How Much Longer Can the Expansion Continue?
We are Still in the “Goldilocks Zone”!

U.S. Has Added Jobs for 109 Straight Months;
Unemployment is Stable at Under 4%; and
Wages Are (Finally) Picking Up!
The U.S. Economy
We Will Add More Jobs, But at a Slower Pace

Non-Farm Payrolls: Monthly Average Growth

Source: BLS with Windermere Economics Forecasts
As Job Openings Are Starting to Soften

Total Job Openings

Source: BLS
Unemployment Rates
Still Looking Good

Source: BLS – Data through Oct. 2019
Inflation is Making Fed Decisions Harder to Predict

Core Consumer Prices

12 Mo. % Change

0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0%

Source: BLS – All Items - Data Through Sept. 2019
The Gardner Misery Index
(Unemployment + Inflation)

Source: Windermere Economics Analysis of BEA & BLS data
U.S. Income Growth has Flattened

Average Hourly Earnings

Source: BLS & Windermere Economics – Data Thru’ Sept. 2019
& Real Income Growth is Still Disappointing

Real Average Hourly Earnings

Source: BLS & Windermere Economics – Data Thru’ Sept. 2019
Business Confidence is Dropping

Business Confidence Index (BCI)

Index Level

Source: OECD - Main Economic Indicators: Business tendency and consumer opinion survey
Is a Recession Looming?
Average Number of Months Between Recessions

Source: Federal Reserve & Windermere Economics
Recession Indicators

- The Yield Curve;
- The Natural Unemployment Rate;
- ISM Manufacturing Index; and
- Consumer Sentiment.
1. The Yield Curve

Start of a Recession

10-2 Treasury Spread

50 years and 7 recessions with a perfect record!

Source: Federal Reserve Bank & Windermere Economics
Daily Yield Curve

Daily 10-2 Treasury Spread

% Point Spread

Source: Federal Reserve Bank & Windermere Economics
Daily Yield Curve

Daily 10-3 Month Treasury Spread

Source: Federal Reserve Bank & Windermere Economics
Gap between the unemployment rate and its low point over the previous 12 months

Worry When the Spread Hits 0.3%

Source: BLS – Spread between current rate & 12-Mo Low
3. ISM Manufacturing Index

ISM Composite Index

Worry When it Drops Below 45

Source: Trading Economics
4. Consumer Sentiment

Source: University of Michigan; 12 Month Change in Sentiment: analyzed by Windermere Economics

Worry When the Annual Drop Hits 15%
Recession Indicators

- The Yield Curve;
- The Natural Unemployment Rate;
- ISM Manufacturing Index; and
- Consumer Sentiment.
What Are We Worried About?

- Trade Wars Dragging On;
- Rising Tariffs Against the EU;
- US Limiting Portfolio Investments in China;
- EU Retaliation on Boeing Subsidies;
- The USMCA Not Passing; and
- The Potential for Another Gov’t Shutdown.
Best Case Scenario
(65% Likelihood)

United States Real Gross Domestic Product
(Quarterly Growth Rate)

Source: BEA w/ Windermere Economics Forecasts
Worse Case Scenario
(35% Likelihood)

United States Real Gross Domestic Product
(Quarterly Growth Rate)

Source: BEA w/ Windermere Economics Forecasts
Trade Wars Unlikely To Be Fully Resolved Any Time Soon;
Roughly 2.0M New Jobs Will be Added in 2020;
Unemployment Rate Ends ‘19 at 3.6%, Rising to 4.3.% by the End of ‘20; and
**We Should Start to See Real Wage Growth Improve Next Year.**
The Seattle Metro Area Economy
Employment Growth Forecast (2020)

Source: Windermere Economics – Updated 10/19
Comparative Employment (y/y)

Annual Employment Growth in Major West Coast Markets

<table>
<thead>
<tr>
<th>City</th>
<th>Year-Over-Year Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle</td>
<td>3.5%</td>
</tr>
<tr>
<td>San Jose</td>
<td>3.1%</td>
</tr>
<tr>
<td>Boise</td>
<td>3.0%</td>
</tr>
<tr>
<td>Tacoma</td>
<td>2.8%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>2.6%</td>
</tr>
<tr>
<td>Phoenix</td>
<td>2.3%</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>2.2%</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>2.1%</td>
</tr>
<tr>
<td>San Diego</td>
<td>1.8%</td>
</tr>
<tr>
<td>Portland</td>
<td>1.8%</td>
</tr>
<tr>
<td>Denver</td>
<td>1.7%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Source: BLS – Sept. 2018 to Sept. 2019
Comparative Employment (y/y)

12-Month Employment Growth

<table>
<thead>
<tr>
<th>City</th>
<th>Employment Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacoma</td>
<td>7.0%</td>
</tr>
<tr>
<td>Seattle</td>
<td>3.1%</td>
</tr>
<tr>
<td>Kennewick</td>
<td>2.8%</td>
</tr>
<tr>
<td>Bremerton</td>
<td>1.8%</td>
</tr>
<tr>
<td>Wenatchee</td>
<td>1.5%</td>
</tr>
<tr>
<td>Yakima</td>
<td>0.8%</td>
</tr>
<tr>
<td>Longview</td>
<td>0.7%</td>
</tr>
<tr>
<td>Spokane</td>
<td>0.5%</td>
</tr>
<tr>
<td>Olympia</td>
<td>0.4%</td>
</tr>
<tr>
<td>Bellingham</td>
<td>0.1%</td>
</tr>
<tr>
<td>Mount Vernon</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>

Source: BLS – Sept. 2018 to Sept. 2019
Statewide Unemployment Rates

Source: WA ESD – Sept. 2019
Employment Growth
Seattle Metro Area

Seattle MSA Employment Growth

Source: WA ESD w/ Windermere Economics Forecasts – 12-Month Average Change
Sectoral Growth
Seattle MSA

1/ Transportation, Warehousing & Utilities
Sept. 2018 – Sept. 2019
Relative Unemployment Rates

Source: WA ESD – Data thru’ Sept. 2019

U.S.  WA State  Seattle MSA
Housing is Pushing People Out
Residual Migration Patterns

Source: Windermere Economics, WA OFM
Will the last person leaving SEATTLE -
Turn out the lights.
Aerospace Employment

Source: WA ESD

77,500
92,200
76,100
84,200
8.6% Growth – or 6,700 New Jobs

Source: WA ESD
Industry Diversification

SEATTLE EMPLOYERS
- Amazon
- Starbucks
- Google
- Bill & Melinda Gates Foundation
- Fred Hutchinson Cancer Research Center
- NORDSTROM
- Expeditors
- Weyerhaeuser
- Columbia Bank
- DaVita
- State Farm

EASTSIDE EMPLOYERS
- Microsoft
- Expedia
- Amazon
- PACCAR
- Concur
- Facebook
- Tableau
- Syntegra
- Costco
- Valve
- Costco Wholesale
- Seattle Genetics
- REI
- AT&T

TACOMA EMPLOYERS
- Boeing
- Alaska Airlines
- Trident
- Kaiser Permanente
- Providence Health & Services

OTHER PUGET SOUND EMPLOYERS
- Boeing
- Alaska Airlines
- Trident
- Kaiser Permanente
- Providence Health & Services
How Important is Technology to Seattle?
### By the Numbers: Technology in Seattle

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs in Tech</td>
<td>298,555</td>
</tr>
<tr>
<td>Net New Jobs in 2018</td>
<td>11,550</td>
</tr>
<tr>
<td>YoY Change in Net Tech Employment</td>
<td>4.0%</td>
</tr>
<tr>
<td>Employment as a % of Total Workforce</td>
<td>14.2%</td>
</tr>
<tr>
<td>Tech Companies</td>
<td>10,346</td>
</tr>
<tr>
<td>Tech Occupation Job Postings (2018)</td>
<td>93,303</td>
</tr>
<tr>
<td>Emerging Tech Job Postings % Change</td>
<td>66%</td>
</tr>
<tr>
<td>Net Tech Employment Rank</td>
<td>9th</td>
</tr>
<tr>
<td>Net Tech Jobs Added Rank</td>
<td>4th</td>
</tr>
<tr>
<td>Economic Impact Rank</td>
<td>3rd</td>
</tr>
</tbody>
</table>

Source: CBRE & Windermere Economics
Amazon in Bellevue

Amazon.com's Puget Sound Occupancy

3.6 Million SqFt in Bellevue by End of 2024, but this Could Grow to 4.8M SqFt

Source: CBRE & Windermere Economics
<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Hours of vehicle travel daily per motorist</td>
<td>36</td>
<td>49</td>
</tr>
<tr>
<td>Average additional time (minutes) it takes to drive during peak period</td>
<td>31</td>
<td>48</td>
</tr>
<tr>
<td>Number of traffic collisions</td>
<td>52,000</td>
<td>63,000</td>
</tr>
<tr>
<td>Commercial aircraft delay hours</td>
<td>11,000</td>
<td>115,000</td>
</tr>
</tbody>
</table>
## WA Trade with China

<table>
<thead>
<tr>
<th>Type</th>
<th>Who</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of Exports</td>
<td>Washington Businesses, farmers</td>
<td>Displacement of Washington market share in China with cheaper competitors, such as Russia. Impairment of existing buyer relationships.</td>
</tr>
<tr>
<td>Reduction in cargo handling</td>
<td>Cargo handling operations, e.g., terminal operators, rail, trucking, logistics</td>
<td>Reduction in cargo flows, especially on imports, will potentially lead to labor reductions.</td>
</tr>
<tr>
<td>Supply chain disruptors</td>
<td>Washington businesses</td>
<td>Too expensive to procure from established sources due to tariffs, need to find new suppliers and likely more expensive.</td>
</tr>
<tr>
<td>Consumer goods more expensive</td>
<td>Washington households</td>
<td>Many products that are no longer produced on the U.S. and with inelastic demand will be more expensive for families.</td>
</tr>
<tr>
<td>Services exports &amp; investment impact</td>
<td>Washington service providers</td>
<td>While tariffs do not directly apply to services exports, services markets often follow development of goods markets.</td>
</tr>
</tbody>
</table>
Regional Economic Forecast for 2020

• Total Employment in the Seattle MSA Rises by 2.5% in 2020;

• Continued Corporate Growth – Mainly in Urban Hubs (Tech Continues as an Economic Driver);

• Income Growth Will Continue to Head Higher But at Slower Rates); and

• The Economy Will – Yet Again – Outperform the U.S. Next Year.
Regional Office Market
Absorption of Office Space
Seattle/Tacoma MSA

Source: CBRE History w/ Windermere Economics’ Forecasts
Vacancy Rates
Seattle/Tacoma MSA

Source: CBRE
Availability in New Buildings

Source: CBRE
Expectations

• We Work…;
• Seattle CBD Continues To Outperform – Driven by Tech Expansion (54% of U/C Space is Pre-leased);
• Look to the East (Bellevue CBD Lease Rates Now Over $58);
• Tacoma Establishing as a Start-Up Locale; and
• Fed Leading Borrowing Costs Lower!
Regional Industrial Market
Industrial Absorption
Seattle/Tacoma MSA

Source: CBRE History w/ Windermere Economics’ Forecasts
Total Available Space

Source: CBRE

Square Foot


17,131,162
Average Rental Rates
Seattle/Tacoma MSA

$0.80
$0.75
$0.70
$0.65
$0.60
$0.55
$0.50
$0.45
$0.40


Source: CBRE

67.1% Increase in Avg. Rates

$0.76
New Deliveries
Seattle/Tacoma MSA

Source: CBRE
Construction Activity
Seattle/Tacoma MSA

Source: CBRE
Expectations

• Construction Deliveries at a Decade High;
• Even with New Supply, Lease Rates are Up 6.5% y/y;
• Rental Rate “Fatigue” Setting into Some Markets;
• SeaPort Alliance Suggest 6.5% Growth in Container Volume – That Will Drive Demand; and
• Population Growth Continues to be a Significant Demand Driver.
The Income Property Market
2019 Average Tech Worker Salaries

Source: Hired.com
Adjusted for CoL

Main factors that affect the cost of living in a city:
- Rent
- Real estate
- Utilities
- Groceries
- Local taxes
- Transportation

Source: Ranked list of salary by COL adjustment (USD and local converted as of 12/31/2018)
## Drivers of Apartment Demand

**Still Room For Growth**

<table>
<thead>
<tr>
<th></th>
<th>Class A Office Rent</th>
<th>Median Home Sale Price</th>
<th>Median 1-Bed Apartment Rent</th>
<th>Avg. 2019 Tech Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td>$90 nnn</td>
<td>$1,805,000</td>
<td>$3,700</td>
<td>$145K/Year</td>
</tr>
<tr>
<td>Seattle</td>
<td>$50 nnn</td>
<td>$765,200</td>
<td>$1,880</td>
<td>$138K/Year</td>
</tr>
<tr>
<td>Seattle Savings:</td>
<td>44%</td>
<td>58%</td>
<td>49%</td>
<td>-5%*</td>
</tr>
</tbody>
</table>

* The marginal tax rate in California with $145K/year in earnings is 9.3%; Washington State does not have a state income tax.

Source: CoStar, Zillow, Zumper, Hired.com
Concentration of Development (U/C, Approved & Review)

60,854 Total Units

- **1,944 Units | 3%**
  - Fremont, Greenlake & Wallingford

- **1,990 Units | 3%**
  - Ballard

- **2,557 Units | 4%**
  - Queen Anne & Magnolia

- **8,501 Units | 14%**
  - South Lake Union, Eastlake, & Westlake

- **15,608 Units | 26%**
  - Belltown, Downtown, & Pioneer Square

- **2,345 Units | 4%**
  - West Seattle

- **3,515 Units | 6%**
  - Kirkland

- **6,467 Units | 11%**
  - University District & Roosevelt

- **1,947 Units | 3%**
  - West Bellevue & Mercer Island

- **2,530 Units | 4%**
  - Capitol Hill

- **2,546 Units | 4%**
  - Central District

- **5,400 Units | 9%**
  - First Hill & Yesler Terrace

- **5,504 Units | 9%**
  - South Seattle

Source: CoStar
Rent & Vacancy Rate Trends

Source: Kidder Matthews
## Rent & Vacancy Rate Trends

<table>
<thead>
<tr>
<th>Neighbourhood</th>
<th>Rent</th>
<th>Vacancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont, Greenlake &amp; Wallingford</td>
<td>$1,847</td>
<td>4.2%</td>
</tr>
<tr>
<td>Ballard</td>
<td>$1,887</td>
<td>4.9%</td>
</tr>
<tr>
<td>Queen Anne &amp; Magnolia</td>
<td>$1,866</td>
<td>3.4%</td>
</tr>
<tr>
<td>South Lake Union, Eastlake, &amp; Westlake</td>
<td>$2,403</td>
<td>6.9%</td>
</tr>
<tr>
<td>Belltown, Downtown, &amp; Pioneer Square</td>
<td>$2,643</td>
<td>6.1%</td>
</tr>
<tr>
<td>West Seattle</td>
<td>$1,738</td>
<td>5.4%</td>
</tr>
<tr>
<td>Kirkland</td>
<td>$1,981</td>
<td>5.1%</td>
</tr>
<tr>
<td>University District &amp; Roosevelt</td>
<td>$1,673</td>
<td>4.0%</td>
</tr>
<tr>
<td>West Bellevue &amp; Mercer Island</td>
<td>$2,497</td>
<td>5.1%</td>
</tr>
<tr>
<td>Capitol Hill</td>
<td>$1,793</td>
<td>3.1%</td>
</tr>
<tr>
<td>Central District</td>
<td>$1,698</td>
<td>4.5%</td>
</tr>
<tr>
<td>First Hill &amp; Yesler Terrace</td>
<td>$2,051</td>
<td>7.4%</td>
</tr>
<tr>
<td>South Seattle</td>
<td>$1,588</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

**Source:** Kidder Matthews
Rent & Vacancy Rate Trends (Urban)

Source: Kidder Matthews
Rent & Vacancy Rate Trends (Eastside)

Source: Kidder Matthews
Rent & Vacancy Rate Trends (So. King)

Source: Kidder Matthews
Emerging Trends

TRANSIT ORIENTED DEVELOPMENT (TOD)

We Will Continue to See Interest in, and Development of, Apartment Units that are Proximate to Mass Transit Stops
Closing Thoughts

• The Regional Economy Will Continue to Slow & So Will Demand – But I’d Rather Be Here than Anywhere Else!;
• Cheap Financing Continues to Drive New Development;
• Rising REET Costs Will Push Up Rents; and
• Rent Control Will Be a Big Topic in ‘20.
Questions?

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LinkedIn: Matthew Gardner
Facebook: Windermere Economics
Instagram: matthewgdnererecon