Economic & R.E. Outlook.

Where is the Momentum for 2017?

March 16, 2017
By: K.C. Conway
Disclaimer: Upfront and Not in fine print…

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Before I lay out my Outlook, What could go wrong?

The FED / Monetary Policy

Transportation / Shipping
Hanjin Bankruptcy

Capital for R.E. and Bank Regulation (HVCRE / Risk Retention)

Immigration & Education for a Skilled Workforce

Return of the “Old Testament” Hurricanes (Matthew), Floods, Plagues, Pests (Zika)

Security / Terrorism

Millennials Don’t Leave Home or ... pass Euthanasia Laws after learning about Reverse Mtg.

BREXIT / TRUMP
They don’t make things GREAT

Note: Nothing on Millennials. They have already solved the Puzzle (no commute, no housing costs, no kids, just enjoy life in the city 😊)
Let’s also deal upfront with the Elephant in the Room 😊

TRUMP Admin and Trade ...

• Not going back to an era of ISOLATION
• Moving from Multi-lateral Trade Agreements to Bi-Lateral (actually a stealth strategy)
• Won’t need to build a wall - USDA ‘Reefer’ strategy great for SE & Gulf ports and shift in Food Supply chain out of CA
“It’s a Small World with ... Big Economic Challenges”

One need only reflect upon the headlines of late regarding BREXIT, Trans-Pacific-Partnership (TPP), Hanjin shipping bankruptcy, and slowing GDP growth to realize that all is not harmonious in the global economy. The common threads that run through these headlines — as well as other noteworthy current events, such as the Syrian refugee crisis and U.S. “secure the border” movement front and center during the 2016 U.S. Presidential campaign — are twofold:

i. **Unresolved post WWII reconstruction monetary, political, and trade policies exacerbated by conflict between the dominant 20th Century industrialized nations (G7) and 21st Century, Emerging-Market economies with greater populations.** These Emerging Market economies are demanding more influence over currency, labor, and trade matters — and the organizations that determine their outcomes;

ii. **Disruptive technologies that are effectively reducing demand for labor.** In essence, these technologies are fueling isolation behaviors that underlie BREXIT, anti-TPP sentiment, and anti-immigration policies across Europe, North America and Latin America. Left unaddressed, more volatility and conflict is ahead that serves to only inhibit economic and GDP growth for all.

Q1 2017 Real Estate Issues:
By K.C. Conway
“It’s a Small World with ... Big Economic Challenges”

Q1 2017 Real Estate Issues:
By K.C. Conway

The U.S. Dollar as the world’s reserve currency is at real risk from crypto-currency. The U.S. and EU monetary policy behavior is driving global interest in a substitute reserve currency and cryptocurrencies like Bit-Coin and Bit-Mint. What are the implications for commodity prices like oil and agriculture that are principally priced using the U.S. Dollar? Don’t be so quick to dismiss the cryptocurrency movement by the emerging market economies. Crypto-currency is viewed as a way to neutralize currency manipulation and disruptive monetary policy by the U.S. and EU. The emerging markets will use cryptocurrency technology to displace a single-country reserve currency (the U.S. Dollar) in the next decade. A review of the top-trending crypto-currency news stories as of the first week of November 2016 revealed that even the UK bank regulator is studying the implications.

<table>
<thead>
<tr>
<th>Name</th>
<th>Market Cap</th>
<th>Price</th>
<th>Available Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitcoin</td>
<td>$11,280,506,281</td>
<td>$706.62</td>
<td>15,964,080 BTC</td>
</tr>
<tr>
<td>Ethereum</td>
<td>$931,409,949</td>
<td>$10.86</td>
<td>85,746,239 ETH</td>
</tr>
<tr>
<td>Ripple</td>
<td>$290,168,602</td>
<td>$0.008139</td>
<td>35,649,569,539 XRP</td>
</tr>
<tr>
<td>Litecoin</td>
<td>$185,883,098</td>
<td>$3.85</td>
<td>48,338,954 LTC</td>
</tr>
<tr>
<td>Ethereum Classic</td>
<td>$80,910,280</td>
<td>$0.94465</td>
<td>85,649,707 ETC</td>
</tr>
</tbody>
</table>

The top-5 cryptocurrencies in circulation today represent a market capitalization that has grown to approximately $12.2 trillion U.S. Dollars—or 2/3 of U.S. annual GDP. Crypto-currencies are no longer eclectic or theoretical. They are real and increasingly utilized by emerging economies to conduct trade due to their trade imbalances with the U.S. and Europe. Trade deficits could be eradicated by global use of crypto-currency. Then what influence will central banks have on economic activity?
E-commerce Growth Translated
Every $1.0 billion in added e-commerce sales = 1.0msf of new warehouse

Source: CBRE Econometric Advisors, Q3 2016.

HOW MUCH LONGER?
Add the near-term economic uncertainty posed by a new presidential administration, and it’s understandable if some observers are skeptical of how much upside is left in this cycle. Our view, however, is resolutely positive: Industrial market conditions will remain favorable through 2017. Our position is rooted in how the industrial sector is uniquely positioned to benefit from both cyclical and structural changes throughout the coming year. On the cyclical side, although a global economic downturn and Brexit rattled the U.S. outlook, perceived economic risks have dissipated over the course of the year. The industrial sector handled the early-2016 slowdown in trade and manufacturing without a hitch, thanks to unwavering consumer demand with household confidence and spending near post-recession highs. These tailwinds bode well for both traditional retailers and distributors, as well as those focused on e-commerce.

The new service demands it creates. U.S. e-commerce sales are forecast to rise by 9.3% annually over the next five years, to $523 billion in 2020, according to research firm Forrester. For industrial real estate, this growth represents a huge opportunity. E-commerce users require three times more space on average than traditional warehouse users. Further, growth in e-commerce sales causes growth in demand for additional warehouse and distribution space: For every $1 billion in new e-commerce sales, an additional 1 million sq. ft. of new distribution space is needed, according to CBRE’s Global Supply Chain Practice. Given current forecasts of e-commerce growth, this translates to an annual average of 40 million sq. ft. of new warehouse space demand between 2017 and 2020.

The supply side is growing in response to user demand. One of the most notable features of the current cycle has been the relatively tepid development market, adding new logistics
History of Economic Cycles Since end of WW II

The Recovery/Expansion Is Already Fairly Long

<table>
<thead>
<tr>
<th>Years</th>
<th>Duration (Months)</th>
<th>Expansions</th>
<th>Duration (Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>8</td>
<td>1945-48</td>
<td>37</td>
</tr>
<tr>
<td>1948-49</td>
<td>11</td>
<td>1949-53</td>
<td>45</td>
</tr>
<tr>
<td>1953-54</td>
<td>10</td>
<td>1954-57</td>
<td>39</td>
</tr>
<tr>
<td>1957-58</td>
<td>8</td>
<td>1958-60</td>
<td>24</td>
</tr>
<tr>
<td>1960-61</td>
<td>10</td>
<td>1961-69</td>
<td>106</td>
</tr>
<tr>
<td>1973-75</td>
<td>16</td>
<td>1975-80</td>
<td>58</td>
</tr>
<tr>
<td>1980</td>
<td>6</td>
<td>1980-81</td>
<td>12</td>
</tr>
<tr>
<td>1981-82</td>
<td>16</td>
<td>1982-90</td>
<td>92</td>
</tr>
<tr>
<td>1990-91</td>
<td>8</td>
<td>1991-2001</td>
<td>120</td>
</tr>
<tr>
<td>2001</td>
<td>8</td>
<td>2001-07</td>
<td>73</td>
</tr>
<tr>
<td>2008-09</td>
<td>18</td>
<td>2009-?</td>
<td>84 So Far</td>
</tr>
</tbody>
</table>

Averages:

<table>
<thead>
<tr>
<th>Period</th>
<th>Average (Months)</th>
<th>Averages:</th>
<th>Average (Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1854-1919</td>
<td>21.6</td>
<td>1854-1919</td>
<td>26.6</td>
</tr>
<tr>
<td>1919-45</td>
<td>18.2</td>
<td>1919-45</td>
<td>35.0</td>
</tr>
<tr>
<td>1945-2009</td>
<td>11.1</td>
<td>1945-2009</td>
<td>58.4</td>
</tr>
</tbody>
</table>

Mar ‘17
92 mos.

- 3rd longest
- 50% longer than 58 mo avg.
**KC-nomics:** What do the economic indicators suggest?

Shipping Consolidation, Supply-Chain Shift, Inland Ports Model, Disruptive Technology, etc.

<table>
<thead>
<tr>
<th>The positives:</th>
<th>The negatives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Manufacturing:</strong> ISM rebounded, 3D Print/Additive Mfd.</td>
<td>1. <strong>Shipping Consolidation:</strong> Hanjin was the flash point. We will go from 4 Alliances to 3 and 20+ shipping companies to &lt;10 over next 5 years.</td>
</tr>
<tr>
<td>2. <strong>Supply-Chain Shift:</strong> Good for East &amp; Gulf coast ports and Canada (Port Rupert &amp; Vancouver); not so good for West coast. LA &amp; LB still very relevant servicing 40 million.</td>
<td>2. <strong>Supply-Chain Shift:</strong> Disruptive to West coast ports. West coast shipping consolidates to LA/LB and Canada.</td>
</tr>
<tr>
<td>3. <strong>Shift to digital currency to mitigate Monetary Policy:</strong> Manufacturers, commodity owners and retailers can no longer manage in a global economy with so much currency manipulation by central banks - U.S. and FED are just as guilty as China.</td>
<td>3. <strong>Obsolete legacy warehouse space:</strong> As much as 40% of North Am. Warehouse inventory is functionally obsolete - low clear ceiling height, inadequate truck courtyards, not located near intermodal, etc.</td>
</tr>
<tr>
<td>4. <strong>Food Supply-Chain shift from West to SE &amp; MW:</strong> USDA pilot refrigerated container program between Latin Am and SE ports is huge. Not only does it add more “Organic” to the food supply, but it solves TRUMP’s immigration problem without building a wall 😊</td>
<td>4. <strong>Automation and Labor:</strong> No longer do we need to chase cheap labor around the globe to manufacture. Technology is manufacturing’s answer to so many challenges.</td>
</tr>
<tr>
<td>5. <strong>Intermodal, Inland Ports and Rail:</strong> E-Commerce is dependent on growth of a reliable rail model with trucking as the short front-end and final-mile mode of transportation.</td>
<td>5. <strong>GDP disparity between G-7 and Emerging Markets:</strong> The bifurcation between the industrialized economies in the West and the emerging economies is growing worse. There are only 3 economies with a GDP in excess of $10 trillion annually (U.S., European Union and China). In contrast to the previous GDP profile, the world’s largest population resides in just two countries (China and India).</td>
</tr>
<tr>
<td>6. <strong>Housing:</strong> Still healthy with 5%+ annual HPA</td>
<td></td>
</tr>
<tr>
<td>7. <strong>E-Commerce / Logistics &amp; Ports:</strong> Every $1.0 billion in added e-commerce sales = 1.0msf more warehouse space</td>
<td></td>
</tr>
</tbody>
</table>
ISM data showing best performance in 2 yrs. **Dec-Jan 1st back-to-back >60 in 3 Yrs.**

- January’s ISM manufacturing report is signaling the strongest conditions in the factory sector since the oil-price collapse of 2014.
- The composite index for January (56.0) is the highest reading since November 2014.
- New orders at 60.4 vs 60.3 in December is also a high since November 2014 and is the first back-to-back 60 showing since December 2013.

2017 Release Schedule

[Graph showing motor vehicle sales with release dates]
The U.S. manufacturing industry is showing signs of a comeback, after hitting its peak in the late 1970s. According to a 2015 Boston Consulting Group report, there has been a 250 percent increase since 2012 in the number of executives at large U.S.-based manufacturing companies who said their companies are actively reshoring production. The report concludes that reshoring has become a reality for many U.S. businesses.

Lower labor costs and tax advantages drove manufacturing for U.S. corporations overseas. While these factors still influence manufacturing decisions, proprietary technology is now even more critical to their long-term success. As domestic companies flirt with reshoring, the tipping point may be an advantage the U.S. had all along: robust intellectual property protections.

Technology Matters

Many companies now view manufacturing processes and technology as their crucial differentiators and are aggressively protecting them. In industries where competition is based primarily on cost, these factors are critically important to maintaining a competitive edge.

For example, look at 3D printing, which has significantly shrunk the production time for many products in the last decade. Basic factories can be built and brought online relatively quickly. However, 3D printing technology to produce a particular product is much harder to replicate.

Companies now see the proprietary technology that runs their factories as the real asset to protect. If U.S. firms export it to countries with lax property rights protections and enforcement, they are exposed to multiple risks.
Consumer Confidence steady near Dec’ 2016 fifteen-yr high. There are warning flags.

- Consumer confidence held steady in January, at 111.8 (a slight decrease from December’s 15-year high of 113.3 (revised).
- Details are positive including a noticeable decline in those saying jobs are hard to get right now, at 21.5 percent.
- There are red flags, including a nearly 2% drop in buying plans for autos. Home sales have been less strong than auto sales, but here too buying plans are down.

2017 Release Schedule

https://www.bloomberg.com/markets/economic-calendar
Consumer Spending growing faster than Income; PCE Price Index highest since Q2’14

- Consumer Spending (PCE) is growing faster than Personal Income growth
  Dec ‘17: +0.5% Vs +0.3%

- Higher energy prices pushed the PCE Price Index up to its highest YoY level (+1.6%) since Summer 2014.

- CORE - PCE Price Index (ex-food & energy) was up YOY to +1.7% and driven by Durable Goods (autos and housing).

https://www.bloomberg.com/markets/economic-calendar
EMPLOYMENT: ADP - Private Payrolls

CY 2017 starts off on right foot with >200k jobs (+246k was best since June ‘16)

- Private sector employment increased by 298,000 jobs from January 2017 to February 2017.
- February was the best month for job creation in past 13 mos.
- 5 of the last 6 months have created >200k jobs per month. The monthly average for CY 2016 was 175,000/month.
- The ADP national employment report is computed from a subset of ADP records that represent approx. 400,000 U.S. business clients and an estimated 23 million U.S. employees working in all private industrial sectors.

Chart 1. Change in Total Nonfarm Private Employment

5 of last 6 months ADP Private Jobs over 200k per month

Sources: ADP, LLC; Moody's Analytics

2017 Release Schedule

https://www.bloomberg.com/markets/economic-calendar
**BEST JOB MSAs:**

Best Job-Producing MSAs since 2009 (BLS)

### Best Job Producing MSAs post 2009:
Note the correlation to the Southeast, Ports & Logistics!

<table>
<thead>
<tr>
<th>MSA</th>
<th>YE 2009 Empl. (000)</th>
<th>Sept 2016 Empl. (000)</th>
<th>Total Empl # change</th>
<th>2009-Q3’16 Percent %</th>
<th>Best MSAs by % Change</th>
<th>Best MSAs by # Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin-Round Rock</td>
<td>771</td>
<td>992.3</td>
<td>230</td>
<td>29.8%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cape Coral-Fort Myers</td>
<td>200</td>
<td>251.9</td>
<td>50</td>
<td>25.1%</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ocean City</td>
<td>45</td>
<td>50.5</td>
<td>11</td>
<td>23.8%</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Nashville</td>
<td>763</td>
<td>949.0</td>
<td>174</td>
<td>22.8%</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Charleston SC</td>
<td>284</td>
<td>346.6</td>
<td>62</td>
<td>21.8%</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Denver</td>
<td>1,194</td>
<td>1455.9</td>
<td>259</td>
<td>21.7%</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Dallas-Fort Worth</td>
<td>2,917</td>
<td>3545.1</td>
<td>607</td>
<td>20.8%</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Orlando-Kissimme</td>
<td>994</td>
<td>1216.9</td>
<td>206</td>
<td>20.7%</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Raleigh</td>
<td>499</td>
<td>600.8</td>
<td>102</td>
<td>20.4%</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>Charlotte</td>
<td>952</td>
<td>1133.3</td>
<td>187</td>
<td>19.6%</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>San Francisco-Oakland</td>
<td>1,948</td>
<td>2334.8</td>
<td>377</td>
<td>19.3%</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>San Antonio</td>
<td>850</td>
<td>1004.2</td>
<td>159</td>
<td>18.7%</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>591</td>
<td>702.1</td>
<td>106</td>
<td>18.0%</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Houston-Sugarland</td>
<td>2,547</td>
<td>3004.4</td>
<td>452</td>
<td>17.7%</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,278</td>
<td>2668.0</td>
<td>381</td>
<td>16.7%</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Greenville-Anderson</td>
<td>352</td>
<td>410.4</td>
<td>57</td>
<td>16.2%</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>Tampa-St. Petersburg</td>
<td>1,110</td>
<td>1283.5</td>
<td>173</td>
<td>15.6%</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>San Diego-Carlsbad</td>
<td>1,248</td>
<td>1422.8</td>
<td>179</td>
<td>14.3%</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>583</td>
<td>682.5</td>
<td>83</td>
<td>14.3%</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Miami-FtLaud-WPBch</td>
<td>2,227</td>
<td>2565.9</td>
<td>314</td>
<td>14.1%</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Richmond</td>
<td>593</td>
<td>673.4</td>
<td>83</td>
<td>14.0%</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Spartanburg</td>
<td>128</td>
<td>146.4</td>
<td>18</td>
<td>13.8%</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Columbia</td>
<td>347</td>
<td>398.0</td>
<td>46</td>
<td>13.3%</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Phoenix-Scottsdale</td>
<td>1,716</td>
<td>1967.4</td>
<td>220</td>
<td>12.8%</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Boston</td>
<td>2,439</td>
<td>2709.0</td>
<td>295</td>
<td>12.1%</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>Los Angeles-Long Bch</td>
<td>5,345</td>
<td>5958.8</td>
<td>626</td>
<td>11.7%</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>New York-Newark NJ</td>
<td>8,648</td>
<td>9523.3</td>
<td>982</td>
<td>11.4%</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td>Baltimore MD</td>
<td>1,279</td>
<td>1399.0</td>
<td>133</td>
<td>10.4%</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Chicago-Naperville</td>
<td>4,264</td>
<td>4677.0</td>
<td>439</td>
<td>10.3%</td>
<td>29</td>
<td>5</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>706</td>
<td>781.5</td>
<td>70</td>
<td>9.9%</td>
<td>30</td>
<td>10</td>
</tr>
</tbody>
</table>

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15 of the top 30 job-producing MSAs post 2009 are located in the South; 4 are in FL, Houston/Sugarland still surpasses Atlanta despite hit from Energy past 2.5 yrs.

AND...

15 of Top 30 MSAs in Job Gr. are correlated to Logistics!

Note:
The correlation of job growth to MSAs with Sea Ports (Green arrows), Inland Ports (Blue arrows), and Supply-Chain strength (land-sea-air/e-commerce). It is not coincidental that the growth is correlated to LOGISTICS!
Translate the Top-25 Job Growth MSAs to the Ports

West-coast ports have <1% 10-Yr CAGR ... East & Gulf Ports have 3%-7% growth

SAVANNAH:
#4 AND FASTEST GROWING

Q. How does a <50-foot deep, River-Port become #4 in containerized goods and rank #1 in growth among all US ports?
A. Logistics

Note:
Compare the Port Container stats and growth for West coast LA, LB, SEA/TAC to SE and Gulf (GA, VA, HOU)

<table>
<thead>
<tr>
<th>PORT</th>
<th>2005 TEUs</th>
<th>2015 TEUs</th>
<th>10-YEAR CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LOS ANGELES</td>
<td>7,484,624</td>
<td>8,160,458</td>
<td>0.9%</td>
</tr>
<tr>
<td>2. LONG BEACH</td>
<td>6,709,818</td>
<td>7,192,066</td>
<td>0.7%</td>
</tr>
<tr>
<td>3. NY/NJ</td>
<td>4,785,318</td>
<td>6,371,720</td>
<td>2.9%</td>
</tr>
<tr>
<td>4. SAVANNAH</td>
<td>1,901,506</td>
<td>3,737,425</td>
<td>7.0%</td>
</tr>
<tr>
<td>5. SEA/TAC</td>
<td>3,289,279</td>
<td>2,760,811</td>
<td>-1.7%</td>
</tr>
<tr>
<td>6. VIRGINIA</td>
<td>1,981,955</td>
<td>2,549,270</td>
<td>2.5%</td>
</tr>
<tr>
<td>7. OAKLAND</td>
<td>2,273,990</td>
<td>2,277,515</td>
<td>0.0%</td>
</tr>
<tr>
<td>8. HOUSTON</td>
<td>1,582,081</td>
<td>2,130,544</td>
<td>3.0%</td>
</tr>
<tr>
<td>9. CHARLESTON</td>
<td>1,984,887</td>
<td>1,973,202</td>
<td>-0.1%</td>
</tr>
<tr>
<td>10. PT. EV</td>
<td>814,745</td>
<td>1,056,524</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Source: AAPA; throughput excluding domestic
Housing starts in the United States jumped 11.3 percent from the previous month to a seasonally adjusted annualized rate of 1226 thousand in December of 2016, beating market expectations of 1200 thousand. Multi-segment starts rebounded while single-family declined for the second month. Considering full 2016, housing starts rose 4.9 percent to 1166.4 thousand. Housing Starts in the United States averaged 1438.64 Thousand from 1959 until 2016, reaching an all time high of 2494 Thousand in January of 1972 and a record low of 478 Thousand in April of 2009.
### Housing Affordability …

**Whose HPA? Case-Shiller may be understating it!**

<table>
<thead>
<tr>
<th>METRO AREA</th>
<th>YEAR</th>
<th>QTR</th>
<th>PRICE (000'S)</th>
<th>% CHANGE OF PRIOR YR QTR</th>
<th>CASE-SHILLER (000'S)</th>
<th>% CHANGE OF PRIOR YR QTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta-Sandy Springs-Roswell, GA</td>
<td>2016</td>
<td>2</td>
<td>173.64</td>
<td>7.0%</td>
<td>132.02</td>
<td>5.8%</td>
</tr>
<tr>
<td>Boston, MA (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>292.51</td>
<td>6.4%</td>
<td>190.41</td>
<td>4.7%</td>
</tr>
<tr>
<td>Charlotte-Concord-Gastonia, NC-SC</td>
<td>2016</td>
<td>2</td>
<td>195.25</td>
<td>6.4%</td>
<td>141.13</td>
<td>5.1%</td>
</tr>
<tr>
<td>Chicago-Naperville-Arlington Heights, IL (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>168.68</td>
<td>5.9%</td>
<td>136.22</td>
<td>3.3%</td>
</tr>
<tr>
<td>Cleveland-Elyria, OH</td>
<td>2016</td>
<td>2</td>
<td>130.45</td>
<td>4.9%</td>
<td>112.07</td>
<td>2.5%</td>
</tr>
<tr>
<td>Dallas-Plano-Irving, TX (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>234.12</td>
<td>11.1%</td>
<td>165.20</td>
<td>8.9%</td>
</tr>
<tr>
<td>Denver-Aurora-Lakewood, CO</td>
<td>2016</td>
<td>2</td>
<td>390.47</td>
<td>10.8%</td>
<td>185.77</td>
<td>9.2%</td>
</tr>
<tr>
<td>Detroit-Dearborn-Livonia, MI (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>119.05</td>
<td>6.3%</td>
<td>107.90</td>
<td>5.1%</td>
</tr>
<tr>
<td>Las Vegas-Henderson-Paradise, NV</td>
<td>2016</td>
<td>2</td>
<td>183.89</td>
<td>7.1%</td>
<td>151.26</td>
<td>5.7%</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Glendale, CA (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>248.07</td>
<td>8.8%</td>
<td>249.67</td>
<td>5.3%</td>
</tr>
<tr>
<td>Miami-Miami Beach-Kendall, FL (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>290.07</td>
<td>10.7%</td>
<td>214.51</td>
<td>6.9%</td>
</tr>
<tr>
<td>Minneapolis-St. Paul-Bloomington, MN-WI</td>
<td>2016</td>
<td>2</td>
<td>250.56</td>
<td>5.9%</td>
<td>153.49</td>
<td>5.1%</td>
</tr>
<tr>
<td>New York-Jersey City-White Plains, NY-NJ (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>221.90</td>
<td>2.5%</td>
<td>183.09</td>
<td>2.0%</td>
</tr>
<tr>
<td>Phoenix-Mesa-Scottsdale, AZ</td>
<td>2016</td>
<td>2</td>
<td>251.31</td>
<td>8.3%</td>
<td>160.69</td>
<td>5.1%</td>
</tr>
<tr>
<td>Portland-Vancouver-Hillsboro, OR-WA</td>
<td>2016</td>
<td>2</td>
<td>409.16</td>
<td>12.8%</td>
<td>205.09</td>
<td>12.6%</td>
</tr>
<tr>
<td>San Diego-Carlsbad, CA</td>
<td>2016</td>
<td>2</td>
<td>273.21</td>
<td>7.8%</td>
<td>225.75</td>
<td>6.4%</td>
</tr>
<tr>
<td>San Francisco-Redwood City-South San Francisco, CA (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>363.51</td>
<td>9.1%</td>
<td>228.44</td>
<td>6.4%</td>
</tr>
<tr>
<td>Seattle-Bellevue-Everett, WA (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>329.62</td>
<td>12.9%</td>
<td>202.58</td>
<td>11.0%</td>
</tr>
<tr>
<td>Tampa-St. Petersburg-Clearwater, FL</td>
<td>2016</td>
<td>2</td>
<td>207.02</td>
<td>12.3%</td>
<td>183.28</td>
<td>7.9%</td>
</tr>
<tr>
<td>Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)</td>
<td>2016</td>
<td>2</td>
<td>230.48</td>
<td>3.4%</td>
<td>216.75</td>
<td>2.0%</td>
</tr>
<tr>
<td>US NATIONAL</td>
<td>2016</td>
<td>2</td>
<td>215.06</td>
<td>5.5%</td>
<td>182.42</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
**CRE OUTLOOK**

**CRE Conditions - Monitor MF Jobs: Permits & Office Densification**

**CRE Life Cycle:** Retail is actually moving counter-clockwise. Houston is Energy impact.

---

**Phase 1 - Recovery**

- Negative Rental Growth

**Phase 2 - Expansion**

- High Rent Growth in Tight Market

**Phase 3 - Hyper-supply**

- Rent Growth Positive But Declining

**Phase 4 - Recession**

- Below Inflation & Negative Rent Growth

---

**Demand/Supply Equilibrium**

**Top-25 Job MSAs since 2009**

**Office: “Densification”**

**Long Term Average Occupancy**

**Retail: Moving Counter-Clockwise back to Contraction**

**Physical Market Cycle Characteristics**

**SF Housing**

**MF & Industrial**

**Hotel, Houston & DC Office**

---

**SF Housing**

**MF & Industrial**

**Hotel, Houston & DC Office**
## CRE Conditions: MF, Industrial, Office & Retail

### Key Statistics For Major U.S. Property Sectors

**2016Q4 Change From Year Ago**

<table>
<thead>
<tr>
<th></th>
<th>Supply</th>
<th>Demand</th>
<th>Occupancy</th>
<th>Rent</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office</strong></td>
<td>0.7%</td>
<td>1.1%</td>
<td>0.4%</td>
<td>3.2%</td>
<td>(10%)</td>
</tr>
<tr>
<td><strong>Retail</strong></td>
<td>0.6%</td>
<td>1.1%</td>
<td>0.5%</td>
<td>2.6%</td>
<td>(14%)</td>
</tr>
<tr>
<td><strong>Apartment</strong></td>
<td>1.9%</td>
<td>1.2%</td>
<td>(0.6%)</td>
<td>2.3%</td>
<td>(5%)</td>
</tr>
<tr>
<td><strong>Light Industrial</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>0.6%</td>
<td>7.3%</td>
<td>(23%)</td>
</tr>
<tr>
<td><strong>Logistics</strong></td>
<td>3.1%</td>
<td>3.6%</td>
<td>0.5%</td>
<td>6.4%</td>
<td></td>
</tr>
</tbody>
</table>

Source: CoStar Portfolio Strategy
*All Industrial

Maybe NEVER a more perfect time for Industrial R.E.!
WHERE IS MF OVERBUILDING RISK?

STI Market Intelligence by K.C. Conway: **Risk is where jobs : Permits is >5:1**

**Multi-Family: The Key Metric is Jobs to Permits**

- <5:1 Overbuilt / >5:1 Balanced

**MSA with Jobs : Permits > 5:1**
- Atlanta
- Chicago
- Cincinnati
- Charlotte NC
- Charleston SC
- Greenville SC
- Raleigh NC
- Columbia SC

**Overbuilt MSAS with Jobs : Permits < 5:1**
- Houston 1:1
- Pittsburgh <1:1
- NYC <3:1
- DC / GWR <3:1
- Austin 3:1
- W. Palm Bch <2:1
- Tampa <4:1
- Orlando 4:1
CRE Conditions: Office - The good news...

- **SUN BELT FUELS OFFICE-USING JOB GROWTH.** More than 100,000 office-using jobs were added to the economy in Q4, bringing the 2016 net gain to approximately 426,000—on par with the annual average since 2010. **Office-using employment now stands 9.2% higher than the previous peak in Q3 2007,** reflecting the robust rate of job creation during the current expansion.

- The SE ranks high with respect to number of top ranking MSAs for office job growth - DC/GWR not so much (Baltimore exception)
CRE Conditions: Office - The not-so-good news...

- Net absorption is not a good story overall.

It is down more than 1/3rd in 2016 over 2015 and Q4 net absorption for the tr-4 quarters was <10msf for the first time since 2014. The net absorption numbers reflect the “Densification Trend” at work (less square feet per worker). Be careful with spec office lending and perm office loans. Orlando was the only SE MSA to make CBRE’s top-10 list in terms of net absorption. Dallas reigns supreme again.

DEMAND TRENDS

NET ABSORPTION REBOUNDS IN FOURTH QUARTER

Following a slowdown in the third quarter, net absorption nearly doubled to 13.0 million sq. ft. in Q4 2016, as both the downtown and suburban markets recorded positive absorption. Nonetheless, net absorption has decelerated during the past several years; annual absorption decreased by more than one-third in 2016, and the four-quarter trailing average dropped below 10.0 million sq. ft. in Q4 for the first time since early 2014.

Figure 3: Metro Highest Absorption (MSF) - 2016

Source: CBRE Research, Q4 2016.
Industrial CRE will be ‘Epic!’

Noteworthy opportunities: Freightways + e-commerce growth + Inland ports & Rail + Food Supply
Industrial CRE: 2017 AFIRE report indicates Industrial investment will accelerate in 2017

For Immediate Release

Contact: Kathryn Hamilton
Kathryn@hamiltonink.com
919.973.2685

Interview: James A. Fetgatter
CEO, AFIRE
JAF@afire.org
202.312.1400

US RE Grabs Foreign Investors’ Intentions!
95% Will Maintain or Increase Investment Levels in 2017

NYC is Big Winner as London and DC Slip

Ranking of US Property Types
1. Industrial (#1 tied with multifamily last year)
2. Multifamily (#1 tied with industrial last year)
3. Office (#4 last year)
4. Retail (#3 last year)
5. Hotel (#5 last year)
“FREIGHTWAYS” Define the Eco. Outlook

Freightways are CORRIDORS of Eco Growth - sea-land-air.

65%-70% of Population East of Line

Where is the RR, Intermodal, e-Commerce fulfillment infrastructure in the West?

America’s 4th Coast
28% of GDP Or 33.5% for TrustBelt

Who will be East-coast’s LA & LB?

The Gulf-coast:
Houston & Mobile
Industrial – Remaking the U.S. Supply-Chain: 
The new CORE for Industrial will be in new markets aligned with Rail

Rail Time Indicators  AAR.org – American Assoc. of RRs
The 7- Class I RRs (Note CN (red) & KCS (brown)

http://www.intermodal.org/
“All that happens on the ports, doesn’t stay on the ports” – Rail, Intermodal!
Supply-Chain Shift to East Coast … before Panama Canal widening … It is very real!

Western Ports Slowing While East Rises

Change In TEUS By Region

Sources: Port Websites, CoStar Portfolio Strategy

As of 2016
Initiated in 2013, the US Department of Agriculture’s pilot program for importing fruits and vegetables from Latin America changed the trajectory of America’s perishable food supply chain, allowing southern ports to have a seat at the table for the first time.

The perishable food supply chain, traditionally clustered in the north because of regulations meant to safeguard against the problem of fruit flies and other infestations, needed a safety valve to address mounting challenges as consumer demand for fresh produce grew. The delayed distribution from north to south sometimes led to spoilage and days-old produce for consumers, and decreased profitability for exporters and grocers.

Southern ports, which were in the midst of rebuilding their infrastructure, viewed cold storage and food distribution as an untapped opportunity to expand their services and resolve the distribution problems for the region’s rapidly expanding population. What started out as a conversation about food distribution and regulatory changes between the USDA and the Florida Perishables Trade Coalition has morphed into a pilot program that encompasses a majority of the South’s major ports.

So how did we get here? The Panama Canal expansion was the impetus for many southern ports to question the region’s supply chain and complete the transformation from military seaports to technologically advanced commercial ports. Simultaneously, Americans were migrating toward a healthier lifestyle marked by an increase in organic food consumption. Seeing a wider adoption among consumers for chemical-free fruits and vegetables, as well as a need for quicker turnaround times for freight transportation, southern port officials seized upon a chance to invest in refrigerated terminal space. This aided in their efforts to become ports of entry for imported produce.

The new healthy eating trend and Panama Canal expansion, coupled with the ports’ technological advancements and a modernized supply chain network, created the perfect storm that helped carve out an opportunity for the South. While the USDA pilot program is still in the early stages, it has the ability to sustain long-term success because of the region’s comparatively inexpensive electric grid and extensive intermodal transport system, which includes a superior Class I railroad network.

Looking ahead, the program’s success will rely upon the ability of southern ports to continue to add refrigerated capacity, at a rate commensurate with consumer appetite. Currently, refrigerated cargo represents 10 percent of all containerized units in the south. That number could easily double within two to three years. To support this increased activity, ports will need to build more than 1 million square feet of refrigerated space. This will be at great cost, as cold storage is very expensive to build. While many in the financial industry still view cold storage as a niche business and are determining financing risks, it is important for all parties to work together.
What An Eastern-Shifting Supply Chain Means For North American Seaports And Industrial Real Estate

Feb 28, 2017 NAIOP, the Commercial Real Estate Development Association Travis Gonzalez, Bisnow

Former key ports of entry along the West Coast of North America have begun to compete with increasingly modern and more efficient East Coast ports. Rising dependence on intermodal services have also made railway connections between ports a necessity, while e-commerce has spurred industrial real estate development, leading to increased competition and location flexibility for warehouses.

Hesitation over the effectiveness of the Panama expansion has eastern ports adapting to handle a larger flow of cargo. “Not only did they look at dredging but also all kinds of modern efficiencies like robotic cranes and better on-dock rail services to the ports that the West Coast ports do not necessarily have — especially in Southern California,” Conway said. These ports have led port modernization, while the West has historically been hindered by labor unions that fear upgrades will lead to job loss. Further modernization is required in the wake of shipping consolidation. “We will probably go from four shipping alliances to three and probably from two dozen shipping companies to maybe 10 or less over the next three to five years,” Conway said. “So these shipping companies have been trying to figure out tech issues to deal with that consolidation.”
In Focus: Why America’s Supply Chain Is Shifting East

With a vast rail and intermodal network, East Coast ports are well positioned to support the growing e-commerce trend.

America’s supply chain is heading east despite its deep history on the West Coast. Many point to the Panama Canal expansion as the cause of the shift, but a network of ports and distribution centers throughout the East Coast region have been quietly stealing market share from the West Coast long before construction of the canal was complete. To understand how this occurred, let’s examine this shift through the lens of a business executive.

East Coast Advantages

One of the greatest advantages of the East is its vast rail and intermodal network. Five of seven Class 1 railroads move through the Southeast and Midwest, and 85 percent of the U.S. intermodal infrastructure resides in the East, Southeast, and Midwest regions. This allows companies to more quickly transport goods to their final destination.

Additionally, electricity is often 25 to 40 percent less expensive on the East Coast. And, businesses can be assured that the supply chain will remain efficient, regardless of external factors, as there is redundancy. If a natural disaster or accident impacts a port or rail system, there are other ports along the East Coast for a retailer, wholesaler, or distributor to access and avoid interrupting operations.

E-Commerce Trends

Looking toward the future, the East Coast is well positioned to support the growing e-commerce trend. The appetite among Americans for online shopping is still in its infancy, but by 2020, Forrester projects e-commerce sales will exceed $500 billion. With an estimated 70 percent of the U.S. population living east of the Ohio and Mississippi rivers, constructing a supply chain along the East Coast to meet e-commerce demand makes good business sense. The modern rail and intermodal network provides a relay system to easily move products from ship to rail to truck to e-commerce fulfillment centers, an infrastructure that does not exist on the West Coast.
The Gulf & Texas Ports Picture …
2\textsuperscript{nd} only to FL in most # Ports, TX has the Gulf Advantage!
SC knows how to view their Port asset(s)!
SCSPA to be Deepest port on East Coast!
52 Feet is a big deal. Charleston SC will be the LA/LB of East Coast by 2020!

45-Feet of water today. Working ships drafting 48-feet, tidally restricted.

52' (15.8m) Channel depth at MLW.

By the end of 2019 Charleston will be the deepest port on the U.S. East Coast.

Source: SCSPA
What is this Mid-America Arc project @ GA Ports Authority?

Savannah is poised to rapidly increase service to an arc of inland markets, from Atlanta to Memphis, to St. Louis, Chicago and the Ohio Valley.

Key to expanding rail service is a $128M project linking Garden City Terminal’s two rail yards. Construction of the rail expansion, forming the Port of Savannah International Multi-modal Connector, will take four years.

Set for completion in 2020, the rail expansion will improve efficiency and double terminal rail lift capacity to approximately 1 million containers per year.

Unit train capacity on terminal will build density into the system, and enable rail providers CSX and Norfolk Southern to deliver faster, more frequent rail service to markets along the Mid-American Arc.
Houston’s industrial market ends 2016 on a positive note

Lisa Bridges  Director of Market Research | Houston

During the final quarter of 2016, 1.9M SF of Houston’s industrial inventory was absorbed, substantially less than the 6.3M SF absorbed in the third quarter. However, 3.9M SF of the space that was absorbed in the previous quarter was a result of one tenant, Daiken occupying a massive new facility. Industrial leasing activity decreased between quarters, dropping from 4.3M SF to 3.2M SF.

The average vacancy rate increased 10 basis points over the quarter from 5.5% in to 5.6%. About 70% of the 2.3M SF of new space delivered in Q4 2016 was pre-leased and 78% of the 5.2M SF currently under construction is pre-leased. More than 2.4M SF of the 5.2M SF currently under construction is located in the East-Southeast Far submarket where the Houston’s Ship Channel and the Port of Houston are located.

The average citywide quoted industrial rental rate increased 3.3% on a quarterly basis from $6.87 per SF NNN to $7.10 per SF NNN.
Banks hold <50% of CRE Debt once again (Regulator Concern)

Risk Retention Rules impact in 2H to continue as full implementation not until Yr-End 2016.
Lender Market Share

Banks have grown since 2010

Sources: Federal Reserve, Trepp LLC
CONCLUSION: The 2017 Momentum Formula

What is the formula for MOMENTUM in 2017 for “Epic” results?

- Best Job Producing MSAs remain in the SE
- Logistics tied to ½ top-30 Job MSAs.
- TX port Infrastructure Investments – RAIL!
- FED adheres to slow Interest Rate Increases
- MF Jobs : Permits > 5:1
- Office Densification means need more Office job growth
- Industrial will be EPIC - $1 billion in added e-commerce sales translates to need for another 1.0msf of warehouses.
- Food Supply shift from CA to SE is an epic opportunity
- No Return of the Old Testament – Black Swan events

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