The Economy is OK

GDP = C + I + G + (X - M)
The Stock Market Is Doing Well
Despite numerous stressors it holds up.
Households Are Re-Leveraging
Mortgage debt remains slightly below the 2008 peak. Total debt is 6.9% higher

Total Debt Balance and its Composition

Source: New York Fed Consumer Credit Panel/Equifax
Households Balance Sheets Look Pretty Good
Less high interest revolving debt

FRED
Household Financial Obligations as a percent of Disposable Personal Income

Shaded areas indicate U.S. recessions  Source: Board of Governors of the Federal Reserve System (US)  myf.red/g/mEUg
University of MI Consumer Confidence is Down
Reading is still OK

U. Michigan Consumer Sentiment Index

Survey: 97.8
Actual: 98.4
Small Business Confidence Remains Strong
Decline has stopped and it remains above long-term average of 98

Small Business Optimism Index at 101.8
Based on 10 survey indicators, seasonally adjusted, Jan. '00 – Mar. '19

NFIB.com/sboi
US Light Vehicle Sales Slow Slightly
No records will be set this year
Housing Improvements & Repairs Keep Rising
Homes are aging, rates are low, home equity is good, and a lack of inventory

Leading Indicator of Remodeling Activity – Fourth Quarter 2018

Note: Historical estimates since 2015 are produced using the LIRA model until American Housing Survey data become available.
Source: Joint Center for Housing Studies.
Single-Family and Multifamily Starts – A Slow Recovery

Lack of lots, rising rates, high prices, SF remains near recessionary lows

Shaded areas indicate U.S. recessions

Source: U.S. Census Bureau
myf.red/g/npGc
Annual Y-o-Y Percent Change in PCE
A very solid growth rate of 2.5%, but down most recently
Drilling Activity is Falling
Falling prices hurt as does a pipeline problem

- Horizontal oil rigs: -4 to 754
Corporate Profits are at a Record High

Corporate profit growth in 2019 will be much weaker
ISM Manufacturing Numbers Decline!
Manufacturing is less important than in decades past. Has it peaked?

ISM Purchasing Managers' Index (PMI) and Fed Manufacturing Surveys

Recession | Average Philly and NY (Mar) | Average All Fed Surveys (through Mar) | ISM PMI (Feb)
Richmond Manufacturing Numbers Are Weakening

Off best levels of just a few months ago
Factory Utilization Rates are Weaker

Combination of slowing global growth, trade wars, weak oil prices and a strong dollar
ISM Non-Manufacturing Numbers are Good
Service sector is holding up

ISM Non-Manufacturing and Employment Diffusion Indexes

[Graph showing ISM Non-Manufacturing and Employment Diffusion Indexes from Jan-98 to Jan-20]

http://www.calculatedriskblog.com/
Look at Capital Goods Orders. They are OK

Slowing global growth, trade concerns and falling oil prices are why
Tax Cuts Are Supercharging the Economy
But, only in the short run

Exhibit 3: Fiscal Boost to Growth Likely to Fade Gradually in 2019

Source: US Department of Commerce, Treasury, Goldman Sachs Global Investment Research
Global Growth Slows
Growth slows slightly everywhere

Growth Outlook
Growth forecasts have come down globally and in many key countries and regions.

Forecasts for real GDP growth in 2019

Source: International Monetary Fund
Global Growth Slows
Growth slows in the top three areas

Losing Some Steam
The World Bank expects GDP growth to ease globally and in major economies

Source: World Bank's January 2019 report
Note: Data for 2018 are estimates. Data for 2019-2021 are forecasts.
Global Manufacturing Growth Weakens
Noticeable decline of late
Shipping Costs Sag
This suggests weakening demand

Baltic Exchange Capesize Index

The Daily Shot®
190.00 / -17.39%

Source: Bloomberg
US Heavy Truck Sales Flatten

Gross Vehicle Weight > 7 tons. Down due to falling oil and gas prices

*Shaded areas indicate U.S. recessions*  
*Source: U.S. Bureau of Economic Analysis*
Shipment Activity Declines
Global slowing, trade wars....

Cass Freight Shipments Index YoY

Latest: -2.1%
Expenditures Are Relatively High but Soften

Looks at price and volume

Source: Cass Information Systems, Inc.
Spot Trucking Prices are Declining

The logistics frenzy looks to be over
$250 Billion Trade War Hurts GDP

The impact will rise over time, and is now quite small

Rising US-China trade tensions will weigh on growth

GDP level, cumulative % from baseline

US
China

Source: Oxford Economics

US imposes 25% tariffs on $50 billion of imports & then an additional 10% on $200 billion of imports from China, and China retaliates in kind.
More Nations are Dovish with Monetary Policy

Global growth is slowing and central banks are easing

Chart 2: Global central banks pivoting back to an easier stance (6m rolling sum of rate hikes minus rate cuts).

Source: Bloomberg. Large sample of central banks across the world
GDP Growth Will Slow

Impact of the recent tax cuts and spending increases will fade through 2019

Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

myf.red/g/n8Xm
GDP Can’t Grow Fast!
Very weak population growth and labor productivity growth

![Bar chart showing labor force growth and productivity by decade from 1970-1980 to 2010-2020.](chart.png)

Source: Bureau of Labor Statistics Chart #0387
Y-o-Y % Change in Real Final Sales
Strips out government spending, inventory swings and exports
Best of All, No Recession Now!
Designed to track real macroeconomic activity in real time

Aruoba-Diebold-Scotti Business Conditions Index (12/31/2007 - 03/31/2019)
Best of All, No Recession...Yet!

Yield Curve Inversion Test: 1-Year Treasury Yield – 10-Year Treasury Yield
Inversions Do Not Immediately Lead to Recessions

It takes a long time for the onset of the recession.

*Since 1978, there have been an average of 627.2 days between the first inversion of the 2Y10Y spread and the start of the next recession. Applying that average, and assuming the 2Y10Y spread were to invert today, it would imply a recession in November 2020.*
Labor Markets:
They’re Tight, Very Tight
STeady Labor Market Improvement: Involuntary Separation
Long Term Trends: 1967-2017 Initial claims below 300K for 213 straight weeks!

Sources: BLS, U.S. Employment and Training Administration
myf.red/g/nxCv

Shaded areas indicate U.S. recession.
Quit Rates are Good, but Not Improving
Are above their pre-recession level. At 2.3% (in blue) or 3.5 million (in red)
Job Openings are Hard to Fill
Increasingly hard to fill

[Graph showing NFIB Small Business Job Openings Hard to Fill]

Latest: 39.0
Wage Growth is Slowly Rising
Total Employee Compensation: It’s Clearly Rising
Includes wages and salaries and benefits

Shaded areas indicate U.S. recessions
Source: U.S. Bureau of Labor Statistics
myf.red/g/mQCC
Y-o-Y Percent Change in Hourly Earnings

Despite a very low unemployment rate, wages growth has been relatively weak.
Changes in Median Wage Growth Looks OK!

Looks only at those continuously full-time employed

**Wage Growth Tracker**
three-month moving average of median wage growth

<table>
<thead>
<tr>
<th>Category</th>
<th>Line Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall unweighted</td>
<td>Black</td>
</tr>
<tr>
<td>College degree</td>
<td>Gray</td>
</tr>
<tr>
<td>Male</td>
<td>Gray</td>
</tr>
<tr>
<td>Overall, back to 1963</td>
<td>Gray</td>
</tr>
<tr>
<td>Services</td>
<td>Gray</td>
</tr>
<tr>
<td>Prime-age</td>
<td>Gray</td>
</tr>
<tr>
<td>Job stayer</td>
<td>Gray</td>
</tr>
<tr>
<td>Usually full-time</td>
<td>Gray</td>
</tr>
<tr>
<td>Female</td>
<td>Gray</td>
</tr>
<tr>
<td>Job switcher</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Changes in Median Wage Growth Looks Good!
of those continuously full-time employed

Wage Growth Tracker
three-month moving average of median wage growth

Inflation?
It’s Slow To Appear
CPI: Inflationary Pressures are Nonexistent
There appears to be no inflationary pressures. Growth is flat
Core PCE Price Index

Inflation is fortunately being held back by a number of factors
Gap Between Potential GDP and Real GDP is Gone!
Nice news, but note that the blue line fell! Now inflation may rise!
Federal Reserve Behavior

Rates Will Rise. But, How Fast?
Taller Fed Chair, Higher Rates?

We don’t actually believe that interest rates are determined by the height of the Fed chair, but it has been an interesting coincidence.
Federal Reserve Behavior
Best Case Scenario

• Fed funds is currently 2.375%

• 12/31/19: 2.625% 10-yr Treasury @ 2.85%
  12/31/20: 2.375% 10-yr Treasury @ 2.65%
  12/31/21: 2.125% 10-yr Treasury @ 2.50%

• Balance sheet keeps shrinking.
Federal Reserve Behavior
Most likely scenario

- Fed funds is currently 1.375%

- 12/31/18: 2.125% (50%/50%) 10-yr Treasury @ 2.85%
  12/31/19: 2.625% 10-yr Treasury @ 3.15%

- 12/31/20: 3.125% 10-yr Treasury @ 3.45%

- Balance sheet keeps shrinking.
Construction?
It’s OK, Just OK
Residential Fixed Investment Stalls
Non-residential is up 9%, public is flat, and residential is down 20% from peak
Public Construction Rises
Residential is down 3% Y-o-Y, non-res is up 0.1%, and public is up 11%
Public Road Construction Activity is Up
Highway spending is up like a rocket, transportation spending is plateauing.
State and Local Construction Spending
It is way up, enough to impact GDP
National Highway Construction Cost Index

Prices are rising but not very quickly
Construction Activity is Solid but Flat
Non-Residential, Residential & Non-Building all perform the same

The Dodge Index of New Construction Starts
(Year 2000 = 100)

Monthly Summary of Construction Starts
Prepared by Dodge Data & Analytics

Monthly Construction Starts
Seasonally Adjusted Annual Rates, in Millions of Dollars

<table>
<thead>
<tr>
<th></th>
<th>February 2019</th>
<th>January 2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential Building</td>
<td>$244,481</td>
<td>$244,744</td>
<td>-0%</td>
</tr>
<tr>
<td>Residential Building</td>
<td>299,350</td>
<td>310,122</td>
<td>-3%</td>
</tr>
<tr>
<td>Nonbuilding Construction</td>
<td>153,583</td>
<td>167,430</td>
<td>-8%</td>
</tr>
<tr>
<td>Total Construction</td>
<td>$697,414</td>
<td>$722,296</td>
<td>-3%</td>
</tr>
</tbody>
</table>

The Dodge Index
Year 2000=100, Seasonally Adjusted
February 2019.....148
January 2019.....153

Year-to-Date Construction Starts
Unadjusted Totals, in Millions of Dollars

<table>
<thead>
<tr>
<th></th>
<th>2 Mos. 2019</th>
<th>2 Mos. 2018</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential Building</td>
<td>$33,474</td>
<td>$38,579</td>
<td>-13%</td>
</tr>
<tr>
<td>Residential Building</td>
<td>42,543</td>
<td>49,868</td>
<td>-15%</td>
</tr>
<tr>
<td>Nonbuilding Construction</td>
<td>23,235</td>
<td>24,723</td>
<td>-6%</td>
</tr>
<tr>
<td>Total Construction</td>
<td>$99,252</td>
<td>$113,170</td>
<td>-12%</td>
</tr>
</tbody>
</table>

Source: Dodge Data & Analytics
National Backlog Index is Topping Out?

Construction activity under contract but not yet completed
Nonresidential Construction Activity is OK

FMI’s NRCI is a 6 month leading economic indicator. Surveys non-res, non-civil const activity.
Future Activity Looks Flat
This measures nonresidential building projects in the planning phase and is generally a 12 month leading economic indicator

<table>
<thead>
<tr>
<th>Dodge Momentum Index (Year 2000=100)</th>
<th>Mar-19</th>
<th>Feb-19</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dodge Momentum Index</td>
<td>145.5</td>
<td>144.8</td>
<td>0.5%</td>
</tr>
<tr>
<td>Commercial Building</td>
<td>162.0</td>
<td>157.6</td>
<td>2.8%</td>
</tr>
<tr>
<td>Institutional Building</td>
<td>125.0</td>
<td>128.9</td>
<td>-3.0%</td>
</tr>
</tbody>
</table>

Source: Dodge Data & Analytics
CFMA Confidex is Positive But Declining

At 109 it’s at its lowest level since 10Q3. Looks at expectations.
What About Things Here?
Things Are Good Now

January 2019 State Coincident Indexes: Three-Month Change

Source: Federal Reserve Bank of Philadelphia
The Future Looks OK
Economic Conditions

Good everywhere, most variable in Virginia Beach
Unemployment Rates in the Big MSAs
Richmond and Virginia Beach have caught up to DC’s low rate
Unemployment Rates in Some Smaller Virginia MSAs
All are below the national average, Bristol has caught up! C’ville is always lowest.
Job Growth in the Biggest Three Cities

Growth has slowed noticeably since fall 2018. Virginia Beach has hit zero!
Job Growth in Four Smaller Cities

Charlottesville has been best. Growth has slowed since fall 2018
Labor Force Growth Rates Around Here
Since start of 2018 a slowing has occurred. DC’s growth has plummeted

Shaded areas indicate U.S. recessions
Source: U.S. Bureau of Labor Statistics
myf.red/g/ny8c
Charlottesville’s labor force has been doing very well till recently
House Price Appreciation in DC, VA Beach and Richmond
Virginia Beach has not yet recovered. Richmond has done best.
House Price Appreciation in the Other Four Cities
All places have fully recovered. Charlottesville is different than the other cities.
New Home Construction Activity by City
Richmond gains, Virginia Beach weakens, DC is flat. None back to 2005 levels
ANY QUESTIONS?

Elliot F. Eisenberg, Ph.D.

Cell: 202.306.2731

elliot@graphsandlaughs.net

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GRAPHs and LAUGHS