The housing recovery will continue*

The forecast for housing starts is only minimally changed. The near-term forecast for housing starts is higher, although the growth is lower. We expect housing starts to grow 7.4% this year, compared to 6.3% in November, reaching 1.26 million units. The March forecast calls for growth to average 4.1% from 2018 through 2021 with starts reaching 1.48 million units. There continues to be a lack of available homes to purchase, which should continue to bolster new construction. Mortgage rates continue to trend upward, but remain low by historical standards. The forecast calls for growth in single-family housing starts of

8.2% this year after growing by 10.0% in 2016. The forecast expects the growth in single-family housing starts trend down through 2021, reaching 2.2%. We expect growth in the multi-family segment of 6.0% this year. In 2018, we expect multi-family starts to contract 0.2%, as builders wait and see the impacts of potential tax reform on rental housing projects. The forecast calls for the multi-family housing segment to grow at an average rate of 5.0% through the remainder of the forecast.

*Foreign growth appears to be slowly improving*

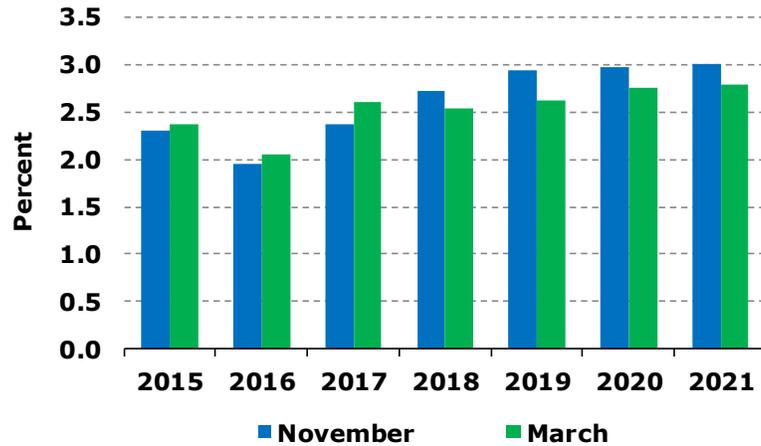
Major foreign economies remain weak, although they appear to be slowly improving. The Canadian economy grew 2.6% (SAAR) in the fourth quarter, pushing 2016 growth up to 1.9% for the year. Low oil and other commodity prices have continued to restrain Canadian growth. Business spending declined 8.2% (SAAR) in the fourth quarter, the ninth consecutive quarter of decline. The latest Blue Chip forecast expects growth of 1.9% in Canada for 2017 and 2018. Low oil prices have also taken a toll on the Mexican economy. The country has also been restrained by tight fiscal and monetary policy. Perhaps even more important, however, is the uncertainty surrounding the North American Free Trade Agreement (NAFTA) and the possible implications to the Mexican economy. GDP growth is expected to slow to 1.6% this year from 2.2% in 2016. The recovery in the Eurozone remains weak with real GDP increasing 1.7% in 2016. The latest Blue Chip forecast calls for 1.6% growth for both 2017 and 2018. 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 2016 was 6.7%, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.4% this year and 6.0% in 2018. Japan's economy has grown for four consecutive quarters now as policymakers have continued to support growth after years of stagnation. However, 2016 growth was still weak at 1.0%. The most recent Blue Chip forecast expects slow growth in the near term of 1.1% this year followed by 0.8% in 2018.

*Economic growth of U.S. trading partners has improved*

Economic growth of major U.S. trading partners is likely to be higher this year than in the previous forecast, although the outlook going forward has deteriorated (see Figure 1.5). GDP growth of U.S. trading partners is the weakest since the recession. After growing 2.1% in 2016, the forecast calls for GDP of U.S. trading partners to grow 2.6% this year. The November forecast called for 2.4% growth in 2017. The March forecast now calls for GDP of U.S. trading partners to grow 2.5% in 2018 and 2.6% in 2019. U.S. trading partner growth is expected to reach 2.8% in 2020 and 2021 compared to 3.0% expected in the previous forecast. The dollar has stabilized recently and the drag on exports has diminished. Real U.S. exports are forecasted to grow 2.9% this year after just 0.4% growth in 2016. The forecast calls for real export growth of 3.5% through 2021.

Export growth is more than offset by increased imports in the forecast. Net exports are expected to reduce GDP growth by 0.3 percentage points on average through 2021.

**Figure 1.5: Economic Growth of Major U.S. Trading Partners**

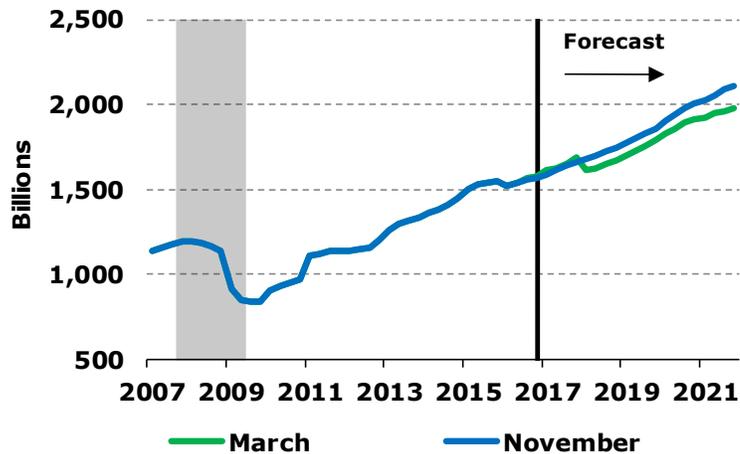


Source: Blue Chip, March 2017 ERFC forecast; historical data through 2016

*The fiscal policy outlook now includes potential policy changes from the new administration*

This is our first forecast since the November presidential election and thus the first to incorporate potential fiscal policy changes to the outlook. While several proposals for healthcare reform are being discussed, no legislation has passed, so we have not incorporated any related changes to the forecast. The forecast does include a \$25 billion annual increase in infrastructure spending beginning in 2018. Also included are lower personal and corporate federal tax rates, consistent with the House Republican plan (see Figure 1.6). A suspension of the debt limit will expire this month and the Treasury will need to use “extraordinary measures” to fund government operations.

**Figure 1.6: Federal Personal Tax Receipts**



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

*The federal budget deficit is growing*

The federal budget deficit began increasing again after reaching a trough of \$570 billion in 2015. The deficit increased to \$658 billion in 2016 but is projected to decline to \$628 billion this year. The forecast assumes the cuts in real defense spending that started in 2011 will continue throughout the forecast. The forecast calls for real defense spending to decline 0.1% this year and then average a 0.4% decline through 2021. Real nondefense purchases are expected to decline through 2021 by an average of 1.1% per year. 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. We expect total real government spending to grow 0.1% this year and 1.0% in 2018. We then expect growth to trend downward and reach 0.1% in 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. The Federal Reserve is facing a more upbeat economic outlook but also a more uncertain policy environment. As expected, the Federal Open Market Committee raised the federal funds rate by 25 basis points in March. The forecast assumes two more 25 basis point rate hikes this year, in September and December. The Federal Reserve is near achieving its goals for employment and inflation. Employment growth has been solid and core inflation is approaching 2.0% per year. We expect three more rate hikes per year until a Federal Funds rate of 3.0% is achieved.

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

## **Risks to the Forecast**

*Downside risks outweigh upside risks*

Our view of the risks to the forecast is unchanged since the November forecast. The 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**

- A breakdown in trade relations
- Infrastructure spending assumed in the baseline fails to materialize
- Chinese economy experiences a "hard landing" (annual growth under 5%); growth is weaker in emerging market economies
- Too aggressive tightening of monetary policy
- Weaker than expected employment growth
- Real wage growth stagnates, leading to slower consumer spending

- Slower household formation
- Slowdown in economic growth and negative effects to financial markets due to Brexit
- 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**

- Increased business confidence leads to more hiring
- Increased consumer confidence gives a boost to consumer spending
- The housing sector improves faster than anticipated
- Oil prices decline as OPEC fails to cut global supply
- 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	16,850.8	17,244.8	17,638.1	17,987.3	18,353.2
% Ch	2.1	2.9	1.7	2.0	2.3	2.3	2.0	2.0
Real Consumption	10,690.4	11,058.2	11,356.3	11,679.9	11,975.8	12,267.8	12,541.5	12,812.9
% Ch	2.0	3.4	2.7	2.8	2.5	2.4	2.2	2.2
Real Nonresidential Fixed Investment	2,090.3	2,188.0	2,195.3	2,233.4	2,359.7	2,463.1	2,536.1	2,624.3
% Ch	4.9	4.7	0.3	1.7	5.7	4.4	3.0	3.5
Real Residential Fixed Investment	495.1	531.0	588.2	601.3	630.9	650.5	662.4	680.9
% Ch	6.3	7.2	10.8	2.2	4.9	3.1	1.8	2.8
Real Personal Income	13,282.5	13,862.8	14,293.5	14,635.2	15,046.8	15,506.0	15,926.6	16,295.5
% Ch	1.2	4.4	3.1	2.4	2.8	3.1	2.7	2.3
Real Per Capita Income (\$/Person)	41,728	43,226	44,218	44,916	45,809	46,833	47,725	48,452
% Ch	0.4	3.6	2.3	1.6	2.0	2.2	1.9	1.5
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.084	1.093	1.100	1.117	1.134	1.152	1.173	1.195
% Ch	1.4	0.9	0.7	1.5	1.6	1.6	1.8	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.350	2.367	2.383	2.430	2.484	2.531	2.586	2.644
% Ch	1.6	0.7	0.7	2.0	2.2	1.9	2.1	2.2
Employment Cost Index (Dec. 2005=1.0)	1.193	1.221	1.248	1.277	1.315	1.357	1.402	1.449
% Ch	1.9	2.3	2.2	2.4	3.0	3.2	3.3	3.3
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,015.0	17,760.9	18,274.1	18,971.1	19,852.2	20,692.2	21,500.3	22,368.9
% Ch	3.8	4.4	2.9	3.8	4.6	4.2	3.9	4.0
Personal Income	14,394.7	15,155.4	15,729.0	16,348.2	17,070.0	17,866.4	18,681.7	19,480.2
% Ch	2.6	5.3	3.8	3.9	4.4	4.7	4.6	4.3
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.5	156.6	158.0	159.6	161.0	162.8	164.5	165.8
Total U.S. Employment	145.0	147.7	150.1	152.0	153.9	155.9	157.3	158.4
Unemployment Rate (%)	6.77	5.68	4.98	4.73	4.43	4.27	4.36	4.46
Nonfarm Payroll Employment	137.56	140.42	143.09	145.50	147.47	148.88	149.94	150.75
% Ch	1.7	2.1	1.9	1.7	1.4	1.0	0.7	0.5
Manufacturing	12.09	12.28	12.35	12.35	12.50	12.72	12.90	12.95
% Ch	0.9	1.6	0.6	0.0	1.2	1.7	1.4	0.4
Durable Manufacturing	7.60	7.74	7.75	7.72	7.88	8.09	8.25	8.32
% Ch	1.1	1.9	0.1	-0.4	2.1	2.7	2.0	0.8
Nondurable Manufacturing	4.49	4.54	4.61	4.63	4.62	4.63	4.64	4.63
% Ch	0.5	1.0	1.5	0.6	-0.2	0.1	0.4	-0.2
Construction	5.99	6.31	6.61	6.80	7.03	7.31	7.49	7.66
% Ch	4.3	5.4	4.7	2.9	3.4	4.0	2.4	2.3
Service-Providing	118.61	120.96	123.40	125.67	127.21	128.11	128.80	129.38
% Ch	1.7	2.0	2.0	1.8	1.2	0.7	0.5	0.4
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	101.3	69.3	41.7	49.0	51.2	51.2	51.2	51.5
Personal Saving/Disposable Income (%)	5.3	5.6	6.0	5.6	5.9	6.6	6.8	6.8
Auto Sales (Millions)	7.6	7.7	7.2	6.7	6.6	6.5	6.7	6.8
% Ch	2.1	1.0	-5.9	-7.7	-1.0	-0.8	1.9	1.6
Housing Starts (Millions)	0.955	1.055	1.150	1.226	1.285	1.341	1.406	1.464
% Ch	8.9	10.5	9.0	6.6	4.8	4.4	4.9	4.1
Federal Budget Surplus (Billions)	-612.0	-592.4	-621.5	-651.6	-721.2	-870.9	-912.6	-965.6
Net Exports (Billions)	-489.5	-513.7	-511.0	-510.1	-467.5	-471.8	-502.4	-527.5
3-Month Treasury Bill Rate (%)	0.04	0.02	0.18	0.53	1.26	2.06	2.77	2.83
10-Year Treasury Note Yield (%)	2.71	2.23	2.02	2.20	2.87	3.46	3.96	3.92
Bond Index of 20 G.O. Munis. (%)	4.55	3.83	3.51	3.65	4.43	4.79	4.93	4.89
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.99	4.75	5.40	5.98	5.93

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
<b>2017</b>				
March	1.9	1.3	0.35	3.89

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
<b>2017</b>				
March	2.3	1.6	1.66	5.07

Table 1.4

Fiscal Years

**Forecast Comparison**

Forecast 2017 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>							
March Baseline	16231.1	16513.4	16850.8	17244.8	17638.1	17987.3	18353.2
% Ch	2.9	1.7	2.0	2.3	2.3	2.0	2.0
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
<b>Implicit Price Deflator</b>							
March Baseline	1.093	1.100	1.117	1.134	1.152	1.173	1.195
% Ch	0.9	0.7	1.5	1.6	1.6	1.8	1.9
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
<b>Unemployment Rate</b>							
March Baseline	5.68	4.98	4.73	4.43	4.27	4.36	4.46
November Baseline	5.70	4.99	4.83	4.67	4.63	4.69	4.74
<b>Mortgage Rate</b>							
March Baseline	3.92	3.80	3.99	4.75	5.40	5.98	5.93
November Baseline	3.92	3.80	3.64	4.29	4.97	5.57	5.57
<b>3 Month T-Bill Rate</b>							
March Baseline	0.02	0.18	0.53	1.26	2.06	2.77	2.83
November Baseline	0.02	0.18	0.47	0.98	1.79	2.52	2.58



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

- **Recent Washington employment and income growth have been stronger than expected and historical estimates for both were revised higher.**
- **The state's unemployment rate has continued to decline, reaching 4.9% in February.**
- **Retail trade employment is benefitting from strong growth in electronic shopping but we expect more aerospace job cuts in 2017.**
- **Seattle home prices continue to rise very rapidly; Washington housing construction came down to earth after a fourth quarter spike.**
- **Seattle area consumer price inflation is above the national average due to higher shelter cost inflation.**
- **As in November, we expect the Washington economy to continue to outperform the U.S. economy.**

### Current Conditions

*The Washington economy is expanding at a rapid pace*

The Washington economy is expanding at a rapid pace. In recent months, Washington employment has grown faster than expected in the November forecast and historical estimates were revised higher. Historical estimates for Washington personal income were revised upward as well. Overall Washington exports continue to decline due to transportation equipment but other exports may be turning around. Manufacturing activity continues to struggle. Home prices are rising rapidly in the Seattle area but home construction has weakened after a fourth quarter spike. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*Employment growth has been stronger than expected*

We have four months of new Washington employment data since the November forecast was released. Total nonfarm payroll employment rose 21,300 (seasonally adjusted) in November, December, January, and February, which was 4,600 more than the 16,700 expected in the November forecast. The goods producing sectors more than accounted for the variance in job

growth. Manufacturing employment, which had been expected to fall 3,300, lost only 300 jobs. Some of the variance in manufacturing employment was due to aerospace, which declined less than expected, but most of the variance was due to other manufacturing industries, which grew more than expected. Construction employment increased 4,500 in the four-month period compared to the forecast of a decline of 400 jobs. Government payrolls expanded by 2,800 jobs compared to the forecast of 2,000 jobs but private, service-providing sectors added only 14,200 jobs, compared to the 18,400 expected in the forecast.

*Historical employment estimates were revised higher*

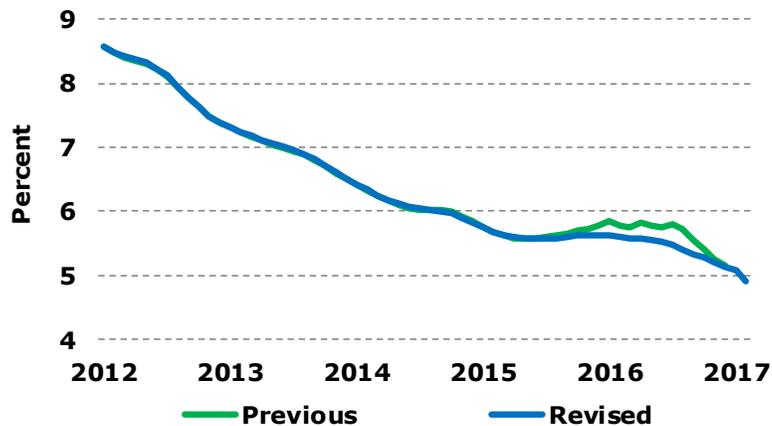
We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions raised the estimated level of total employment in October 2016 by 12,600 jobs (0.4%). As a result of the upward revision to history and slightly stronger-than-expected growth, the total effect is 17,100 (0.5%) more jobs in February 2017 than expected in the November forecast.

*The state's unemployment rate has continued to decline*

The Bureau of Labor Statistics has revised its state labor force, employment, and unemployment estimates for 2012 through 2016. The revisions alter the unemployment rate picture in 2015 and 2016. By July of 2016, the new measure is 5.48% compared to the previous estimate of 5.80%. However, the revised estimates fall faster in the final five months of the year (see Figure 2.1). According to the revised estimates, the unemployment rate in December was 5.14%, virtually identical to the previous estimate of 5.17%. The state's unemployment rate has continued to decline in recent months, reaching 4.9% in February.

**Figure 2.1: Washington Unemployment Rate**

*Washington unemployment rate data have been revised*



Source: BLS; data through February 2016

<i>Washington UI claims remain near the post-recession low</i>	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 edged up to 6,500 in the week ending March 25th from 6,400 in the previous week. While the current level of claims is slightly above the post-recession low of 6,000 reached in January, it remains below the previous trough of 7,200 reached during the last expansion. Claims have fallen 61% since the peak in early 2009
<i>Average hourly earnings growth offset a decline in average weekly hours</i>	Average weekly earnings for Washington private sector employees have improved recently despite a decline in average weekly hours. Private sector average weekly hours in the twelve months ending in February 2017 were down 1.1% compared to the twelve-month period ending in February 2016. However, average hourly earnings were up 3.2% in the most recent twelve-month period. As a result of the growth in average hourly earnings, and despite the decline in average weekly hours, average weekly earnings grew 2.1% in the twelve months ending in February 2017 compared to the twelve months ending in February 2016.
<i>Transportation equipment exports are down</i>	Fourth quarter 2016 Washington exports were down 4.7% from the fourth quarter of 2015. Transportation equipment exports (mostly Boeing planes) declined 12.4% over the year but exports of agricultural products increased 19.9%. Exports of all other commodities declined 0.1% over the year.
<i>Washington housing permits spiked in the fourth quarter</i>	Washington housing construction finished the year on a high note. The number of housing units authorized by building permits in the fourth quarter averaged 22,300 single-family units and 28,700 multi-family units permitted for a total of 50,900 units (SAAR). Permits came down to earth in January and February 2017 as the number of housing units authorized fell to 42,200 (SAAR) of which 23,100 were single-family and 19,100 were multi-family. The March forecast assumed 40,800 units (SAAR) in the first quarter as a whole, consisting of 22,200 single-family and 18,600 multi-family units.
<i>Seattle home prices continue to rise very rapidly</i>	Seattle home prices continue to rise very rapidly. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices rose 1.7% in January following a 1.4% increase in December. Recent growth is probably overstated due to problems with the seasonal adjustment process. A more reliable measure is the over-the-year growth, which shows a 11.2% increase in prices since the previous January, nearly double the 5.7% increase in the Composite-20 index. Seattle home prices are up 60.7% since the November 2011 trough and now exceed the May 2007 peak by 11.7%.
	The Institute of Supply Management - Western Washington Index (ISM-WW) moved back into negative territory in February.

*Manufacturing is struggling*

The index, which measures conditions in the manufacturing sector, decreased from 54.2 in January to 48.6 in February (index values above 50 indicate growth while values below 50 indicate contraction). Only the orders component indicated expansion in February while the employment, inventory, and deliveries components indicated contraction. The production index was neutral at 50. The overall manufacturing index has fluctuated around the 50 mark since mid-2015.

*Washington car and truck sales declined in January and February*

Washington car and truck sales declined in January and February. Seasonally adjusted new vehicle registrations fell 3.3% in January and 4.8% in February following increases in the previous two months. Car and truck sales are down 10.4% since the post-recession peak in January 2016 and 6.5% over the year (see Figure 2.2).

**Figure 2.2: New Vehicle Registrations**

*Car and truck sales are down since the post-recession peak in January 2016*



Source: WA State Department of Licensing, ERFC; data through February 2017

*Washington personal income growth was overstated in fourth quarter of 2016*

In March, after the forecast was complete, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the fourth quarter of 2016. According to these estimates, Washington personal income rose to \$396.8 billion (SAAR) in the fourth quarter of 2016 from \$391.7 billion in the third quarter. The reported 5.3% growth rate (SAAR) in Washington personal income was the third largest among the states and District of Columbia and much higher than the 3.8% growth rate for the U.S. as a whole. However, the reported fourth quarter earnings growth was distorted by a change in the way Microsoft stock awards vest during the year. The result of the change is higher reported earnings growth in each fourth and first quarter and lower reported earnings growth in each second and third quarter. Excluding earnings from the information sector, Washington personal income grew at a 4.8% rate in the fourth quarter, which still ranked 5th among the

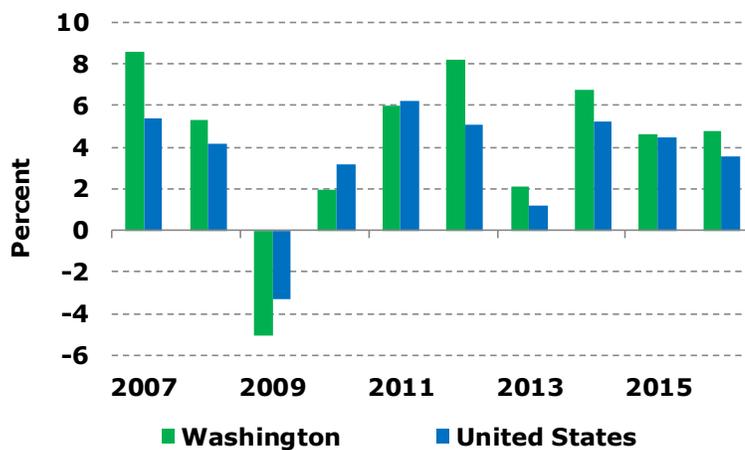
states and District of Columbia and well above the national average rate of 3.8%.

*IT boosted Washington personal income growth in 2016*

The March personal income release also included preliminary estimates for 2016 as a whole. The annual estimates are free of the seasonality problem described above. Washington personal income rose to \$389.9 billion (SAAR) in 2016 from \$372.1 billion in 2015. The 4.8% growth rate in Washington personal income was the fourth largest among the states and District of Columbia and was much higher than the 3.6% growth rate for the U.S. as a whole. The 1.2 percentage point differential between Washington personal income growth and U.S. personal income growth was almost entirely due to two sectors: information (which includes software publishing) and retail trade (which includes electronic shopping). Between the two of them, these sectors contributed 1.0 percentage points more to Washington personal income growth than to U.S. personal income growth.

*Washington personal income growth was much higher than the rate for the U.S. as a whole in 2016*

**Figure 2.3: Personal Income Growth**



Source: BEA; data through 2016

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

Seattle area consumer price inflation remains well above the national average. Over the last year, from February 2016 to February 2017, consumer prices in the Seattle area rose 3.4% compared to 2.8% for the U.S. city average. Core prices, which exclude food and energy, were up 2.9% 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 6.9% compared to 3.5% for the nation.

## Washington State Forecast

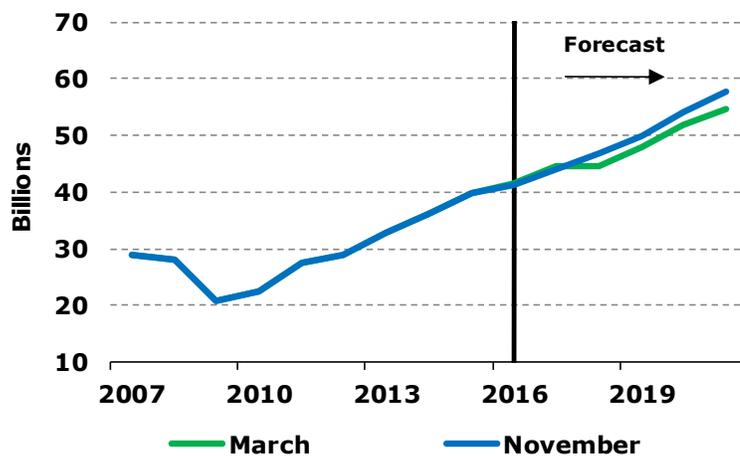
*The March forecast incorporates some policies proposed by the new administration*

The March Washington State forecast is based on a new national forecast that is similar to the forecast adopted in November. Real GDP growth averages 2.2% per year in 2017 through 2021 compared to 2.1% in the November forecast. As in November,

employment growth averages 0.8% per year. Real personal income growth averages 2.6% compared to 2.5% in November but because inflation is lower, nominal personal income grows at the same 4.4% average rate. The March forecast incorporates some policies proposed by the new administration, including lower personal and corporate federal tax rates, consistent with the House Republican plan, as well as \$250 billion in additional infrastructure spending over 10 years and a hiring freeze for federal nonmilitary employees. The forecast does not assume a border adjustment tax nor does it assume a replacement of the Affordable Care Act. These revisions in the national forecast feed through to the state economic forecast (see Figure 2.4).

**Figure 2.4: Federal Personal Taxes, Washington**

*We expect lower taxes to save Washington residents an average of \$2.3 billion per year in 2018-21, about 0.5% of personal income.*



Source: Bureau of Economic Analysis, ERFC; historical data through 2016

*Overall, our forecast for Washington State is stronger than we expected in November.*

Overall, our forecast for Washington State is stronger than we expected in November. Washington employment is expected to grow 2.3% this year, up from 1.9% in the November forecast. We expect employment growth to average 1.4% per year in 2018 through 2021, which is slightly higher than the 1.3% rate assumed in November. Our forecast for nominal personal income growth this year is 5.0%, up from 4.5% in the November forecast. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, up slightly from the 5.0% rate in the November forecast. We expect total housing units authorized by building permits to decline 5.3% this year to 40,900 units, which is slightly higher than the 40,000 units in the November forecast. We expect permits to average 40,800 during the remainder of the forecast, which is slightly lower than the 41,400 expected in November. As in November, we expect the all-items Seattle CPI to rise 2.8% this year. We expect Seattle area inflation to average 2.2% per year in 2018 through 2021 compared to 2.3% in the November forecast.

## Washington Payroll Employment

*Washington employment growth will slow*

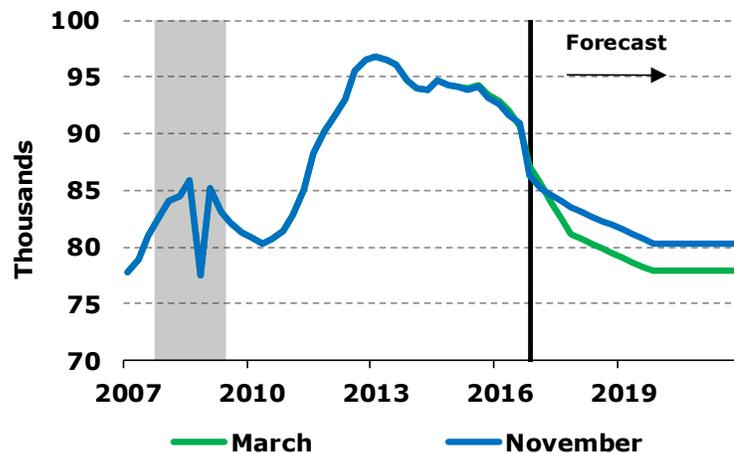
Washington employment growth in 2016 was 3.1%, which was the highest rate since 1998. We expect the employment growth rate to slow in the coming years as the economy approaches full employment. Employment growth will also be constrained by baby boomers leaving the work force, further reducing labor force growth. Washington employment is expected to grow 2.3% this year, up from 1.9% in the November forecast. As in November, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.4% per year in 2018 through 2021, which is slightly higher than the 1.3% rate assumed in November. On a calendar year basis, we expect 1.8% employment growth in 2018, 1.4% in 2019, 1.2% growth in 2020, and 1.0% growth in 2021.

*We expect more aerospace job cuts in 2017*

Though aerospace employment declined less than expected in November through February, Boeing has indicated that their 2017 job cuts will be similar to those experienced in 2016. In November, we had assumed a slowing in the rate of decline in 2017. In the current forecast we assume a decline of 6,100 aerospace jobs from the fourth quarter of 2016 through the fourth quarter of 2017, which is close to, the 6,300 decline experienced during 2016. The new aerospace employment forecast is 2,500 lower by the end of 2017 than in the November forecast (see Figure 2.4). On an annual average basis, we expect aerospace employment to decline 8.1% in 2017, 3.9% in 2018, 2.0% in 2019, and 0.8% in 2020 with no change in 2021.

**Figure 2.5: Aerospace Employment**

*The Washington aerospace employment forecast is lower*



Source: Washington State Employment Security, BLS, ERFC; historical data through 2016Q4

*The software employment forecast is slightly lower*

Software employment grew only 0.5% in 2015 after absorbing a series of Microsoft layoffs during the latter part of 2014. Growth rebounded to 5.1% in 2016. The forecast is slightly lower than in

November mostly because actual employment in recent months has been slightly lower than expected. As in November, we expect moderate growth through the remainder of the forecast. Software employment is expected to grow 2.2% in 2017, 0.5% in 2018, 0.8% in 2019, 0.9% in 2020, and 1.0% in 2021.

*Construction employment is higher than expected in November*

As of February, construction employment was about 8,000 higher than expected in the November forecast due to a combination of upward revisions to historical data and stronger than expected growth in recent months. The forecast expects a slowing of growth in coming years similar to the pattern in the November forecast. Construction employment is expected to grow 5.1% this year, down from 7.5% in 2016 and a post-recession high of 8.5% in 2015. Growth will continue to slow to 3.8% in 2018, 1.6% in 2019, 0.8% in 2021 before rising to 1.6% in 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 five years due largely to our outsized and rapidly growing electronic shopping sector. Retail trade employment grew at an average rate of 3.4% per year between 2011 and 2016 compared to 1.5% for the U.S. as a whole. Without the electronic shopping sector, which added 26,000 jobs in the five-year period, Washington retail trade employment would have grown at a 2.0% average annual rate. Retail employment growth is expected to slow due to technology and slower overall economic growth. Retail trade employment is expected to grow 2.9% this year, 1.6% in 2018, 1.0% in 2019, 0.7% in 2020, and 0.1% in 2021.

## Washington Personal Income

*Washington personal income is initially higher than believed in November*

In December, the Bureau of Economic Analysis released estimates for state personal income through the third quarter of 2016. In producing our March forecast, we incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) and other wage data. Our estimate of Washington personal income for the third quarter of 2016 was \$391.7 billion, which was \$0.4 billion (0.1%) higher than assumed in the November forecast. Wages and salaries were \$0.1 billion higher than believed in November and other sources of personal income were \$0.3 billion higher.

*Our forecast for nominal personal income growth is higher than in November*

Our forecast for nominal personal income growth this year is 5.0%, up from 4.5% in the November forecast. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, up slightly from the 5.0% rate in the November forecast. While our forecast for personal income growth is similar to the November forecast, the level is higher throughout the forecast due to the higher growth this year (see Figure 2.5). On an annual basis, we expect personal income to grow 5.3% in 2018, 5.3% in 2019, 4.9% in 2020, and 4.7% in 2021.

## Washington Building Permits

*The housing recovery in Washington is essentially complete*

The housing recovery in Washington is essentially complete although the composition of new housing will change in coming years. Multi-family housing has recovered from a low of only 4,000 units in 2009 to 21,200 in 2016. We believe 2016 was the peak in multi-family construction in this cycle and that permits will decline to 14,800 by 2021. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 22,100 in 2016. We expect single-family construction to continue to strengthen with the number of units rising to 25,700 by 2021. We expect total housing units authorized by building permits to decline 5.3% this year to 40,900 units before rising 0.3% next year to 41,100 units. The number of units is then expected to decline 0.6% to 40,800, 0.1% to 40,800, and 0.6% to 40,500 in 2019, 2020, and 2021.

## Seattle Consumer Price Index

*Rents are driving Seattle core inflation higher*

Core inflation (excluding food and energy) in Seattle was 3.0% in 2016 while national core inflation was 2.2%. The reason for the difference was shelter costs, which were rising much faster in Seattle. Recent data show that shelter costs continue to rise faster in Seattle than in the U.S. city average. We expect core inflation in Seattle to moderate as shelter costs stabilize. Our forecast for core Seattle inflation is 2.7% in 2017, 2.1% in 2018, 2.0% in 2019, 2.2% per year in 2020 and 2021.

*Energy costs will not affect headline inflation*

After working to reduce overall inflation considerably in 2015 and 2016, energy costs are leveling off in the forecast. As a result, they will not significantly affect headline inflation in the next few years. We expect the Seattle CPI to rise 2.8% this year, 2.1% in 2018, 2.1% in 2019, and 2.3% per year in 2020 and 2021.

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

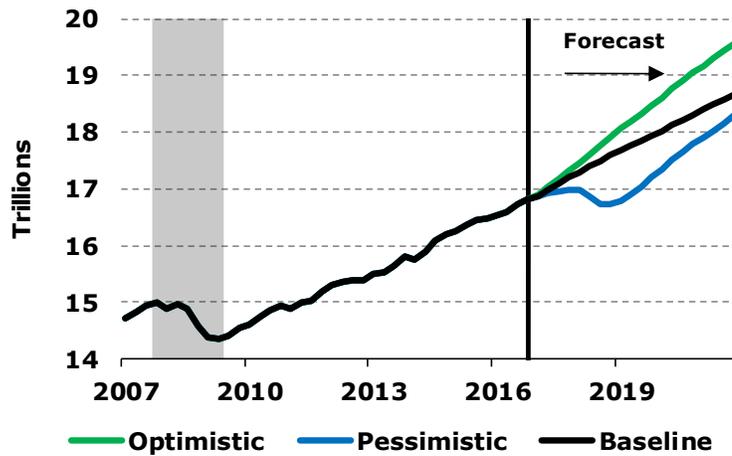
## Alternative Scenarios

*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 (see Figure 2.6).

**Figure 2.6: U.S. Real Gross Domestic Product**

*The pessimistic scenario features a recession while the optimistic features stronger real growth*



Source: Bureau of Economic Analysis, IHS Markit, ERFC; historical data through 2016Q4

**Optimistic**

*In the optimistic scenario, lower taxes and fewer regulations boost growth*

In the optimistic scenario, the Trump administration provides a boost to both the supply and demand sides of the economy. On the supply side, a rollback of regulations and lower corporate taxes result in greater capital spending. Stronger growth in business fixed investment and an explosion of new technologies lead to stronger productivity gains, bringing economic growth above the baseline rate throughout the forecast period. Given the strengthening outlook, both consumer and business confidence improve and the stock market sees strong gains. On the demand side, higher incomes combine with lower oil prices, inflation, and interest rates to support robust consumer spending. Thanks to increased household formation, solid income growth, and a favorable financing environment, housing remains an engine of growth. Meanwhile, economic conditions in the rest of the world improve with the help of structural reforms and quantitative-easing programs.

*The optimistic scenario also assumes a much stronger Washington economy*

In addition to reflecting the impact of the stronger U.S. forecast on the state economy, the optimistic Washington forecast assumes that aerospace employment declines less in 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 the strong local economy attracts migrants from other states. The recovery in construction employment is much stronger than in the baseline forecast with employment in the sector exceeding

the previous peak in the second quarter of 2018. By the end of 2021, Washington nonfarm payroll employment is higher by 180,700 jobs (5.1%) than in the baseline forecast and Washington personal income is \$66.1 billion (13.0%) higher.

### **Pessimistic**

*The pessimistic scenario features a recession induced by strained trade relations*

In the pessimistic scenario, trade with Mexico and China turns contentious. Rhetoric about various tariffs on foreign goods coming into the United States results in lower imports, but in retaliation, exports decline even more. Uncertainty regarding the trade situation combined with political turmoil causes economic conditions in the rest of the world to worsen. U.S. businesses react to uncertainty by postponing significant capital investments. In this low-growth environment, modest demand-side growth exerts upward pressure on both wage and price inflation. In addition, OPEC cuts oil production, pushing prices over \$80 per barrel by the end of 2017. Discouraged by the economic situation and disagreements between Congress and the new administration, both consumer and business confidence deteriorate, and the stock market plunges. The U.S. economy contracts at annual rates of 2.8% and 3.0% in the second and third quarters of 2018. The unemployment rate climbs through the middle of 2019, reaching an eventual peak of more than 6.5%.

*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 from early 2018 through early 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 and the Seattle CPI are about the same in the pessimistic alternative as they are in the baseline forecast. By the end of 2021, Washington nonfarm payroll employment is 177,600 (5.0%) lower than in the baseline forecast and Washington personal income is \$21.0 billion (4.1%) 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 2.1% per year in 2017 through 2021 compared to 2.2% in the baseline forecast. The GCEA forecast of real consumer spending growth is also slightly lower at 2.2% compared to 2.4%. The GCEA inflation forecast is a little higher than the baseline forecast at 1.9% compared to 1.7%, offsetting 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 5.2% compared to 5.4% on average. The GCEA oil price forecast is slightly higher than the baseline forecast averaging \$55 in 2017 through 2021 compared to \$53 in the baseline forecast.

*The GCEA members also expect slightly weaker Washington growth*

Except for housing construction, 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 2017 through 2021 compared to the baseline forecast of 3.3%. Their inflation forecast is slightly higher, however, so their nominal personal income forecast is close to ours. At an average rate of 1.4% per year, the Council members' forecast for total employment growth over the five-year period is also slightly lower than the baseline forecast of 1.6% 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 is, averaging 43,200 units per year through 2021 compared to 40,800 in the baseline forecast. At the end of 2021, the GCEA forecast for Washington nonfarm payroll employment is 23,600 (0.7%) lower than in the baseline forecast and Washington personal income is \$3.3 billion (0.6%) 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	345.793	358.108	370.462	384.126	396.580	407.877
% Ch	2.3	5.4	3.6	3.6	3.4	3.7	3.2	2.8
Real Wage and Salary Disb.	162.191	170.803	180.466	189.092	195.592	202.148	207.481	212.903
% Ch	3.5	5.3	5.7	4.8	3.4	3.4	2.6	2.6
Real Nonwage Income	154.459	163.046	165.328	169.016	174.870	181.978	189.099	194.974
% Ch	1.1	5.6	1.4	2.2	3.5	4.1	3.9	3.1
Real Per Capita Income (\$/Person)	45,110	46,901	47,860	48,815	49,753	50,862	51,818	52,625
% Ch	1.1	4.0	2.0	2.0	1.9	2.2	1.9	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.084	1.093	1.100	1.117	1.134	1.152	1.173	1.195
% Ch	1.4	0.9	0.7	1.5	1.6	1.6	1.8	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.437	2.473	2.521	2.586	2.649	2.702	2.761	2.825
% Ch	1.4	1.5	1.9	2.6	2.4	2.0	2.2	2.3
Average Nonfarm Annual Wage	55,987	57,969	59,935	62,036	63,894	66,043	68,173	70,570
% Ch	3.0	3.5	3.4	3.5	3.0	3.4	3.2	3.5
Avg. Hourly Earnings-Mfg. (\$/Hour)	24.76	25.28	26.00	26.75	27.40	28.20	29.04	29.92
% Ch	2.3	2.1	2.8	2.9	2.5	2.9	3.0	3.0
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	343.162	364.967	380.515	400.028	420.283	442.609	465.195	487.603
% Ch	3.8	6.4	4.3	5.1	5.1	5.3	5.1	4.8
Disposable Personal Income	302.084	319.888	333.386	350.671	368.662	388.546	406.946	425.430
% Ch	3.1	5.9	4.2	5.2	5.1	5.4	4.7	4.5
Per Capita Income (\$/Person)	48,886	51,272	52,665	54,528	56,443	58,605	60,783	62,910
% Ch	2.6	4.9	2.7	3.5	3.5	3.8	3.7	3.5
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,465.7	3,517.0	3,589.6	3,680.2	3,748.8	3,819.0	3,883.2	3,939.5
Total Washington Employment	3,240.7	3,313.2	3,388.8	3,490.8	3,573.3	3,649.3	3,709.1	3,761.0
Unemployment Rate (%)	6.49	5.80	5.59	5.15	4.68	4.45	4.48	4.53
Nonfarm Payroll Employment	3,017.2	3,102.6	3,193.4	3,285.9	3,352.9	3,406.5	3,449.4	3,485.8
% Ch	2.3	2.8	2.9	2.9	2.0	1.6	1.3	1.1
Manufacturing	287.5	290.5	292.3	286.5	285.4	289.1	292.3	294.1
% Ch	0.9	1.0	0.6	-2.0	-0.4	1.3	1.1	0.6
Durable Manufacturing	209.4	210.7	210.5	203.6	201.6	204.8	207.1	208.5
% Ch	0.4	0.6	-0.1	-3.3	-1.0	1.6	1.1	0.7
Aerospace	94.7	94.3	93.2	86.9	81.1	79.2	78.0	77.9
% Ch	-1.7	-0.5	-1.2	-6.8	-6.6	-2.3	-1.6	-0.1
Nondurable Manufacturing	78.1	79.8	81.8	82.9	83.8	84.3	85.2	85.6
% Ch	2.3	2.2	2.6	1.4	1.0	0.6	1.1	0.5
Construction	153.7	168.0	178.9	191.0	199.9	205.2	207.2	209.5
% Ch	6.8	9.3	6.5	6.8	4.7	2.7	1.0	1.1
Service-Providing	2,569.8	2,637.8	2,715.9	2,801.9	2,861.0	2,905.6	2,943.1	2,975.5
% Ch	2.2	2.6	3.0	3.2	2.1	1.6	1.3	1.1
Software Publishers	55.0	55.5	57.2	59.7	60.1	60.6	61.1	61.7
% Ch	3.9	1.0	3.1	4.4	0.7	0.8	0.8	0.9
Nonfarm Payroll Employment, EOP*	3,038.8	3,138.9	3,236.6	3,312.9	3,375.4	3,423.7	3,468.0	3,499.2
% Ch*	2.2	3.3	3.1	2.4	1.9	1.4	1.3	0.9
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.222	38.703	39.703	43.065	41.029	40.929	40.752	40.705
% Ch	6.5	16.5	2.6	8.5	-4.7	-0.2	-0.4	-0.1
Single-Family	17.383	18.652	21.614	22.181	23.629	24.490	25.178	25.637
% Ch	-6.3	7.3	15.9	2.6	6.5	3.6	2.8	1.8
Multi-Family	15.839	20.051	18.089	20.884	17.400	16.440	15.574	15.068
% Ch	25.2	26.6	-9.8	15.4	-16.7	-5.5	-5.3	-3.3
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.99	4.75	5.40	5.98	5.93

\*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	2.1	3.1	3.4	3.1	3.0
Baseline	1.7	2.0	2.3	2.3	2.0	2.0
Pessimistic	1.7	1.9	0.7	-0.9	2.9	3.3
<b>Implicit Price Deflator, Percent Change</b>						
Optimistic	0.7	1.5	1.6	1.7	2.1	2.2
Baseline	0.7	1.5	1.6	1.6	1.8	1.9
Pessimistic	0.7	1.6	2.6	2.2	2.6	2.8
<b>Mortgage Rate, Percent</b>						
Optimistic	3.80	3.99	4.81	5.76	6.50	6.47
Baseline	3.80	3.99	4.75	5.40	5.98	5.93
Pessimistic	3.80	3.99	4.52	4.35	3.91	3.74
<b>3 Month T-Bill Rate, Percent</b>						
Optimistic	0.18	0.50	1.13	2.08	2.97	3.15
Baseline	0.18	0.53	1.26	2.06	2.77	2.83
Pessimistic	0.18	0.58	1.84	0.82	0.46	0.68
<b>Washington</b>						
<b>Real Personal Income, Percent Change</b>						
Optimistic	3.6	4.4	5.7	6.4	6.0	4.9
Baseline	3.6	3.6	3.4	3.7	3.2	2.8
Pessimistic	3.6	2.8	1.2	0.0	1.5	3.1
<b>Personal Income, Percent Change</b>						
Optimistic	4.3	6.0	7.4	8.3	8.1	7.2
Baseline	4.3	5.1	5.1	5.3	5.1	4.8
Pessimistic	4.3	4.5	3.8	2.3	4.2	5.9
<b>Employment, Percent Change</b>						
Optimistic	2.9	3.0	2.7	2.6	2.5	2.3
Baseline	2.9	2.9	2.0	1.6	1.3	1.1
Pessimistic	2.9	2.7	0.9	-0.8	0.0	0.8
<b>Housing Permits, Thousands of Authorized Units</b>						
Optimistic	39.7	43.3	43.2	44.7	46.7	48.3
Baseline	39.7	43.1	41.0	40.9	40.8	40.7
Pessimistic	39.7	42.8	38.0	33.6	31.9	32.3

Table 2.3

Calendar Years

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

	2017	2018	2019	2020	2021
<b>U.S.</b>					
<b>Real GDP</b>					
<i>Growth</i>					
ERFC	2.3	2.4	2.1	2.0	2.0
GCEA Average	2.3	2.2	2.1	2.1	2.0
<b>Real Consumption</b>					
<i>Growth</i>					
ERFC	2.6	2.6	2.3	2.2	2.1
GCEA Average	2.5	2.3	2.2	2.1	2.1
<b>Implicit Price Deflator, PCE</b>					
<i>Growth</i>					
ERFC	1.7	1.5	1.7	1.9	1.9
GCEA Average	1.9	2.0	1.9	1.9	1.9
<b>Mortgage Rate</b>					
<i>Percent</i>					
ERFC	4.5	5.1	5.8	6.0	5.9
GCEA Average	4.4	4.8	5.3	5.6	5.7
<b>Oil Price (Brent)</b>					
<i>Dollars per barrel</i>					
ERFC	53.0	53.0	52.6	52.9	53.8
GCEA Average	54.9	55.1	55.1	55.6	56.6
<b>Washington State</b>					
<b>Real Personal Income</b>					
<i>Growth</i>					
ERFC	3.3	3.7	3.6	3.0	2.7
GCEA Average	3.1	3.1	3.1	2.8	2.8
<b>Wage and Salary Employment</b>					
<i>Growth</i>					
ERFC	2.3	1.8	1.4	1.2	1.0
GCEA Average	2.0	1.7	1.2	1.1	1.1
<b>Manufacturing Employment</b>					
<i>Growth</i>					
ERFC	-1.7	0.8	1.3	0.8	0.7
GCEA Average	-1.6	0.0	0.3	0.4	0.4
<b>Construction Employment</b>					
<i>Growth</i>					
ERFC	5.1	3.8	1.6	0.8	1.6
GCEA Average	2.9	2.9	2.1	1.7	1.9
<b>Housing Permits</b>					
<i>Thousands of authorized units</i>					
ERFC	40.9	41.1	40.8	40.8	40.5
GCEA Average	41.9	42.5	43.5	44.2	43.8
<b>Washington Average Annual Wage</b>					
<i>Growth</i>					
ERFC	3.0	3.3	3.4	3.3	3.6
GCEA Average	3.0	3.1	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>
2012				
September	1.7	5.1	3.1	38.5
November	1.7	4.9	3.2	38.4
2013				
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
2014				
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
2015				
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
2016				
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
2017				
March	2.7	4.7	3.3	41.4

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>	
2014					
February	1.3	4.9	3.5	42.5	
June	1.2	5.3	3.8	43.0	
September	1.3	5.4	3.8	43.1	
November	1.1	5.5	3.6	43.2	
2015					
March	1.3	5.4	3.6	43.1	
June	1.4	5.6	3.8	44.2	
September	1.3	5.4	3.6	43.9	
November	1.4	5.4	3.5	44.0	
2016					
February	1.2	5.0	3.2	43.3	
June	1.2	5.1	3.2	43.7	
September	1.4	5.1	3.3	43.8	
November	1.5	5.1	3.2	41.0	
2017					
March	1.7	5.3	3.6	41.0	

Table 2.6  
**Forecast Comparison**  
 Forecast 2017 to 2021

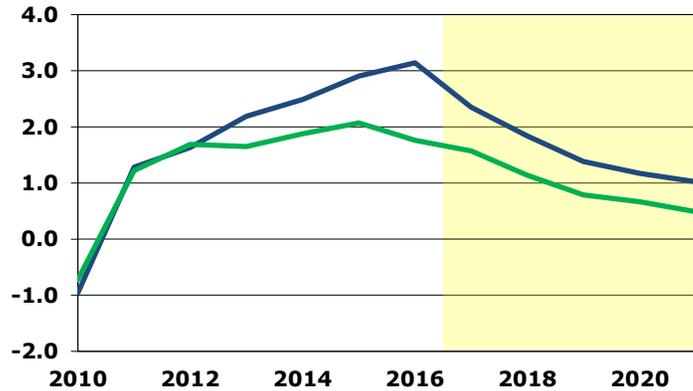
Fiscal Years

	<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>							
March Baseline	333.849	345.793	358.108	370.462	384.126	396.580	407.877
% Ch	5.4	3.6	3.6	3.4	3.7	3.2	2.8
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
<b>Personal Income</b>							
March Baseline	364.967	380.515	400.028	420.283	442.609	465.195	487.603
% Ch	6.4	4.3	5.1	5.1	5.3	5.1	4.8
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
<b>Employment</b>							
March Baseline	3102.6	3193.4	3285.9	3352.9	3406.5	3449.4	3485.8
% Ch	2.8	2.9	2.9	2.0	1.6	1.3	1.1
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
<b>Housing Permits</b>							
March Baseline	38.703	39.703	43.065	41.029	40.929	40.752	40.705
% Ch	16.5	2.6	8.5	-4.7	-0.2	-0.4	-0.1
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

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

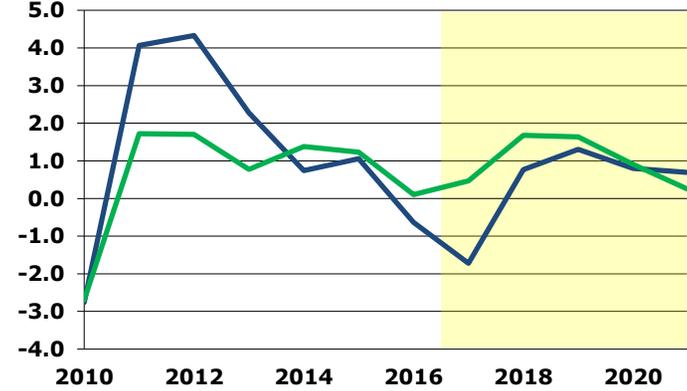
Forecast

Total nonfarm payroll employment



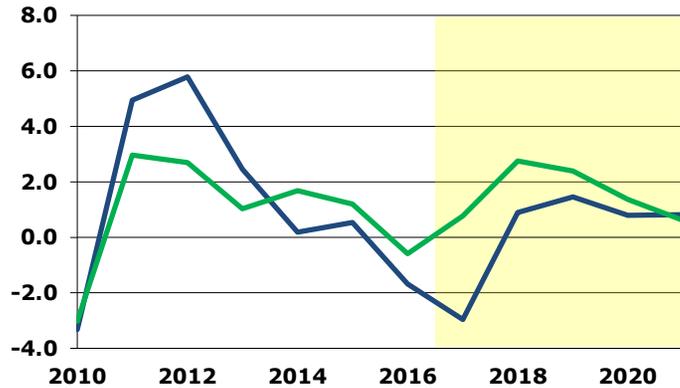
Source: WA State Employment Security Dept. 2015, ERFC 2021

Manufacturing employment



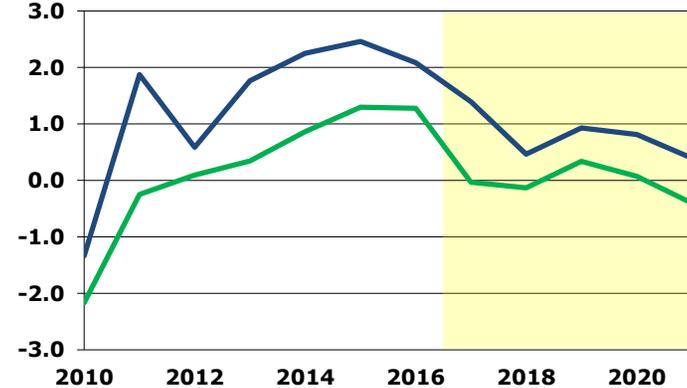
Source: WA State Employment Security Dept. 2015, ERFC 2021

Durable manufacturing employment



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

Nondurable manufacturing employment



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

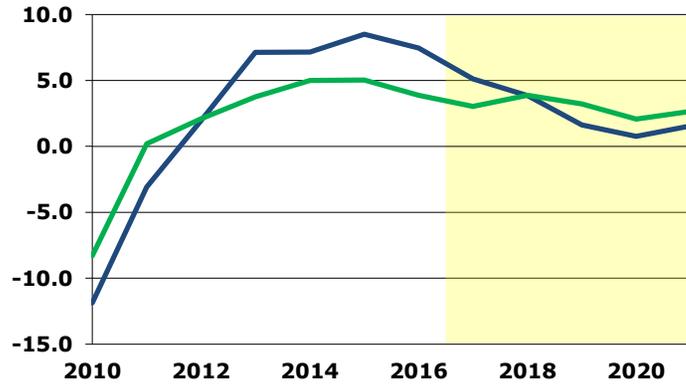
■ Washington

■ U.S.

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

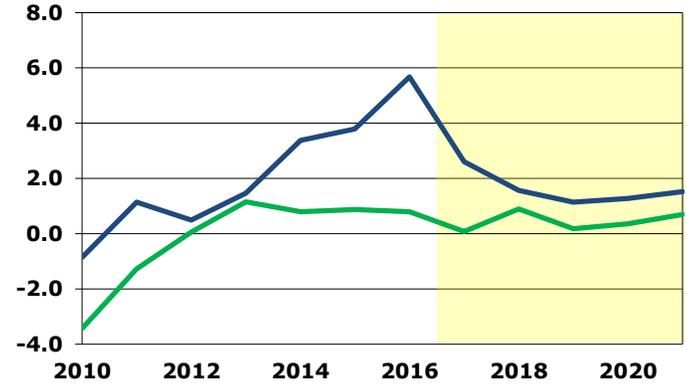
Forecast

Construction employment



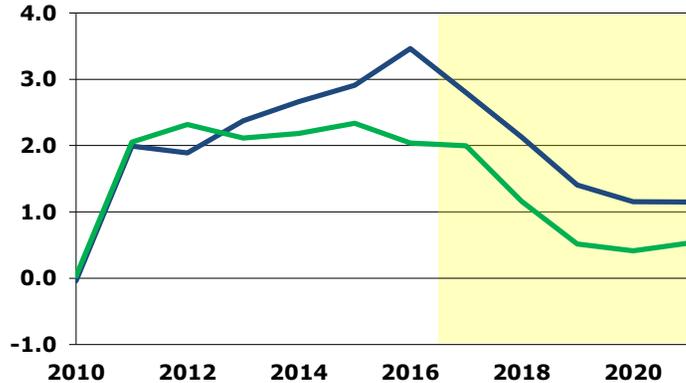
Source: WA State Employment Security Dept. 2015, ERFC 2021

Information employment



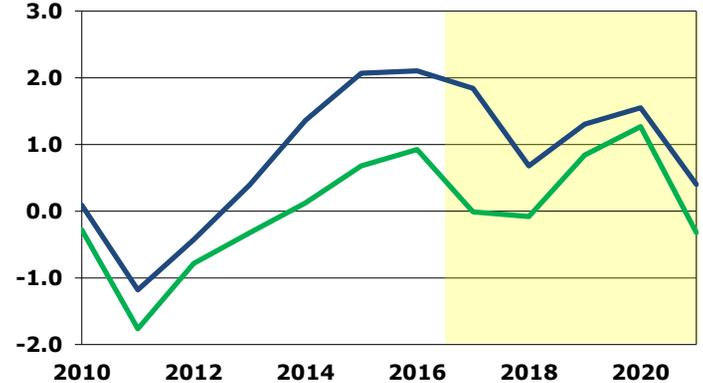
Source: WA State Employment Security Dept. 2015, ERFC 2021

Other private employment



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

Government employment



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

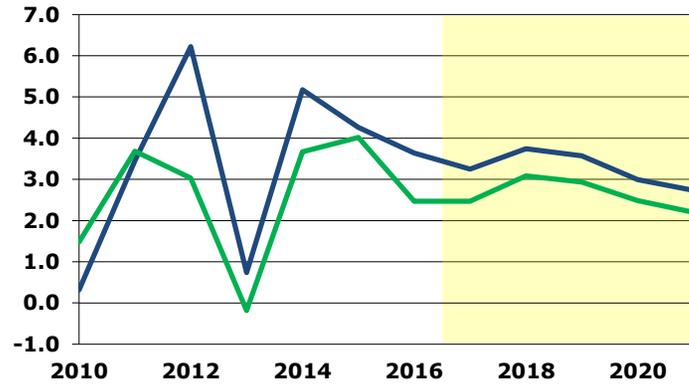
Washington

U.S.

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

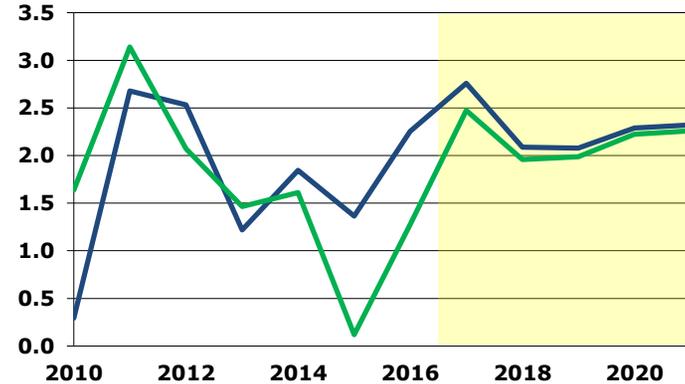
Forecast

Real personal income



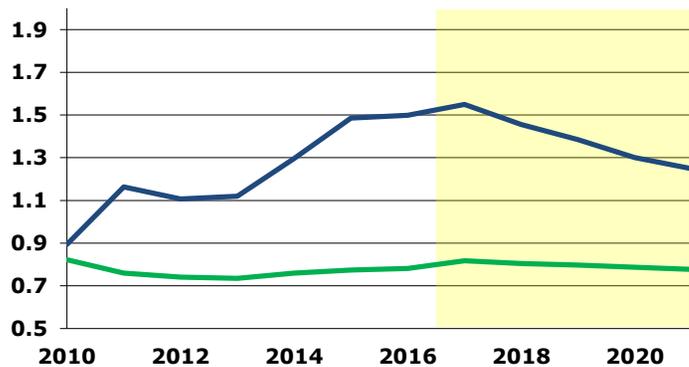
Source: Bureau of Economic Analysis 2015, ERFC 2021

Consumer price indices



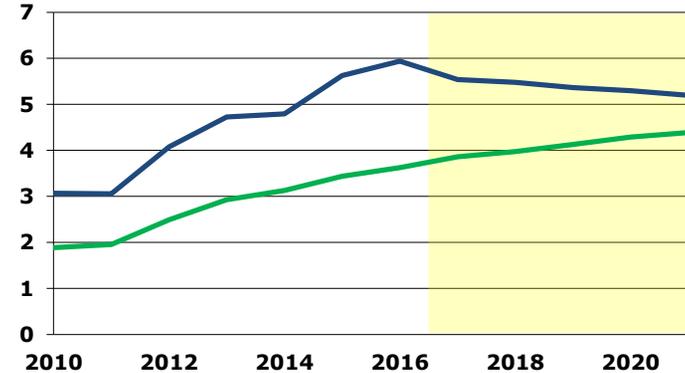
Source: Bureau of Labor Statistics 2015, ERFC 2021

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

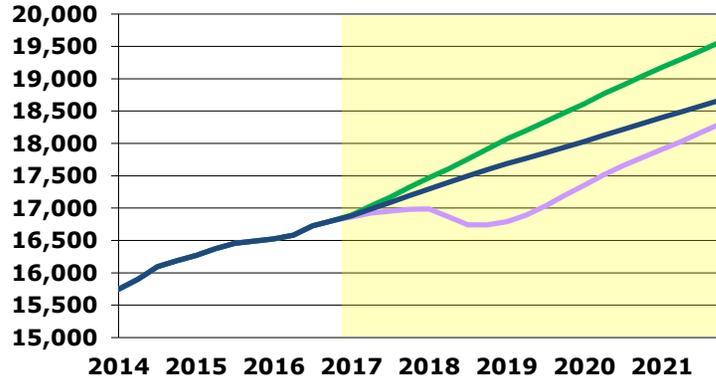
Washington

U.S.

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

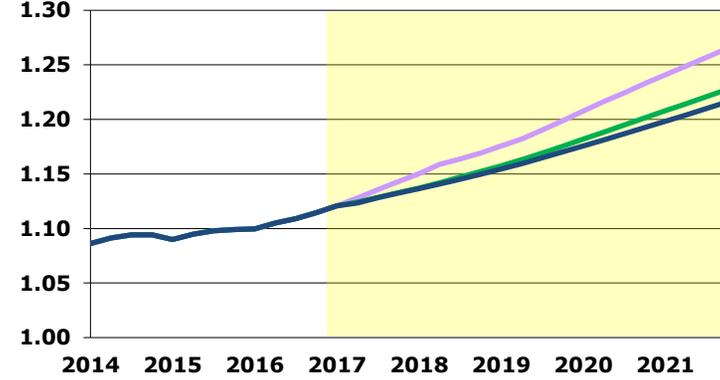
Forecast

Real GDP, billions of chained 2009 dollars



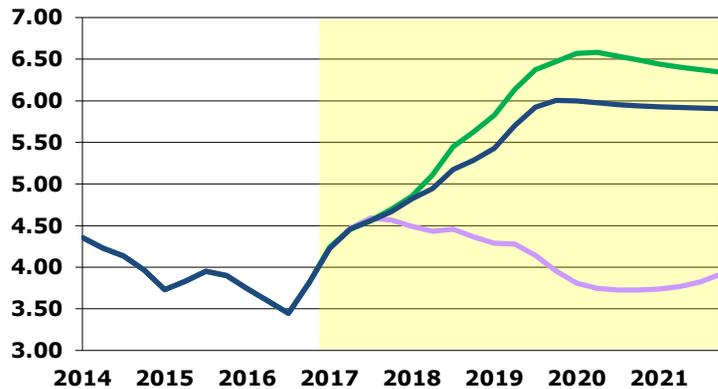
Source: Bureau of Economic Analysis 2016 Q3, ERFC 2021

Implicit price deflator, index 2009 = 1.0



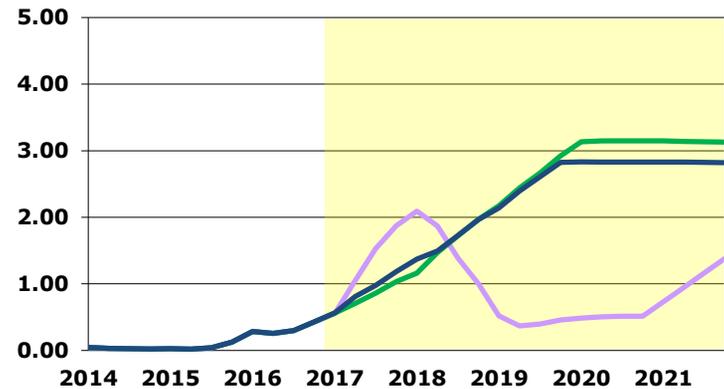
Source: Bureau of Economic Analysis 2016 Q3, ERFC 2021

Mortgage rate, percent



Source: Freddie Mac 2016 Q3, ERFC 2021

Three month T-bill rate, percent



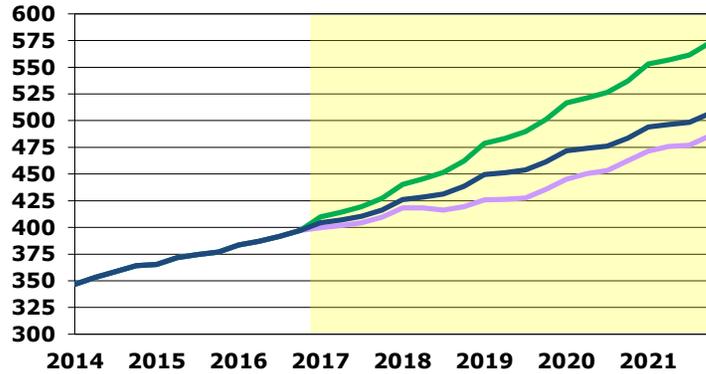
Source: Federal Reserve Board 2016 Q3, ERFC 2021

■ Baseline      ■ Optimistic      ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

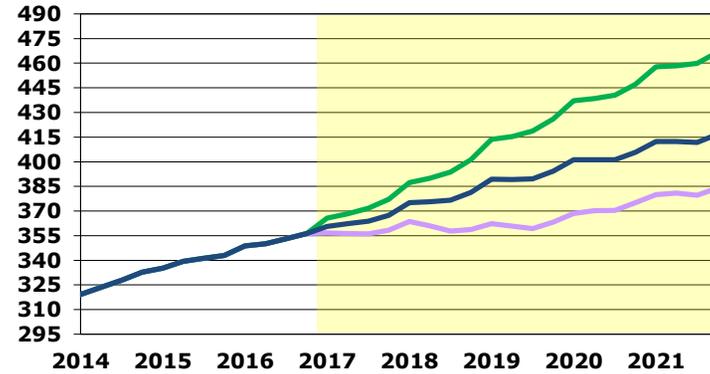
Forecast

Personal income, billions of dollars



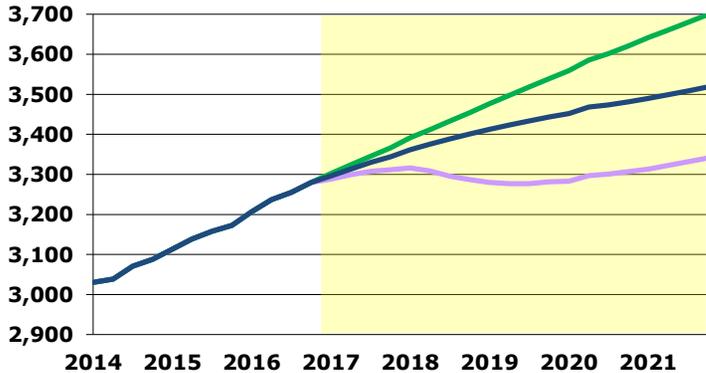
Source: Bureau of Economic Analysis 2015 Q4, ERFC 2021

Real personal income, billions of chained 2009 dollars



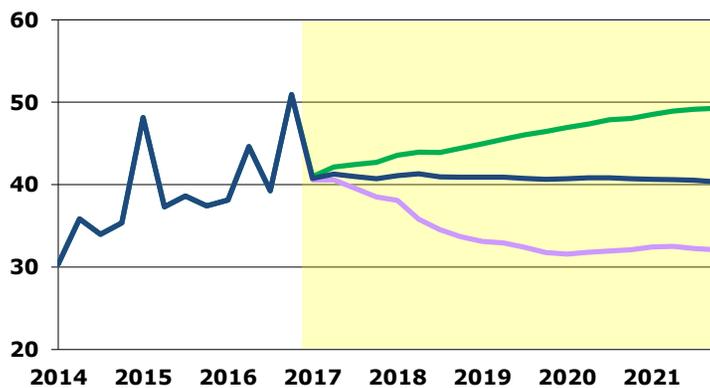
Source: Bureau of Economic Analysis 2015 Q4, ERFC 2021

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 November 2016 forecast have come in \$163 million over the forecasted amount.**
- **The forecast of General Fund-State (GF-S) revenue for the 2015-17 biennium was increased by \$247 million, the forecast for the 2017-19 biennium was increased by \$303 million, and the forecast for the 2019-21 biennium was increased by \$186 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 November 2016 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 March 2017 economic forecast relative to the November 2016 forecast.

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

15-17: +\$247  
17-19: +\$303  
19-21: +\$186

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2015-17 through 2019-21 biennia. Since the November 2016 forecast, revenue sources that are tracked monthly came in \$162.7 million higher than forecasted. There were no non-economic changes in expected revenue. Changes to the economic forecast resulted in an \$84.7 million increase to projected collections for the rest of the biennium. The total of these components was a \$247.4 million increase in projected revenue for the current 2015-17 biennium. The forecast for the 2017-19 biennium has been increased by \$303.0 million, and the forecast for the 2019-21 biennium has been increased by \$186.0 million. GF-S revenue is now forecasted to total \$38,227.1

million in the 2015-17 biennium, \$40,816.7 million in the 2017-19 biennium, and \$43,841.6 million in the 2019-21 biennium.

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

2015-17:  
\$38,227

2017-19:  
\$40,817

2019-21:  
\$43,842

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

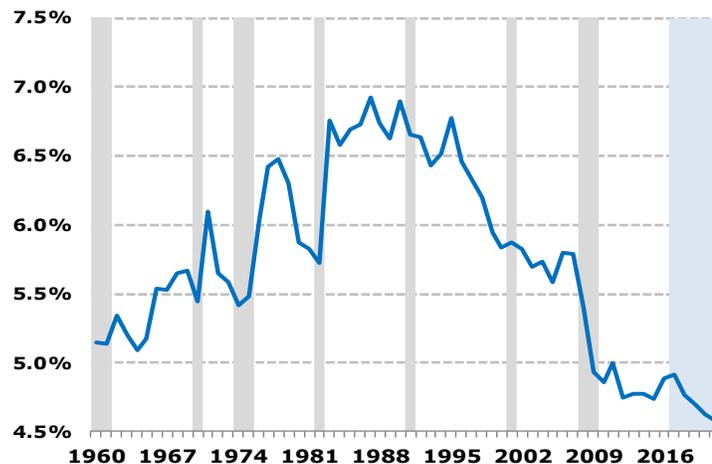
	<b>2015-17 Biennium</b>	<b>2017-19 Biennium</b>	<b>2019-21 Biennium</b>
Collection Experience	\$162.7	NA	NA
Non-Economic Change	\$0.0	\$0.0	\$0.0
Forecast Change	\$84.7	\$303.0	\$186.0
<b>Total Change</b>	<b>\$247.4</b>	<b>\$303.0</b>	<b>\$186.0</b>

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

As can be seen in Figure 3.1, the amount of GF-S revenue 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 increased in FY 2016 and 2017, largely due to revenue increases stemming from legislative changes. The ratio, however, is expected to resume its downward trend from FY 2018 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 \$163 million (2.6%) more than the November 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 November 2016 forecast, total revenue from the above sources came in \$162.7 million (2.6%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$98.9 million (2.1%) above the forecast. Revenue from other DOR tax sources was \$64.9 million (4.6%) above the forecast.

Much of the forecast variance was due to a surge in sales of large commercial properties in November and December

Most of the positive variance in non-Revenue Act collections was due to real estate excise taxes (REET) which came in \$62.7 million (27.1%) higher than forecasted. Most of the surplus REET collections occurred in November and December, which saw a total of \$3.7 billion in sales of large commercial properties. Property tax receipts came in \$0.6 million (0.1%) lower than forecasted. Cigarette tax receipts came in \$5.3 million (4.6%) lower than forecasted and liquor sales and liter tax receipts came in \$0.3 million (0.3%) higher than forecasted. Transfers of unclaimed property into the GF-S were \$8.7 million (29.5%) higher than forecasted. All other DOR revenue sources came in \$0.9 million (1.8%) lower than forecasted. Revenue from the Department of Licensing was \$0.4 million (28.7%) lower than forecasted and revenue from the Administrative Office of the Courts was \$0.7 million (2.9%) lower than forecasted.

**Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the November 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	\$98.9	2.1%
Non-Revenue Act	\$64.9	4.6%
Subtotal	\$163.8	2.7%
Department of Licensing		
	(\$0.4)	-28.7%
Administrative Office of the Courts		
	(\$0.7)	-2.9%
<b>Total*</b>	<b>\$162.7</b>	<b>2.6%</b>

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

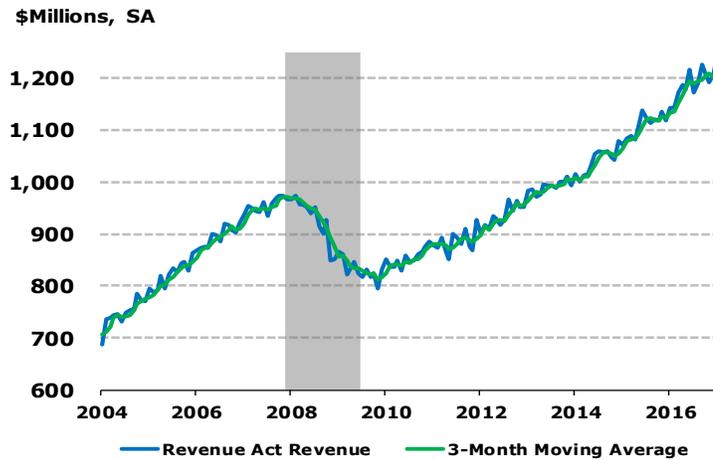
Source: ERFC; Period: November 11, 2016 - March 10, 2017

*Adjusted Revenue Act collections were up 9.2% year over year in the most recent collection period and up 6.8% in the previous two periods*

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 were strong in the most recent collection period. Adjusted for large one-time audit payments and refunds, year-over-year growth was 9.2% in the February 11 – March 10, 2017 collection period after 6.8% growth in the previous two periods. Adjusted year-over-year growth in collections representing fourth quarter 2016 activity (November 11, 2016 – February 10, 2017 collections) was 6.4%. Collections growth for adjusted third quarter 2016 activity (August 11 – November 10, 2016) was 7.2%. Adjusted collections growth for both first and second quarter 2016 was 7.6%.

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

*Adjusted Revenue Act collections were strong in the most recent collection period*



Source: ERFC; Data through March 10, 2017 preliminary allocation  
\*Adjusted for large payments/refunds and payment pattern change

*Sales of large commercial properties spiked after the November 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 \$4.9 billion in the four months since the last forecast, with \$3.7 billion of the total occurring in November and December. Large commercial sales have been responsible for much of the increase in taxable activity since November 2012, creating many spikes in activity, many representing transfers of controlling interest during corporate mergers (see Figure 3.3). Residential sales and smaller commercial sales have also been stronger than expected since the November 2016 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 February 2017

## Revenue Forecasts by Source

### Department of Revenue

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

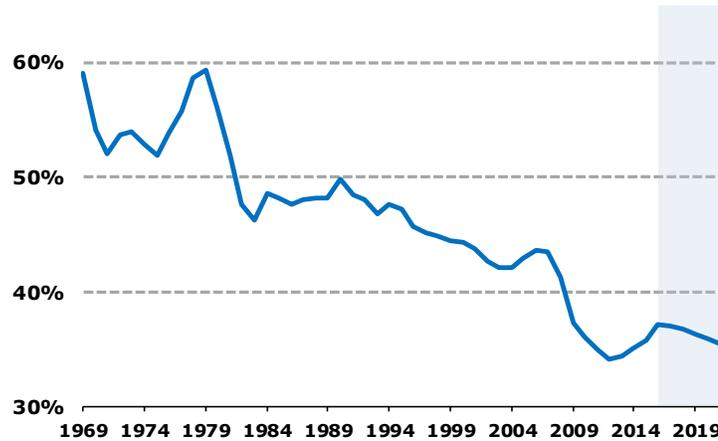
The Department of Revenue (DOR) collects and administers the majority of Washington’s GF-S revenue, accounting for 95% of total GF-S revenue in FY 2016. The largest tax sources administered by the DOR are the retail sales tax, business and occupation tax, property tax, use tax, cigarette tax and real 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 35.5% 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: 6.0%*  
*FY18: 3.9%*  
*FY19: 4.3%*  
*FY20: 3.9%*  
*FY21: 3.8%*

Strong growth in construction and auto sales brought taxable retail sales growth of 8.1% in FY 2015. The abovementioned legislative changes coupled with continued growth in construction and auto sales boosted growth in FY 2016 taxable activity to 8.4%. Growth in FY 2017 activity is forecasted at 4.9%. Forecasted growth then slows to 4.2% in FY 2018, 4.3% in FY 2019, 3.8% in FY 2020 and 3.7% 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 6.0% in FY 2017, 3.9% in FY 2018, 4.3% 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: 5.1%  
FY18: 4.0%  
FY19: 5.3%  
FY20: 5.0%  
FY21: 4.9%*

In FY 2016, B&O tax receipts grew by 7.3%, due largely to legislative changes from the 2015 session. Growth is forecasted to decrease to 5.1% in FY 2017. Growth is then forecasted to slow to 4.0% in FY 2018, due mainly to the elevation of FY 2017 receipts from one-time remittance payments. Forecasted growth then increases to 5.3% in FY 2019. Growth is forecasted at 5.0% in FY 2020 and 4.9% 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: 2.7%  
FY19: 2.7%  
FY20: 2.6%  
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 2.7% in FY 2018. Growth is expected at 2.7% in FY 2019 as well, with growth of 2.6% in FY 2020 and 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: 10.3%  
FY18: -13.4%  
FY19: 0.2%  
FY20: 0.7%  
FY21: 2.7%*

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 accelerate, resulting in an expected further 10.3% increase in REET for the current fiscal year. Large commercial sales are

expected to decline in FY 2018 as residential sales grow more slowly, resulting in a 13.4% decrease in collections. Collections growth is then forecasted to pause somewhat, with growth of 0.2% in FY 2019 and 0.7% in FY 2020, with more normal growth of 2.7% resuming 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: 2.1%  
FY18: 0.7%  
FY19: 3.8%  
FY20: 4.3%  
FY21: 4.0%*

The legislated elimination of certain tax exemptions, along with several large one-time remittance payments, boosted use tax growth to 7.1% in FY 2016. Coming off of FY 2016's high level, collections are forecasted to increase by only 2.1% in FY 2017 and 0.7% in FY 2018. Growth is then expected to occur at more normal levels of 3.8% in FY 2019, 4.3% in FY 2020 and 4.0% 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: -2.0%  
FY18: 11.1%  
FY19: 4.8%  
FY20: 4.1%  
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. Lower-than-expected receipts through March 10<sup>th</sup> along with lower natural gas prices in the near term have resulted in a forecasted reduction of 2.0% for FY 2017 receipts. A recovery in projected natural gas prices and increased electricity prices bring expected growth of 11.1% in FY 2018. Growth then slows to 4.8% in FY 2019, 4.1% in FY 2020 and 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: -3.5%  
FY18: -2.2%  
FY19: -2.7%  
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. 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 3.5% in FY 2017, 2.2% in FY 2018, 2.7% 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: -\$5.9  
17-19: -\$25.5  
19-21: -\$25.5

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 \$143.3 million, \$5.9 million less than forecasted in November 2016. GF-S distributions are forecasted at \$215.4 million in the 2017-19 biennium, a decrease of \$25.5 million from the November forecast, and \$248.8 million in the 2019-21 biennium, a decrease of \$25.5 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: -\$0.3  
17-19: \$0.1  
19-21: \$0.2

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 decreased \$0.3 million to \$37.6 million. The department's forecast for the 2017-19 biennium has been increased \$0.1 million to \$37.1 million and the forecast for the 2019-21 biennium has been increased \$0.2 million to \$37.1 million.

## The Office of Financial Management (Other Agencies)

*Forecast  
change by  
biennium  
(millions):*

15-17: \$6.3  
17-19: \$8.0  
19-21: -\$101.7

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 \$6.3 million to \$222.8 million and the forecast for the 2017-19 biennium was increased \$8.0 million to \$221.3 million. Most of the forecast increases stemmed from increased license, permit and fee revenue from the Department of Financial Institutions. The office's forecast for the 2019-21 biennium was decreased \$101.7 million to \$104.0 million due to the inclusion of a statutory transfer of \$109.4 million from the GF-S to the Connecting Washington Account.

## State Treasurer

*Forecast  
change by  
biennium  
(millions):*

15-17: \$2.0  
17-19: \$2.4  
19-21: \$5.5

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 \$2.0 million to \$19.3 million. The forecast for the 2017-19 biennium has been increased \$2.4 million to \$31.2 million and the forecast for the 2019-21 biennium has been increased \$5.5 million to \$70.3 million. Forecast increases were due to increases in both expected balances and interest rates.

## Insurance Commissioner

*Forecast  
change by  
biennium  
(millions):*

15-17: \$36.3  
17-19: \$35.6  
19-21: \$64.2

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 \$36.3 million to \$1,087.5 million. The forecast for the 2017-19 biennium has been increased \$35.6 million to \$1,167.4 million and the forecast for the 2019-21 biennium has been increased \$64.2 million to \$1,274.4 million. The forecast increases were due to a downward adjustment to the expected use of tax credits during the forecast period.

## Liquor and Cannabis Board

*Forecast  
change by  
biennium  
(millions):*

15-17: -\$5.7  
17-19: -\$22.5  
19-21: -\$21.8

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The forecast of LCB GF-S revenue for the 2015-17 biennium has been

decreased \$5.7 million to \$365.4 million. The forecast of revenue for the 2017-19 biennium has been decreased \$22.5 million to \$465.4 million and the forecast for the 2019-21 biennium has been decreased \$21.8 million to \$516.9 million. The forecast decreases were due to the reduction in expected distributions of cannabis excise taxes to the GF-S discussed above.

## Lottery Commission

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

15-17: \$0.5  
17-19: \$2.5  
19-21: \$3.0

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. The forecast of transfers into the GF-S for the 2015-17 biennium has been increased \$0.5 million to \$31.9 million. Forecasted transfers for the 2017-19 biennium have been increased \$2.5 million to \$38.2 million and forecasted transfers to the GF-S for the 2019-21 biennium have been increased \$3.0 million to \$48.0 million.

*OPA forecast change by biennium (millions):*

15-17: -\$2.4  
17-19: \$4.2  
19-21: -\$1.9

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 decreased \$2.4 million to \$264.1 million. The forecast for the 2017-19 biennium has been increased \$4.2 million to \$255.7 million and the forecast for the 2019-21 biennium has been decreased \$1.9 million to \$251.4 million.

## Administrative Office of the Courts

*Forecast change by biennium (millions):*

15-17: -\$1.4  
17-19: -\$4.6  
19-21: -\$4.1

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast of transfers to the GF-S for the 2015-17 biennium has been decreased \$1.4 million to \$155.8 million and the forecast for the 2017-19 biennium has been decreased \$4.6 million to \$146.7 million. The forecast of transfers for the 2019-21 biennium has been decreased \$4.1 million to \$151.1 million.

## Track Record for the 2015-17 Biennium

*The March 2017 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 March 2017 forecast for the biennium is \$2.71 billion (7.6%) 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 \$2.21 billion (6.2%) 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 March 2017 forecast is \$1.28 billion (3.5%) higher than that sum.

## Track Record for the 2017-19 Biennium

*The March 2017 forecast is \$2.1 billion (5.4%) 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 March 2017 forecast is \$2.11 billion (5.4%) 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 \$1.71 billion (4.4%) 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

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

*The forecast implies GF-S reserves of \$2.34 billion at the end of the 2015-17 biennium and \$2.39 billion in reserves for GF-S, ELTA and OPA*

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 March 2017 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$990.5 million at the end of the 2015-17 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,037.0 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,353.0 million, bringing total projected GF-S reserves to \$2,343.5 million. Projected combined reserves for the ELTA and OPA are \$46.5 million, for total projected reserves of \$2,390.0 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: +\$0.3  
17-19: +\$2.0

*Pessimistic scenario:*

15-17: -\$0.4  
17-19: -\$2.6

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 60% to the baseline forecast, 15% to a scenario based on the upside risks and 25% to a scenario based on the downside risks. The revenue implications of these alternative scenarios for the 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 \$38,502.3 million in GF-S revenue, \$275.2 million (0.7%) more than the baseline scenario, while the pessimistic forecast produces \$37,790.0 million in revenue, \$437.1 million (1.1%) less than the baseline. For the 2017-19 biennium, the optimistic forecast generates \$42,801.3 million in GF-S revenue, \$1,984.6 million (4.9%) more than the baseline scenario, while the pessimistic forecast produces \$38,191.9 million in revenue, \$2,624.7 million (6.4%) less than the baseline.

## **Near General Fund Forecasts for the 2015-17–2019-21 Biennia**

*Near General Fund Forecast (millions):*

2015-17:  
\$38,698.4

2017-19:  
\$41,341.6

2019-21:  
\$44,202.8

“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 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 \$38,698.4 million, \$260.4 million more than the November 2016 forecast. The forecast of Near General Fund revenue for the 2017-19 biennium is \$41,341.6 million, \$308.7 million more than the

November forecast, and the forecast for the 2019-21 biennium is \$44,202.8 million, \$189.9 million more than the November 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>	38,227.1	13.5%	34,479.3	11.5%
2017-19 <sup>F</sup>	40,816.7	6.8%	35,700.7	3.5%
2019-21 <sup>F</sup>	43,841.6	7.4%	37,023.1	3.7%

<sup>F</sup> March 2017 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 March 2017 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>	148,004	4.9%
2018 <sup>F</sup>	154,271	4.2%
2019 <sup>F</sup>	160,932	4.3%
2020 <sup>F</sup>	166,969	3.8%
2021 <sup>F</sup>	173,166	3.7%

<sup>F</sup> March 2017 forecast  
Source: ERFC

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

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>Nov. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Mar. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$18,321.0	0.0	\$69.4	\$18,390.4	\$69.4
Business & Occupation Use	7,408.2	0.0	32.1	7,440.2	32.1
Public Utility	1,280.1	0.0	4.9	1,285.1	4.9
Liquor Sales/Liter	813.8	0.0	(20.6)	793.2	(20.6)
Cigarette	512.2	0.0	0.9	513.1	0.9
Property (State Levy)	772.5	0.0	(3.1)	769.4	(3.1)
Real Estate Excise	4,134.0	0.0	(1.9)	4,132.1	(1.9)
Timber Excise	1,774.6	0.0	86.5	1,861.1	86.5
Other	4.7	0.0	(1.0)	3.8	(1.0)
Subtotal	1,076.1	0.0	42.5	1,118.5	42.5
	36,097.2	0.0	209.7	36,306.9	209.7
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.9	0.0	(0.3)	37.6	(0.3)
<b>Insurance Commissioner</b>					
Insurance Premiums	1,051.3	0.0	36.3	1,087.5	36.3
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	314.3	0.0	(6.2)	308.1	(6.2)
Beer & Wine Surtax	56.7	0.0	0.5	57.3	0.5
<b>Lottery Commission</b>					
Lottery Revenue	31.4	0.0	0.5	31.9	0.5
<b>State Treasurer</b>					
Interest Earnings	17.3	0.0	2.0	19.3	2.0
<b>Office of Financial Management</b>					
Other Agencies	216.5	0.0	6.3	222.8	6.3
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	157.2	0.0	(1.4)	155.8	(1.4)
<b>Total General Fund-State *</b>	<b>\$37,979.7</b>	<b>\$0.0</b>	<b>\$247.4</b>	<b>\$38,227.1</b>	<b>\$247.4</b>

<sup>1</sup> Forecast for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council November 16, 2016<sup>2</sup> Forecast for the 2015-17 biennium, adopted March 16, 2017

\*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>Nov. 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	\$18,366.5	\$0.0	\$69.4	\$18,435.9	\$69.4
Business & Occupation Use	7,429.3	0.0	32.1	7,461.4	32.1
Public Utility	1,272.7	0.0	4.9	1,277.7	4.9
Liquor Sales/Liter	810.6	0.0	(20.6)	790.0	(20.6)
Cigarette	513.9	0.0	0.9	514.8	0.9
Property (State Levy)	772.7	0.0	(3.1)	769.6	(3.1)
Real Estate Excise	4,134.9	0.0	(1.9)	4,133.0	(1.9)
Timber Excise	1,776.5	0.0	86.5	1,863.0	86.5
Other	4.6	0.0	(1.1)	3.5	(1.1)
Subtotal	1,079.8	0.0	42.5	1,122.3	42.5
	36,161.6	0.0	209.6	36,371.2	209.6
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.8	0.0	(0.3)	37.5	(0.3)
<b>Insurance Commissioner</b>					
Insurance Premiums	1,051.3	0.0	36.3	1,087.5	36.3
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	314.3	0.0	(6.2)	308.1	(6.2)
Beer & Wine Surtax	56.7	0.0	0.5	57.3	0.5
<b>Lottery Commission</b>					
Lottery Revenue	46.0	0.0	(2.9)	43.1	(2.9)
<b>State Treasurer</b>					
Interest Earnings	17.1	0.0	2.3	19.4	2.3
<b>Office of Financial Management</b>					
Other	216.5	0.0	6.3	222.8	6.3
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	157.2	0.0	(1.4)	155.8	(1.4)
<b>Total General Fund-State *</b>	<b>\$38,058.5</b>	<b>\$0.0</b>	<b>\$244.2</b>	<b>\$38,302.7</b>	<b>\$244.2</b>

<sup>1</sup> Forecast for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council November 16, 2016<sup>2</sup> Forecast for the 2015-17 biennium, adopted March 16, 2017

\*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>Nov. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Mar. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$19,919.4	0.0	\$169.7	\$20,089.1	\$169.7
Business & Occupation	8,125.8	0.0	10.4	8,136.2	10.4
Use	1,317.4	0.0	15.8	1,333.3	15.8
Public Utility	890.6	0.0	2.7	893.4	2.7
Liquor Sales/Liter	532.2	0.0	3.0	535.1	3.0
Cigarette	729.3	0.0	(0.2)	729.2	(0.2)
Property (State Levy)	4,342.1	0.0	(2.5)	4,339.6	(2.5)
Real Estate Excise	1,626.8	0.0	66.2	1,692.9	66.2
Timber Excise	4.5	0.0	(0.7)	3.8	(0.7)
Other	939.7	0.0	17.0	956.6	17.0
Subtotal	38,427.8	0.0	281.5	38,709.3	281.5
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.0	0.0	0.1	37.1	0.1
<b>Insurance Commissioner</b>					
Insurance Premiums	1,131.9	0.0	35.6	1,167.4	35.6
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	431.5	0.0	(23.0)	408.6	(23.0)
Beer & Wine Surtax	56.4	0.0	0.4	56.8	0.4
<b>Lottery Commission</b>					
Lottery Revenue	35.8	0.0	2.5	38.2	2.5
<b>State Treasurer</b>					
Interest Earnings	28.8	0.0	2.4	31.2	2.4
<b>Office of Financial Management</b>					
Other	213.3	0.0	8.0	221.3	8.0
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	151.2	0.0	(4.6)	146.7	(4.6)
<b>Total General Fund-State *</b>	<b>\$40,513.7</b>	<b>\$0.0</b>	<b>\$303.0</b>	<b>\$40,816.7</b>	<b>\$303.0</b>

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

\*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>Nov. 2016 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Mar. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$19,919.4	\$0.0	\$169.7	\$20,089.1	\$169.7
Business & Occupation	8,125.8	0.0	10.4	8,136.2	10.4
Use	1,317.4	0.0	15.8	1,333.3	15.8
Public Utility	890.6	0.0	2.7	893.4	2.7
Liquor Sales/Liter	532.2	0.0	3.0	535.1	3.0
Cigarette	729.3	0.0	(0.2)	729.2	(0.2)
Property (State Levy)	4,342.1	0.0	(2.5)	4,339.6	(2.5)
Real Estate Excise	1,626.8	0.0	66.2	1,692.9	66.2
Timber Excise	4.5	0.0	(0.6)	3.9	(0.6)
Other	939.7	0.0	17.0	956.6	17.0
Subtotal	38,427.9	0.0	281.5	38,709.4	281.5
<b>Department of Licensing</b>					
Boat excise, licenses, fees & other	37.0	0.0	0.1	37.1	0.1
<b>Insurance Commissioner</b>					
Insurance Premiums	1,131.9	0.0	35.6	1,167.4	35.6
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	431.5	0.0	(23.0)	408.6	(23.0)
Beer & Wine Surtax	56.4	0.0	0.4	56.8	0.4
<b>Lottery Commission</b>					
Lottery Revenue	37.0	0.0	2.9	39.9	2.9
<b>State Treasurer</b>					
Interest Earnings	29.8	0.0	2.4	32.1	2.4
<b>Office of Financial Management</b>					
Other	213.3	0.0	8.0	221.3	8.0
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	151.2	0.0	(4.6)	146.7	(4.6)
<b>Total General Fund-State *</b>	<b>\$40,515.9</b>	<b>\$0.0</b>	<b>\$303.4</b>	<b>\$40,819.3</b>	<b>\$303.4</b>

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

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

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

Table 3.9

**March 2017 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	\$9,463.1	\$18,390.4	\$9,831.1	\$10,258.1	\$20,089.1	\$10,655.1	\$11,056.0	\$21,711.1
Business & occupation Use**	3,628.4	3,811.8	7,440.2	3,963.0	4,173.2	8,136.2	4,380.7	4,596.6	8,977.3
Public Utility	400.5	392.7	793.2	436.2	457.2	893.4	475.9	498.0	974.0
Liquor sales/liter	252.9	260.3	513.1	264.7	270.4	535.1	275.9	281.1	557.0
Beer & wine surtax	29.1	28.2	57.3	28.4	28.5	56.8	28.5	28.6	57.2
Cigarette	400.6	387.2	787.8	378.4	368.5	746.8	358.0	350.1	708.1
Tobacco products	51.6	52.4	104.1	52.9	53.5	106.4	54.0	54.6	108.6
Cannabis Excise Taxes	48.1	88.7	136.8	99.1	111.0	210.2	118.7	124.8	243.5
Property (state school levy)	2,047.1	2,085.0	4,132.1	2,141.1	2,198.5	4,339.6	2,256.7	2,316.0	4,572.7
Leasehold Excise Tax	32.9	30.5	63.4	30.5	30.8	61.2	31.0	31.4	62.4
Public utility district	51.2	51.8	103.0	52.4	53.2	105.6	54.1	55.1	109.2
Brokered Natural Gas	21.4	22.0	43.3	20.9	21.1	42.0	21.3	21.5	42.8
Real estate excise***	885.1	976.0	1,861.1	845.7	847.2	1,692.9	852.8	875.4	1,728.3
Timber excise	2.8	0.9	3.8	1.8	2.0	3.8	2.1	2.2	4.3
Estate/inheritance	0.3	0.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Boat excise	13.8	13.3	27.2	13.3	13.3	26.7	13.3	13.3	26.7
Insurance premiums	510.1	577.4	1,087.5	569.6	597.9	1,167.4	624.2	650.2	1,274.4
Penalties and interest on past due taxes	178.9	281.5	460.5	156.9	163.0	319.9	169.3	175.9	345.2
Other	56.6	56.7	113.3	56.6	35.5	92.1	36.2	36.9	73.0
<b>Total Taxes</b>	<b>18,174.7</b>	<b>19,229.4</b>	<b>37,404.1</b>	<b>19,596.8</b>	<b>20,361.9</b>	<b>39,958.7</b>	<b>21,116.5</b>	<b>21,904.6</b>	<b>43,021.0</b>
<b>State Non-Tax Sources</b>									
Licenses, permits, fees	141.9	145.9	287.8	149.0	151.0	300.0	153.6	156.2	309.8
Liquor & Cannabis fees	81.7	89.6	171.3	96.8	101.6	198.4	105.7	110.5	216.2
Earnings on investments	7.3	12.0	19.3	9.5	21.7	31.2	33.5	36.9	70.3
Administrative Office of the Courts	80.8	75.0	155.8	72.9	73.7	146.7	74.9	76.2	151.1
Transfers of unclaimed property	70.7	72.1	142.8	68.4	69.6	137.9	70.8	72.1	142.9
Other revenue & transfers	21.7	24.4	46.1	19.2	24.6	43.8	(34.2)	(35.6)	(69.8)
<b>Total Non-Tax</b>	<b>404.0</b>	<b>419.1</b>	<b>823.1</b>	<b>415.9</b>	<b>442.1</b>	<b>858.0</b>	<b>404.3</b>	<b>416.3</b>	<b>820.6</b>
<b>Total General Fund-State *</b>	<b>\$18,578.7</b>	<b>\$19,648.5</b>	<b>\$38,227.1</b>	<b>\$20,012.7</b>	<b>\$20,804.0</b>	<b>\$40,816.7</b>	<b>\$21,520.8</b>	<b>\$22,320.9</b>	<b>\$43,841.6</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 March 2017

Cash Basis - Millions of Dollars

<u>Date of Forecast</u>	<u>Department of Revenue*</u>	<u>Other Agencies</u>	<u>Subtotal*</u>	<u>Non-Economic Changes**</u>	<u>Total Change</u>	<u>Total General Fund-State Cash Basis</u>
<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
March 2017	210	38	247	0	247	38,227
<b>Total change***:</b>						
From September 2012	1,888	322	2,209	499	2,709	
Percent change	5.5	22.7	6.2	1.4	7.6	

\* 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 March 2017

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis#</u></b>
<b>February 2014**</b>	\$36,887	\$1,823				\$38,710
<b>Changes to Forecast</b>						
June 2014	265	50	315	(1) #1	313	39,023
September 2014	227	(63)	164	0	164	39,188
November 2014	388	26	415	0	415	39,602
February 2015	126	28	154	0	154	39,757
June 2015	257	64	321	122 #2	443	40,200
September 2015	4	47	52	286 #3	338	40,538
November 2015	35	(5)	30	0	30	40,567
February 2016	(449)	7	(442)	0	(442)	40,125
June 2016	187	(53)	134	(8) #4	126	40,252
September 2016	135	(10)	125	0	125	40,377
November 2016	131	6	137	0	137	40,514
March 2017	281	22	303	0	303	40,817
<b>Total change***:</b>						
From February 2014	1,590	118	1,708	399	2,107	
Percent change	4.3	6.5	4.4	1.0	5.4	

\* 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 (BSA)**  
Dollars in Millions

	2015-17		
	GFS	ELTA and OPA	TOTAL
<b>RESOURCES</b>			
<b>Beginning Fund Balance</b>	990.9	20.3	1,011.2
November 2016 Revenue Forecast	37,979.7	724.8	38,704.5
March 2017 Revenue Forecast Change	247.4	10.5	257.9
<b>Current Revenue Totals</b>	<b>38,227.1</b>	<b>735.3</b>	<b>38,962.5</b>
Transfer to Budget Stabilization Account (1% of GSR)	(379.9)		(379.9)
Transfer to Budget Stabilization Account (EORG)	(680.5)		(680.5)
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>38,519.4</b>	<b>745.6</b>	<b>39,265.0</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>990.5</b>	<b>46.5</b>	<b>1,037.0</b>
<b>Budget Stabilization Account</b>			
Budget Stabilization Account Beginning Balance	513.1		513.1
Plus Transfers from General Fund, Interest Earnings and Adjustments	1,067.4		1,067.4
Less 2016 Appropriations and Reversions From BSA: Fires	(152.5)		(152.5)
Less Transfers Out to GFS (EORG)	(75.0)		(75.0)
<b>Projected Budget Stabilization Account Ending Balance</b>	<b>1,353.0</b>		<b>1,353.0</b>
<b>Total Reserves (Near General Fund plus Budget Stabilization)</b>	<b>2,343.5</b>	<b>46.5</b>	<b>2,390.0</b>

Acronyms

GSR- General State Revenues

EORG- Extraordinary General State Revenues

CAFR- Comprehensive Annual Financial Report

Table 3.13

**Alternative forecasts compared to the baseline forecast  
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	\$18,528.9	\$18,390.4	\$18,146.0
Business & Occupation	7,493.5	7,440.2	7,344.1
Use	1,295.6	1,285.1	1,267.6
Public Utility	799.9	793.2	781.6
Property (school levy)	4,137.7	4,132.1	4,126.5
Real Estate Excise	1,864.8	1,861.1	1,854.6
Other	2,414.6	2,404.8	2,397.3
Subtotal	36,535.0	36,306.9	35,917.7
<b>Department of Licensing</b>			
	37.9	37.6	37.2
<b>Insurance Commissioner<sup>1</sup></b>			
	1,116.4	1,087.5	1,058.7
<b>Lottery Commission</b>			
	33.5	31.9	30.3
<b>State Treasurer - Interest earnings</b>			
	21.9	19.3	15.5
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>			
	377.2	365.4	353.7
<b>Office of Financial Management</b>			
Other agencies	223.9	222.8	221.6
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	156.4	155.8	155.3
<b>Total General Fund - State*</b>	<b>\$38,502.3</b>	<b>\$38,227.1</b>	<b>\$37,790.0</b>
<b>Difference from March 2017 Baseline</b>	<b>\$275.1</b>		<b>(\$437.2)</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	\$21,194.9	\$20,089.1	\$18,670.5
Business & Occupation Use	8,543.0	8,136.2	7,605.9
Public Utility	1,416.0	1,333.3	1,222.6
Property (school levy)	946.1	893.4	854.3
Real Estate Excise	4,361.4	4,339.6	4,317.6
Other	1,854.7	1,692.9	1,373.1
Subtotal	2,249.3	2,224.8	2,153.1
	40,565.5	38,709.3	36,197.1
<b>Department of Licensing</b>			
	37.9	37.1	36.4
<b>Insurance Commissioner<sup>1</sup></b>			
	1,225.8	1,167.4	1,109.1
<b>Lottery Commission</b>			
	40.2	38.2	36.3
<b>State Treasurer - Interest earnings</b>			
	63.0	31.2	10.7
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>			
	487.7	465.4	445.8
<b>Office of Financial Management</b>			
Other agencies	227.9	221.3	214.6
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	153.2	146.7	141.9
<b>Total General Fund - State*</b>	<b>\$42,801.3</b>	<b>\$40,816.7</b>	<b>\$38,191.9</b>
<b>Difference from March 2017 Baseline</b>	<b>\$1,984.6</b>		<b>(\$2,624.7)</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 3.15

**Lottery transfers by fund**

March 2017 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	157.7	14.8	0.0	12.2	0.0	0.0	0.3	4.5	124.9	0.0	0.0
2015-17 Biennium	329.3	31.9	0.0	23.8	0.0	0.0	0.7	7.8	264.1	0.0	0.0
2018	163.8	17.7	0.0	12.6	0.0	0.0	0.3	3.6	129.0	0.0	0.0
2019	164.9	20.6	0.0	13.1	0.0	0.0	0.3	3.6	126.7	0.0	0.0
2017-19 Biennium	328.6	38.2	0.0	25.8	0.0	0.0	0.7	7.3	255.7	0.0	0.0
2020	168.0	23.2	0.0	13.7	0.0	0.0	0.3	3.6	126.6	0.0	0.0
2021	167.7	24.7	0.0	14.2	0.0	0.0	0.4	3.6	124.7	0.0	0.0
2019-21 Biennium	335.7	48.0	0.0	27.9	0.0	0.0	0.7	7.3	251.4	0.0	0.0

Table 3.16

**Lottery transfers by fund**

March 2017 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	156.9	11.2	0.0	12.2	0.0	0.0	0.3	4.4	127.8	0.0	0.0
2015-17 Biennium	332.4	43.1	0.0	23.8	0.0	0.0	0.7	7.3	256.6	0.0	0.0
2018	161.8	19.3	0.0	12.6	0.0	0.0	0.3	3.6	125.4	0.0	0.0
2019	163.7	20.6	0.0	13.1	0.0	0.0	0.3	3.6	125.5	0.0	0.0
2017-19 Biennium	325.5	39.9	0.0	25.8	0.0	0.0	0.7	7.3	250.9	0.0	0.0
2020	166.9	23.2	0.0	13.7	0.0	0.0	0.3	3.6	125.6	0.0	0.0
2021	170.1	24.7	0.0	14.2	0.0	0.0	0.4	3.6	126.7	0.0	0.0
2019-21 Biennium	337.0	48.0	0.0	27.9	0.0	0.0	0.7	7.3	252.2	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)

March 2017 - 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	\$19,648	5.8%	\$256	19.4%	\$19,905	5.9%	\$125	-10.2%	\$20,030	5.8%
FY 2018	\$20,013	1.9%	\$251	-2.3%	\$20,263	1.8%	\$129	3.2%	\$20,392	1.8%
FY 2019	\$20,804	4.0%	\$274	9.6%	\$21,078	4.0%	\$127	-1.8%	\$21,205	4.0%
FY 2020	\$21,521	3.4%	\$179	-34.9%	\$21,700	2.9%	\$127	0.0%	\$21,826	2.9%
FY 2021	\$22,321	3.7%	\$182	2.0%	\$22,503	3.7%	\$125	-1.5%	\$22,628	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>\$38,227</b>	<b>13.5%</b>	<b>\$471</b>	<b>16.4%</b>	<b>\$38,698</b>	<b>13.6%</b>	<b>\$264</b>	<b>12.9%</b>	<b>\$38,962</b>	<b>13.6%</b>
<b>17-19 Biennium</b>	<b>\$40,817</b>	<b>6.8%</b>	<b>\$525</b>	<b>11.4%</b>	<b>\$41,342</b>	<b>6.8%</b>	<b>\$256</b>	<b>-3.2%</b>	<b>\$41,597</b>	<b>6.8%</b>
<b>19-21 Biennium</b>	<b>\$43,842</b>	<b>7.4%</b>	<b>\$361</b>	<b>-31.2%</b>	<b>\$44,203</b>	<b>6.9%</b>	<b>\$251</b>	<b>-1.7%</b>	<b>\$44,454</b>	<b>6.9%</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**

March 2017

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	\$291,861	\$9,201	\$282,660	\$27,786	\$7,500	\$345	\$141,330	\$12,979	\$511	\$92,209
2018	\$323,647	\$9,201	\$314,446	\$27,786	\$9,750	\$1,702	\$157,223	\$15,722	\$511	\$101,752
2019	\$350,132	\$9,201	\$340,931	\$27,786	\$9,750	\$1,702	\$170,466	\$17,047	\$511	\$113,670
2020	\$367,094	\$9,201	\$357,893	\$27,786	\$9,750	\$1,702	\$178,947	\$17,895	\$511	\$121,303
2021	\$380,774	\$9,201	\$371,573	\$27,786	\$9,750	\$1,702	\$185,786	\$18,579	\$511	\$127,459
<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	\$459,911	\$17,752	\$442,159	\$40,600	\$15,000	\$690	\$221,080	\$20,770	\$762	\$143,258
2017-19	\$673,779	\$18,402	\$655,377	\$55,572	\$19,500	\$3,404	\$327,688	\$32,769	\$1,022	\$215,422
2019-21	\$747,868	\$18,402	\$729,466	\$55,572	\$19,500	\$3,404	\$364,733	\$36,473	\$1,022	\$248,762

\*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 2017 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	16,659.8	17,039.0	17,447.3	17,813.6	18,169.9	18,533.3
% Ch	2.4	2.6	1.6	2.3	2.4	2.1	2.0	2.0
Real Consumption	10,868.9	11,214.7	11,518.5	11,822.5	12,126.3	12,405.2	12,678.2	12,944.7
% Ch	2.9	3.2	2.7	2.6	2.6	2.3	2.2	2.1
Real Nonresidential Fixed Investment	2,155.6	2,200.2	2,189.2	2,299.7	2,416.5	2,499.9	2,578.8	2,667.5
% Ch	6.0	2.1	-0.5	5.0	5.1	3.5	3.2	3.4
Real Residential Fixed Investment	505.4	564.5	592.0	619.2	642.4	656.5	670.8	690.8
% Ch	3.5	11.7	4.9	4.6	3.8	2.2	2.2	3.0
Real Personal Income	13,567.7	14,112.9	14,461.7	14,818.7	15,276.2	15,724.9	16,116.1	16,470.6
% Ch	3.7	4.0	2.5	2.5	3.1	2.9	2.5	2.2
Real Per Capita Income (\$/Person)	42,464	43,831	44,566	45,296	46,322	47,306	48,104	48,783
% Ch	2.9	3.2	1.7	1.6	2.3	2.1	1.7	1.4
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.091	1.095	1.107	1.126	1.143	1.162	1.184	1.207
% Ch	1.5	0.4	1.1	1.7	1.5	1.7	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.367	2.370	2.400	2.459	2.508	2.557	2.614	2.673
% Ch	1.6	0.1	1.3	2.5	2.0	2.0	2.2	2.3
Employment Cost Index (Dec. 2005=1.0)	1.206	1.233	1.263	1.295	1.336	1.379	1.425	1.473
% Ch	2.0	2.3	2.4	2.6	3.1	3.3	3.3	3.3
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,393.1	18,036.7	18,565.6	19,402.6	20,284.1	21,089.3	21,931.6	22,807.0
% Ch	4.2	3.7	2.9	4.5	4.5	4.0	4.0	4.0
Personal Income	14,809.8	15,458.5	16,011.9	16,689.8	17,460.6	18,276.2	19,082.4	19,881.9
% Ch	5.2	4.4	3.6	4.2	4.6	4.7	4.4	4.2
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.9	157.1	159.2	160.1	162.0	163.7	165.2	166.3
Total U.S. Employment	146.3	148.8	151.4	152.7	155.0	156.6	157.9	158.7
Unemployment Rate (%)	6.17	5.26	4.85	4.58	4.31	4.30	4.42	4.51
Nonfarm Payroll Employment	138.94	141.81	144.31	146.57	148.24	149.41	150.40	151.13
% Ch	1.9	2.1	1.8	1.6	1.1	0.8	0.7	0.5
Manufacturing	12.19	12.34	12.35	12.41	12.61	12.82	12.94	12.97
% Ch	1.4	1.2	0.1	0.5	1.7	1.6	0.9	0.2
Durable Manufacturing	7.67	7.77	7.72	7.78	7.99	8.18	8.30	8.35
% Ch	1.7	1.2	-0.6	0.8	2.7	2.4	1.4	0.6
Nondurable Manufacturing	4.51	4.57	4.63	4.63	4.62	4.64	4.64	4.62
% Ch	0.9	1.3	1.3	0.0	-0.1	0.3	0.1	-0.4
Construction	6.15	6.46	6.71	6.91	7.18	7.41	7.57	7.77
% Ch	5.0	5.0	3.9	3.0	3.9	3.2	2.1	2.7
Service-Providing	119.71	122.21	124.57	126.54	127.71	128.43	129.15	129.63
% Ch	1.8	2.1	1.9	1.6	0.9	0.6	0.6	0.4
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	93.3	48.7	43.2	51.0	51.3	51.2	51.3	51.8
Personal Saving/Disposable Income (%)	5.6	5.8	5.9	5.5	6.4	6.8	6.8	6.8
Auto Sales (Millions)	7.7	7.5	6.9	6.6	6.5	6.6	6.8	6.8
% Ch	1.6	-2.5	-8.5	-4.7	-0.1	0.4	2.8	0.1
Housing Starts (Millions)	1.001	1.108	1.176	1.264	1.311	1.372	1.438	1.482
% Ch	7.8	10.7	6.1	7.4	3.8	4.6	4.8	3.0
Federal Budget Surplus (Billions)	-612.9	-569.7	-658.5	-628.7	-843.4	-887.3	-935.5	-1,013.3
Net Exports (Billions)	-508.8	-522.0	-499.9	-498.6	-459.7	-489.0	-515.9	-530.1
3-Month Treasury Bill Rate (%)	0.03	0.05	0.32	0.88	1.64	2.49	2.83	2.83
10-Year Treasury Note Yield (%)	2.54	2.14	1.84	2.65	3.16	3.78	3.94	3.91
Bond Index of 20 G.O. Munis. (%)	4.24	3.66	3.27	4.19	4.64	4.89	4.92	4.88
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.65	4.48	5.06	5.76	5.97	5.92

Table A1.2  
**U.S. Economic Forecast Summary**  
Forecast 2017 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	16,727.0	16,804.1	16,883.6	16,988.7	17,090.5	17,193.1
% Ch , Annual Rate	0.8	1.4	3.5	1.9	1.9	2.5	2.4	2.4
Real Consumption	11,365.2	11,484.9	11,569.0	11,655.0	11,709.4	11,786.1	11,859.4	11,935.0
% Ch , Annual Rate	1.6	4.3	3.0	3.0	1.9	2.6	2.5	2.6
Real Nonresidential Fixed Investment	2,179.7	2,185.0	2,192.5	2,199.7	2,257.9	2,283.6	2,312.0	2,345.6
% Ch , Annual Rate	-3.4	1.0	1.4	1.3	11.0	4.6	5.1	5.9
Real Residential Fixed Investment	600.7	588.7	582.5	596.0	610.0	616.8	622.0	627.8
% Ch , Annual Rate	7.8	-7.8	-4.1	9.6	9.7	4.6	3.4	3.8
Real Personal Income	14,313.2	14,413.3	14,524.8	14,595.3	14,643.3	14,777.3	14,874.1	14,980.0
% Ch , Annual Rate	1.0	2.8	3.1	2.0	1.3	3.7	2.6	2.9
Real Per Capita Income (\$/Person)	44,244	44,468	44,713	44,840	44,896	45,216	45,421	45,652
% Ch , Annual Rate	0.4	2.0	2.2	1.1	0.5	2.9	1.8	2.1
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.105	1.109	1.115	1.121	1.123	1.128	1.132
% Ch , Annual Rate	0.3	2.0	1.5	1.9	2.3	0.9	1.7	1.5
U.S. Consumer Price Index (1982-84=1.0)	2.380	2.394	2.404	2.422	2.443	2.450	2.466	2.478
% Ch , Annual Rate	0.1	2.3	1.8	3.0	3.5	1.2	2.5	2.1
Employment Cost Index (Dec. 2005=1.0)	1.252	1.260	1.266	1.272	1.280	1.290	1.300	1.310
% Ch , Annual Rate	2.9	2.6	1.9	1.9	2.6	3.2	3.1	3.1
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	18,281.6	18,450.1	18,675.3	18,855.5	19,072.8	19,280.9	19,514.9	19,741.6
% Ch , Annual Rate	1.3	3.7	5.0	3.9	4.7	4.4	4.9	4.7
Personal Income	15,740.1	15,929.4	16,111.1	16,266.8	16,413.0	16,602.0	16,781.2	16,963.1
% Ch , Annual Rate	1.3	4.9	4.6	3.9	3.6	4.7	4.4	4.4
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	158.8	158.8	159.5	159.6	159.5	159.7	160.3	160.8
Total U.S. Employment	151.0	151.1	151.7	152.0	151.9	152.3	153.0	153.6
Unemployment Rate (%)	4.93	4.87	4.90	4.70	4.72	4.59	4.53	4.46
Nonfarm Payroll Employment	143.44	143.95	144.66	145.17	145.81	146.36	146.88	147.24
% Ch , Annual Rate	1.7	1.4	2.0	1.4	1.8	1.5	1.4	1.0
Manufacturing	12.37	12.35	12.34	12.33	12.35	12.38	12.43	12.46
% Ch , Annual Rate	0.6	-0.8	-0.1	-0.5	0.8	1.0	1.6	0.8
Durable Manufacturing	7.75	7.72	7.71	7.70	7.72	7.75	7.80	7.84
% Ch , Annual Rate	-0.1	-1.6	-0.7	-0.4	1.3	1.5	2.7	1.8
Nondurable Manufacturing	4.62	4.63	4.64	4.63	4.63	4.63	4.63	4.62
% Ch , Annual Rate	1.9	0.4	1.0	-0.6	-0.1	0.2	-0.3	-0.8
Construction	6.67	6.69	6.71	6.76	6.84	6.89	6.93	6.99
% Ch , Annual Rate	5.3	1.6	1.1	3.0	4.9	2.6	2.4	3.9
Service-Providing	123.69	124.24	124.94	125.41	125.94	126.38	126.80	127.06
% Ch , Annual Rate	1.8	1.8	2.3	1.5	1.7	1.4	1.3	0.8
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	33.2	45.4	44.9	49.3	52.0	49.8	50.8	51.2
Personal Saving/Disposable Income (%)	6.1	5.9	5.9	5.6	5.4	5.6	5.6	5.5
Auto Sales (Millions)	7.1	6.8	6.8	6.9	6.4	6.6	6.7	6.6
% Ch , Annual Rate	-20.8	-16.3	3.5	4.7	-27.1	14.7	4.0	-2.4
Housing Starts (Millions)	1.151	1.159	1.145	1.249	1.254	1.257	1.268	1.276
% Ch , Annual Rate	6.0	2.8	-5.0	41.9	1.6	0.8	3.7	2.5
Federal Budget Surplus (Billions)	-668.3	-652.4	-652.4	-660.7	-642.4	-650.7	-623.3	-598.5
Net Exports (Billions)	-507.4	-492.4	-460.0	-539.8	-539.0	-501.7	-481.7	-472.2
3-Month Treasury Bill Rate (%)	0.29	0.26	0.30	0.43	0.56	0.81	0.98	1.18
10-Year Treasury Note Yield (%)	1.92	1.75	1.56	2.13	2.48	2.63	2.68	2.79
Bond Index of 20 G.O. Munis. (%)	3.36	3.26	2.90	3.57	3.96	4.17	4.25	4.38
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.81	4.22	4.46	4.56	4.67

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2017 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	17,296.7	17,398.8	17,499.4	17,594.2	17,688.5	17,770.4	17,855.0	17,940.7
% Ch , Annual Rate	2.4	2.4	2.3	2.2	2.2	1.9	1.9	1.9
Real Consumption	12,015.8	12,092.9	12,166.3	12,230.0	12,304.0	12,370.7	12,439.5	12,506.4
% Ch , Annual Rate	2.7	2.6	2.5	2.1	2.4	2.2	2.2	2.2
Real Nonresidential Fixed Investment	2,375.9	2,405.4	2,427.6	2,457.2	2,474.9	2,492.6	2,507.4	2,525.0
% Ch , Annual Rate	5.3	5.1	3.7	5.0	2.9	2.9	2.4	2.8
Real Residential Fixed Investment	634.9	638.8	645.7	650.2	651.6	654.5	658.4	661.5
% Ch , Annual Rate	4.6	2.5	4.4	2.9	0.8	1.8	2.4	1.9
Real Personal Income	15,110.5	15,222.6	15,329.3	15,442.3	15,575.0	15,677.6	15,777.3	15,869.7
% Ch , Annual Rate	3.5	3.0	2.8	3.0	3.5	2.7	2.6	2.4
Real Per Capita Income (\$/Person)	45,958	46,206	46,438	46,687	46,995	47,211	47,418	47,601
% Ch , Annual Rate	2.7	2.2	2.0	2.2	2.7	1.9	1.8	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.136	1.141	1.145	1.150	1.154	1.159	1.165	1.170
% Ch , Annual Rate	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.490	2.502	2.513	2.525	2.537	2.550	2.564	2.578
% Ch , Annual Rate	2.0	1.8	1.8	1.9	2.0	2.0	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.320	1.330	1.341	1.352	1.363	1.374	1.385	1.396
% Ch , Annual Rate	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.3
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	19,968.9	20,183.2	20,392.0	20,592.1	20,798.5	20,986.2	21,184.5	21,388.0
% Ch , Annual Rate	4.7	4.4	4.2	4.0	4.1	3.7	3.8	3.9
Personal Income	17,171.8	17,363.9	17,553.4	17,753.1	17,981.3	18,177.9	18,376.3	18,569.5
% Ch , Annual Rate	5.0	4.6	4.4	4.6	5.2	4.4	4.4	4.3
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	161.3	161.7	162.2	162.7	163.1	163.5	163.9	164.3
Total U.S. Employment	154.2	154.7	155.2	155.7	156.1	156.5	156.8	157.1
Unemployment Rate (%)	4.39	4.33	4.28	4.25	4.26	4.29	4.32	4.35
Nonfarm Payroll Employment	147.71	148.07	148.43	148.75	149.04	149.29	149.53	149.76
% Ch , Annual Rate	1.3	1.0	1.0	0.9	0.8	0.7	0.7	0.6
Manufacturing	12.52	12.60	12.63	12.70	12.74	12.80	12.85	12.89
% Ch , Annual Rate	2.1	2.7	0.9	2.0	1.5	1.6	1.6	1.4
Durable Manufacturing	7.90	7.98	8.01	8.08	8.12	8.16	8.21	8.25
% Ch , Annual Rate	3.2	4.2	1.5	3.2	2.2	2.2	2.1	1.9
Nondurable Manufacturing	4.62	4.62	4.62	4.62	4.63	4.63	4.64	4.65
% Ch , Annual Rate	0.1	0.1	0.0	-0.1	0.5	0.6	0.7	0.5
Construction	7.07	7.14	7.22	7.29	7.35	7.39	7.44	7.48
% Ch , Annual Rate	4.3	4.2	4.6	3.7	3.2	2.5	2.4	2.1
Service-Providing	127.39	127.59	127.84	128.02	128.21	128.36	128.50	128.65
% Ch , Annual Rate	1.0	0.6	0.8	0.6	0.6	0.5	0.5	0.5
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	51.3	51.4	51.3	51.3	51.2	51.2	51.1	51.2
Personal Saving/Disposable Income (%)	6.2	6.3	6.4	6.5	6.7	6.8	6.8	6.8
Auto Sales (Millions)	6.6	6.5	6.5	6.6	6.5	6.5	6.6	6.6
% Ch , Annual Rate	-2.0	-3.2	0.9	0.8	-1.2	0.6	2.4	3.8
Housing Starts (Millions)	1.287	1.308	1.316	1.335	1.348	1.364	1.381	1.395
% Ch , Annual Rate	3.5	6.5	2.5	5.9	3.9	5.0	4.9	4.3
Federal Budget Surplus (Billions)	-822.5	-840.6	-845.6	-864.8	-884.0	-889.1	-885.6	-890.5
Net Exports (Billions)	-458.5	-457.6	-460.5	-462.3	-474.8	-489.5	-494.3	-497.6
3-Month Treasury Bill Rate (%)	1.37	1.49	1.73	1.97	2.14	2.39	2.61	2.82
10-Year Treasury Note Yield (%)	2.94	3.05	3.25	3.38	3.51	3.70	3.94	3.99
Bond Index of 20 G.O. Munis. (%)	4.50	4.59	4.71	4.77	4.81	4.86	4.93	4.94
30-Year Fixed Mortgage Rate (%)	4.82	4.95	5.17	5.29	5.43	5.70	5.92	6.00

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2017 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	18,027.4	18,126.0	18,217.1	18,309.2	18,399.8	18,486.6	18,577.3	18,669.5
% Ch , Annual Rate	1.9	2.2	2.0	2.0	2.0	1.9	2.0	2.0
Real Consumption	12,575.5	12,644.8	12,712.4	12,780.3	12,847.2	12,911.5	12,976.4	13,043.8
% Ch , Annual Rate	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.1
Real Nonresidential Fixed Investment	2,545.3	2,566.9	2,590.3	2,612.9	2,636.1	2,657.8	2,678.5	2,697.5
% Ch , Annual Rate	3.3	3.4	3.7	3.5	3.6	3.3	3.2	2.9
Real Residential Fixed Investment	662.4	667.2	673.8	679.8	683.1	686.8	693.9	699.2
% Ch , Annual Rate	0.6	2.9	4.0	3.6	2.0	2.2	4.2	3.1
Real Personal Income	15,983.7	16,075.7	16,162.6	16,242.3	16,347.1	16,430.1	16,509.2	16,595.9
% Ch , Annual Rate	2.9	2.3	2.2	2.0	2.6	2.0	1.9	2.1
Real Per Capita Income (\$/Person)	47,850	48,031	48,197	48,340	48,558	48,711	48,851	49,014
% Ch , Annual Rate	2.1	1.5	1.4	1.2	1.8	1.3	1.2	1.3
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.176	1.181	1.187	1.192	1.198	1.204	1.210	1.216
% Ch , Annual Rate	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.593	2.607	2.621	2.636	2.651	2.666	2.681	2.696
% Ch , Annual Rate	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2
Employment Cost Index (Dec. 2005=1.0)	1.408	1.419	1.431	1.443	1.455	1.467	1.479	1.491
% Ch , Annual Rate	3.3	3.3	3.3	3.3	3.4	3.3	3.4	3.4
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	21,602.9	21,826.0	22,039.4	22,258.2	22,482.9	22,695.1	22,913.6	23,136.6
% Ch , Annual Rate	4.1	4.2	4.0	4.0	4.1	3.8	3.9	4.0
Personal Income	18,792.2	18,988.8	19,180.3	19,368.4	19,588.8	19,783.5	19,975.7	20,179.5
% Ch , Annual Rate	4.9	4.3	4.1	4.0	4.6	4.0	3.9	4.1
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	164.7	165.1	165.5	165.7	165.9	166.1	166.4	166.6
Total U.S. Employment	157.5	157.8	158.1	158.3	158.5	158.6	158.8	159.0
Unemployment Rate (%)	4.39	4.41	4.43	4.45	4.47	4.50	4.53	4.55
Nonfarm Payroll Employment	150.00	150.45	150.51	150.63	150.82	151.03	151.23	151.45
% Ch, Annual Rate	0.6	1.2	0.2	0.3	0.5	0.5	0.5	0.6
Manufacturing	12.92	12.92	12.94	12.96	12.95	12.96	12.98	12.99
% Ch, Annual Rate	0.8	0.2	0.6	0.4	-0.1	0.2	0.5	0.3
Durable Manufacturing	8.27	8.28	8.31	8.32	8.32	8.33	8.36	8.37
% Ch, Annual Rate	1.3	0.5	1.0	0.7	0.1	0.5	1.2	0.8
Nondurable Manufacturing	4.65	4.64	4.64	4.64	4.63	4.63	4.62	4.61
% Ch, Annual Rate	-0.1	-0.4	-0.1	-0.3	-0.5	-0.5	-0.6	-0.6
Construction	7.51	7.54	7.59	7.64	7.68	7.74	7.80	7.85
% Ch, Annual Rate	1.7	1.8	2.4	2.7	2.6	2.8	3.1	3.0
Service-Providing	128.83	129.24	129.23	129.29	129.43	129.57	129.69	129.84
% Ch, Annual Rate	0.6	1.3	0.0	0.2	0.4	0.4	0.4	0.4
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	51.2	51.2	51.3	51.4	51.5	51.7	51.9	52.1
Personal Saving/Disposable Income (%)	6.9	6.8	6.7	6.7	6.8	6.8	6.8	6.8
Auto Sales (Millions)	6.7	6.7	6.8	6.8	6.8	6.7	6.8	6.8
% Ch, Annual Rate	3.4	2.8	2.3	0.5	-1.1	-1.5	0.2	1.2
Housing Starts (Millions)	1.416	1.431	1.448	1.456	1.470	1.481	1.488	1.489
% Ch, Annual Rate	6.0	4.3	5.0	2.2	3.6	3.1	1.9	0.3
Federal Budget Surplus (Billions)	-928.1	-946.1	-932.8	-935.2	-988.8	-1,005.9	-1,020.7	-1,038.0
Net Exports (Billions)	-503.8	-513.8	-520.5	-525.3	-531.4	-532.7	-530.0	-526.4
3-Month Treasury Bill Rate (%)	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.82
10-Year Treasury Note Yield (%)	3.97	3.95	3.93	3.92	3.92	3.91	3.90	3.90
Bond Index of 20 G.O. Munis. (%)	4.94	4.92	4.91	4.90	4.89	4.88	4.87	4.87
30-Year Fixed Mortgage Rate (%)	6.00	5.97	5.95	5.94	5.93	5.92	5.91	5.90

Table A1.3  
**Washington Economic Forecast Summary**  
Forecast 2017 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	352.095	363.541	377.140	390.616	402.320	413.314
% Ch	5.2	4.3	3.6	3.3	3.7	3.6	3.0	2.7
Real Wage and Salary Disb.	166.477	175.110	185.327	191.904	198.846	204.933	210.130	215.726
% Ch	4.9	5.2	5.8	3.5	3.6	3.1	2.5	2.7
Real Nonwage Income	159.379	164.631	166.768	171.637	178.295	185.684	192.190	197.589
% Ch	5.5	3.3	1.3	2.9	3.9	4.1	3.5	2.8
Real Per Capita Income (\$/Person)	46,111	47,373	48,371	49,182	50,290	51,375	52,235	53,001
% Ch	3.8	2.7	2.1	1.7	2.3	2.2	1.7	1.5
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.091	1.095	1.107	1.126	1.143	1.162	1.184	1.207
% Ch	1.5	0.4	1.1	1.7	1.5	1.7	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.460	2.494	2.550	2.620	2.675	2.730	2.793	2.858
% Ch	1.8	1.4	2.3	2.8	2.1	2.1	2.3	2.3
Average Nonfarm Annual Wage	57,225	58,746	60,989	62,824	64,902	67,114	69,317	71,839
% Ch	4.2	2.7	3.8	3.0	3.3	3.4	3.3	3.6
Avg. Hourly Earnings-Mfg. (\$/Hour)	25.16	25.52	26.44	27.03	27.79	28.61	29.48	30.37
% Ch	3.4	1.4	3.6	2.2	2.8	3.0	3.0	3.0
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	355.677	372.125	389.830	409.443	431.066	453.988	476.365	498.912
% Ch	6.8	4.6	4.8	5.0	5.3	5.3	4.9	4.7
Disposable Personal Income	312.758	325.456	341.956	358.476	378.873	397.905	415.935	435.333
% Ch	6.6	4.1	5.1	4.8	5.7	5.0	4.5	4.7
Per Capita Income (\$/Person)	50,330	51,888	53,554	55,391	57,479	59,709	61,848	63,976
% Ch	5.4	3.1	3.2	3.4	3.8	3.9	3.6	3.4
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,487.9	3,544.8	3,641.6	3,712.8	3,784.7	3,851.9	3,912.7	3,964.1
Total Washington Employment	3,275.3	3,345.5	3,443.4	3,531.7	3,613.5	3,680.5	3,736.2	3,783.6
Unemployment Rate (%)	6.10	5.62	5.44	4.88	4.52	4.45	4.51	4.55
Nonfarm Payroll Employment	3,056.8	3,145.7	3,244.5	3,320.7	3,381.7	3,428.5	3,468.6	3,504.0
% Ch	2.5	2.9	3.1	2.3	1.8	1.4	1.2	1.0
Manufacturing	288.8	291.8	290.0	285.0	287.2	290.9	293.2	295.3
% Ch	0.7	1.1	-0.6	-1.7	0.8	1.3	0.8	0.7
Durable Manufacturing	210.0	211.1	207.5	201.4	203.2	206.1	207.8	209.5
% Ch	0.2	0.5	-1.7	-3.0	0.9	1.5	0.8	0.8
Aerospace	94.2	94.0	90.7	83.3	80.1	78.5	77.9	77.9
% Ch	-1.9	-0.2	-3.5	-8.1	-3.9	-2.0	-0.8	0.0
Nondurable Manufacturing	78.8	80.8	82.4	83.6	84.0	84.8	85.4	85.8
% Ch	2.3	2.5	2.1	1.4	0.5	0.9	0.8	0.4
Construction	159.7	173.3	186.2	195.7	203.2	206.5	208.1	211.3
% Ch	7.2	8.5	7.5	5.1	3.8	1.6	0.8	1.6
Service-Providing	2,602.2	2,674.3	2,762.0	2,833.6	2,884.8	2,924.4	2,960.6	2,990.7
% Ch	2.4	2.8	3.3	2.6	1.8	1.4	1.2	1.0
Software Publishers	55.6	55.9	58.7	60.0	60.4	60.9	61.4	62.0
% Ch	3.3	0.5	5.1	2.2	0.5	0.8	0.9	1.0
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.898	40.374	43.239	40.946	41.070	40.816	40.781	40.539
% Ch	2.8	19.1	7.1	-5.3	0.3	-0.6	-0.1	-0.6
Single-Family	17.905	19.797	22.053	23.015	24.119	24.833	25.458	25.703
% Ch	-2.7	10.6	11.4	4.4	4.8	3.0	2.5	1.0
Multi-Family	15.993	20.577	21.186	17.930	16.951	15.983	15.323	14.836
% Ch	9.8	28.7	3.0	-15.4	-5.5	-5.7	-4.1	-3.2
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.65	4.48	5.06	5.76	5.97	5.92

Table A1.4  
**Washington Economic Forecast Summary**  
Forecast 2017 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	348.766	350.139	353.136	356.338	360.693	362.263	363.746	367.462
% Ch, Annual Rate	6.9	1.6	3.5	3.7	5.0	1.8	1.6	4.1
Real Wage and Salary Disb.	183.624	183.948	185.852	187.884	191.427	191.205	191.420	193.564
% Ch, Annual Rate	12.4	0.7	4.2	4.4	7.8	-0.5	0.5	4.6
Real Nonwage Income	165.142	166.191	167.284	168.454	169.266	171.058	172.326	173.898
% Ch, Annual Rate	1.3	2.6	2.7	2.8	1.9	4.3	3.0	3.7
Real Per Capita Income (\$/Person)	48,184	48,203	48,427	48,669	49,065	49,099	49,120	49,442
% Ch, Annual Rate	5.5	0.2	1.9	2.0	3.3	0.3	0.2	2.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.105	1.109	1.115	1.121	1.123	1.128	1.132
% Ch, Annual Rate	0.3	2.0	1.5	1.9	2.3	0.9	1.7	1.5
Seattle Cons. Price Index (1982-84=1.0)	2.527	2.541	2.557	2.575	2.599	2.611	2.628	2.642
% Ch, Annual Rate	2.3	2.3	2.5	3.0	3.7	1.9	2.6	2.2
Average Nonfarm Annual Wage	60,673	60,563	61,097	61,624	62,841	62,583	62,593	63,277
% Ch, Annual Rate	7.7	-0.7	3.6	3.5	8.1	-1.6	0.1	4.4
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.06	26.39	26.71	26.60	26.75	26.94	27.12	27.31
% Ch, Annual Rate	3.4	5.1	5.0	-1.7	2.3	2.9	2.8	2.7
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	383.527	386.963	391.693	397.139	404.284	406.997	410.384	416.107
% Ch, Annual Rate	7.2	3.6	5.0	5.7	7.4	2.7	3.4	5.7
Disposable Personal Income	336.434	339.542	343.497	348.353	354.209	356.624	359.239	363.830
% Ch, Annual Rate	8.4	3.7	4.7	5.8	6.9	2.8	3.0	5.2
Per Capita Income (\$/Person)	52,987	53,272	53,714	54,242	54,995	55,162	55,418	55,987
% Ch, Annual Rate	5.8	2.2	3.4	4.0	5.7	1.2	1.9	4.2
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,605.2	3,631.1	3,656.5	3,673.8	3,688.3	3,702.1	3,721.5	3,739.5
Total Washington Employment	3,403.1	3,429.6	3,458.6	3,482.5	3,501.8	3,520.3	3,542.0	3,562.5
Unemployment Rate (%)	5.61	5.55	5.41	5.21	5.06	4.91	4.82	4.73
Nonfarm Payroll Employment	3,206.4	3,236.6	3,255.2	3,279.6	3,295.9	3,312.9	3,329.8	3,344.3
% Ch, Annual Rate	4.3	3.8	2.3	3.0	2.0	2.1	2.1	1.7
Manufacturing	292.4	292.1	289.1	286.3	285.8	285.0	284.9	284.2
% Ch, Annual Rate	0.5	-0.4	-4.1	-3.9	-0.7	-1.1	-0.1	-1.0
Durable Manufacturing	210.4	209.1	206.9	203.7	202.4	201.4	201.2	200.6
% Ch, Annual Rate	-0.5	-2.5	-4.1	-6.1	-2.6	-2.0	-0.3	-1.2
Aerospace	93.0	92.0	90.7	87.2	85.6	84.1	82.6	81.1
% Ch, Annual Rate	-2.0	-4.1	-5.5	-14.7	-7.1	-6.8	-6.9	-7.1
Nondurable Manufacturing	82.0	83.0	82.2	82.6	83.4	83.6	83.7	83.6
% Ch, Annual Rate	3.1	5.0	-4.0	1.9	4.1	1.1	0.4	-0.4
Construction	182.5	185.2	186.8	190.1	192.8	194.5	196.5	199.1
% Ch, Annual Rate	17.4	6.1	3.5	7.3	5.6	3.6	4.2	5.4
Service-Providing	2,725.2	2,752.9	2,773.1	2,796.9	2,810.9	2,826.9	2,841.9	2,854.5
% Ch, Annual Rate	3.9	4.1	3.0	3.5	2.0	2.3	2.1	1.8
Software Publishers	57.6	58.4	59.3	59.6	59.9	60.1	60.1	60.1
% Ch, Annual Rate	5.8	5.8	6.6	1.8	2.1	1.3	-0.3	0.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	38.143	44.624	39.253	50.936	40.771	41.299	40.982	40.730
% Ch, Annual Rate	7.9	87.3	-40.1	183.5	-59.0	5.3	-3.0	-2.4
Single-Family	22.258	22.581	21.102	22.271	22.186	23.165	23.294	23.416
% Ch, Annual Rate	16.6	5.9	-23.7	24.1	-1.5	18.8	2.3	2.1
Multi-Family	15.885	22.042	18.151	28.666	18.585	18.135	17.688	17.314
% Ch, Annual Rate	-3.1	270.7	-54.0	522.1	-82.3	-9.3	-9.5	-8.2
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.81	4.22	4.46	4.56	4.67

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2017 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	375.043	375.598	376.564	381.357	389.391	389.191	389.634	394.250
% Ch, Annual Rate	8.5	0.6	1.0	5.2	8.7	-0.2	0.5	4.8
Real Wage and Salary Disb.	199.244	198.139	197.533	200.468	206.275	204.317	203.036	206.103
% Ch, Annual Rate	12.3	-2.2	-1.2	6.1	12.1	-3.7	-2.5	6.2
Real Nonwage Income	175.798	177.459	179.031	180.889	183.116	184.873	186.597	188.148
% Ch, Annual Rate	4.4	3.8	3.6	4.2	5.0	3.9	3.8	3.4
Real Per Capita Income (\$/Person)	50,279	50,173	50,123	50,583	51,471	51,272	51,161	51,598
% Ch, Annual Rate	6.9	-0.8	-0.4	3.7	7.2	-1.5	-0.9	3.5
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.136	1.141	1.145	1.150	1.154	1.159	1.165	1.170
% Ch, Annual Rate	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.656	2.668	2.681	2.694	2.708	2.723	2.738	2.753
% Ch, Annual Rate	2.0	2.0	1.9	2.0	2.1	2.1	2.2	2.3
Average Nonfarm Annual Wage	65,051	64,655	64,444	65,458	67,431	66,841	66,515	67,671
% Ch, Annual Rate	11.7	-2.4	-1.3	6.4	12.6	-3.5	-1.9	7.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.50	27.69	27.89	28.09	28.30	28.51	28.72	28.93
% Ch, Annual Rate	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.0
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	426.206	428.434	431.200	438.424	449.551	451.260	453.819	461.323
% Ch, Annual Rate	10.1	2.1	2.6	6.9	10.5	1.5	2.3	6.8
Disposable Personal Income	374.850	376.729	378.917	384.995	394.567	395.706	397.583	403.763
% Ch, Annual Rate	12.7	2.0	2.3	6.6	10.3	1.2	1.9	6.4
Per Capita Income (\$/Person)	57,138	57,231	57,396	58,153	59,423	59,449	59,588	60,376
% Ch, Annual Rate	8.5	0.7	1.2	5.4	9.0	0.2	0.9	5.4
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,758.4	3,776.0	3,793.3	3,811.1	3,827.6	3,844.1	3,860.2	3,875.7
Total Washington Employment	3,584.5	3,604.3	3,623.4	3,642.0	3,658.2	3,673.5	3,688.2	3,702.3
Unemployment Rate (%)	4.63	4.55	4.48	4.44	4.43	4.44	4.45	4.47
Nonfarm Payroll Employment	3,362.0	3,375.4	3,388.5	3,400.9	3,412.9	3,423.7	3,433.5	3,443.6
% Ch, Annual Rate	2.1	1.6	1.6	1.5	1.4	1.3	1.1	1.2
Manufacturing	285.5	287.0	287.6	288.7	289.6	290.5	291.4	292.1
% Ch, Annual Rate	1.8	2.1	0.8	1.5	1.3	1.3	1.2	0.9
Durable Manufacturing	201.7	203.0	203.5	204.6	205.2	205.9	206.5	206.9
% Ch, Annual Rate	2.1	2.7	1.0	2.0	1.3	1.4	1.1	0.8
Aerospace	80.7	80.3	79.8	79.4	79.0	78.6	78.3	77.9
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Nondurable Manufacturing	83.8	84.0	84.0	84.1	84.3	84.6	84.9	85.2
% Ch, Annual Rate	0.9	0.7	0.4	0.2	1.2	1.2	1.4	1.3
Construction	201.6	202.6	203.9	204.9	205.8	206.4	206.6	207.3
% Ch, Annual Rate	5.0	2.1	2.6	2.0	1.8	1.3	0.4	1.3
Service-Providing	2,868.5	2,879.3	2,890.5	2,900.7	2,911.0	2,920.1	2,928.8	2,937.5
% Ch, Annual Rate	2.0	1.5	1.6	1.4	1.4	1.3	1.2	1.2
Software Publishers	60.2	60.3	60.4	60.6	60.7	60.8	60.9	61.1
% Ch, Annual Rate	0.5	0.8	0.9	0.9	0.7	0.8	0.9	0.9
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	41.098	41.306	40.950	40.928	40.918	40.921	40.780	40.645
% Ch, Annual Rate	3.7	2.0	-3.4	-0.2	-0.1	0.0	-1.4	-1.3
Single-Family	23.751	24.055	24.258	24.413	24.565	24.724	24.934	25.111
% Ch, Annual Rate	5.8	5.2	3.4	2.6	2.5	2.6	3.5	2.9
Multi-Family	17.347	17.251	16.692	16.515	16.353	16.197	15.846	15.534
% Ch, Annual Rate	0.8	-2.2	-12.3	-4.2	-3.9	-3.8	-8.4	-7.6
30-Year Fixed Mortgage Rate (%)	4.82	4.95	5.17	5.29	5.43	5.70	5.92	6.00

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2017 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	401.188	401.248	401.174	405.668	412.375	412.291	411.847	416.745
% Ch, Annual Rate	7.2	0.1	-0.1	4.6	6.8	-0.1	-0.4	4.8
Real Wage and Salary Disb.	211.126	209.660	208.220	211.513	216.607	215.272	213.709	217.316
% Ch, Annual Rate	10.1	-2.7	-2.7	6.5	10.0	-2.4	-2.9	6.9
Real Nonwage Income	190.062	191.588	192.954	194.155	195.769	197.019	198.138	199.429
% Ch, Annual Rate	4.1	3.3	2.9	2.5	3.4	2.6	2.3	2.6
Real Per Capita Income (\$/Person)	52,337	52,178	52,004	52,422	53,124	52,950	52,732	53,198
% Ch, Annual Rate	5.9	-1.2	-1.3	3.3	5.5	-1.3	-1.6	3.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.176	1.181	1.187	1.192	1.198	1.204	1.210	1.216
% Ch, Annual Rate	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.769	2.785	2.801	2.817	2.833	2.850	2.866	2.882
% Ch, Annual Rate	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Average Nonfarm Annual Wage	69,501	69,005	68,723	70,038	71,913	71,606	71,220	72,619
% Ch, Annual Rate	11.3	-2.8	-1.6	7.9	11.1	-1.7	-2.1	8.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.15	29.37	29.59	29.81	30.03	30.26	30.49	30.72
% Ch, Annual Rate	3.0	3.0	3.0	3.0	3.1	3.0	3.1	3.1
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	471.679	473.959	476.078	483.744	494.149	496.441	498.324	506.733
% Ch, Annual Rate	9.3	1.9	1.8	6.6	8.9	1.9	1.5	6.9
Disposable Personal Income	412.448	413.991	415.392	421.909	431.277	433.145	434.825	442.086
% Ch, Annual Rate	8.9	1.5	1.4	6.4	9.2	1.7	1.6	6.8
Per Capita Income (\$/Person)	61,533	61,633	61,713	62,511	63,658	63,757	63,804	64,685
% Ch, Annual Rate	7.9	0.7	0.5	5.3	7.5	0.6	0.3	5.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,890.7	3,906.2	3,920.6	3,933.4	3,945.9	3,957.9	3,970.2	3,982.5
Total Washington Employment	3,715.5	3,730.2	3,743.5	3,755.5	3,767.1	3,777.9	3,789.1	3,800.5
Unemployment Rate (%)	4.50	4.51	4.52	4.52	4.53	4.55	4.56	4.57
Nonfarm Payroll Employment	3,452.2	3,468.0	3,473.4	3,480.9	3,489.9	3,499.2	3,508.6	3,518.4
% Ch, Annual Rate	1.0	1.8	0.6	0.9	1.0	1.1	1.1	1.1
Manufacturing	292.7	292.9	293.4	293.9	294.3	294.8	295.6	296.3
% Ch, Annual Rate	0.8	0.3	0.7	0.7	0.5	0.7	1.1	1.0
Durable Manufacturing	207.4	207.5	207.9	208.3	208.6	209.0	209.8	210.5
% Ch, Annual Rate	0.9	0.3	0.7	0.8	0.5	0.9	1.4	1.3
Aerospace	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.3	85.4	85.5	85.6	85.7	85.8	85.8	85.9
% Ch, Annual Rate	0.6	0.2	0.7	0.5	0.3	0.3	0.2	0.3
Construction	207.3	207.8	208.4	209.0	209.9	210.8	211.8	212.9
% Ch, Annual Rate	-0.1	1.0	1.1	1.3	1.6	1.8	1.9	2.0
Service-Providing	2,945.6	2,960.7	2,965.0	2,971.2	2,979.0	2,986.8	2,994.4	3,002.4
% Ch, Annual Rate	1.1	2.1	0.6	0.8	1.1	1.1	1.0	1.1
Software Publishers	61.2	61.3	61.4	61.6	61.8	61.9	62.1	62.3
% Ch, Annual Rate	0.9	0.8	0.9	0.9	1.1	1.0	1.1	1.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	40.738	40.847	40.833	40.708	40.659	40.620	40.523	40.355
% Ch, Annual Rate	0.9	1.1	-0.1	-1.2	-0.5	-0.4	-0.9	-1.6
Single-Family	25.260	25.408	25.540	25.624	25.660	25.724	25.735	25.694
% Ch, Annual Rate	2.4	2.4	2.1	1.3	0.6	1.0	0.2	-0.6
Multi-Family	15.479	15.438	15.292	15.083	15.000	14.896	14.788	14.661
% Ch, Annual Rate	-1.4	-1.0	-3.7	-5.4	-2.2	-2.7	-2.9	-3.4
30-Year Fixed Mortgage Rate (%)	6.00	5.97	5.95	5.94	5.93	5.92	5.91	5.90

Table A2.1

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

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	138.94	141.81	144.31	146.57	148.24	149.41	150.40	151.13
% Ch	1.9	2.1	1.8	1.6	1.1	0.8	0.7	0.5
Manufacturing	12.19	12.34	12.35	12.41	12.61	12.82	12.94	12.97
% Ch	1.4	1.2	0.1	0.5	1.7	1.6	0.9	0.2
Durable Manufacturing	7.67	7.77	7.72	7.78	7.99	8.18	8.30	8.35
% Ch	1.7	1.2	-0.6	0.8	2.7	2.4	1.4	0.6
Wood Products	0.37	0.38	0.39	0.40	0.42	0.45	0.47	0.49
% Ch	5.2	2.9	2.5	1.8	5.6	6.8	4.5	3.8
Primary and Fabricated Metals	1.85	1.85	1.80	1.81	1.87	1.94	1.98	1.99
% Ch	1.4	0.0	-2.7	0.2	3.4	3.8	2.1	0.7
Computer and Electronic Products	1.05	1.05	1.05	1.04	1.08	1.09	1.08	1.08
% Ch	-1.5	0.4	-0.5	-0.3	3.3	0.9	-0.9	0.0
Machinery and Electrical Equipment	1.50	1.50	1.46	1.47	1.53	1.58	1.60	1.61
% Ch	1.8	0.0	-2.7	0.8	3.9	3.4	1.2	0.6
Transportation Equipment	1.56	1.60	1.63	1.63	1.63	1.64	1.68	1.70
% Ch	3.3	2.9	1.3	0.4	-0.2	0.6	2.8	0.8
Other Durables	1.34	1.37	1.39	1.42	1.46	1.49	1.48	1.48
% Ch	1.7	2.4	1.4	2.5	2.9	1.5	-0.2	-0.3
Nondurable Manufacturing	4.51	4.57	4.63	4.63	4.62	4.64	4.64	4.62
% Ch	0.9	1.3	1.3	0.0	-0.1	0.3	0.1	-0.4
Food Manufacturing	1.48	1.51	1.55	1.57	1.60	1.61	1.63	1.64
% Ch	0.7	1.8	2.8	1.3	1.3	1.2	1.0	0.7
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.36
% Ch	-1.2	-0.2	-0.5	-0.6	-0.5	0.0	0.0	-0.6
Other Nondurables	2.65	2.69	2.70	2.68	2.66	2.66	2.64	2.62
% Ch	1.3	1.2	0.7	-0.7	-0.9	-0.1	-0.5	-1.1
Natural Resources and Mining	0.89	0.81	0.68	0.71	0.74	0.74	0.75	0.76
% Ch	3.2	-8.7	-16.6	4.5	3.7	1.1	1.1	1.8
Construction	6.15	6.46	6.71	6.91	7.18	7.41	7.57	7.77
% Ch	5.0	5.0	3.9	3.0	3.9	3.2	2.1	2.7
Trade, Transportation, and Utilities	26.38	26.88	27.24	27.57	27.64	27.62	27.58	27.47
% Ch	2.0	1.9	1.3	1.2	0.3	-0.1	-0.1	-0.4
Wholesale Trade	5.81	5.85	5.87	5.91	5.95	5.97	6.00	6.03
% Ch	1.4	0.7	0.2	0.8	0.6	0.4	0.5	0.5
Retail Trade	15.35	15.60	15.83	16.02	16.00	15.94	15.88	15.75
% Ch	1.9	1.6	1.4	1.2	-0.1	-0.3	-0.4	-0.8
Trans., Warehousing, and Utilities	5.21	5.43	5.54	5.64	5.70	5.70	5.70	5.69
% Ch	3.2	4.1	2.2	1.8	1.0	0.1	-0.1	-0.1
Information	2.73	2.75	2.77	2.77	2.80	2.80	2.81	2.83
% Ch	0.8	0.9	0.8	0.1	0.9	0.2	0.4	0.7
Publishing Industries	0.73	0.73	0.73	0.72	0.70	0.68	0.66	0.65
% Ch	-0.8	0.0	0.5	-1.2	-3.6	-2.5	-2.4	-1.9
Other Information	2.00	2.02	2.04	2.05	2.10	2.13	2.15	2.19
% Ch	1.4	1.2	0.9	0.6	2.5	1.1	1.2	1.5
Financial Activities	7.98	8.12	8.28	8.47	8.46	8.40	8.38	8.38
% Ch	1.1	1.8	2.0	2.2	-0.1	-0.7	-0.3	0.0
Professional and Business Services	19.06	19.63	20.13	20.85	21.71	22.22	22.58	23.01
% Ch	2.9	3.0	2.6	3.6	4.1	2.4	1.6	1.9
Education and Health Services	21.44	22.02	22.62	23.06	23.25	23.36	23.45	23.61
% Ch	1.7	2.7	2.7	2.0	0.8	0.4	0.4	0.7
Leisure and Hospitality	14.69	15.15	15.62	15.90	16.03	16.09	16.19	16.27
% Ch	3.1	3.1	3.0	1.8	0.8	0.4	0.6	0.5
Other Services	5.57	5.62	5.69	5.70	5.62	5.54	5.48	5.45
% Ch	1.5	1.0	1.1	0.2	-1.4	-1.4	-1.0	-0.6
Federal Government	2.73	2.76	2.80	2.76	2.68	2.63	2.74	2.57
% Ch	-1.4	0.8	1.5	-1.4	-2.9	-1.5	3.9	-6.0
State and Local Government	19.14	19.27	19.43	19.47	19.53	19.76	19.94	20.03
% Ch	0.3	0.7	0.8	0.2	0.3	1.2	0.9	0.5

Table A2.2

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

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	143.44	143.95	144.66	145.17	145.81	146.36	146.88	147.24
% Ch, Annual Rate	1.7	1.4	2.0	1.4	1.8	1.5	1.4	1.0
Manufacturing	12.37	12.35	12.34	12.33	12.35	12.38	12.43	12.46
% Ch, Annual Rate	0.6	-0.8	-0.1	-0.5	0.8	1.0	1.6	0.8
Durable Manufacturing	7.75	7.72	7.71	7.70	7.72	7.75	7.80	7.84
% Ch, Annual Rate	-0.1	-1.6	-0.7	-0.4	1.3	1.5	2.7	1.8
Wood Products	0.39	0.39	0.39	0.39	0.40	0.39	0.40	0.41
% Ch, Annual Rate	1.6	0.6	0.3	2.0	1.4	-1.1	7.6	4.7
Primary and Fabricated Metals	1.82	1.80	1.80	1.79	1.79	1.80	1.81	1.82
% Ch, Annual Rate	-2.7	-2.8	-1.7	-0.5	-0.2	1.2	2.7	2.7
Computer and Electronic Products	1.05	1.05	1.05	1.04	1.04	1.04	1.05	1.06
% Ch, Annual Rate	1.6	-1.0	-2.3	-1.7	-1.7	0.5	4.7	2.0
Machinery and Electrical Equipment	1.48	1.46	1.46	1.46	1.46	1.47	1.48	1.49
% Ch, Annual Rate	-2.3	-3.7	-1.4	-0.8	2.7	1.0	2.9	1.9
Transportation Equipment	1.62	1.63	1.63	1.62	1.63	1.63	1.63	1.63
% Ch, Annual Rate	1.7	0.4	0.7	-1.8	1.9	0.9	0.1	-0.4
Other Durables	1.39	1.38	1.39	1.39	1.40	1.42	1.43	1.44
% Ch, Annual Rate	2.1	-1.3	0.6	2.0	3.1	4.8	2.7	2.1
Nondurable Manufacturing	4.62	4.63	4.64	4.63	4.63	4.63	4.63	4.62
% Ch, Annual Rate	1.9	0.4	1.0	-0.6	-0.1	0.2	-0.3	-0.8
Food Manufacturing	1.54	1.55	1.56	1.56	1.57	1.57	1.58	1.58
% Ch, Annual Rate	4.2	2.3	3.7	-0.1	0.6	1.8	1.3	0.9
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	-0.1	-1.5	-2.0	-1.9	2.0	-0.6	-1.4	-1.8
Other Nondurables	2.71	2.70	2.70	2.70	2.69	2.69	2.68	2.67
% Ch, Annual Rate	0.9	-0.3	-0.1	-0.7	-0.8	-0.7	-1.1	-1.6
Natural Resources and Mining	0.71	0.68	0.66	0.66	0.68	0.71	0.72	0.73
% Ch, Annual Rate	-21.8	-18.3	-7.5	1.4	8.5	20.3	5.5	3.9
Construction	6.67	6.69	6.71	6.76	6.84	6.89	6.93	6.99
% Ch, Annual Rate	5.3	1.6	1.1	3.0	4.9	2.6	2.4	3.9
Trade, Transportation, and Utilities	27.12	27.19	27.28	27.36	27.49	27.56	27.63	27.61
% Ch, Annual Rate	1.6	1.0	1.4	1.1	1.9	1.0	1.0	-0.2
Wholesale Trade	5.86	5.86	5.87	5.89	5.90	5.90	5.92	5.93
% Ch, Annual Rate	0.3	0.2	0.6	1.2	1.0	0.0	1.4	0.5
Retail Trade	15.76	15.81	15.86	15.88	15.97	16.03	16.05	16.02
% Ch, Annual Rate	2.3	1.1	1.5	0.5	2.2	1.5	0.6	-0.9
Trans., Warehousing, and Utilities	5.50	5.53	5.55	5.59	5.62	5.63	5.65	5.66
% Ch, Annual Rate	1.0	1.6	1.8	2.8	1.9	0.9	1.6	0.9
Information	2.77	2.77	2.78	2.77	2.78	2.79	2.76	2.77
% Ch, Annual Rate	1.4	-0.7	2.0	-1.4	0.8	2.0	-3.8	1.1
Publishing Industries	0.73	0.73	0.73	0.73	0.73	0.73	0.72	0.71
% Ch, Annual Rate	1.8	-0.2	1.1	-1.3	0.5	-0.6	-6.4	-4.9
Other Information	2.04	2.04	2.05	2.04	2.05	2.06	2.05	2.06
% Ch, Annual Rate	1.3	-0.9	2.4	-1.5	0.9	2.9	-2.9	3.3
Financial Activities	8.22	8.26	8.31	8.35	8.42	8.47	8.48	8.49
% Ch, Annual Rate	2.0	2.3	2.4	1.6	3.4	2.8	0.6	0.3
Professional and Business Services	19.90	20.03	20.21	20.38	20.53	20.69	20.97	21.21
% Ch, Annual Rate	1.4	2.6	3.7	3.2	3.1	3.2	5.4	4.7
Education and Health Services	22.40	22.55	22.70	22.83	22.94	23.03	23.11	23.15
% Ch, Annual Rate	2.3	2.7	2.7	2.3	2.0	1.7	1.4	0.7
Leisure and Hospitality	15.49	15.57	15.67	15.73	15.81	15.88	15.94	15.98
% Ch, Annual Rate	3.1	2.2	2.5	1.5	2.2	1.7	1.5	0.8
Other Services	5.66	5.67	5.70	5.71	5.72	5.72	5.69	5.66
% Ch, Annual Rate	1.4	1.0	1.5	1.0	0.7	-0.2	-2.0	-1.9
Federal Government	2.78	2.79	2.81	2.81	2.80	2.77	2.74	2.71
% Ch, Annual Rate	1.5	1.4	2.9	1.2	-1.6	-4.7	-4.0	-4.2
State and Local Government	19.36	19.40	19.48	19.48	19.45	19.47	19.47	19.48
% Ch, Annual Rate	1.0	0.9	1.7	0.0	-0.6	0.3	0.2	0.1

Table A2.2 (continued)

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

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	147.71	148.07	148.43	148.75	149.04	149.29	149.53	149.76
% Ch, Annual Rate	1.3	1.0	1.0	0.9	0.8	0.7	0.7	0.6
Manufacturing	12.52	12.60	12.63	12.70	12.74	12.80	12.85	12.89
% Ch, Annual Rate	2.1	2.7	0.9	2.0	1.5	1.6	1.6	1.4
Durable Manufacturing	7.90	7.98	8.01	8.08	8.12	8.16	8.21	8.25
% Ch, Annual Rate	3.2	4.2	1.5	3.2	2.2	2.2	2.1	1.9
Wood Products	0.41	0.42	0.42	0.43	0.44	0.45	0.45	0.46
% Ch, Annual Rate	5.3	7.6	4.7	7.5	7.2	7.2	6.5	5.8
Primary and Fabricated Metals	1.84	1.87	1.87	1.89	1.91	1.93	1.95	1.96
% Ch, Annual Rate	4.4	5.0	1.5	3.7	4.5	4.3	3.9	3.0
Computer and Electronic Products	1.07	1.08	1.08	1.09	1.09	1.09	1.09	1.09
% Ch, Annual Rate	3.8	4.3	3.2	2.8	0.0	-0.7	-0.9	-0.9
Machinery and Electrical Equipment	1.50	1.53	1.54	1.56	1.57	1.58	1.59	1.60
% Ch, Annual Rate	4.9	7.2	2.6	4.7	2.7	3.1	2.7	2.1
Transportation Equipment	1.63	1.63	1.62	1.63	1.63	1.63	1.64	1.65
% Ch, Annual Rate	-0.6	-0.3	-0.8	1.2	-0.1	0.5	1.6	2.9
Other Durables	1.45	1.46	1.47	1.48	1.48	1.48	1.49	1.49
% Ch, Annual Rate	3.5	4.2	0.7	2.3	1.3	1.2	0.9	0.2
Nondurable Manufacturing	4.62	4.62	4.62	4.62	4.63	4.63	4.64	4.65
% Ch, Annual Rate	0.1	0.1	0.0	-0.1	0.5	0.6	0.7	0.5
Food Manufacturing	1.59	1.59	1.60	1.60	1.61	1.61	1.62	1.62
% Ch, Annual Rate	2.0	1.4	0.8	0.3	1.4	1.4	1.6	1.5
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	0.0	0.2	0.2	-0.5	-0.3	0.2	0.3	0.4
Other Nondurables	2.66	2.66	2.66	2.65	2.65	2.66	2.66	2.66
% Ch, Annual Rate	-0.9	-0.8	-0.5	-0.2	0.0	0.1	0.2	-0.1
Natural Resources and Mining	0.73	0.73	0.74	0.74	0.74	0.74	0.74	0.75
% Ch, Annual Rate	2.5	1.3	1.7	1.6	1.0	0.3	0.8	1.1
Construction	7.07	7.14	7.22	7.29	7.35	7.39	7.44	7.48
% Ch, Annual Rate	4.3	4.2	4.6	3.7	3.2	2.5	2.4	2.1
Trade, Transportation, and Utilities	27.64	27.64	27.64	27.63	27.63	27.61	27.61	27.61
% Ch, Annual Rate	0.4	0.0	0.1	-0.2	0.0	-0.3	0.0	-0.1
Wholesale Trade	5.93	5.94	5.95	5.96	5.96	5.97	5.97	5.98
% Ch, Annual Rate	0.3	0.5	0.7	0.6	0.2	0.2	0.4	0.6
Retail Trade	16.03	16.00	15.99	15.97	15.97	15.94	15.94	15.93
% Ch, Annual Rate	0.3	-0.7	-0.3	-0.6	0.0	-0.6	0.0	-0.4
Trans., Warehousing, and Utilities	5.68	5.70	5.70	5.71	5.70	5.70	5.70	5.70
% Ch, Annual Rate	1.0	1.4	0.3	0.2	-0.2	-0.1	-0.1	0.0
Information	2.80	2.81	2.79	2.80	2.80	2.80	2.81	2.81
% Ch, Annual Rate	3.6	1.8	-2.0	1.1	0.0	0.3	0.3	0.4
Publishing Industries	0.70	0.70	0.69	0.69	0.68	0.68	0.68	0.67
% Ch, Annual Rate	-3.7	-2.5	-2.2	-2.2	-3.0	-2.8	-2.3	-2.3
Other Information	2.09	2.11	2.10	2.11	2.12	2.12	2.13	2.14
% Ch, Annual Rate	6.2	3.3	-1.9	2.2	1.0	1.3	1.2	1.2
Financial Activities	8.49	8.47	8.45	8.43	8.42	8.41	8.40	8.39
% Ch, Annual Rate	-0.1	-1.0	-0.6	-0.9	-0.7	-0.5	-0.6	-0.3
Professional and Business Services	21.44	21.63	21.80	21.94	22.09	22.19	22.27	22.35
% Ch, Annual Rate	4.4	3.8	3.2	2.6	2.7	1.8	1.4	1.6
Education and Health Services	23.19	23.23	23.28	23.30	23.32	23.35	23.36	23.39
% Ch, Annual Rate	0.7	0.7	0.8	0.4	0.3	0.5	0.2	0.5
Leisure and Hospitality	16.00	16.01	16.04	16.06	16.06	16.08	16.11	16.13
% Ch, Annual Rate	0.7	0.2	0.7	0.4	0.2	0.3	0.9	0.4
Other Services	5.64	5.62	5.61	5.59	5.57	5.55	5.53	5.50
% Ch, Annual Rate	-1.4	-1.4	-0.9	-1.1	-1.5	-1.6	-1.6	-1.7
Federal Government	2.70	2.68	2.67	2.65	2.65	2.64	2.63	2.62
% Ch, Annual Rate	-2.1	-2.1	-2.2	-2.2	-1.1	-1.1	-1.1	-1.1
State and Local Government	19.49	19.49	19.54	19.60	19.67	19.73	19.79	19.85
% Ch, Annual Rate	0.2	0.0	1.1	1.2	1.3	1.4	1.2	1.1

Table A2.2 (continued)

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

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	150.00	150.45	150.51	150.63	150.82	151.03	151.23	151.45
% Ch, Annual Rate	0.6	1.2	0.2	0.3	0.5	0.5	0.5	0.6
Manufacturing	12.92	12.92	12.94	12.96	12.95	12.96	12.98	12.99
% Ch, Annual Rate	0.8	0.2	0.6	0.4	-0.1	0.2	0.5	0.3
Durable Manufacturing	8.27	8.28	8.31	8.32	8.32	8.33	8.36	8.37
% Ch, Annual Rate	1.3	0.5	1.0	0.7	0.1	0.5	1.2	0.8
Wood Products	0.46	0.47	0.47	0.48	0.48	0.49	0.49	0.50
% Ch, Annual Rate	3.8	2.5	3.7	4.3	3.6	3.6	4.3	4.4
Primary and Fabricated Metals	1.97	1.98	1.98	1.99	1.99	1.99	1.99	2.00
% Ch, Annual Rate	1.8	0.6	1.2	1.0	-0.1	0.4	1.5	1.5
Computer and Electronic Products	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
% Ch, Annual Rate	-0.9	-1.4	-0.8	-0.1	-0.1	0.5	1.0	0.8
Machinery and Electrical Equipment	1.60	1.60	1.60	1.60	1.61	1.61	1.62	1.62
% Ch, Annual Rate	1.2	-0.2	0.2	0.2	0.2	0.9	1.7	1.6
Transportation Equipment	1.66	1.68	1.69	1.70	1.70	1.70	1.70	1.69
% Ch, Annual Rate	3.4	3.5	3.4	1.5	-0.1	0.2	-0.1	-1.6
Other Durables	1.49	1.48	1.48	1.48	1.48	1.48	1.48	1.48
% Ch, Annual Rate	-0.5	-1.2	-0.5	-0.3	-0.6	-0.2	0.7	0.6
Nondurable Manufacturing	4.65	4.64	4.64	4.64	4.63	4.63	4.62	4.61
% Ch, Annual Rate	-0.1	-0.4	-0.1	-0.3	-0.5	-0.5	-0.6	-0.6
Food Manufacturing	1.63	1.63	1.63	1.63	1.64	1.64	1.64	1.64
% Ch, Annual Rate	0.8	0.4	0.9	0.7	0.8	0.8	0.6	0.5
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.36
% Ch, Annual Rate	-0.2	-0.4	-0.1	-0.3	-0.8	-0.8	-0.8	-0.6
Other Nondurables	2.65	2.65	2.64	2.64	2.63	2.62	2.61	2.60
% Ch, Annual Rate	-0.6	-0.9	-0.7	-0.8	-1.2	-1.2	-1.3	-1.3
Natural Resources and Mining	0.75	0.75	0.75	0.76	0.76	0.76	0.77	0.77
% Ch, Annual Rate	1.1	1.0	1.5	2.0	2.3	1.7	1.5	1.7
Construction	7.51	7.54	7.59	7.64	7.68	7.74	7.80	7.85
% Ch, Annual Rate	1.7	1.8	2.4	2.7	2.6	2.8	3.1	3.0
Trade, Transportation, and Utilities	27.61	27.58	27.57	27.56	27.52	27.48	27.45	27.42
% Ch, Annual Rate	0.0	-0.4	0.0	-0.2	-0.6	-0.5	-0.5	-0.5
Wholesale Trade	5.99	6.00	6.01	6.02	6.02	6.03	6.03	6.04
% Ch, Annual Rate	0.8	0.2	0.7	0.5	0.6	0.3	0.3	0.3
Retail Trade	15.91	15.89	15.87	15.85	15.80	15.76	15.73	15.70
% Ch, Annual Rate	-0.4	-0.6	-0.4	-0.5	-1.3	-0.9	-0.9	-0.8
Trans., Warehousing, and Utilities	5.70	5.69	5.69	5.69	5.69	5.69	5.69	5.68
% Ch, Annual Rate	0.1	-0.5	0.1	-0.1	0.1	-0.2	-0.4	-0.4
Information	2.81	2.81	2.82	2.82	2.82	2.83	2.84	2.85
% Ch, Annual Rate	0.3	0.3	0.7	0.1	0.7	1.1	1.1	1.0
Publishing Industries	0.67	0.66	0.66	0.66	0.65	0.65	0.65	0.64
% Ch, Annual Rate	-2.3	-2.8	-2.3	-2.2	-1.7	-1.8	-1.5	-1.6
Other Information	2.14	2.15	2.16	2.16	2.17	2.18	2.19	2.20
% Ch, Annual Rate	1.2	1.2	1.6	0.8	1.4	1.9	1.9	1.8
Financial Activities	8.38	8.37	8.38	8.39	8.39	8.38	8.38	8.37
% Ch, Annual Rate	-0.2	-0.5	0.2	0.3	0.1	-0.1	-0.1	-0.3
Professional and Business Services	22.44	22.52	22.62	22.73	22.84	22.94	23.06	23.19
% Ch, Annual Rate	1.5	1.4	1.9	1.9	2.0	1.8	2.0	2.3
Education and Health Services	23.42	23.42	23.46	23.51	23.57	23.60	23.62	23.66
% Ch, Annual Rate	0.5	-0.1	0.7	0.8	1.0	0.5	0.5	0.6
Leisure and Hospitality	16.16	16.17	16.20	16.23	16.24	16.27	16.29	16.30
% Ch, Annual Rate	0.8	0.1	0.8	0.8	0.2	0.9	0.5	0.2
Other Services	5.49	5.48	5.48	5.47	5.47	5.46	5.44	5.43
% Ch, Annual Rate	-0.7	-0.8	-0.4	-0.5	-0.3	-0.7	-1.0	-1.1
Federal Government	2.62	2.97	2.75	2.61	2.58	2.58	2.57	2.57
% Ch, Annual Rate	-0.1	63.9	-26.3	-19.1	-3.9	-1.0	-0.9	-0.8
State and Local Government	19.89	19.93	19.96	19.98	20.00	20.02	20.04	20.06
% Ch, Annual Rate	1.0	0.7	0.6	0.5	0.4	0.4	0.3	0.4

Table A2.3

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

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	3,056.8	3,145.7	3,244.5	3,320.7	3,381.7	3,428.5	3,468.6	3,504.0
% Ch	2.5	2.9	3.1	2.3	1.8	1.4	1.2	1.0
Manufacturing	288.8	291.8	290.0	285.0	287.2	290.9	293.2	295.3
% Ch	0.7	1.1	-0.6	-1.7	0.8	1.3	0.8	0.7
Durable Manufacturing	210.0	211.1	207.5	201.4	203.2	206.1	207.8	209.5
% Ch	0.2	0.5	-1.7	-3.0	0.9	1.5	0.8	0.8
Wood Products	13.4	13.3	13.1	13.2	13.6	14.1	14.4	14.6
% Ch	3.0	-1.0	-1.3	0.2	3.0	4.1	2.1	1.5
Primary and Fabricated Metals	25.6	25.7	25.3	25.3	26.5	27.9	28.8	29.0
% Ch	2.5	0.5	-1.7	0.2	4.7	5.3	3.1	0.8
Computer and Electronic Products	20.0	19.9	20.1	20.3	21.5	22.0	21.8	22.1
% Ch	-1.0	-0.3	1.0	0.9	5.9	2.2	-0.5	1.0
Machinery and Electrical Equipment	20.8	20.8	20.5	21.3	23.3	25.2	26.5	27.7
% Ch	4.9	-0.3	-1.2	4.0	9.0	8.3	5.2	4.4
Aerospace	94.2	94.0	90.7	83.3	80.1	78.5	77.9	77.9
% Ch	-1.9	-0.2	-3.5	-8.1	-3.9	-2.0	-0.8	0.0
Other Transportation Equip.	9.7	10.1	10.1	9.9	9.6	9.4	9.2	9.0
% Ch	-0.7	4.7	-0.7	-1.5	-3.0	-1.8	-2.1	-2.4
Other Durables	26.2	27.2	27.7	28.0	28.7	29.0	29.1	29.2
% Ch	2.1	3.9	1.7	1.1	2.4	1.3	0.2	0.3
Nondurable Manufacturing	78.8	80.8	82.4	83.6	84.0	84.8	85.4	85.8
% Ch	2.3	2.5	2.1	1.4	0.5	0.9	0.8	0.4
Food Manufacturing	36.4	36.8	37.6	38.5	38.8	38.9	39.0	39.0
% Ch	2.0	1.2	2.0	2.5	0.7	0.5	0.2	-0.2
Paper and Paper Products	8.0	8.0	7.7	7.6	7.4	7.4	7.3	7.2
% Ch	-1.2	-0.1	-4.2	-1.9	-1.6	-1.0	-1.0	-1.7
Other Nondurables	34.4	35.9	37.2	37.5	37.8	38.5	39.1	39.7
% Ch	3.4	4.4	3.6	0.9	0.7	1.8	1.8	1.3
Natural Resources and Mining	6.2	6.3	6.3	6.5	6.5	6.6	6.7	6.7
% Ch	1.7	1.8	-0.1	2.5	0.9	1.7	0.9	0.4
Construction	159.7	173.3	186.2	195.7	203.2	206.5	208.1	211.3
% Ch	7.2	8.5	7.5	5.1	3.8	1.6	0.8	1.6
Trade, Transportation, and Utilities	569.3	587.9	607.4	620.7	630.2	636.1	640.5	642.7
% Ch	3.4	3.3	3.3	2.2	1.5	0.9	0.7	0.3
Wholesale Trade	129.9	132.0	133.3	136.1	138.3	139.9	141.4	142.7
% Ch	2.4	1.6	1.0	2.1	1.7	1.1	1.1	1.0
Retail Trade	342.1	355.0	369.7	380.2	386.2	390.2	392.8	393.3
% Ch	3.7	3.8	4.1	2.9	1.6	1.0	0.7	0.1
Trans., Warehousing, and Utilities	97.3	100.9	104.4	104.4	105.6	106.1	106.4	106.6
% Ch	4.0	3.8	3.4	0.0	1.2	0.4	0.2	0.2
Information	109.8	114.0	120.5	123.6	125.5	127.0	128.6	130.5
% Ch	3.4	3.8	5.7	2.6	1.6	1.1	1.3	1.5
Software Publishers	55.6	55.9	58.7	60.0	60.4	60.9	61.4	62.0
% Ch	3.3	0.5	5.1	2.2	0.5	0.8	0.9	1.0
Other Publishing Industries	6.6	6.2	5.9	5.1	4.6	4.2	3.8	3.4
% Ch	-4.9	-6.6	-3.9	-13.3	-10.4	-9.1	-9.6	-9.3
Other Information	47.6	51.9	55.8	58.4	60.6	61.9	63.4	65.1
% Ch	4.8	9.1	7.4	4.7	3.7	2.2	2.4	2.7
Financial Activities	145.3	147.6	150.6	154.3	154.3	152.8	151.9	151.6
% Ch	1.1	1.6	2.0	2.5	0.0	-1.0	-0.6	-0.2
Professional and Business Services	372.2	389.2	403.7	417.7	438.1	452.2	462.9	474.8
% Ch	3.0	4.5	3.7	3.4	4.9	3.2	2.4	2.6
Education and Health Services	444.0	448.5	464.8	483.3	492.7	499.9	506.4	513.8
% Ch	1.6	1.0	3.6	4.0	1.9	1.5	1.3	1.5
Leisure and Hospitality	296.9	309.9	323.6	330.9	335.9	339.9	343.9	347.5
% Ch	3.4	4.4	4.4	2.3	1.5	1.2	1.2	1.1
Other Services	113.8	115.1	117.6	118.6	119.5	120.3	121.1	122.0
% Ch	2.3	1.1	2.2	0.9	0.8	0.7	0.7	0.7
Federal Government	71.3	73.2	74.6	74.2	72.8	72.2	74.4	71.4
% Ch	-0.5	2.6	1.9	-0.5	-1.9	-0.8	3.1	-4.1
State and Local Government	479.4	488.9	499.3	510.3	515.7	523.9	530.9	536.4
% Ch	1.6	2.0	2.1	2.2	1.1	1.6	1.3	1.0

Table A2.4

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

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	3,206.4	3,236.6	3,255.2	3,279.6	3,295.9	3,312.9	3,329.8	3,344.3
% Ch, Annual Rate	4.3	3.8	2.3	3.0	2.0	2.1	2.1	1.7
Manufacturing	292.4	292.1	289.1	286.3	285.8	285.0	284.9	284.2
% Ch, Annual Rate	0.5	-0.4	-4.1	-3.9	-0.7	-1.1	-0.1	-1.0
Durable Manufacturing	210.4	209.1	206.9	203.7	202.4	201.4	201.2	200.6
% Ch, Annual Rate	-0.5	-2.5	-4.1	-6.1	-2.6	-2.0	-0.3	-1.2
Wood Products	13.2	13.1	13.2	13.1	13.1	13.0	13.2	13.3
% Ch, Annual Rate	-1.6	-0.4	0.2	-2.4	2.0	-2.9	4.8	2.3
Primary and Fabricated Metals	25.6	25.2	25.1	25.3	25.1	25.2	25.4	25.7
% Ch, Annual Rate	-1.5	-5.5	-2.3	3.2	-3.5	2.3	4.0	3.6
Computer and Electronic Products	20.1	20.1	20.2	20.1	20.0	20.1	20.5	20.6
% Ch, Annual Rate	1.3	0.8	0.7	-1.8	-1.5	1.6	7.9	3.8
Machinery and Electrical Equipment	20.6	20.5	20.4	20.6	20.9	21.1	21.5	21.8
% Ch, Annual Rate	-0.3	-1.7	-1.1	3.8	5.7	4.7	7.4	6.0
Aerospace	93.0	92.0	90.7	87.2	85.6	84.1	82.6	81.1
% Ch, Annual Rate	-2.0	-4.1	-5.5	-14.7	-7.1	-6.8	-6.9	-7.1
Other Transportation Equip.	10.2	10.2	9.9	9.9	9.9	9.9	10.0	9.9
% Ch, Annual Rate	-3.2	-1.6	-8.1	-0.5	0.3	-1.4	1.9	-4.0
Other Durables	27.9	28.0	27.5	27.6	27.8	27.9	28.1	28.3
% Ch, Annual Rate	5.9	1.7	-7.2	1.8	3.1	2.4	2.1	2.4
Nondurable Manufacturing	82.0	83.0	82.2	82.6	83.4	83.6	83.7	83.6
% Ch, Annual Rate	3.1	5.0	-4.0	1.9	4.1	1.1	0.4	-0.4
Food Manufacturing	37.6	38.1	36.9	37.6	38.4	38.5	38.6	38.6
% Ch, Annual Rate	8.2	5.3	-12.8	8.0	8.8	1.4	0.6	0.0
Paper and Paper Products	7.7	7.8	7.8	7.5	7.6	7.6	7.5	7.5
% Ch, Annual Rate	-10.2	2.2	-0.6	-12.6	5.8	-1.6	-2.6	-3.0
Other Nondurables	36.6	37.1	37.6	37.5	37.4	37.5	37.6	37.6
% Ch, Annual Rate	1.2	5.3	4.9	-0.8	-0.7	1.4	0.8	-0.4
Natural Resources and Mining	6.3	6.4	6.3	6.3	6.5	6.5	6.5	6.5
% Ch, Annual Rate	0.5	5.1	-5.7	3.1	8.9	1.2	0.2	-1.4
Construction	182.5	185.2	186.8	190.1	192.8	194.5	196.5	199.1
% Ch, Annual Rate	17.4	6.1	3.5	7.3	5.6	3.6	4.2	5.4
Trade, Transportation, and Utilities	597.5	606.4	611.0	614.6	615.5	619.4	623.0	624.9
% Ch, Annual Rate	3.7	6.0	3.1	2.3	0.6	2.6	2.4	1.2
Wholesale Trade	132.5	133.2	133.2	134.1	135.1	135.6	136.5	137.2
% Ch, Annual Rate	1.3	2.0	0.0	2.8	3.0	1.4	2.7	1.9
Retail Trade	362.6	369.0	372.8	374.3	376.4	379.6	382.0	382.9
% Ch, Annual Rate	6.0	7.3	4.1	1.7	2.3	3.4	2.5	1.0
Trans., Warehousing, and Utilities	102.4	104.1	105.0	106.1	103.9	104.2	104.6	104.9
% Ch, Annual Rate	-0.8	6.8	3.5	4.2	-8.1	1.0	1.6	1.2
Information	118.2	119.8	121.5	122.3	123.2	123.9	123.4	123.9
% Ch, Annual Rate	5.0	5.6	5.7	2.8	2.9	2.4	-1.8	1.7
Software Publishers	57.6	58.4	59.3	59.6	59.9	60.1	60.1	60.1
% Ch, Annual Rate	5.8	5.8	6.6	1.8	2.1	1.3	-0.3	0.1
Other Publishing Industries	6.0	6.0	5.9	5.9	5.3	5.3	5.1	4.9
% Ch, Annual Rate	-1.8	-4.5	-4.5	-1.4	-31.6	-4.4	-15.0	-12.7
Other Information	54.6	55.5	56.3	56.9	57.9	58.5	58.2	58.9
% Ch, Annual Rate	4.8	6.6	5.9	4.3	7.9	4.2	-2.0	4.6
Financial Activities	148.8	150.0	151.6	152.0	153.2	154.4	154.8	155.0
% Ch, Annual Rate	2.4	3.1	4.5	0.9	3.2	3.3	1.0	0.7
Professional and Business Services	399.1	403.3	404.6	408.0	410.1	414.3	420.4	426.0
% Ch, Annual Rate	4.5	4.3	1.3	3.4	2.1	4.1	6.0	5.4
Education and Health Services	458.8	462.5	465.2	472.6	478.9	482.1	485.0	487.3
% Ch, Annual Rate	5.6	3.2	2.4	6.5	5.4	2.7	2.4	1.9
Leisure and Hospitality	319.3	322.5	324.7	327.7	328.5	330.2	331.8	333.1
% Ch, Annual Rate	5.0	4.0	2.8	3.7	1.1	2.0	1.9	1.6
Other Services	116.7	118.1	117.4	118.2	118.2	118.6	118.7	118.9
% Ch, Annual Rate	4.9	4.9	-2.1	2.5	0.1	1.3	0.6	0.6
Federal Government	74.2	74.4	74.5	75.1	75.1	74.5	73.9	73.4
% Ch, Annual Rate	1.0	1.4	0.1	3.4	0.0	-3.4	-2.9	-3.0
State and Local Government	492.5	495.9	502.4	506.5	508.3	509.7	510.9	512.1
% Ch, Annual Rate	1.9	2.8	5.4	3.2	1.4	1.1	1.0	0.9

Table A2.4 (continued)

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

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,362.0	3,375.4	3,388.5	3,400.9	3,412.9	3,423.7	3,433.5	3,443.6
% Ch, Annual Rate	2.1	1.6	1.6	1.5	1.4	1.3	1.1	1.2
Manufacturing	285.5	287.0	287.6	288.7	289.6	290.5	291.4	292.1
% Ch, Annual Rate	1.8	2.1	0.8	1.5	1.3	1.3	1.2	0.9
Durable Manufacturing	201.7	203.0	203.5	204.6	205.2	205.9	206.5	206.9
% Ch, Annual Rate	2.1	2.7	1.0	2.0	1.3	1.4	1.1	0.8
Wood Products	13.4	13.5	13.6	13.7	13.9	14.1	14.2	14.3
% Ch, Annual Rate	2.7	4.8	2.3	4.7	4.5	4.5	3.9	3.3
Primary and Fabricated Metals	26.1	26.5	26.6	27.0	27.4	27.8	28.2	28.5
% Ch, Annual Rate	6.4	6.8	1.7	5.2	6.2	6.3	5.6	4.6
Computer and Electronic Products	21.0	21.4	21.7	21.9	22.0	22.0	21.9	21.9
% Ch, Annual Rate	6.7	7.3	5.7	5.2	0.9	-0.2	-0.4	-0.5
Machinery and Electrical Equipment	22.4	23.1	23.5	24.1	24.5	25.0	25.4	25.8
% Ch, Annual Rate	10.4	13.8	7.0	10.2	7.4	8.0	7.4	6.6
Aerospace	80.7	80.3	79.8	79.4	79.0	78.6	78.3	77.9
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Other Transportation Equip.	9.7	9.6	9.6	9.5	9.5	9.5	9.4	9.4
% Ch, Annual Rate	-4.8	-5.5	-0.8	-1.2	-2.2	-1.2	-1.7	-2.5
Other Durables	28.5	28.7	28.7	28.8	28.9	29.0	29.1	29.1
% Ch, Annual Rate	3.1	2.8	0.9	1.5	1.2	1.3	1.0	0.6
Nondurable Manufacturing	83.8	84.0	84.0	84.1	84.3	84.6	84.9	85.2
% Ch, Annual Rate	0.9	0.7	0.4	0.2	1.2	1.2	1.4	1.3
Food Manufacturing	38.7	38.8	38.8	38.7	38.8	38.9	39.0	39.1
% Ch, Annual Rate	1.6	0.8	0.0	-0.7	0.8	0.9	1.1	1.0
Paper and Paper Products	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.3
% Ch, Annual Rate	-1.0	-0.8	-0.8	-1.6	-1.3	-0.8	-0.6	-0.5
Other Nondurables	37.6	37.7	37.8	38.0	38.2	38.4	38.6	38.7
% Ch, Annual Rate	0.6	0.9	1.0	1.6	2.0	2.0	2.1	2.0
Natural Resources and Mining	6.5	6.5	6.5	6.6	6.6	6.6	6.7	6.7
% Ch, Annual Rate	1.5	1.7	2.1	1.9	1.6	1.6	1.8	1.4
Construction	201.6	202.6	203.9	204.9	205.8	206.4	206.6	207.3
% Ch, Annual Rate	5.0	2.1	2.6	2.0	1.8	1.3	0.4	1.3
Trade, Transportation, and Utilities	627.7	629.4	631.2	632.6	634.3	635.4	636.8	638.1
% Ch, Annual Rate	1.8	1.1	1.2	0.9	1.0	0.7	0.9	0.8
Wholesale Trade	137.7	138.1	138.6	139.0	139.3	139.7	140.0	140.4
% Ch, Annual Rate	1.5	1.2	1.4	1.3	1.0	0.9	0.9	1.3
Retail Trade	384.8	385.7	386.9	387.7	388.9	389.6	390.7	391.4
% Ch, Annual Rate	2.0	0.9	1.2	0.9	1.3	0.7	1.1	0.7
Trans., Warehousing, and Utilities	105.2	105.6	105.8	105.9	106.0	106.1	106.1	106.2
% Ch, Annual Rate	1.4	1.5	0.6	0.5	0.2	0.3	0.2	0.4
Information	124.9	125.6	125.5	126.1	126.4	126.7	127.1	127.6
% Ch, Annual Rate	3.4	2.3	-0.3	1.8	1.0	1.2	1.3	1.3
Software Publishers	60.2	60.3	60.4	60.6	60.7	60.8	60.9	61.1
% Ch, Annual Rate	0.5	0.8	0.9	0.9	0.7	0.8	0.9	0.9
Other Publishing Industries	4.8	4.7	4.6	4.5	4.3	4.2	4.1	4.0
% Ch, Annual Rate	-10.6	-8.6	-8.1	-8.2	-10.1	-9.8	-9.1	-9.2
Other Information	60.0	60.7	60.5	61.0	61.4	61.7	62.1	62.5
% Ch, Annual Rate	7.7	4.6	-1.0	3.4	2.1	2.4	2.4	2.4
Financial Activities	155.0	154.5	154.1	153.6	153.2	152.9	152.6	152.4
% Ch, Annual Rate	0.0	-1.4	-1.0	-1.2	-1.0	-0.8	-1.0	-0.5
Professional and Business Services	431.4	436.2	440.5	444.3	448.1	451.0	453.5	456.2
% Ch, Annual Rate	5.2	4.6	4.0	3.5	3.5	2.6	2.3	2.4
Education and Health Services	489.5	491.7	493.9	495.8	497.4	499.2	500.7	502.5
% Ch, Annual Rate	1.8	1.8	1.9	1.5	1.3	1.5	1.2	1.4
Leisure and Hospitality	334.3	335.3	336.5	337.5	338.4	339.3	340.5	341.4
% Ch, Annual Rate	1.5	1.2	1.4	1.2	1.1	1.1	1.4	1.1
Other Services	119.2	119.4	119.7	119.9	120.1	120.3	120.4	120.5
% Ch, Annual Rate	0.8	0.8	1.0	0.8	0.6	0.5	0.5	0.4
Federal Government	73.1	72.9	72.6	72.4	72.3	72.2	72.1	72.1
% Ch, Annual Rate	-1.2	-1.3	-1.3	-1.4	-0.4	-0.5	-0.5	-0.5
State and Local Government	513.3	514.3	516.4	518.6	520.8	523.0	525.0	526.9
% Ch, Annual Rate	1.0	0.8	1.6	1.7	1.7	1.7	1.5	1.5

Table A2.4 (continued)

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

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,452.2	3,468.0	3,473.4	3,480.9	3,489.9	3,499.2	3,508.6	3,518.4
% Ch, Annual Rate	1.0	1.8	0.6	0.9	1.0	1.1	1.1	1.1
Manufacturing	292.7	292.9	293.4	293.9	294.3	294.8	295.6	296.3
% Ch, Annual Rate	0.8	0.3	0.7	0.7	0.5	0.7	1.1	1.0
Durable Manufacturing	207.4	207.5	207.9	208.3	208.6	209.0	209.8	210.5
% Ch, Annual Rate	0.9	0.3	0.7	0.8	0.5	0.9	1.4	1.3
Wood Products	14.4	14.4	14.4	14.5	14.5	14.6	14.7	14.7
% Ch, Annual Rate	1.6	0.4	1.5	2.0	1.3	1.4	2.0	2.1
Primary and Fabricated Metals	28.7	28.7	28.9	28.9	28.9	28.9	29.1	29.2
% Ch, Annual Rate	2.7	1.1	1.6	1.2	-0.3	0.3	1.7	1.8
Computer and Electronic Products	21.9	21.8	21.8	21.8	21.9	22.0	22.1	22.2
% Ch, Annual Rate	-0.4	-1.2	-0.4	0.7	0.7	1.7	2.4	2.1
Machinery and Electrical Equipment	26.2	26.4	26.6	26.9	27.1	27.5	27.9	28.3
% Ch, Annual Rate	5.2	3.2	3.8	3.8	3.9	4.9	6.1	5.9
Aerospace	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.3	9.3	9.2	9.2	9.1	9.1	9.0	8.9
% Ch, Annual Rate	-2.4	-2.3	-1.8	-2.1	-2.1	-2.7	-3.2	-3.5
Other Durables	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.3
% Ch, Annual Rate	-0.1	-0.5	0.0	0.2	0.2	0.5	0.9	0.8
Nondurable Manufacturing	85.3	85.4	85.5	85.6	85.7	85.8	85.8	85.9
% Ch, Annual Rate	0.6	0.2	0.7	0.5	0.3	0.3	0.2	0.3
Food Manufacturing	39.1	39.0	39.0	39.0	39.0	39.0	39.0	38.9
% Ch, Annual Rate	-0.1	-0.6	0.1	-0.1	-0.1	-0.1	-0.3	-0.4
Paper and Paper Products	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.1
% Ch, Annual Rate	-1.2	-1.5	-1.1	-1.4	-2.0	-2.0	-2.0	-1.7
Other Nondurables	38.9	39.0	39.2	39.4	39.5	39.6	39.7	39.8
% Ch, Annual Rate	1.6	1.5	1.7	1.5	1.2	1.2	1.1	1.4
Natural Resources and Mining	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
% Ch, Annual Rate	0.8	0.0	0.5	0.5	0.5	0.2	0.4	0.3
Construction	207.3	207.8	208.4	209.0	209.9	210.8	211.8	212.9
% Ch, Annual Rate	-0.1	1.0	1.1	1.3	1.6	1.8	1.9	2.0
Trade, Transportation, and Utilities	639.2	639.9	641.0	641.9	642.1	642.5	642.8	643.2
% Ch, Annual Rate	0.7	0.5	0.7	0.5	0.1	0.2	0.2	0.3
Wholesale Trade	140.8	141.1	141.5	141.9	142.3	142.6	142.9	143.2
% Ch, Annual Rate	1.2	0.9	1.2	1.0	1.1	0.9	0.8	0.8
Retail Trade	392.1	392.5	393.1	393.5	393.2	393.3	393.3	393.4
% Ch, Annual Rate	0.7	0.4	0.6	0.4	-0.3	0.1	0.0	0.1
Trans., Warehousing, and Utilities	106.3	106.3	106.4	106.5	106.6	106.6	106.6	106.6
% Ch, Annual Rate	0.2	0.1	0.3	0.3	0.4	0.1	0.0	0.0
Information	128.0	128.3	128.8	129.2	129.7	130.2	130.8	131.4
% Ch, Annual Rate	1.3	1.2	1.5	1.1	1.5	1.8	1.9	1.7
Software Publishers	61.2	61.3	61.4	61.6	61.8	61.9	62.1	62.3
% Ch, Annual Rate	0.9	0.8	0.9	0.9	1.1	1.0	1.1	1.1
Other Publishing Industries	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3
% Ch, Annual Rate	-9.3	-10.6	-9.7	-9.7	-8.7	-9.2	-8.6	-9.0
Other Information	62.8	63.2	63.6	64.0	64.4	64.9	65.4	65.8
% Ch, Annual Rate	2.3	2.4	2.8	1.9	2.6	3.1	3.1	3.0
Financial Activities	152.1	151.9	151.9	151.9	151.8	151.7	151.5	151.3
% Ch, Annual Rate	-0.6	-0.7	0.0	0.0	-0.1	-0.4	-0.4	-0.6
Professional and Business Services	458.8	461.3	464.3	467.2	470.2	473.1	476.2	479.6
% Ch, Annual Rate	2.3	2.2	2.6	2.5	2.6	2.5	2.6	2.9
Education and Health Services	504.1	505.2	507.1	509.1	511.4	513.0	514.6	516.3
% Ch, Annual Rate	1.3	0.9	1.5	1.6	1.8	1.3	1.2	1.4
Leisure and Hospitality	342.5	343.3	344.3	345.4	346.1	347.2	348.0	348.7
% Ch, Annual Rate	1.3	0.9	1.2	1.2	0.9	1.2	1.0	0.8
Other Services	120.8	121.0	121.2	121.5	121.7	122.0	122.1	122.3
% Ch, Annual Rate	0.8	0.7	0.9	0.8	0.9	0.7	0.5	0.5
Federal Government	71.5	79.6	74.6	72.0	71.5	71.4	71.3	71.3
% Ch, Annual Rate	-3.1	53.6	-22.8	-13.2	-2.9	-0.5	-0.3	-0.3
State and Local Government	528.7	530.2	531.7	533.1	534.5	535.8	537.1	538.4
% Ch, Annual Rate	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.0

Table A3.1

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

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	14,809.8	15,458.5	16,011.9	16,689.8	17,460.6	18,276.2	19,082.4	19,881.9
% Ch	5.2	4.4	3.6	4.2	4.6	4.7	4.4	4.2
Total Wage and Salary Disbursements	7,476.3	7,854.8	8,189.4	8,550.8	8,921.6	9,285.0	9,650.8	10,039.1
% Ch	5.1	5.1	4.3	4.4	4.3	4.1	3.9	4.0
Nonwage Personal Income	7,333.4	7,603.7	7,822.5	8,139.0	8,539.0	8,991.3	9,431.6	9,842.8
% Ch	5.4	3.7	2.9	4.0	4.9	5.3	4.9	4.4
Supplements to Wages and Salaries	1,777.1	1,838.2	1,912.2	1,975.9	2,029.0	2,085.7	2,140.0	2,189.9
% Ch	3.0	3.4	4.0	3.3	2.7	2.8	2.6	2.3
Proprietor's Income	1,337.7	1,376.8	1,417.6	1,491.5	1,561.5	1,614.1	1,660.9	1,716.2
% Ch	4.1	2.9	3.0	5.2	4.7	3.4	2.9	3.3
Farm	68.5	40.0	28.1	22.8	25.2	27.4	29.3	32.0
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,269.2	1,336.8	1,389.6	1,468.8	1,536.3	1,586.7	1,631.7	1,684.2
% Ch	6.0	5.3	3.9	5.7	4.6	3.3	2.8	3.2
Less: Contribution For Govt. Soc. Ins.	1,154.9	1,203.5	1,250.4	1,303.8	1,364.6	1,418.9	1,475.1	1,536.0
% Ch	4.6	4.2	3.9	4.3	4.7	4.0	4.0	4.1
Dividends/Int./Rent	2,833.1	2,913.5	2,967.6	3,106.5	3,298.1	3,539.1	3,771.4	3,962.4
% Ch	8.0	2.8	1.9	4.7	6.2	7.3	6.6	5.1
Transfer Payments	2,540.4	2,678.7	2,775.4	2,868.9	3,014.9	3,171.3	3,334.3	3,510.3
% Ch	4.6	5.4	3.6	3.4	5.1	5.2	5.1	5.3

Table A3.2

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

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	15,740.1	15,929.4	16,111.1	16,266.8	16,413.0	16,602.0	16,781.2	16,963.1
% Ch, Annual Rate	1.3	4.9	4.6	3.9	3.6	4.7	4.4	4.4
Total Wage and Salary Disbursements	8,011.3	8,142.9	8,262.3	8,341.1	8,413.8	8,505.0	8,598.6	8,685.9
% Ch, Annual Rate	-0.7	6.7	6.0	3.9	3.5	4.4	4.5	4.1
Nonwage Personal Income	7,728.8	7,786.5	7,848.8	7,925.7	7,999.2	8,097.1	8,182.6	8,277.2
% Ch, Annual Rate	3.3	3.0	3.2	4.0	3.8	5.0	4.3	4.7
Supplements to Wages and Salaries	1,881.3	1,903.5	1,924.5	1,939.4	1,956.3	1,968.1	1,982.6	1,996.8
% Ch, Annual Rate	2.9	4.8	4.5	3.1	3.5	2.4	3.0	2.9
Proprietor's Income	1,403.9	1,407.8	1,420.7	1,438.1	1,457.8	1,481.9	1,503.5	1,522.9
% Ch, Annual Rate	0.9	1.1	3.7	5.0	5.6	6.8	5.9	5.3
Farm	32.3	29.8	28.3	21.8	19.6	23.8	24.1	23.5
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,371.6	1,378.0	1,392.4	1,416.3	1,438.2	1,458.2	1,479.3	1,499.4
% Ch, Annual Rate	2.6	1.9	4.2	7.0	6.3	5.7	5.9	5.5
Less: Contribution For Govt. Soc. Ins.	1,229.0	1,244.8	1,259.1	1,268.5	1,288.5	1,294.0	1,309.1	1,323.7
% Ch, Annual Rate	1.6	5.3	4.7	3.0	6.5	1.7	4.8	4.5
Dividends/Int./Rent	2,928.7	2,956.3	2,976.2	3,009.2	3,041.4	3,085.9	3,126.5	3,172.1
% Ch, Annual Rate	2.2	3.8	2.7	4.5	4.3	6.0	5.4	6.0
Transfer Payments	2,744.0	2,763.6	2,786.5	2,807.5	2,832.2	2,855.1	2,879.1	2,909.0
% Ch, Annual Rate	5.4	2.9	3.4	3.0	3.6	3.3	3.4	4.2

Table A3.2 (continued)

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

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	17,171.8	17,363.9	17,553.4	17,753.1	17,981.3	18,177.9	18,376.3	18,569.5
% Ch, Annual Rate	5.0	4.6	4.4	4.6	5.2	4.4	4.4	4.3
Total Wage and Salary Disbursements	8,783.7	8,875.6	8,968.9	9,058.3	9,152.2	9,240.4	9,329.0	9,418.2
% Ch, Annual Rate	4.6	4.3	4.3	4.0	4.2	3.9	3.9	3.9
Nonwage Personal Income	8,388.2	8,488.3	8,584.5	8,694.8	8,829.1	8,937.4	9,047.3	9,151.3
% Ch, Annual Rate	5.5	4.9	4.6	5.2	6.3	5.0	5.0	4.7
Supplements to Wages and Salaries	2,010.9	2,022.4	2,035.1	2,047.6	2,066.8	2,079.9	2,092.2	2,104.0
% Ch, Annual Rate	2.9	2.3	2.5	2.5	3.8	2.6	2.4	2.3
Proprietor's Income	1,537.9	1,556.4	1,568.2	1,583.5	1,597.4	1,609.3	1,619.5	1,630.2
% Ch, Annual Rate	4.0	4.9	3.1	4.0	3.6	3.0	2.6	2.7
Farm	23.3	25.2	25.9	26.2	27.0	26.8	27.4	28.2
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,514.6	1,531.2	1,542.3	1,557.2	1,570.3	1,582.5	1,592.1	1,602.0
% Ch, Annual Rate	4.1	4.5	2.9	3.9	3.4	3.1	2.5	2.5
Less: Contribution For Govt. Soc. Ins.	1,347.4	1,359.3	1,370.4	1,381.4	1,403.9	1,413.8	1,423.6	1,434.4
% Ch, Annual Rate	7.4	3.6	3.3	3.2	6.7	2.8	2.8	3.1
Dividends/Int./Rent	3,219.6	3,270.4	3,321.1	3,381.4	3,443.4	3,506.8	3,572.9	3,633.1
% Ch, Annual Rate	6.1	6.5	6.3	7.5	7.5	7.6	7.8	6.9
Transfer Payments	2,967.1	2,998.4	3,030.6	3,063.7	3,125.5	3,155.2	3,186.3	3,218.3
% Ch, Annual Rate	8.2	4.3	4.4	4.4	8.3	3.9	4.0	4.1

Table A3.2 (continued)

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

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,792.2	18,988.8	19,180.3	19,368.4	19,588.8	19,783.5	19,975.7	20,179.5
% Ch, Annual Rate	4.9	4.3	4.1	4.0	4.6	4.0	3.9	4.1
Total Wage and Salary Disbursements	9,512.5	9,604.1	9,696.2	9,790.6	9,891.8	9,988.9	10,087.5	10,188.1
% Ch, Annual Rate	4.1	3.9	3.9	4.0	4.2	4.0	4.0	4.0
Nonwage Personal Income	9,279.7	9,384.7	9,484.2	9,577.7	9,697.0	9,794.7	9,888.2	9,991.4
% Ch, Annual Rate	5.7	4.6	4.3	4.0	5.1	4.1	3.9	4.2
Supplements to Wages and Salaries	2,122.6	2,134.5	2,146.2	2,156.8	2,174.3	2,183.8	2,194.8	2,206.5
% Ch, Annual Rate	3.6	2.3	2.2	2.0	3.3	1.8	2.0	2.2
Proprietor's Income	1,640.1	1,654.2	1,668.5	1,681.0	1,694.3	1,708.4	1,723.4	1,738.7
% Ch, Annual Rate	2.4	3.5	3.5	3.0	3.2	3.4	3.5	3.6
Farm	28.4	28.8	29.6	30.2	31.1	31.7	32.4	33.0
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,611.7	1,625.3	1,638.9	1,650.8	1,663.2	1,676.7	1,691.0	1,705.7
% Ch, Annual Rate	2.4	3.4	3.4	2.9	3.0	3.3	3.4	3.5
Less: Contribution For Govt. Soc. Ins.	1,459.2	1,469.4	1,479.6	1,492.1	1,519.4	1,530.3	1,541.4	1,552.7
% Ch, Annual Rate	7.1	2.8	2.8	3.4	7.5	2.9	2.9	3.0
Dividends/Int./Rent	3,691.6	3,748.2	3,798.7	3,847.1	3,895.4	3,943.1	3,983.4	4,027.9
% Ch, Annual Rate	6.6	6.3	5.5	5.2	5.1	5.0	4.2	4.5
Transfer Payments	3,284.6	3,317.3	3,350.4	3,385.0	3,452.4	3,489.7	3,528.0	3,570.9
% Ch, Annual Rate	8.5	4.0	4.1	4.2	8.2	4.4	4.5	5.0

Table A3.3

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

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	355.677	372.125	389.830	409.443	431.066	453.988	476.365	498.912
% Ch	6.8	4.6	4.8	5.0	5.3	5.3	4.9	4.7
Total Wage and Salary Disbursements	181.710	191.805	205.190	216.132	227.274	238.174	248.798	260.398
% Ch	6.5	5.6	7.0	5.3	5.2	4.8	4.5	4.7
Manufacturing	21.773	21.799	21.859	21.963	22.651	23.571	24.494	25.497
% Ch	5.9	0.1	0.3	0.5	3.1	4.1	3.9	4.1
Durable Manufacturing	17.667	17.591	17.412	17.328	17.845	18.560	19.273	20.072
% Ch	6.5	-0.4	-1.0	-0.5	3.0	4.0	3.8	4.1
Nondurable Manufacturing	4.106	4.208	4.447	4.635	4.806	5.011	5.221	5.425
% Ch	3.7	2.5	5.7	4.2	3.7	4.3	4.2	3.9
Nonmanufacturing	153.167	163.012	176.029	186.659	196.828	206.528	215.942	226.231
% Ch	7.0	6.4	8.0	6.0	5.4	4.9	4.6	4.8
Other Private Wages	1.111	1.135	1.274	1.272	1.320	1.364	1.406	1.452
% Ch	2.9	2.1	12.3	-0.2	3.8	3.3	3.1	3.2
Farm Wages	1.534	1.756	1.808	1.889	1.986	2.079	2.171	2.270
% Ch	-2.5	14.5	3.0	4.5	5.1	4.7	4.4	4.6
Military Wages	4.125	4.103	4.220	4.349	4.489	4.632	4.785	4.948
% Ch	-4.3	-0.6	2.8	3.1	3.2	3.2	3.3	3.4
Nonwage Personal Income	173.967	180.320	184.640	193.311	203.792	215.814	227.567	238.514
% Ch	7.1	3.7	2.4	4.7	5.4	5.9	5.4	4.8
Supplements to Wages and Salaries	42.724	43.783	46.769	48.485	50.268	52.034	53.706	55.325
% Ch	3.0	2.5	6.8	3.7	3.7	3.5	3.2	3.0
Proprietor's Income	27.307	30.359	30.995	32.513	33.727	34.690	35.589	36.688
% Ch	2.2	11.2	2.1	4.9	3.7	2.9	2.6	3.1
Farm	1.260	2.497	1.627	1.306	1.099	1.003	0.960	0.950
% Ch	...	...	...	...	...	...	...	...
Nonfarm	26.047	27.862	29.368	31.206	32.628	33.687	34.629	35.738
% Ch	3.7	7.0	5.4	6.3	4.6	3.2	2.8	3.2
Less: Contribution For Govt. Soc. Ins.	30.402	31.799	34.008	35.508	37.417	39.096	40.787	42.609
% Ch	4.9	4.6	6.9	4.4	5.4	4.5	4.3	4.5
Plus: Residence Adjustment	3.203	3.657	3.872	4.066	4.248	4.429	4.612	4.804
% Ch	-2.1	14.2	5.9	5.0	4.5	4.2	4.1	4.2
Dividends/Int./Rent	75.706	77.925	79.614	84.011	89.772	96.896	103.787	109.561
% Ch	9.6	2.9	2.2	5.5	6.9	7.9	7.1	5.6
Transfer Payments	55.429	56.395	57.398	59.744	63.193	66.862	70.662	74.745
% Ch	8.8	1.7	1.8	4.1	5.8	5.8	5.7	5.8
State U.I. Benefits	1.052	0.972	0.955	0.838	0.616	0.565	0.606	0.632
% Ch	-39.0	-7.6	-1.7	-12.3	-26.5	-8.2	7.2	4.4
Other Transfers	54.377	55.423	56.443	58.906	62.578	66.297	70.056	74.113
% Ch	10.5	1.9	1.8	4.4	6.2	5.9	5.7	5.8

Table A3.4

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

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	383.527	386.963	391.693	397.139	404.284	406.997	410.384	416.107
% Ch, Annual Rate	7.2	3.6	5.0	5.7	7.4	2.7	3.4	5.7
Total Wage and Salary Disbursements	201.926	203.294	206.144	209.397	214.561	214.815	215.963	219.188
% Ch, Annual Rate	12.7	2.7	5.7	6.5	10.2	0.5	2.2	6.1
Manufacturing	21.584	21.895	22.040	21.918	21.882	21.912	22.003	22.055
% Ch, Annual Rate	-4.1	5.9	2.7	-2.2	-0.7	0.5	1.7	1.0
Durable Manufacturing	17.186	17.475	17.579	17.407	17.309	17.294	17.344	17.365
% Ch, Annual Rate	-7.6	6.9	2.4	-3.8	-2.2	-0.4	1.2	0.5
Nondurable Manufacturing	4.398	4.419	4.461	4.510	4.573	4.618	4.658	4.690
% Ch, Annual Rate	10.9	2.0	3.8	4.5	5.7	4.0	3.6	2.7
Nonmanufacturing	172.961	174.125	176.845	180.184	185.238	185.416	186.422	189.562
% Ch, Annual Rate	14.6	2.7	6.4	7.8	11.7	0.4	2.2	6.9
Other Private Wages	1.365	1.251	1.233	1.246	1.255	1.266	1.277	1.289
% Ch, Annual Rate	149.0	-29.6	-5.8	4.6	2.7	3.5	3.7	3.6
Farm Wages	1.787	1.799	1.811	1.837	1.855	1.877	1.901	1.923
% Ch, Annual Rate	2.1	2.7	2.7	6.0	4.0	4.9	5.0	4.9
Military Wages	4.228	4.224	4.215	4.211	4.331	4.345	4.360	4.359
% Ch, Annual Rate	8.1	-0.3	-0.8	-0.4	11.9	1.3	1.4	-0.1
Nonwage Personal Income	181.601	183.669	185.549	187.743	189.723	192.181	194.421	196.919
% Ch, Annual Rate	1.6	4.6	4.2	4.8	4.3	5.3	4.7	5.2
Supplements to Wages and Salaries	46.076	46.650	46.901	47.451	47.890	48.231	48.679	49.141
% Ch, Annual Rate	14.7	5.1	2.2	4.8	3.8	2.9	3.8	3.8
Proprietor's Income	30.452	30.779	31.175	31.572	31.978	32.327	32.695	33.051
% Ch, Annual Rate	-6.7	4.4	5.2	5.2	5.2	4.4	4.6	4.4
Farm	1.615	1.665	1.699	1.529	1.408	1.344	1.271	1.203
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	28.837	29.114	29.477	30.043	30.570	30.983	31.424	31.848
% Ch, Annual Rate	6.0	3.9	5.1	7.9	7.2	5.5	5.8	5.5
Less: Contribution For Govt. Soc. Ins.	33.520	33.984	34.070	34.457	35.021	35.211	35.669	36.131
% Ch, Annual Rate	14.7	5.6	1.0	4.6	6.7	2.2	5.3	5.3
Plus: Residence Adjustment	3.774	3.826	3.927	3.960	3.997	4.043	4.090	4.133
% Ch, Annual Rate	1.0	5.7	10.9	3.5	3.7	4.7	4.7	4.3
Dividends/Int./Rent	78.248	79.230	79.964	81.013	82.045	83.383	84.620	85.996
% Ch, Annual Rate	2.5	5.1	3.8	5.4	5.2	6.7	6.1	6.7
Transfer Payments	56.572	57.167	57.652	58.203	58.834	59.407	60.005	60.729
% Ch, Annual Rate	2.3	4.3	3.4	3.9	4.4	4.0	4.1	4.9
State U.I. Benefits	0.965	0.943	0.969	0.945	0.945	0.857	0.803	0.748
% Ch, Annual Rate	-1.8	-8.6	11.2	-9.4	0.0	-32.3	-23.0	-24.8
Other Transfers	55.608	56.224	56.683	57.258	57.889	58.550	59.203	59.981
% Ch, Annual Rate	2.4	4.5	3.3	4.1	4.5	4.6	4.5	5.4

Table A3.4 (continued)

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

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	426.206	428.434	431.200	438.424	449.551	451.260	453.819	461.323
% Ch, Annual Rate	10.1	2.1	2.6	6.9	10.5	1.5	2.3	6.8
Total Wage and Salary Disbursements	226.425	226.011	226.193	230.466	238.144	236.903	236.483	241.166
% Ch, Annual Rate	13.9	-0.7	0.3	7.8	14.0	-2.1	-0.7	8.2
Manufacturing	22.289	22.553	22.762	22.998	23.225	23.460	23.689	23.910
% Ch, Annual Rate	4.3	4.8	3.8	4.2	4.0	4.1	4.0	3.8
Durable Manufacturing	17.552	17.769	17.932	18.127	18.300	18.479	18.650	18.813
% Ch, Annual Rate	4.4	5.0	3.7	4.4	3.9	4.0	3.8	3.5
Nondurable Manufacturing	4.737	4.785	4.829	4.871	4.925	4.981	5.039	5.097
% Ch, Annual Rate	4.1	4.1	3.8	3.5	4.5	4.6	4.8	4.7
Nonmanufacturing	196.410	195.682	195.608	199.614	206.909	205.386	204.693	209.124
% Ch, Annual Rate	15.3	-1.5	-0.2	8.4	15.4	-2.9	-1.3	8.9
Other Private Wages	1.303	1.314	1.326	1.336	1.348	1.359	1.369	1.379
% Ch, Annual Rate	4.4	3.7	3.5	3.3	3.6	3.2	3.0	3.0
Farm Wages	1.950	1.974	1.998	2.020	2.045	2.068	2.090	2.112
% Ch, Annual Rate	5.7	5.0	4.8	4.6	5.0	4.5	4.3	4.4
Military Wages	4.473	4.488	4.501	4.497	4.616	4.630	4.642	4.641
% Ch, Annual Rate	10.9	1.3	1.2	-0.3	11.0	1.2	1.0	-0.1
Nonwage Personal Income	199.781	202.423	205.007	207.958	211.408	214.358	217.336	220.156
% Ch, Annual Rate	5.9	5.4	5.2	5.9	6.8	5.7	5.7	5.3
Supplements to Wages and Salaries	49.682	50.072	50.464	50.855	51.460	51.862	52.224	52.590
% Ch, Annual Rate	4.5	3.2	3.2	3.1	4.8	3.2	2.8	2.8
Proprietor's Income	33.322	33.636	33.834	34.117	34.372	34.605	34.791	34.990
% Ch, Annual Rate	3.3	3.8	2.4	3.4	3.0	2.7	2.2	2.3
Farm	1.148	1.115	1.082	1.052	1.031	1.007	0.992	0.981
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	32.174	32.521	32.752	33.065	33.341	33.598	33.799	34.009
% Ch, Annual Rate	4.1	4.4	2.9	3.9	3.4	3.1	2.4	2.5
Less: Contribution For Govt. Soc. Ins.	36.870	37.253	37.600	37.946	38.627	38.942	39.242	39.575
% Ch, Annual Rate	8.4	4.2	3.8	3.7	7.4	3.3	3.1	3.4
Plus: Residence Adjustment	4.180	4.225	4.272	4.316	4.363	4.406	4.451	4.495
% Ch, Annual Rate	4.6	4.4	4.5	4.2	4.3	4.1	4.1	4.1
Dividends/Int./Rent	87.426	88.945	90.466	92.252	94.080	95.948	97.887	99.667
% Ch, Annual Rate	6.8	7.1	7.0	8.1	8.2	8.2	8.3	7.5
Transfer Payments	62.041	62.797	63.571	64.364	65.759	66.477	67.224	67.989
% Ch, Annual Rate	8.9	5.0	5.0	5.1	9.0	4.4	4.6	4.6
State U.I. Benefits	0.682	0.632	0.588	0.560	0.552	0.558	0.570	0.581
% Ch, Annual Rate	-30.7	-26.2	-25.2	-17.8	-5.8	5.0	8.2	8.6
Other Transfers	61.359	62.164	62.983	63.804	65.208	65.919	66.654	67.407
% Ch, Annual Rate	9.5	5.4	5.4	5.3	9.1	4.4	4.5	4.6

Table A3.4 (continued)

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

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	471.679	473.959	476.078	483.744	494.149	496.441	498.324	506.733
% Ch, Annual Rate	9.3	1.9	1.8	6.6	8.9	1.9	1.5	6.9
Total Wage and Salary Disbursements	248.222	247.653	247.097	252.221	259.560	259.210	258.582	264.241
% Ch, Annual Rate	12.2	-0.9	-0.9	8.6	12.2	-0.5	-1.0	9.0
Manufacturing	24.150	24.366	24.608	24.854	25.095	25.351	25.630	25.911
% Ch, Annual Rate	4.1	3.6	4.0	4.1	3.9	4.2	4.5	4.5
Durable Manufacturing	19.003	19.173	19.361	19.555	19.746	19.952	20.181	20.411
% Ch, Annual Rate	4.1	3.6	4.0	4.1	4.0	4.2	4.7	4.6
Nondurable Manufacturing	5.147	5.193	5.247	5.298	5.349	5.399	5.449	5.501
% Ch, Annual Rate	4.0	3.6	4.2	4.0	3.9	3.9	3.7	3.8
Nonmanufacturing	215.782	214.946	214.098	218.940	225.872	225.212	224.250	229.589
% Ch, Annual Rate	13.4	-1.5	-1.6	9.4	13.3	-1.2	-1.7	9.9
Other Private Wages	1.390	1.401	1.411	1.422	1.435	1.446	1.457	1.469
% Ch, Annual Rate	3.1	3.3	3.0	3.1	3.5	3.2	3.2	3.2
Farm Wages	2.135	2.159	2.182	2.206	2.233	2.258	2.283	2.309
% Ch, Annual Rate	4.5	4.6	4.3	4.4	4.9	4.5	4.6	4.6
Military Wages	4.765	4.780	4.798	4.799	4.926	4.943	4.961	4.963
% Ch, Annual Rate	11.1	1.3	1.5	0.1	11.0	1.4	1.5	0.1
Nonwage Personal Income	223.457	226.306	228.981	231.523	234.590	237.231	239.742	242.492
% Ch, Annual Rate	6.1	5.2	4.8	4.5	5.4	4.6	4.3	4.7
Supplements to Wages and Salaries	53.153	53.544	53.891	54.235	54.817	55.135	55.489	55.860
% Ch, Annual Rate	4.4	3.0	2.6	2.6	4.4	2.3	2.6	2.7
Proprietor's Income	35.176	35.458	35.737	35.984	36.245	36.530	36.832	37.144
% Ch, Annual Rate	2.1	3.2	3.2	2.8	2.9	3.2	3.3	3.4
Farm	0.969	0.961	0.956	0.952	0.951	0.950	0.949	0.949
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	34.207	34.497	34.780	35.031	35.294	35.581	35.883	36.195
% Ch, Annual Rate	2.4	3.4	3.3	2.9	3.0	3.3	3.4	3.5
Less: Contribution For Govt. Soc. Ins.	40.292	40.624	40.929	41.304	42.109	42.439	42.774	43.114
% Ch, Annual Rate	7.4	3.3	3.0	3.7	8.0	3.2	3.2	3.2
Plus: Residence Adjustment	4.543	4.588	4.634	4.681	4.731	4.779	4.828	4.878
% Ch, Annual Rate	4.3	4.0	4.1	4.1	4.3	4.1	4.1	4.2
Dividends/Int./Rent	101.400	103.084	104.603	106.061	107.520	108.962	110.202	111.559
% Ch, Annual Rate	7.1	6.8	6.0	5.7	5.6	5.5	4.6	5.0
Transfer Payments	69.477	70.256	71.046	71.866	73.386	74.264	75.165	76.166
% Ch, Annual Rate	9.1	4.6	4.6	4.7	8.7	4.9	4.9	5.4
State U.I. Benefits	0.601	0.601	0.609	0.612	0.618	0.629	0.638	0.644
% Ch, Annual Rate	14.1	0.3	4.9	2.4	4.0	6.9	6.1	3.8
Other Transfers	68.877	69.655	70.438	71.254	72.768	73.635	74.527	75.522
% Ch, Annual Rate	9.0	4.6	4.6	4.7	8.8	4.9	4.9	5.4

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	2.329	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
2016	1.107	1.1	2.400	1.3	2.550	2.3
Forecast						
2017	1.126	1.7	2.459	2.5	2.620	2.8
2018	1.143	1.5	2.508	2.0	2.675	2.1
2019	1.162	1.7	2.557	2.0	2.730	2.1
2020	1.184	1.9	2.614	2.2	2.793	2.3
2021	1.207	1.9	2.673	2.3	2.858	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	
	Index	Percent Change	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	17.9	5.5	22.8	2.3	7.4	6.4	14.0	0.7
1972	18.7	4.2	23.9	4.8	7.5	0.6	14.2	1.3
1973	19.6	4.8	26.9	12.7	8.6	14.6	15.5	9.6
1974	21.3	8.5	31.0	15.2	13.6	58.9	21.0	35.1
1975	23.1	8.6	33.3	7.5	14.8	8.5	22.4	6.7
1976	24.7	6.9	34.0	1.9	15.9	7.3	23.3	4.2
1977	26.6	7.5	36.0	5.9	17.9	13.2	24.7	5.8
1978	28.6	7.8	39.4	9.6	19.0	5.7	25.8	4.3
1979	31.0	8.4	43.3	9.8	26.2	37.9	34.5	34.0
1980	34.2	10.3	46.9	8.4	36.7	40.4	47.9	38.8
1981	37.7	10.2	50.3	7.1	44.9	22.3	53.3	11.3
1982	40.6	7.8	51.6	2.6	44.1	-1.9	50.6	-5.1
1983	43.2	6.2	52.2	1.1	40.6	-7.8	48.9	-3.3
1984	45.4	5.2	53.7	3.0	41.5	2.2	48.2	-1.5
1985	47.7	5.0	54.3	1.1	39.9	-3.9	48.6	0.8
1986	49.6	4.1	55.6	2.4	31.2	-21.7	38.2	-21.5
1987	51.1	2.9	57.4	3.2	32.1	2.6	39.6	3.8
1988	53.5	4.8	59.1	3.0	32.0	0.0	40.0	0.8
1989	56.0	4.6	62.2	5.3	34.0	6.0	43.7	9.2
1990	58.5	4.5	65.2	4.9	40.9	20.4	49.7	13.8
1991	60.7	3.8	67.3	3.1	38.9	-4.8	49.1	-1.3
1992	62.8	3.5	67.8	0.8	37.3	-4.1	48.9	-0.4
1993	65.0	3.5	68.7	1.4	37.1	-0.7	48.4	-1.0
1994	66.8	2.7	69.9	1.7	36.4	-1.8	48.6	0.5
1995	68.6	2.7	71.4	2.2	36.1	-0.9	49.4	1.6
1996	70.5	2.7	73.6	3.1	40.9	13.3	52.4	6.1
1997	72.4	2.8	75.0	1.9	41.0	0.2	52.4	0.0
1998	73.9	2.1	75.9	1.3	36.3	-11.4	45.6	-12.9
1999	75.4	2.0	77.2	1.6	36.9	1.7	49.6	8.9
2000	77.5	2.8	79.0	2.3	54.1	46.6	63.4	27.8
2001	79.9	3.1	81.3	2.9	53.1	-2.0	61.2	-3.6
2002	82.0	2.6	82.5	1.5	47.3	-10.8	57.5	-6.0
2003	84.5	3.1	84.1	1.9	57.2	20.9	67.0	16.5
2004	87.1	3.0	86.7	3.1	66.6	16.4	78.8	17.6
2005	89.9	3.3	88.2	1.7	88.6	33.0	95.8	21.6
2006	93.0	3.4	89.7	1.7	100.7	13.7	108.0	12.8
2007	96.0	3.2	93.2	3.9	107.7	6.9	117.1	8.4
2008	98.9	3.1	98.9	6.1	146.0	35.6	136.6	16.6
2009	100.0	1.1	100.0	1.2	100.0	-31.5	100.0	-26.8
2010	101.7	1.7	100.3	0.3	117.0	17.0	118.2	18.2
2011	103.5	1.8	104.3	4.0	148.8	27.2	149.3	26.3
2012	105.8	2.2	106.7	2.3	150.7	1.3	154.7	3.6
2013	108.3	2.3	107.8	1.1	148.9	-1.2	149.7	-3.2
2014	110.9	2.5	109.8	1.8	148.3	-0.4	144.0	-3.8
2015	113.1	2.0	111.0	1.1	105.5	-28.8	106.2	-26.3
2016	115.7	2.3	110.0	-0.9	88.8	-15.9	94.2	-11.3
Forecast								
2017	118.5	2.4	109.7	-0.3	101.7	14.6	104.8	11.3
2018	121.1	2.2	111.5	1.7	105.3	3.5	105.0	0.2
2019	123.9	2.3	113.8	2.1	107.9	2.5	105.5	0.4
2020	127.0	2.5	115.9	1.8	111.5	3.3	107.1	1.5
2021	130.2	2.5	117.7	1.5	115.7	3.8	109.3	2.1

Table A5.1

**Washington Resident Population and Components of Change\***  
(Thousands)

	<u>Population</u>	<u>Change</u>	<u>Percent Change</u>	<u>Births</u>	<u>Deaths</u>	<u>Net Migration</u>
1970	3413.2	16.2	0.5	59.9	30.0	-13.7
1971	3436.3	23.1	0.7	60.0	29.8	-7.1
1972	3430.3	-6.0	-0.2	53.1	30.4	-28.7
1973	3444.3	14.0	0.4	47.7	30.4	-3.3
1974	3508.7	64.4	1.9	48.2	29.9	46.1
1975	3567.9	59.2	1.7	50.1	30.3	39.4
1976	3634.9	67.0	1.9	51.4	30.2	45.8
1977	3715.4	80.5	2.2	54.2	29.1	55.4
1978	3836.2	120.8	3.3	57.3	30.4	93.9
1979	3979.2	143.0	3.7	60.2	30.2	113.0
1980	4132.2	153.0	3.8	65.4	31.3	118.9
1981	4229.3	97.1	2.4	68.2	31.8	60.8
1982	4276.5	47.3	1.1	70.1	31.7	8.9
1983	4307.2	30.7	0.7	69.5	32.5	-6.2
1984	4354.1	46.8	1.1	68.5	33.2	11.6
1985	4415.8	61.7	1.4	69.1	34.0	26.6
1986	4462.2	46.4	1.1	70.2	34.0	10.2
1987	4527.1	64.9	1.5	69.3	34.4	30.0
1988	4616.9	89.8	2.0	71.0	36.0	54.8
1989	4728.1	111.2	2.4	73.0	36.0	74.2
1990	4866.7	138.6	2.9	76.4	36.2	98.5
1991	5000.4	133.7	2.7	79.1	36.6	91.2
1992	5091.1	90.8	1.8	80.2	37.2	47.7
1993	5188.0	96.9	1.9	79.1	39.4	57.1
1994	5291.6	103.6	2.0	78.2	39.5	64.9
1995	5396.6	105.0	2.0	77.5	40.0	67.5
1996	5483.1	86.5	1.6	77.0	41.2	50.7
1997	5579.1	96.0	1.8	78.0	42.6	60.6
1998	5685.5	106.3	1.9	78.8	41.6	69.1
1999	5792.2	106.8	1.9	79.8	43.1	70.1
2000	5894.1	101.9	1.8	79.9	43.7	65.8
2001	5970.5	76.3	1.3	80.7	43.9	39.5
2002	6059.7	89.2	1.5	79.3	44.9	54.9
2003	6126.9	67.2	1.1	79.1	44.7	32.9
2004	6208.5	81.6	1.3	81.0	46.0	46.7
2005	6298.8	90.3	1.5	81.8	45.6	54.0
2006	6420.2	121.4	1.9	83.2	45.3	83.5
2007	6525.1	104.9	1.6	87.8	46.2	63.3
2008	6608.2	83.1	1.3	89.6	47.9	41.5
2009	6672.3	64.0	1.0	89.8	48.1	22.3
2010	6724.5	52.3	0.8	88.4	47.7	11.5
2011	6767.9	43.4	0.6	86.4	48.8	5.8
2012	6817.8	49.9	0.7	87.1	49.2	12.0
2013	6882.4	64.6	0.9	87.3	51.1	28.5
2014	6968.2	85.8	1.2	87.0	50.7	49.5
2015	7061.4	93.2	1.3	88.5	52.8	57.6
2016	7183.7	122.3	1.7	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	February 2017	+
U.S. Real GDP Growth	4th quarter 2016	-
U.S. ISM Index	February 2017	+
U.S. Employment Y-O-Y%Δ	February 2017	unchanged
U.S. Unemployment Rate	February 2017	+
U.S. Consumer Confidence	March 2017	+
U.S. Consumer Sentiment	March 2017	+
U.S. Light Vehicle Sales	February 2017	unchanged
U.S. CPI Y-O-Y%Δ	February 2017	-
U.S. Home Prices Y-O-Y%Δ	January 2017	+
S&P 500 Index	March 2017	+
WA Leading Index	February 2017	+
WA ISM-WW Index	February 2017	-
WA Employment Y-O-Y%Δ	October 2016	-
WA Aerospace Empl. Y-O-Y%Δ	February 2017	-
WA Unemployment Rate	February 2017	+
WA Help Wanted Index	February 2017	-
WA Business Cycle Indicator	February 2017	-
WA Initial Unemploy. Claims	February 2017	-
WA Housing Permits	February 2017	+
WA Weekly Hours in Mfg.	February 2017	-
WA New Vehicle Registration	February 2017	-
WA In-Migration	February 2017	-
WA Exports-Total Y-O-Y%Δ	4th quarter 2016	-
WA Exports- w/o Trans. Equip. Y-O-Y%Δ	4th quarter 2016	+
Seattle CPI Y-O-Y%Δ	February 2017	-
Seattle Home Prices Y-O-Y%Δ	January 2017	+
WA Construction Activity Index	February 2017	-

\*Change from the previous reading

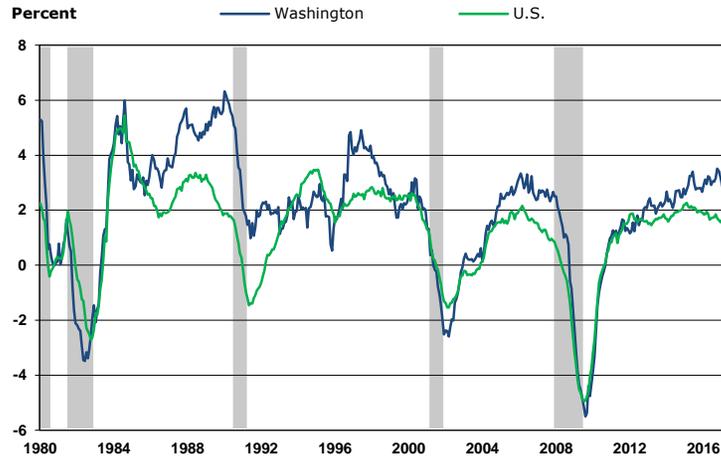
Table A6.2  
**Washington Business Indicators**  
 Historical Data

	<b>WA Index of Leading Indicators</b>	<b>U.S. Index of Leading Indicators</b>	<b>WA State Business Cycle Indicator</b>	<b>WA State Construction Index</b>	<b>WA State Help Wanted Index</b>	<b>WA Purchasing Management Index</b>	<b>U.S. Purchasing Management Index</b>
<b>2014:01</b>	115.9	113.7	44.5	94.7	118.2	63.5	51.8
<b>2014:02</b>	115.6	114.3	43.0	92.4	118.5	68.7	54.3
<b>2014:03</b>	116.5	115.4	43.8	94.1	118.6	63.6	54.4
<b>2014:04</b>	117.2	115.8	46.2	97.1	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>	118.6	117.2	47.2	97.3	121.0	67.0	55.7
<b>2014:07</b>	118.9	118.4	48.8	97.8	121.3	50.1	56.4
<b>2014:08</b>	118.9	118.5	48.8	98.1	121.6	62.9	58.1
<b>2014:09</b>	118.6	119.2	49.0	99.0	114.3	60.3	56.1
<b>2014:10</b>	119.3	119.9	48.9	100.7	119.0	57.6	57.9
<b>2014:11</b>	120.0	120.5	51.2	101.3	128.0	63.1	57.6
<b>2014:12</b>	119.6	121.0	51.4	102.5	122.0	53.3	55.1
<b>2015:01</b>	119.4	121.2	53.1	98.3	127.6	66.6	53.5
<b>2015:02</b>	120.5	120.9	57.7	107.8	137.2	65.9	52.9
<b>2015:03</b>	120.1	121.5	57.8	100.9	138.8	64.1	51.5
<b>2015:04</b>	120.3	122.2	58.7	99.6	135.7	60.4	51.5
<b>2015:05</b>	120.6	122.8	59.0	98.3	139.0	60.3	52.8
<b>2015:06</b>	120.9	122.9	59.0	99.7	136.0	51.4	53.5
<b>2015:07</b>	120.6	122.8	60.1	100.3	141.0	53.6	52.7
<b>2015:08</b>	120.3	122.8	58.9	99.5	139.1	48.0	51.1
<b>2015:09</b>	118.9	122.6	58.2	95.4	126.6	48.0	50.2
<b>2015:10</b>	120.0	123.2	59.6	99.5	132.4	46.1	50.1
<b>2015:11</b>	120.3	123.7	60.1	99.9	134.3	50.0	48.6
<b>2015:12</b>	119.8	123.3	62.5	98.2	130.7	54.5	48.0
<b>2016:01</b>	119.5	123.0	64.8	100.2	128.7	57.2	48.2
<b>2016:02</b>	119.8	123.0	65.9	100.9	124.9	55.4	49.7
<b>2016:03</b>	120.4	123.0	64.4	101.0	128.9	55.7	51.7
<b>2016:04</b>	121.4	123.6	65.1	102.3	130.9	50.8	50.7
<b>2016:05</b>	122.1	123.4	67.8	102.1	148.2	49.2	51.0
<b>2016:06</b>	122.0	122.9	68.1	100.9	151.3	49.1	52.8
<b>2016:07</b>	122.4	123.5	69.3	101.6	156.3	50.8	52.3
<b>2016:08</b>	122.1	123.4	67.7	99.3	153.1	47.7	49.4
<b>2016:09</b>	122.4	123.7	68.5	103.4	143.4	51.4	51.7
<b>2016:10</b>	122.2	123.9	69.6	99.5	152.3	53.1	52.0
<b>2016:11</b>	122.0	124.0	71.1	101.7	148.8	53.3	53.5
<b>2016:12</b>	121.7	124.7	71.4	101.9	149.2	47.3	54.5
<b>2017:01</b>	122.4	125.5	71.6	99.9	152.5	54.2	56.0
<b>2017:02</b>	121.7	126.2	70.2	98.9	140.1	48.6	57.7

# Figure A7.1: Washington State Economic Indicators

## Year-over-Year Employment Growth

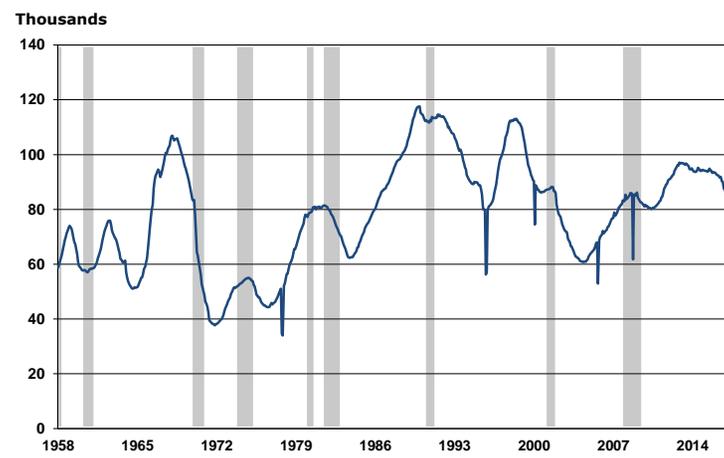
January 1980 to February 2017



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

## Washington Aircraft and Parts Employment

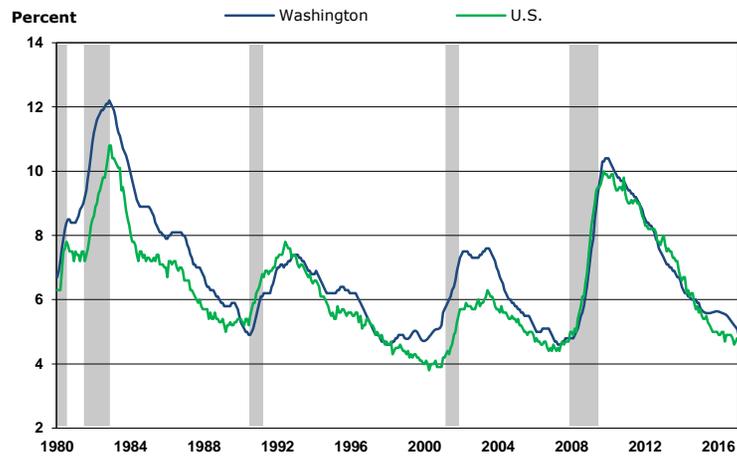
January 1958 to February 2017



\* Source: Bureau of Labor Statistics, ERFC

## Unemployment Rate, S.A.

January 1980 to February 2017



\* Source: Bureau of Labor Statistics

## Washington Business Cycle Indicator

January 1968 to February 2017



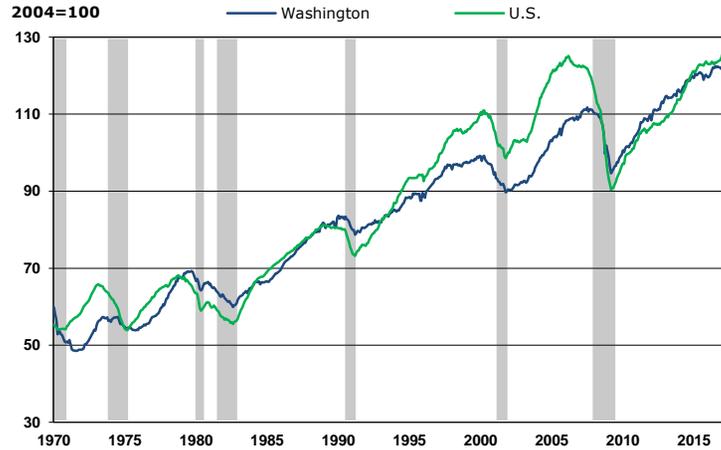
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.2: Washington State Leading Indicators

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

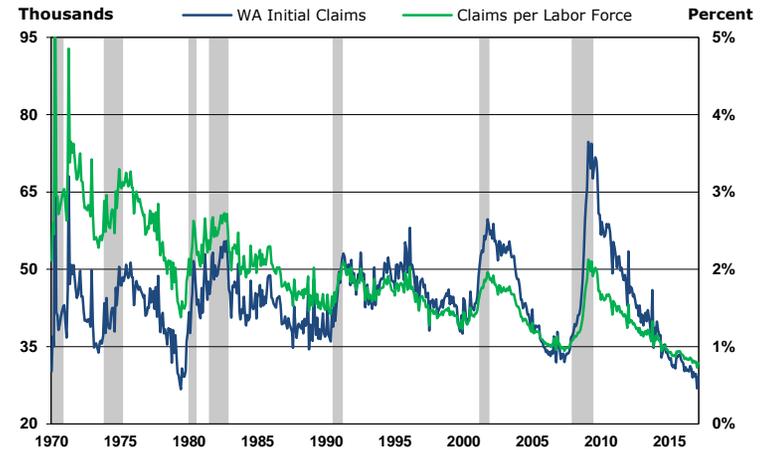
January 1970 to February 2017



\* The Conference Board, ERFC

## Washington Initial Claims for Unemployment Insurance

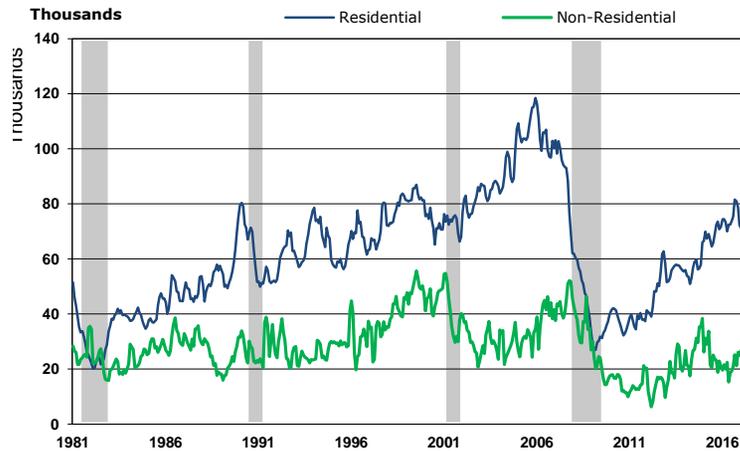
January 1970 to February 2017, S.A.



\* Source: WA State Employment Security, ERFC

## Square Footage of Construction Projects in WA State

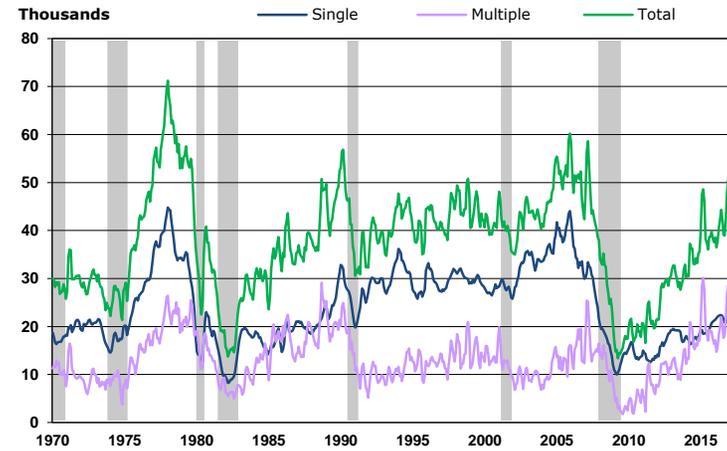
January 1981 to February 2017, 3mma, SAAR



\* Source: McGraw-Hill Construction, ERFC

## Housing Units Authorized in Washington State

January 1970 to February 2017, 3mma, SAAR



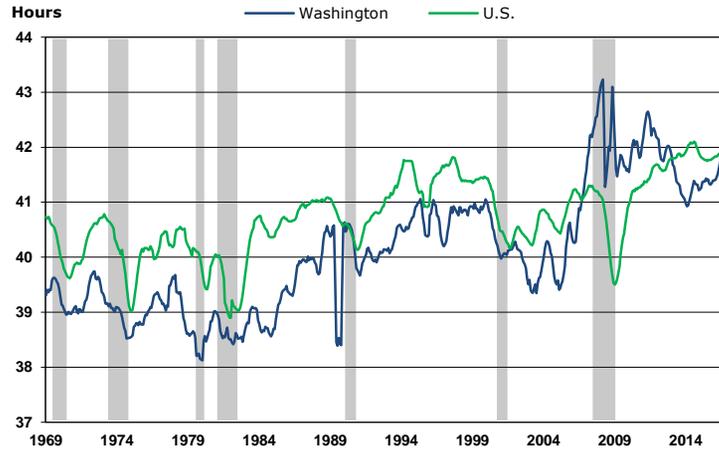
\* Source: Census Bureau, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.3: Other State Economic Indicators

## Average Weekly Hours in Manufacturing

June 1969 to February 2017, 6-Mo. Moving Average, S.A.



\* Bureau of Labor Statistics, ERFC

## Washington Driver's License In-Migration

January 1988 to February 2017, 12-Month Moving Average



\* Source: WA State Department of Licensing, ERFC

## New Car and Truck Registrations in Washington

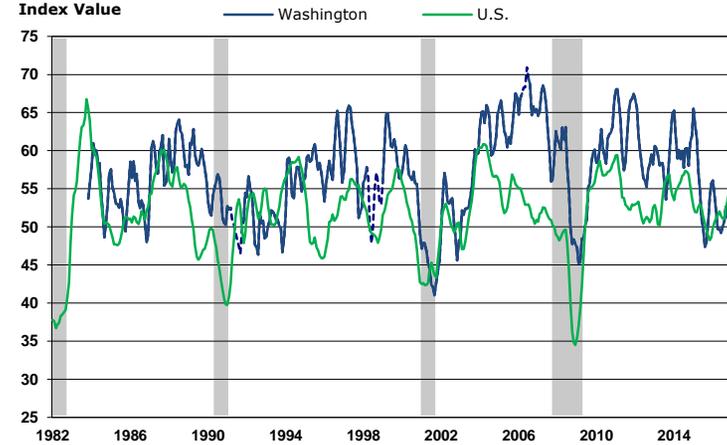
September 1970 to February 2017, 3-Month Moving Average, S.A.



\* Source: WA State Department of Licensing, ERFC

## Institute for Supply Management Index

March 1982 to February 2017, 3-Month Moving Average, S.A.



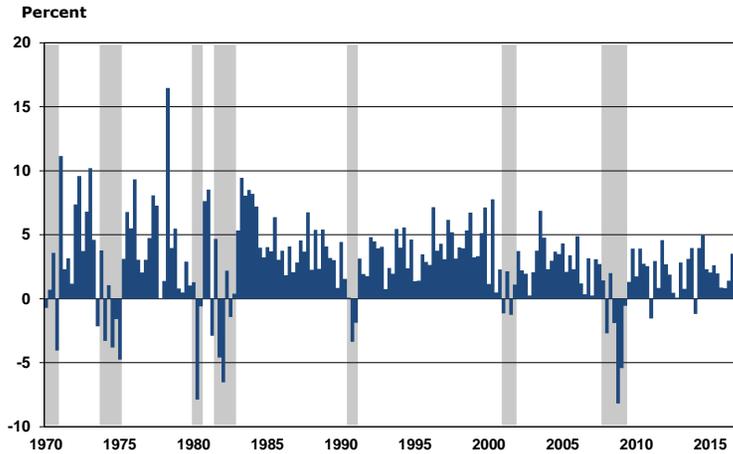
\* Source: Institute for Supply Management, ISM-WW, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.4: Other Economic Indicators

## Quarterly U.S. Real GDP Growth

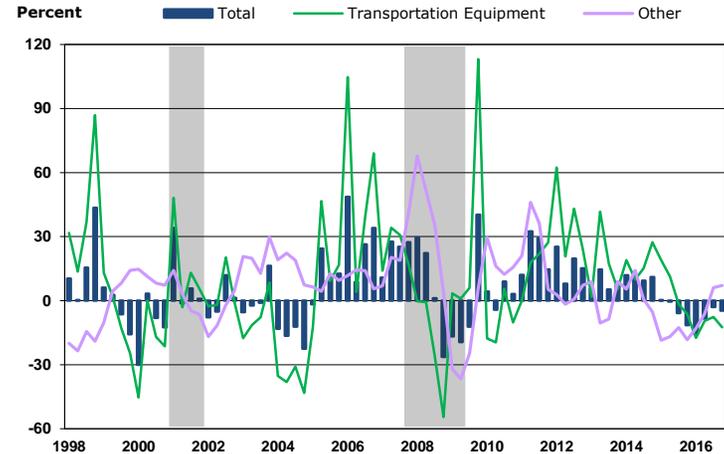
1970Q1 to 2016Q4, SAAR



\* Source: Bureau of Economic Analysis

## Washington State Export Composition

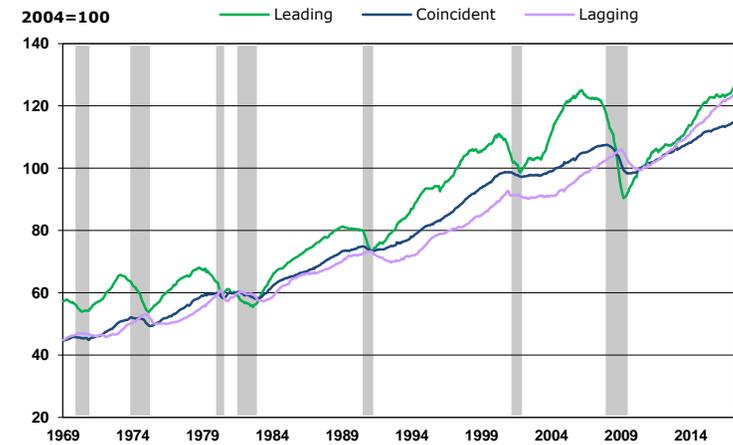
1998Q1 to 2016Q4, Year-over-year percent change



\* Source: WISER

## U.S. Economic Indicators

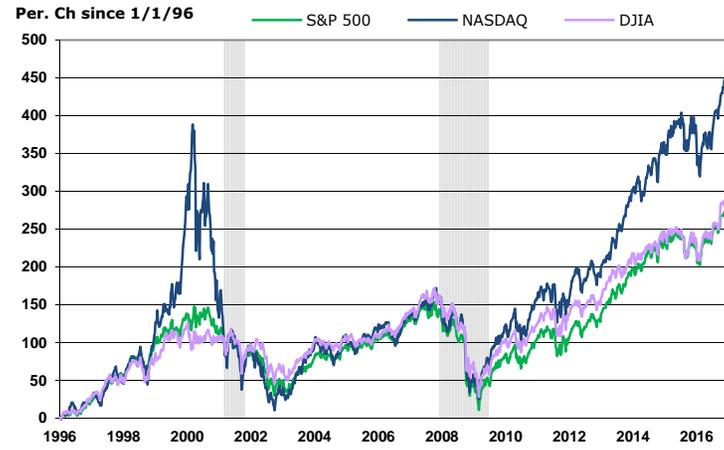
January 1969 to February 2017



\* Source: The Conference Board

## National Stock Indexes

January 1, 1996 to March 24, 2017



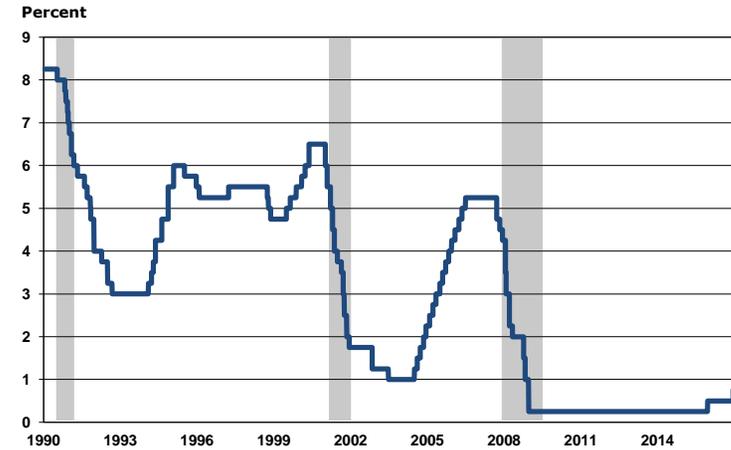
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix

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

**Federal Funds Target Rate**

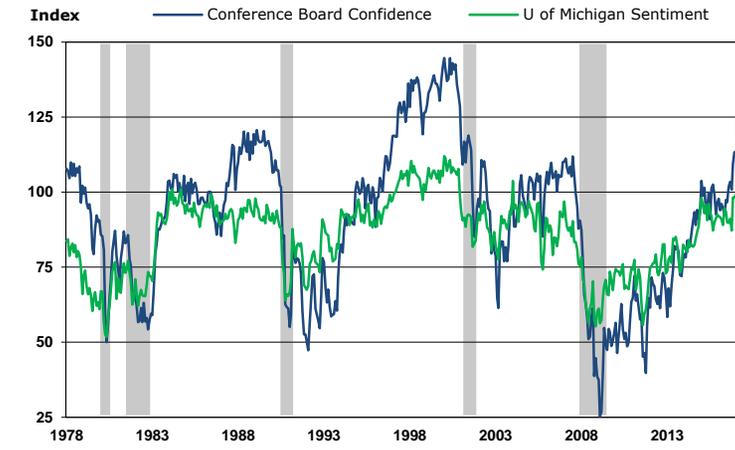
January 1, 1990 to March 31, 2017



\* Federal Reserve

**Consumer Confidence**

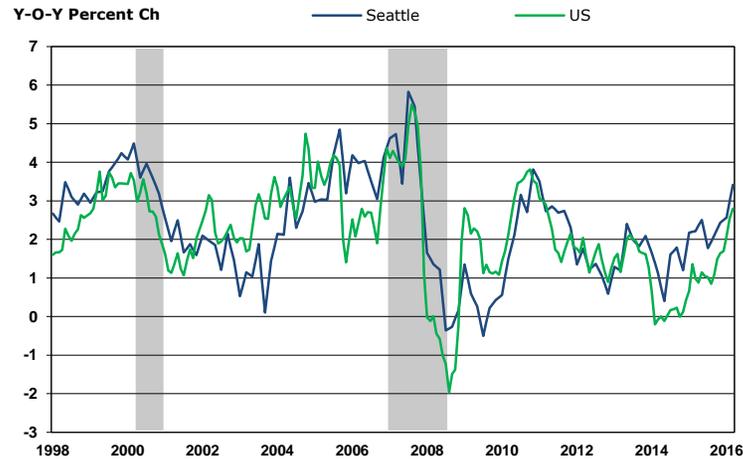
March 1978 to March 2017



\* Source: The Conference Board, University of Michigan

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

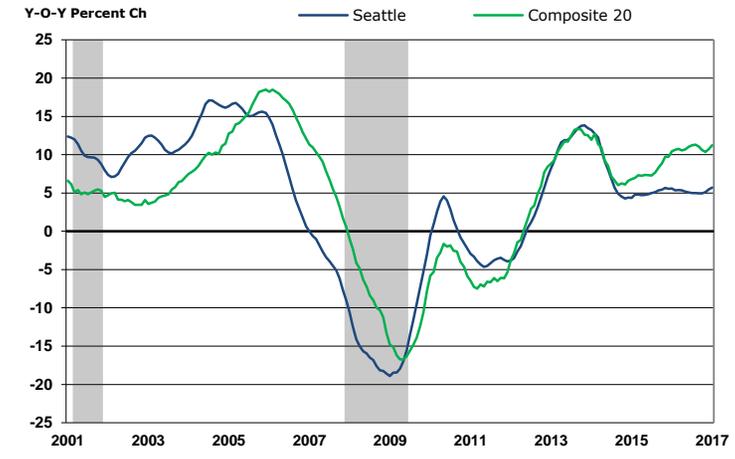
December 1998 to February 2017



\* Source: Bureau of Labor Statistics

**Case Shiller Home Price Index**

January 2001 to January 2017, SA



\* Source: Case Shiller, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

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## Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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