Guidance in an Uncertain Economy
Alan Beaulieu, PhD
President

COVID-19
&
Government Involvement

OIL PRICES

TIMELINE ASSUMPTIONS & ECONOMIC VARIABLES
How Contagious & Deadly is It?

We don’t fully know yet but it’s in this range

<table>
<thead>
<tr>
<th>Country</th>
<th>Fatality Rate</th>
<th>As % of Total Population</th>
<th>% Population 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>11.04%</td>
<td>0.0179%</td>
<td>23.0%</td>
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<tr>
<td>Spain</td>
<td>8.28%</td>
<td>0.0140%</td>
<td>19.6%</td>
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<tr>
<td>UK</td>
<td>6.29%</td>
<td>0.0018%</td>
<td>18.5%</td>
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<tr>
<td>World</td>
<td>4.69%</td>
<td>0.0004%</td>
<td>9.1%</td>
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<tr>
<td>China</td>
<td>4.02%</td>
<td>0.0002%</td>
<td>11.5%</td>
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<tr>
<td>US</td>
<td>1.75%</td>
<td>0.0008%</td>
<td>16.5%</td>
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<tr>
<td>Germany</td>
<td>0.79%</td>
<td>0.0005%</td>
<td>21.6%</td>
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</table>

Sources: Centers for Disease Control, WHO, New York Times

COVID-19 Fatality Rate

Based on DAILY aggregated total deaths

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<th>Fatality Rate</th>
<th>As % of Total Population</th>
<th>% Population 65+</th>
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</thead>
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<tr>
<td>Italy</td>
<td>11.39%</td>
<td>0.0192%</td>
<td>23.0%</td>
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<tr>
<td>Spain</td>
<td>8.62%</td>
<td>0.0157%</td>
<td>19.6%</td>
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<tr>
<td>UK</td>
<td>6.36%</td>
<td>0.0021%</td>
<td>18.5%</td>
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<tr>
<td>World</td>
<td>4.79%</td>
<td>0.0005%</td>
<td>9.1%</td>
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<td>0.0002%</td>
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<td>1.93%</td>
<td>0.0010%</td>
<td>16.5%</td>
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<td>Germany</td>
<td>0.94%</td>
<td>0.0007%</td>
<td>21.6%</td>
</tr>
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</table>

Sources: European Center for Disease Prevention, World Bank, US Census Bureau, Worldometer
China: Supply Chain Concerns

- Operating at 60% to 70% of manufacturing capacity; ~ 90% of the labor has returned
- Expected to be at 90% machine capacity utilization in 6 weeks
- Hubei province lagging
- The province of Zhejiang leads the country with 90% of its large industrial firms reopened
- President Xi said that it is time for companies to reopen where the virus is no longer a big danger
- Port delays/congesting are easing but a "supply chain gap" is still probable
- There is considerable concern in general because the Chinese economy is already debt heavy. We think that is more of a longer-term threat associated with the 2030 forecast.
- Medical: Confirmed new cases are down to zero in some provinces with travelers accounting for the increase that is occurring; over half the hospitalized patients in the outbreak province have reportedly been discharged
- 293 clinical trials underway / a vaccine in trials also with a projected timeline of 6 – 8 months (very fast)

Economic Fundamentals Were Improving

World Industrial Production Index to G7 Leading Indicator

Sources: CPB Netherlands Bureau For Economic Policy Analysis, OECD
United States
Federal Actions

The CARES Act of 2020

CARES Act: $2.000B

- Public Health: $153.5B
- Student Loans/Other: $437.5B
- Cash Payments*: $300B
- Extra Unemployment Payments*: $260B
- National Security: $78B
- Airline Industry: $50B
- Cargo Industry: $40B
- Small Business: $577B
- New Loans: $460B
- Relief for Existing Loans: $124B
- COVID-19 Response: $369B
- Other: $9B

*Estimated

Sources: NPR, Final CARES Act Document
It Will Remain Difficult to Find Qualified Trained People

US Food Service Contractors Employment

Wage Pressures Will Continue

US Average Weekly Wage for Food Service Contractors

Source: Bureau of Labor Statistics
Federal Reserve Takes Action

March 12
• Fed announced pumping $1.5 tril into short-term lending markets

March 15
• Cut interest rates by 100bps to 0% - 0.25%
• Lowered the primary credit rate to 0.25% and lengthened term of loans to 90 days
• Cut reserve requirements to zero
• Announced at least $700 billion of asset purchases:
  • $500 billion of treasuries and $200 billion of MBS
• Announced coordinated efforts with BoC, BoJ, BoE, ECB, and SNB to lower the rate and extend the term on existing dollar swap arrangements

March 16
• Announced the launch of commercial paper funding facility

March 18
• Announced reopening of primary dealer credit facility

March 23
• Created new and extensive lending facilities

BTW: A normal yield curve is back in place

Some Economic Fundamentals
ITR Leading Indicator Expected to Bend but not Break

US Total Retail Sales to ITR Consumer Activity Leading Indicator™

Sources: US Census Bureau, ITR Economics

Analysis suggests near-term decline in the ITR indicator is not probable

It is normal for Retail Sales to move unfettered relative to oil

After the Surge Comes the Lull

Johnson Redbook Weekly Indexes for the US

Sources: CEIC, US Census Bureau
Housing: Positive Signal

US Single Unit Housing Starts

As seen in

**U.S. Economic Leading Indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Trend</th>
<th>Comments</th>
<th>Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITR Consumer Activity Leading Indicator</td>
<td>Rise</td>
<td>Potential April 2019 low expected to hold</td>
<td>14</td>
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<tr>
<td>ITR Financial Leading Indicator</td>
<td>Rise</td>
<td>August 2019 low; danger of losing</td>
<td>14</td>
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<tr>
<td>JPMorgan Global PMI</td>
<td>Decline</td>
<td>Jan 2019 1/12 r-o-c; lost the low</td>
<td>12</td>
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<tr>
<td>OECD Leading Indicator</td>
<td>Rise</td>
<td>August 2019 1/12 low holding but data delayed</td>
<td>10</td>
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<tr>
<td>G7 Leading Indicator</td>
<td>Rise</td>
<td>August 2019 low is holding for now</td>
<td>10</td>
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<tr>
<td>Purchasing Managers Index (PMI)</td>
<td>Rise</td>
<td>September 2019 1/12 low holding thru Feb</td>
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<tr>
<td>ITR Leading Indicator</td>
<td>Rise</td>
<td>October 2019 low looks likely to hold</td>
<td>8</td>
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<tr>
<td>Wilshire Total Market Cap</td>
<td>Rise</td>
<td>Feb 2019 low holding through Feb but in danger</td>
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<tr>
<td>US Leading Indicator</td>
<td>Rise</td>
<td>Dec 2019 low likely will lose the low</td>
<td>8</td>
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<tr>
<td>Single-Family Housing Starts</td>
<td>Rise</td>
<td>12/12 Aug 2019 low expected to hold</td>
<td>8</td>
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<tr>
<td>Total Industry Capacity Utilization</td>
<td>Rise</td>
<td>Jan 2020 low threatened assume we lose the low</td>
<td>6</td>
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<tr>
<td>US Exports – World</td>
<td>Rise</td>
<td>Jun 2019 3/12 low viability is threatened</td>
<td>4</td>
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Financial Markets

Expectations: this will be a relatively short decline and the rebound will be normal

Bear Markets Occur Even When Retail Sales Are Rising

US Stock Prices Index to US Total Retail Sales

Searching for the Bottom
S&P500 Stock Prices Index

March 30, 2020 close 2626.65

Corporate Liquid Assets Will Be Dragged Down
US Stock Prices Index to US Nonfinancial Corporate Business Liquid Assets

Downward pressure on profits certainly a concern
Cash is king; plan accordingly
Fed's $1.5 trils intervention and QE5 are very timely

Sources: Wall Street Journal, Federal Reserve Board
Opportunities in the Cycle

Reduce Risk Exposure And Increase Liquidity

<table>
<thead>
<tr>
<th>Thrill</th>
<th>Euphoria</th>
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<tr>
<td>Anxiety</td>
<td>Denial</td>
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<tr>
<td>Optimism</td>
<td>Relief</td>
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<tr>
<td>Capitulation</td>
<td>Hope</td>
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Increase Risk Exposure And Decrease Liquidity

In the Aftermath of the 7 Pertinent Precedents:

1. Market rebounds for a duration of 11 to 26 months or slightly longer

2. Market rebounds 56.5% to 85.5%

3. Length of rebound not a determining factor in magnitude of the rise

4. Median gain all cases is 60.8%
Quality of the Debt More Important…and Concerning
US Nonfinancial Corporate Business Debt Securities and Loans Liability Level as a Percent of US Gross Domestic Product

Sources: FRED

Macroeconomic Trends
Recession in First and Second Quarters of 2020

US Gross Domestic Product, SAAR, Chained 2012 $

Source: BEA

Expect a Volatile Recovery

US Real Gross Domestic Product

Source: US Bureau of Economic Analysis
An Important Leading Indicator to Monitor
US Real Gross Domestic Product to ITR Leading Indicator™

Sources: Bureau of Economic Analysis, ITR Economics

Not a Consistently Reliable Leading Indicator
US Real Gross Domestic Product to US Stock Prices Index

Sources: Bureau of Economic Analysis, Wall Street Journal
Post Black Swan Business Cycle Forecast
US Industrial Production Index

Source: FRB

12/12 Rates-of-Change

Post Black Swan Business Cycle Forecast
US Total Industrial Production

109.0

Not nearly as painful as 2009

Source: FRB
States with Stay at Home Orders

Problems Will Extend Until Late 2020/Early 2021

US Total Retail Sales

Source: New York Times

Source: US Census Bureau
Downside Pressure Ahead

Retail Sales to Retail Sales Food Services and Drinking Places

Source: US Census Bureau

12/12 Rates of Change

5.2%  4.2%

US Wholesale Trade of Professional and Commercial Equipment and Supplies to US Total Retail Sales

12/12 Rates-of-Change

Source: US Census Bureau
A Positive Leading Indicator for Late 2020

US Wholesale Trade of Professional and Commercial Equipment and Supplies to
US Nondefense Capital Goods New Orders (excluding aircraft)

Source: US Census Bureau

Rates-of-Change

Source: US Census Bureau, ITR Economics
Downside Cyclical Pressure Ahead
Wholesale Trade of Professional & Commercial Equipment & Supplies

Source: US Census Bureau

Billions of dollars

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<tr>
<th>Year</th>
<th>3/12</th>
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$529.4

Post Black Swan Retail Sales Forecast
US Total Retail Sales

Retail Sales
Retail Sales Forecast

Source: US Census Bureau
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Any Questions?
Alan Beaulieu, PhD

With a reputation as an accurate, straightforward economist, Alan has been delivering award-winning workshops and economic analysis seminars in countries across the world to thousands of business owners and executives for the last 30 years.

He is co-author of Prosperity in the Age of Decline, a powerful look at how to make the most of the US and global trends over the next 20 years. Alan also coauthored Make Your Move, a practical and insightful guide on increasing profits through business cycle changes, and noted by one reviewer as “simple, yet awesome.”

ABOUT ALAN

Alan has been providing workshops and economic analysis seminars to countries and literally thousands of business owners and executives for the last 30 years. He is one of the country’s most sought-after economists.

As the chief economist for numerous US and international trade associations, it has been remarked that Alan’s “insight into our business, a track record of accurate forecasting, and unparalleled knowledge of global markets has earned him the respect and appreciation of key business leaders in our industry.”


ABOUT ITR ECONOMICS

Founded in 1948, ITR Economics is the oldest, privately-held, continuously operating economic research & consulting firm in the United States. With a long-term 94.7% accuracy rating, ITR Economics has forecast major economic events, such as the 2008 recession, well in advance and provides reliable industry and company forecasts tailored to client’s needs. ITR Economics also offers economic webinars, subscription periodicals, consultative reports, and data collection services.

TESTIMONIALS

“The lessons and strategies you shared as part of the Strategies for a Tough Economy panel were of enormous value to the more than 700 entrepreneurs and small business partners in attendance.” - Mark Herlyn, Vice President, Advertising New York Times

“Many thanks for your excellent presentation at HMA’s recent National Conference & Expo. As always, the information was extremely well-received, on point, and hit home to everyone in this room. And the ‘subtle’ humor is always an extra bonus!” - Linda Jovanovich, Executive Vice President, Hardwood Manufacturers Association

“ITR gives us unique intelligence and insight that has helped us win during a severe recession and now win in a growing economy. Alan, you do a great job of presenting the information with a style that is engaging and fun for our audience.” - Reggie Dupré, CEO, Dupré Logistics, LLC

“Thank you for your wit, charm and levity in your presentation. I always thought economists were boring, but glad to see I was wrong.” Rich Canote, Principal, Canote Group

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To book a speaker from ITR Economics, please call 603.796.2500 or email itr@itreconomics.com.

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- Sales forecasting
- Benchmark internal success
- Budget setting
- Improve internal forecasting accuracy and ability

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ITR's insight and ability to relate global and US leading and lagging indicators to our industry was astounding and quite informative. I highly recommend ITR to anyone interested in sound knowledge of future economic conditions.

- Jim Rohr, Co-Chairman, National Shipbuilding and Research Program

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