



Managing Economic Uncertainty

Ohio Through 2023

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CEO & Chief Economist



2018 Forecast Results

If you heard ITR around two years prior...

	Duration	Accuracy
US GDP	24	99.9%
US Ind. Production	34	99.4%
Europe Ind. Production	24	99.2%
Canada Ind. Production	27	97.1%
China Ind. Production	30	99.9%
Retail Sales	28	99.6%
Housing (Single Family Units)	26	99.2%
Employment (Private Sector)	30	99.4%

***ITR Economics provides the best economic intelligence to reduce
risk and drive practical and profitable business decisions.***





Lake Travis, TX

2010



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Source: Lower Colorado River Authority – Lake Travis when “full” – picture taken in 2016, Hill Country News July 2017.



**Lake Travis
2013**



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Source: Lower Colorado River Authority –Lake Travis, Hill Country News July 2017.



Lake Travis, TX

2017

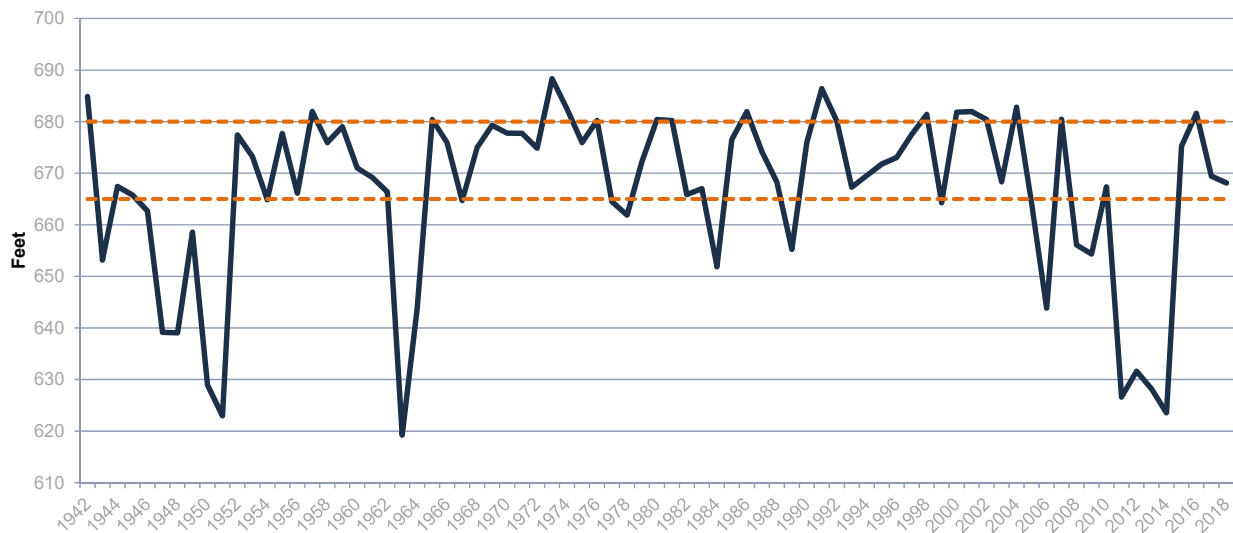


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Source: Lower Colorado River Authority – Lake Travis when “full” – picture taken in 2016, Hill Country News July 2017.

Lake Travis Water Level Last 75 Years



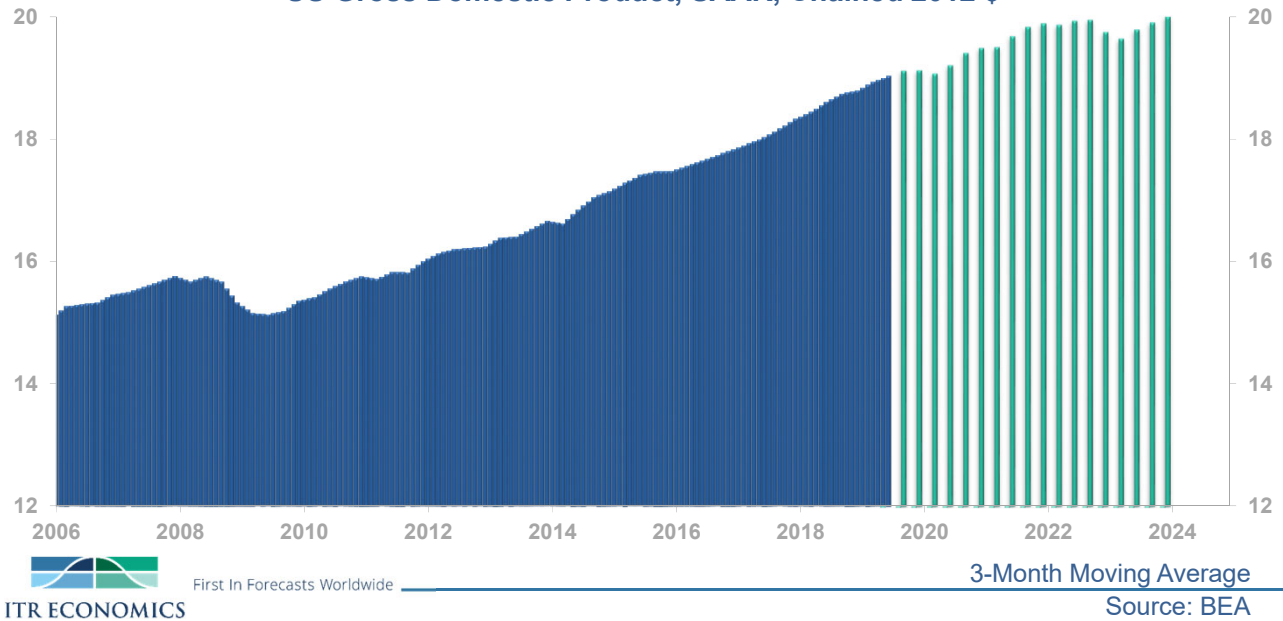
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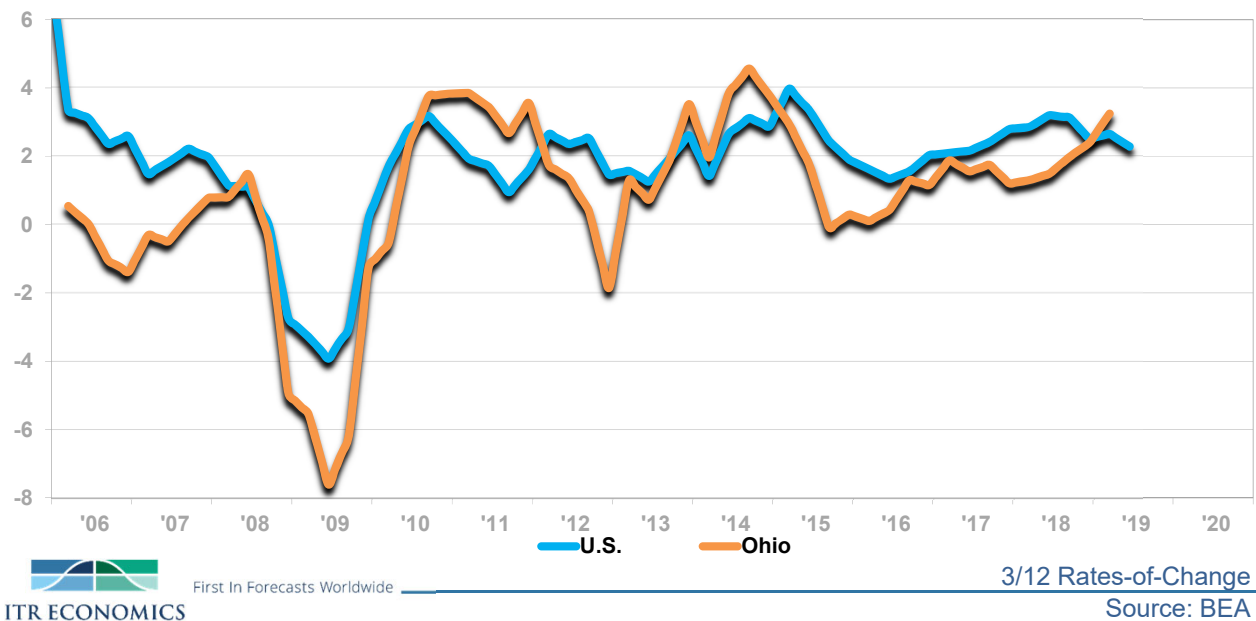
Source: Lower Colorado River Authority, May 2018. Feet is average feet above sea level as of December of each year.

US Economy Stalls in 2019 and Into 2020

US Gross Domestic Product, SAAR, Chained 2012 \$

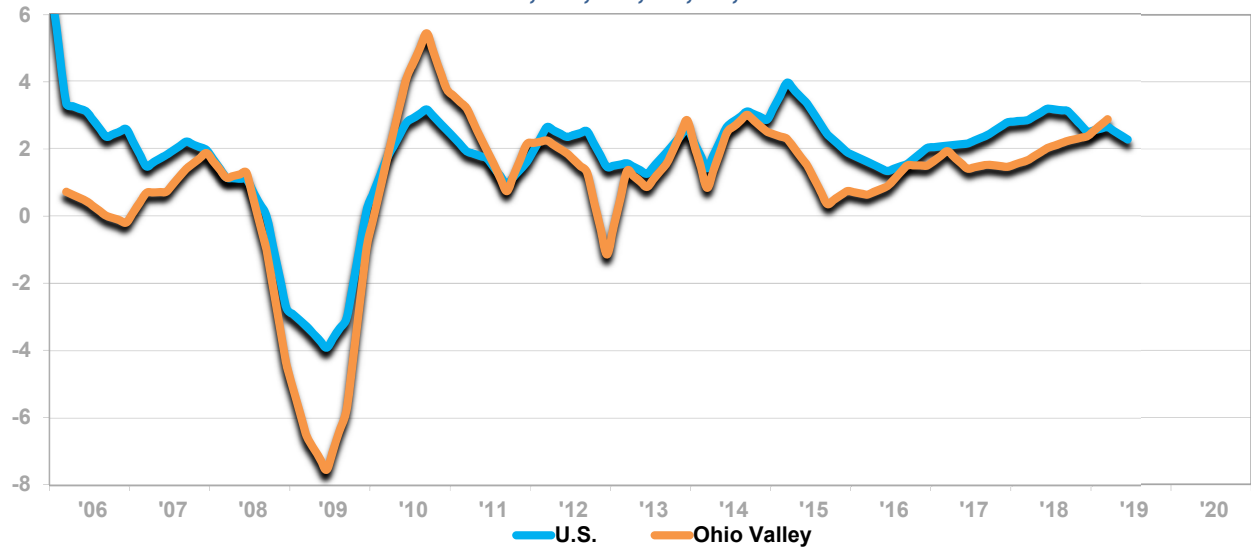


US and Ohio GDP Growth Rate



US and the Ohio Valley GDP Growth Rate

OH, PA, KY, MI, IN, WV



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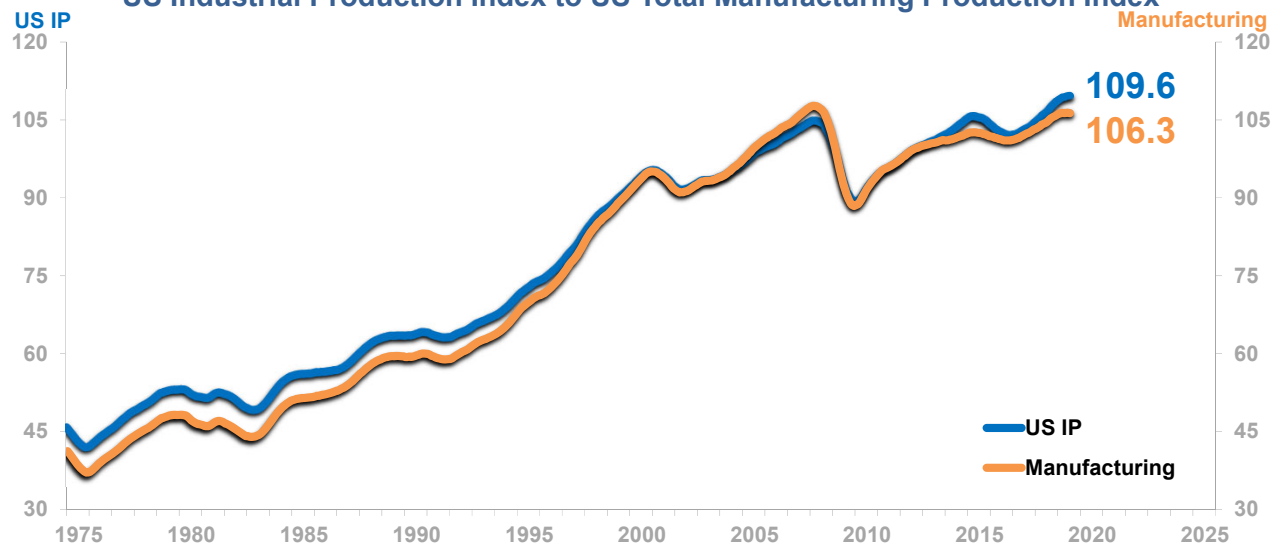
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3/12 Rates-of-Change

Source: BEA

Manufacturing: A Growing Part of America

US Industrial Production Index to US Total Manufacturing Production Index



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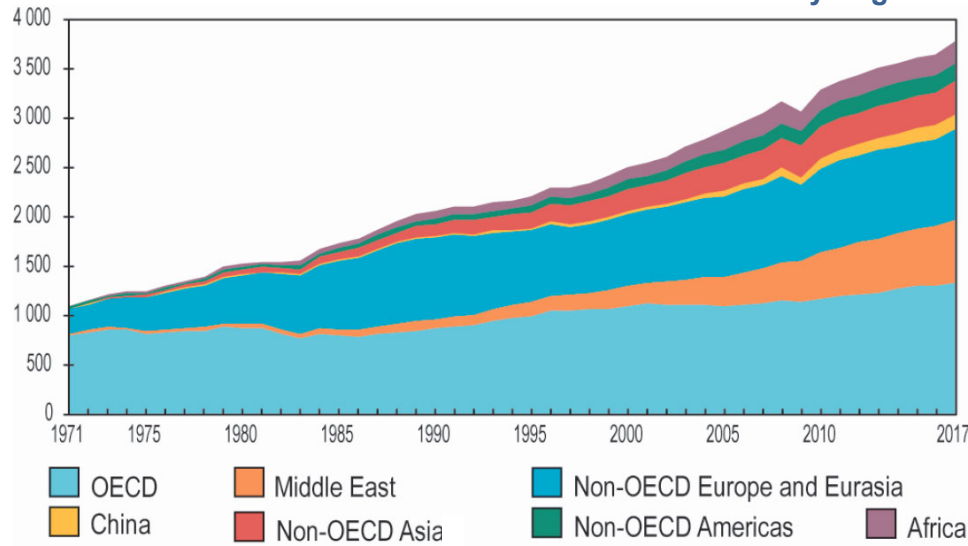
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Annual Data Trends

Source: FRB

Availability is a Huge Advantage

World Natural Gas Production by Region



Producers	bcm	% of World Total
United States	760	20.2
Russia	694	18.4
Iran	214	5.7
Canada	184	4.9
Qatar	169	4.5
China	142	3.8
Norway	128	3.4
Australia	105	2.8
Algeria	94	2.5
Saudi Arabia	94	2.5
Rest of World	1,184	31.3
World	3,768	100

Billion Cubic Meters

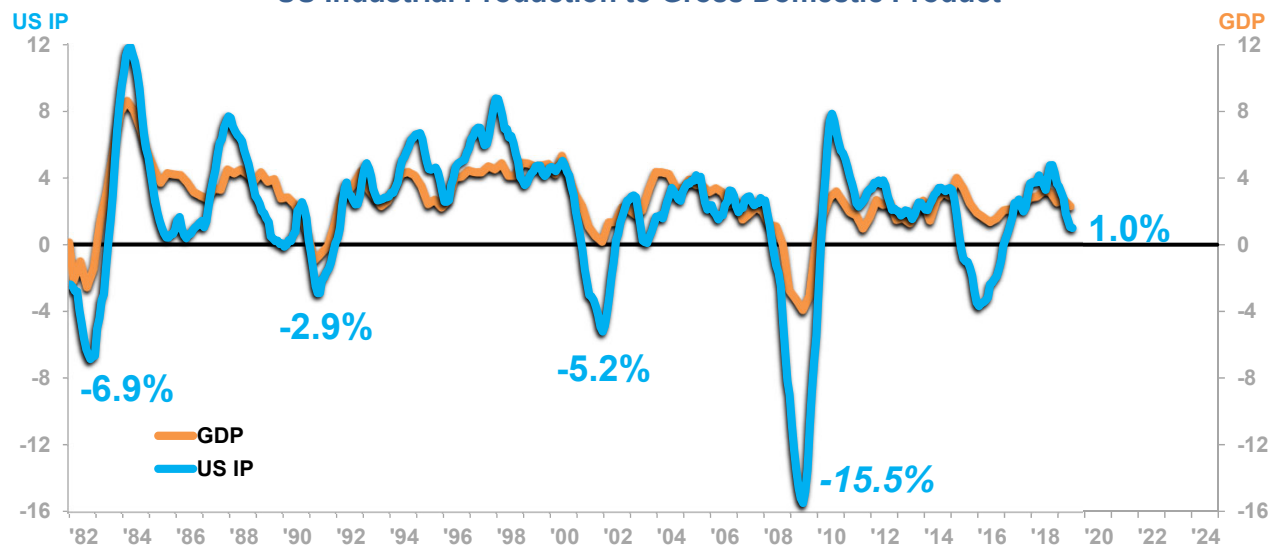
Source: IEA

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Manage the Business Cycles to Maximize Profits

US Industrial Production to Gross Domestic Product



Year-over-Year, Quarter-to-Quarter (3/12)

Sources: FRB, BEA

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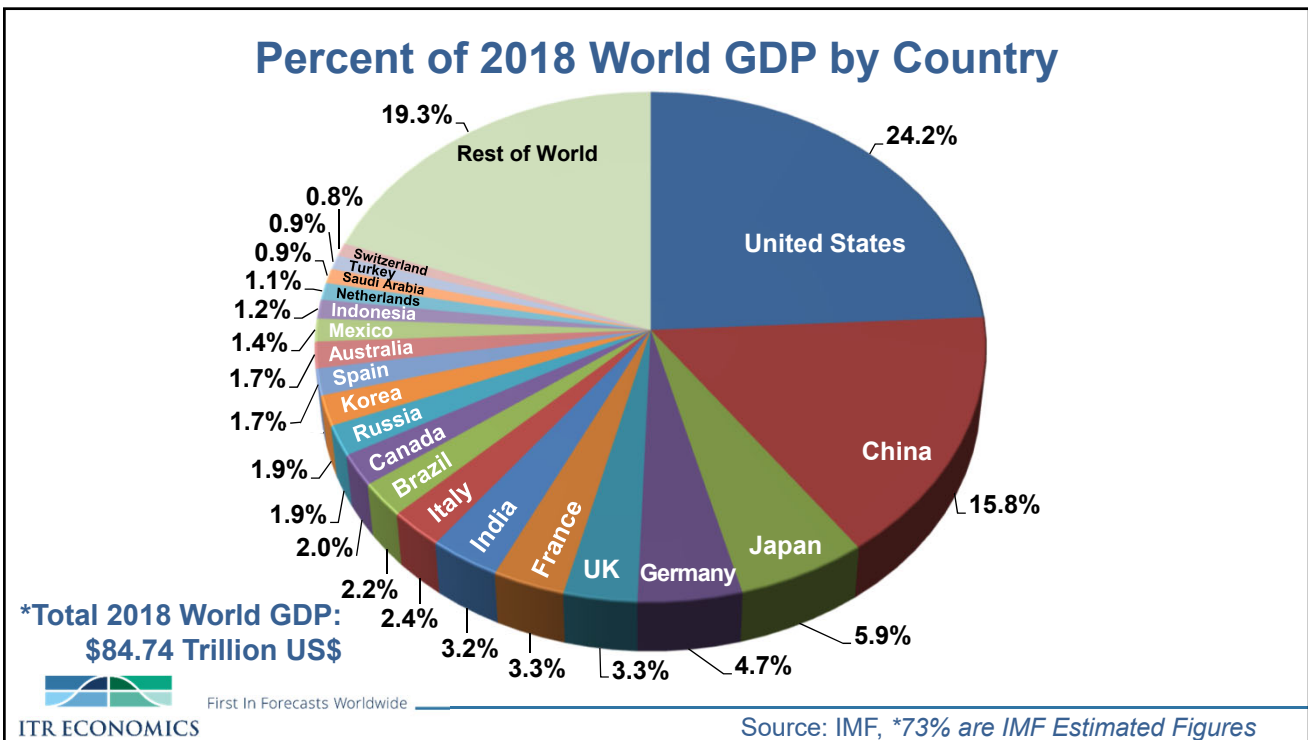


Global Issues

- Business Cycle
- Tariffs

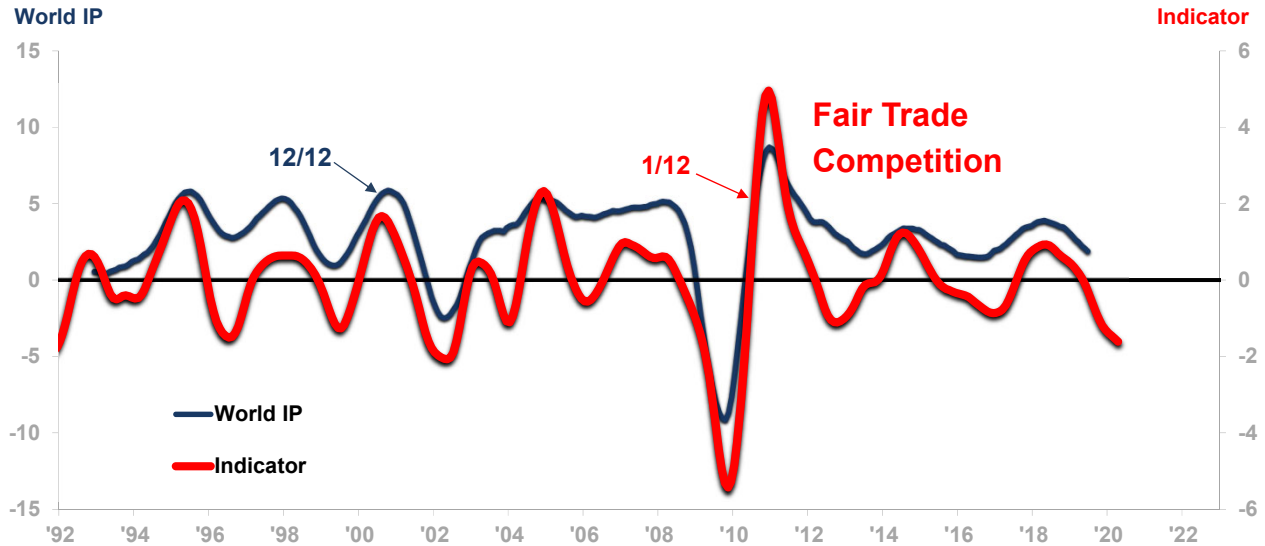


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Trade is of Increasing Importance to Some Countries

World Industrial Production Index to G7 Leading Indicator



ITR ECONOMICS First In Forecasts Worldwide Sources: CPB Netherlands Bureau For Economic Policy Analysis, OECD Rates-of-Change



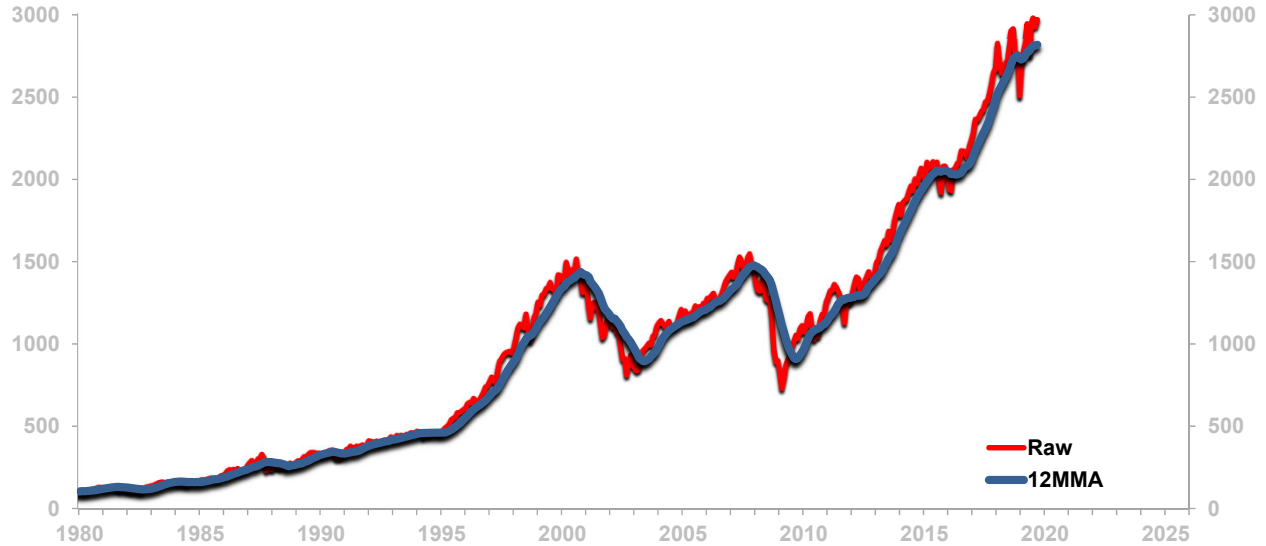
Financial Indicators





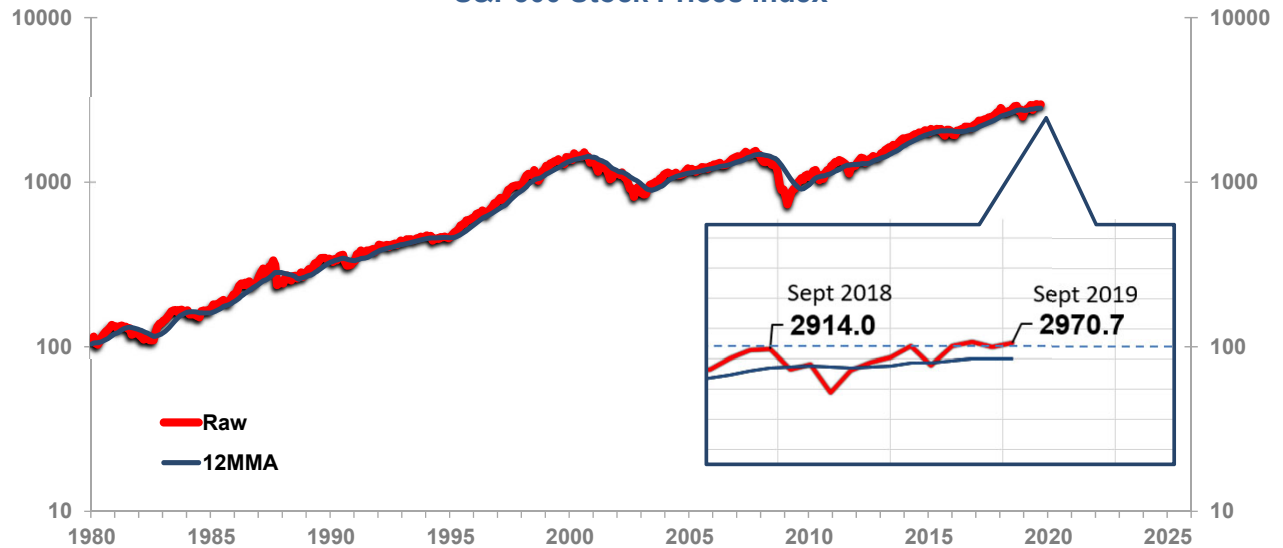
Concerned About How High the Market Has Gone?

S&P500 Stock Prices Index



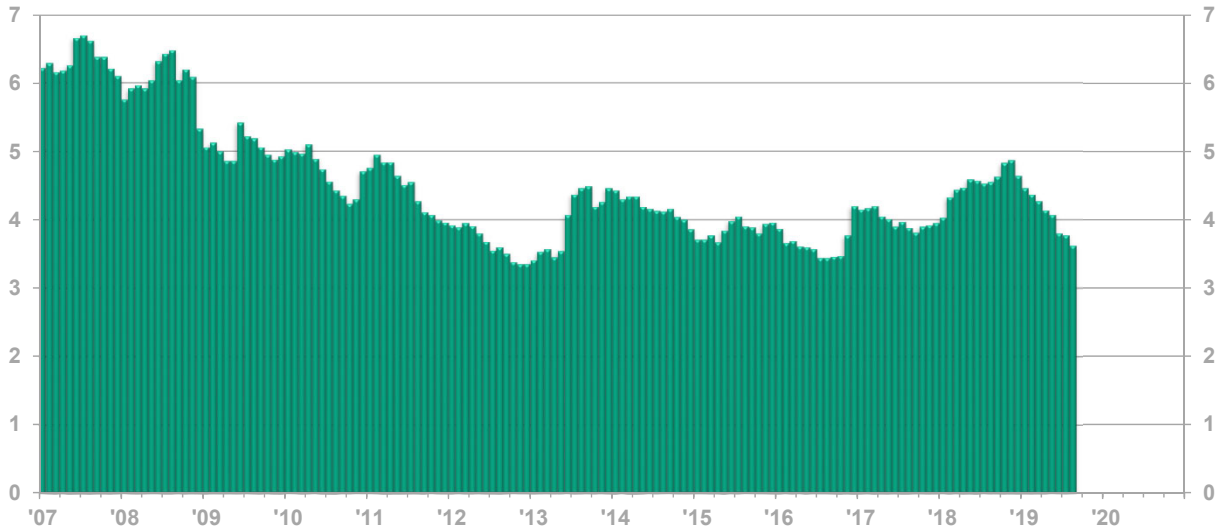
Perilous Heights Are Not an Issue

S&P500 Stock Prices Index



US Mortgage Rate Are Heading Higher in the Next Cycle

US 30-Year Mortgage Rate



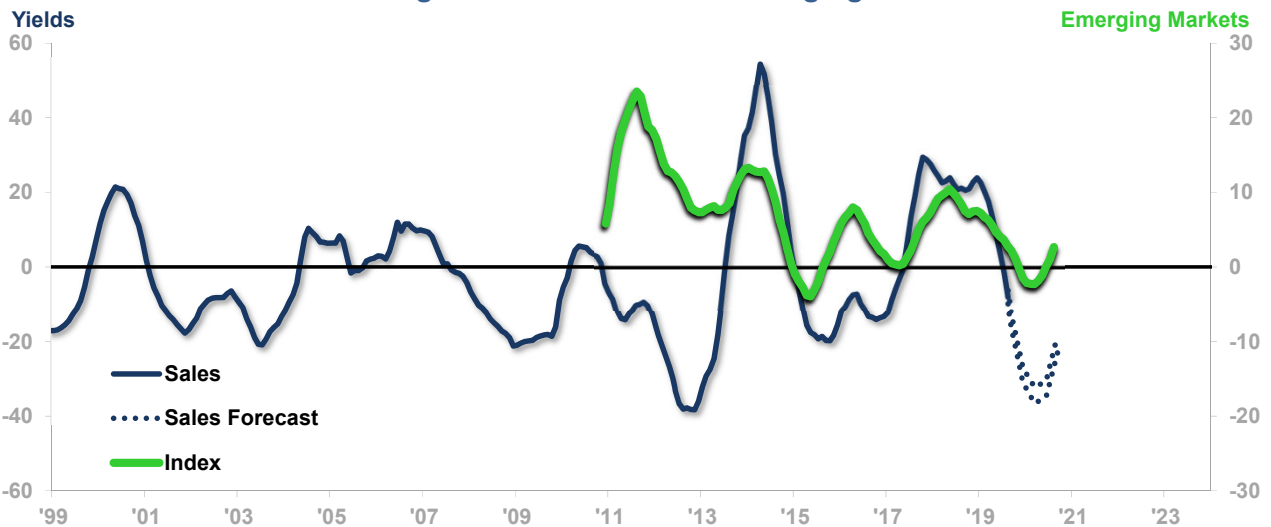
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30-Year, Percent

Source: Wall Street Journal

New Research Results for Bond Yields

US Government Long-Term Bond Yields to Emerging Markets Bond EFT



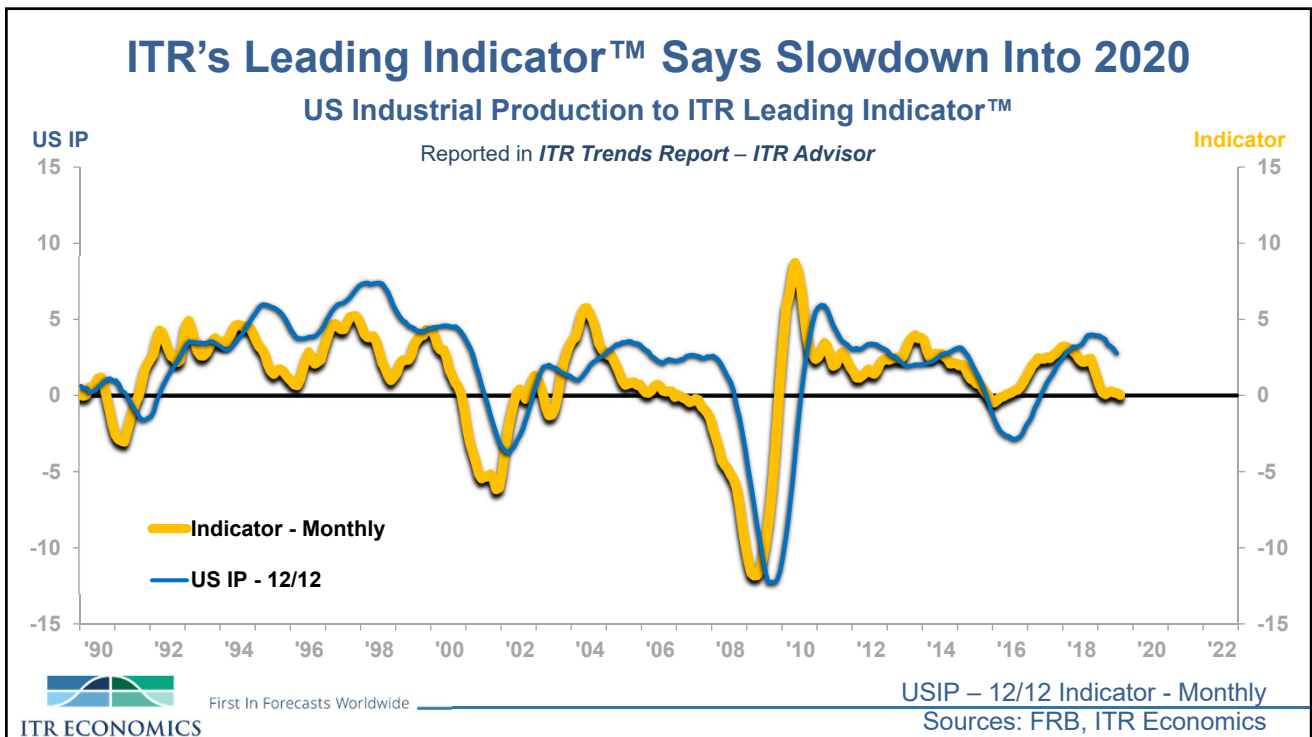
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12/12 Rates of Change

Sources: FRB, Yahoo Finance

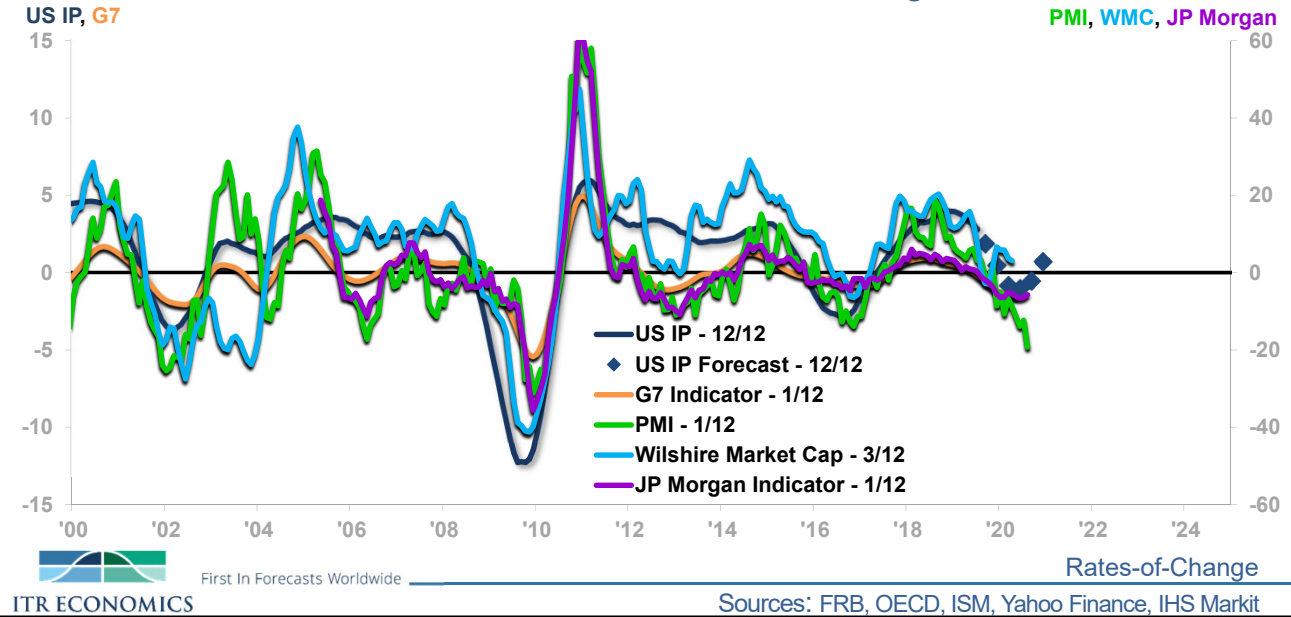



Leading Indicators System Approach

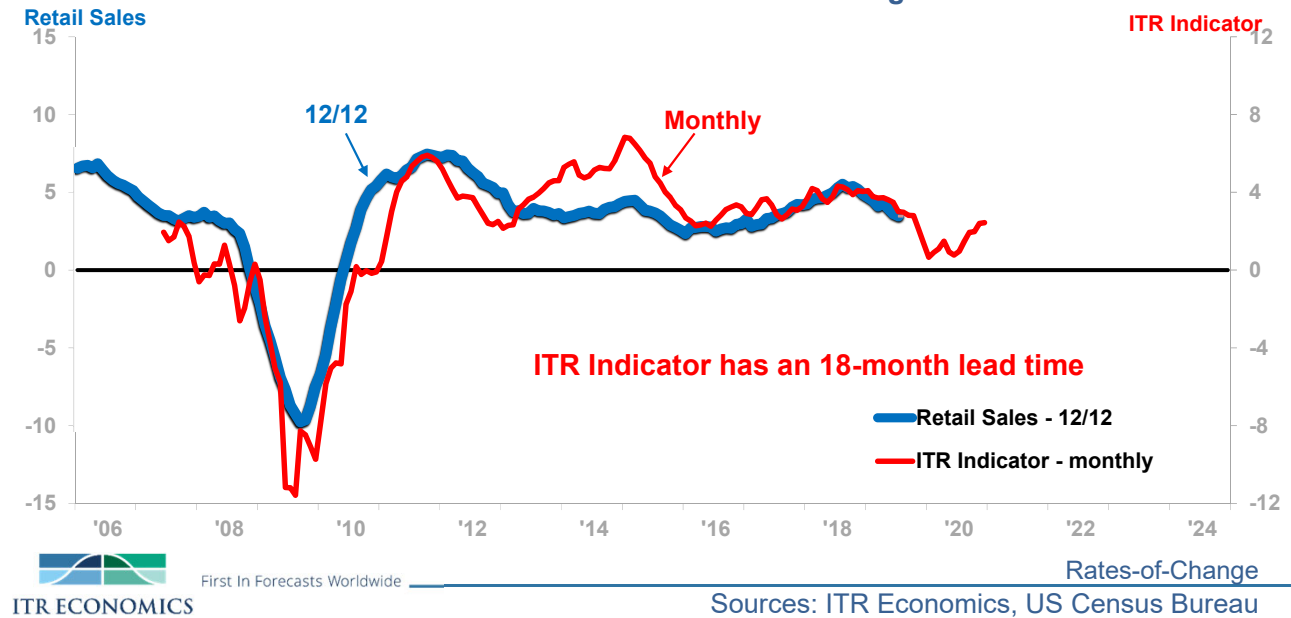
Leading Indicator System as a Powerful Tool

US Industrial Production Index to Various Leading Indicators



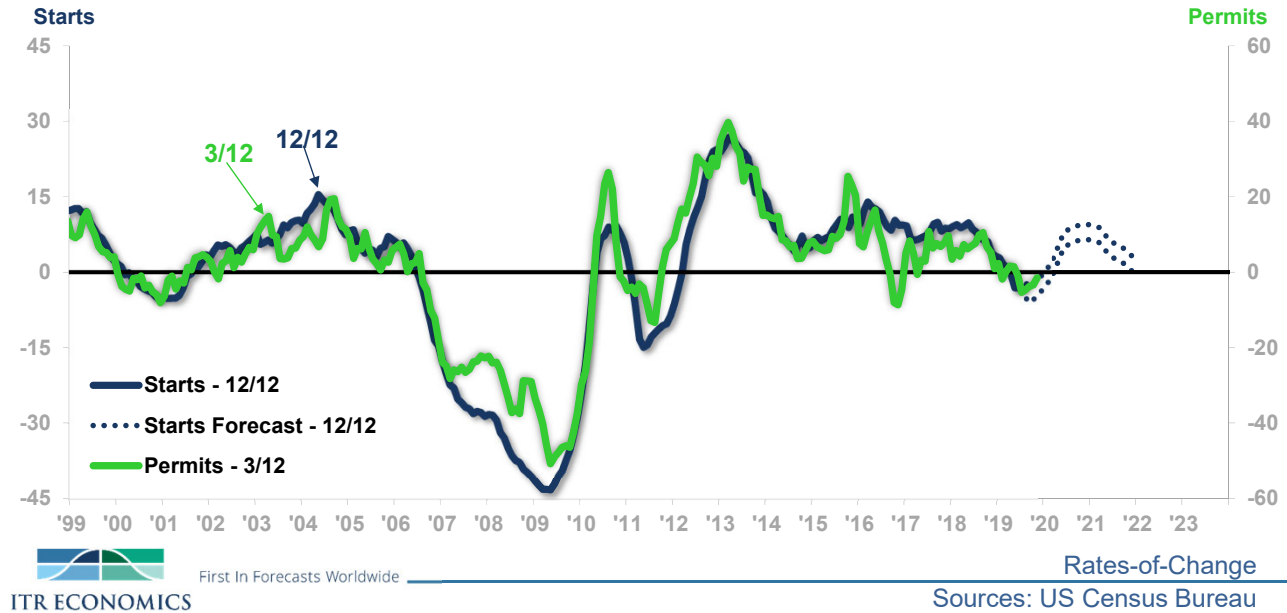
Leading Signal for Decline and for Rise

US Total Retail Sales to ITR Retail Sales Leading Indicator™



Leading the Traditional Leading Indicator

US Single-Unit Housing Starts to US Housing Unit Building Permits

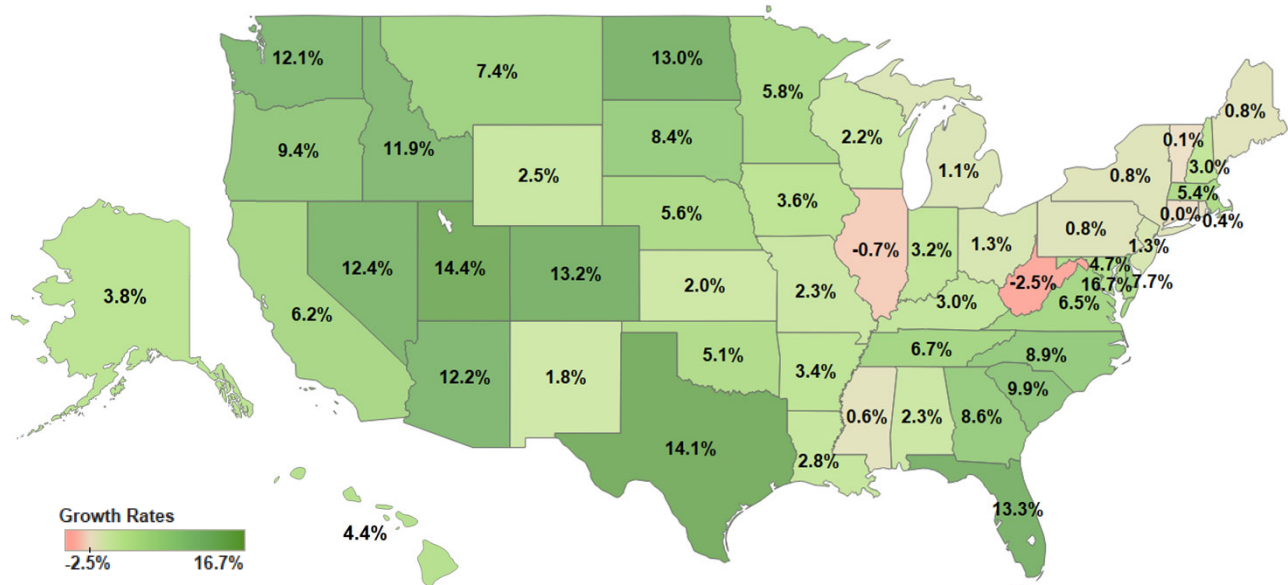


mcao

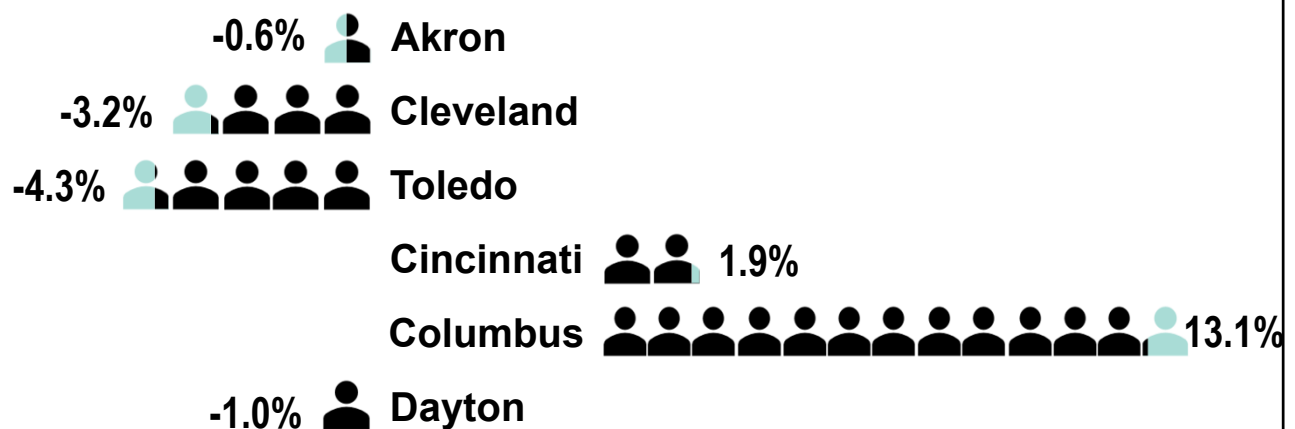
People

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State Population Growth Rates

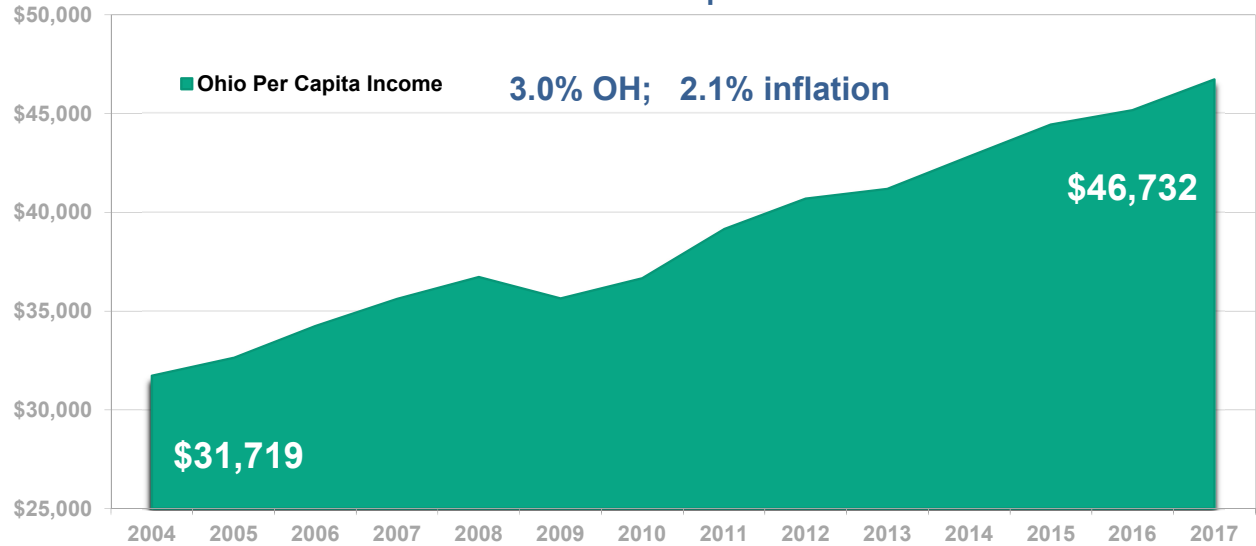


Ohio City Population Growth Rates



Rising Incomes Are a Reality

Ohio Nominal Per Capita Income

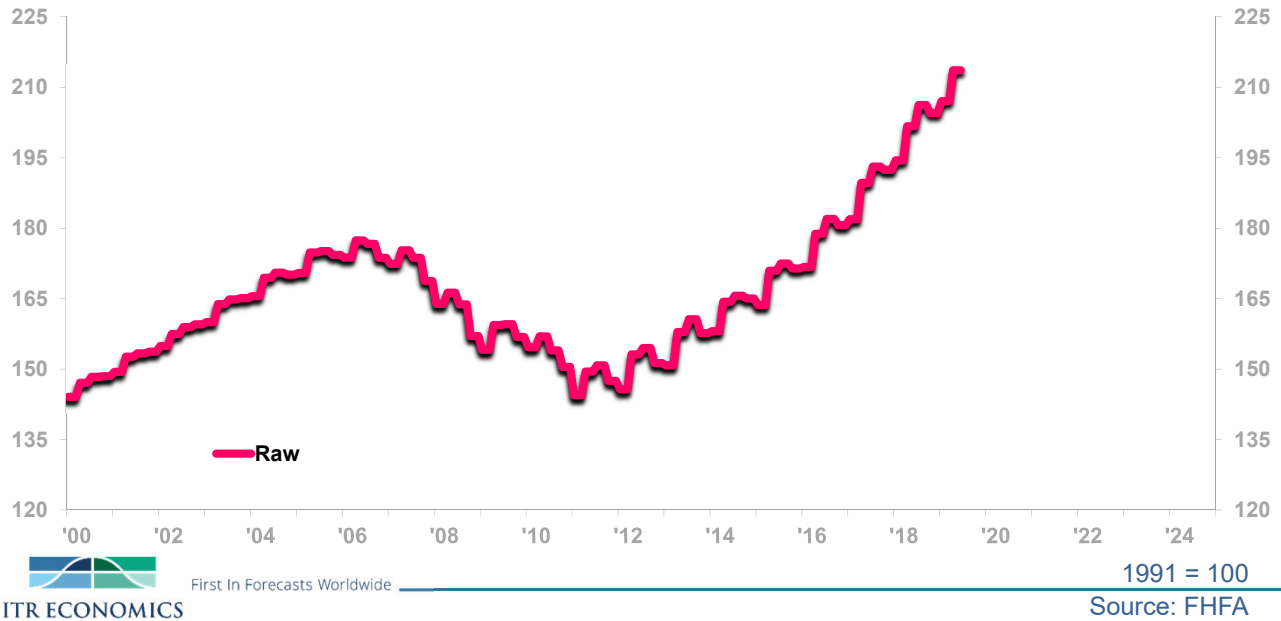


Local Conditions Vary

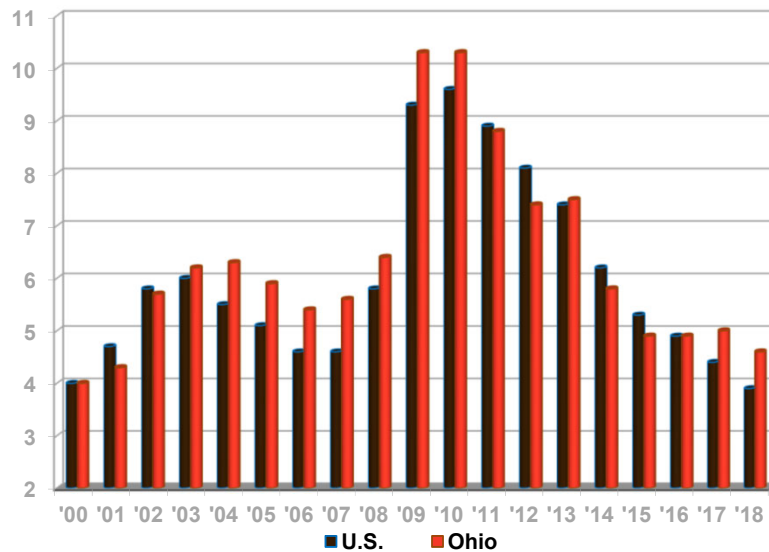
Single-Family Permits

	12/12	Phase	3/12	Phase	Annual Trend	Direction
Akron	-12.4%	D	-25.0%	A	577	Down
Cincinnati	-4.8%	D	-0.7%	A	4,211	Down
Cleveland	-0.2%	D	-5.0%	A	2,627	Down
Columbus	-9.6%	D	-18.6%	D	3,886	Down
Dayton	-12.1%	A	2.7%	B	912	Up
Toledo	-5.1%	D	-3.0%	A	613	Down

Ohio Housing Price Index



US to Ohio Unemployment Rates



July 2019

US 3.7%

OH 4.0%

Akron 5.3%

Cleveland 6.6%

Toledo 5.4%

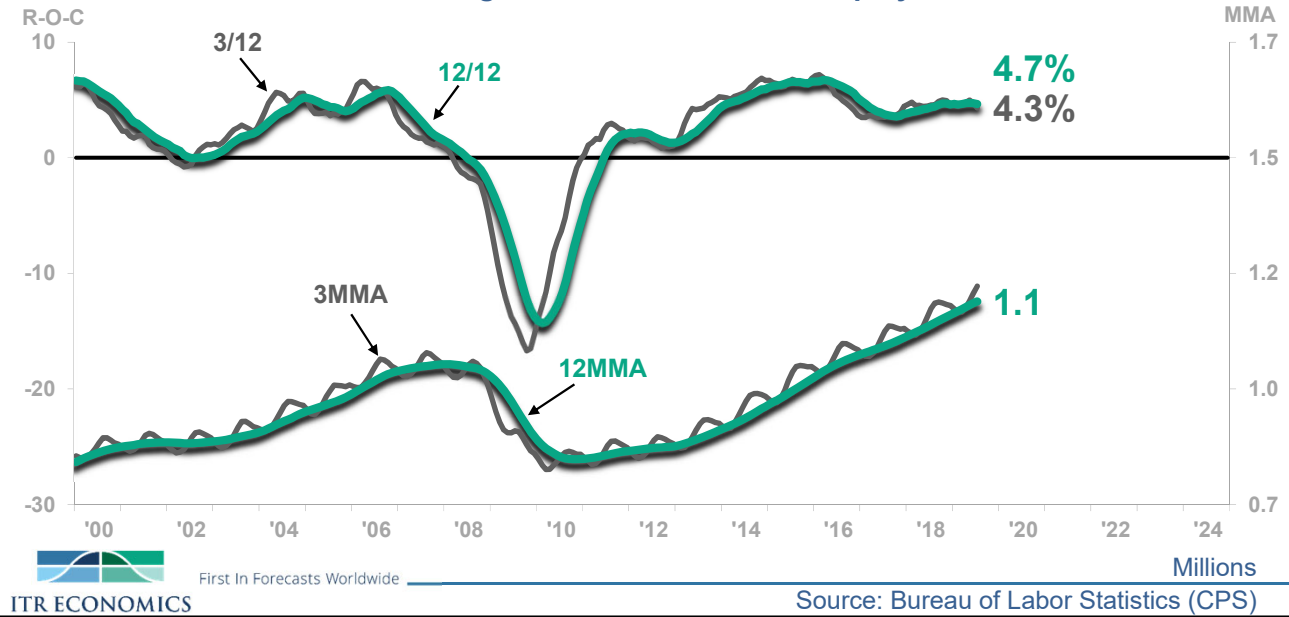
Cincinnati 4.8%

Columbus 4.0%

Dayton 5.8%

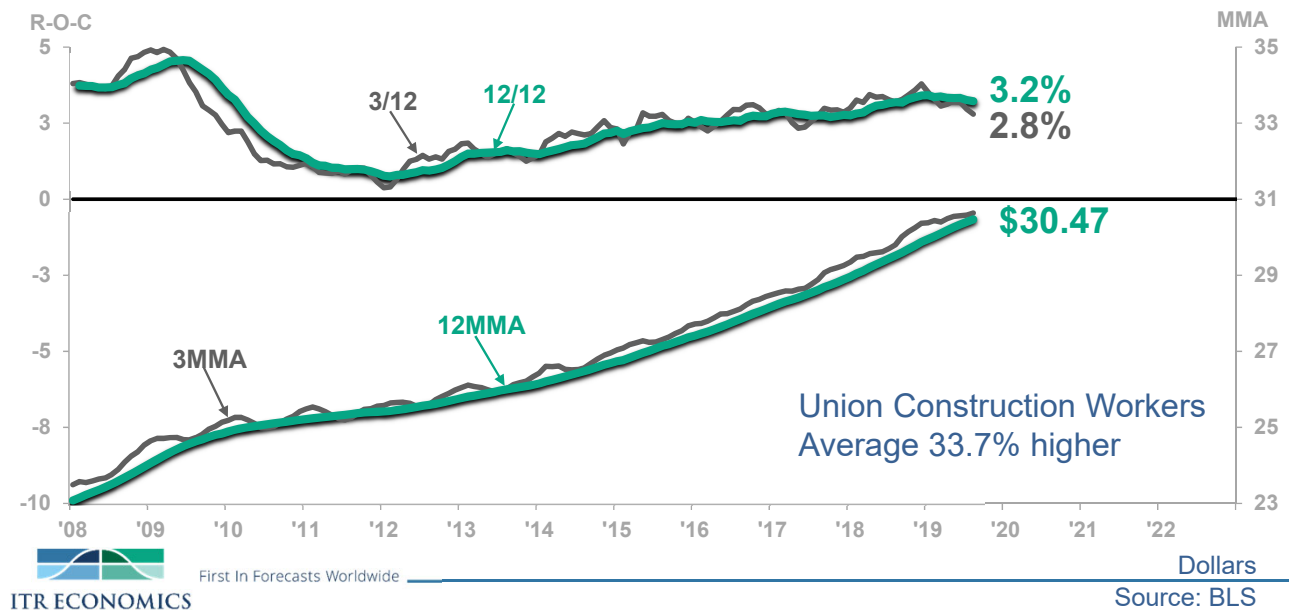
The Need for People Continues

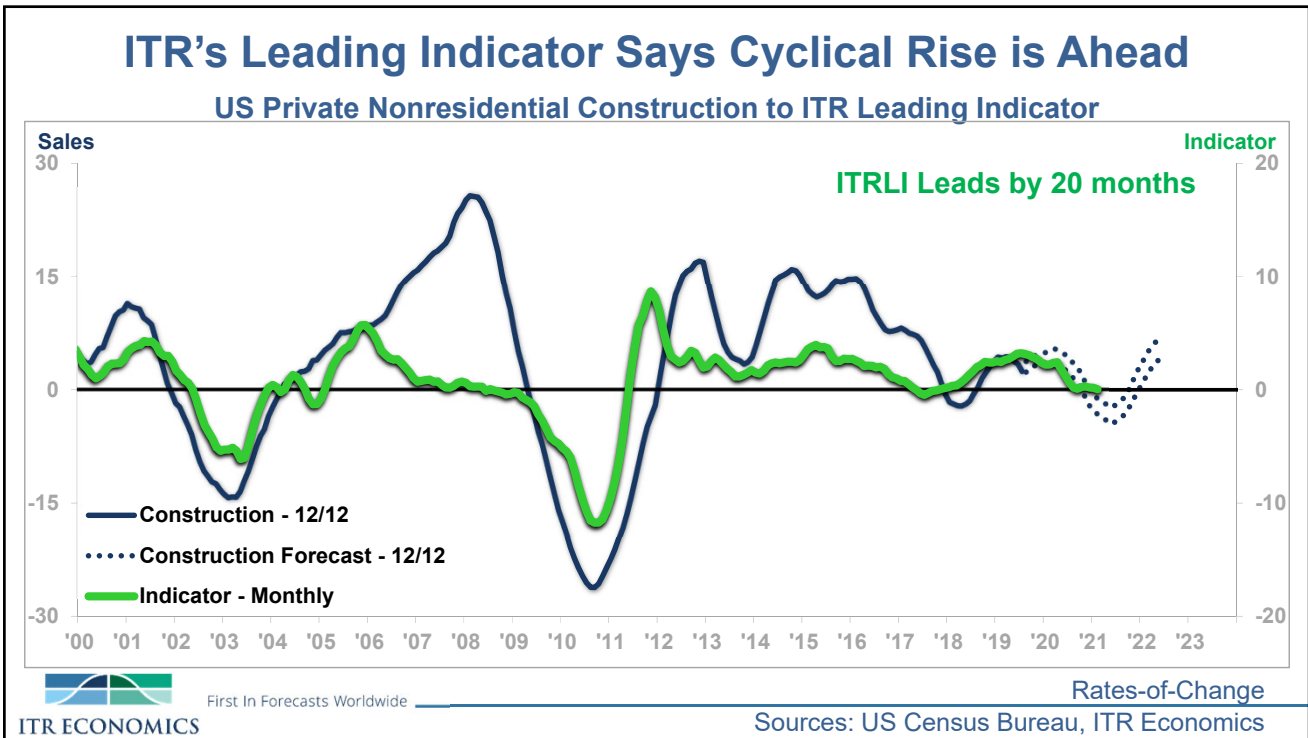
US Plumbing and HVAC Contractor Employment



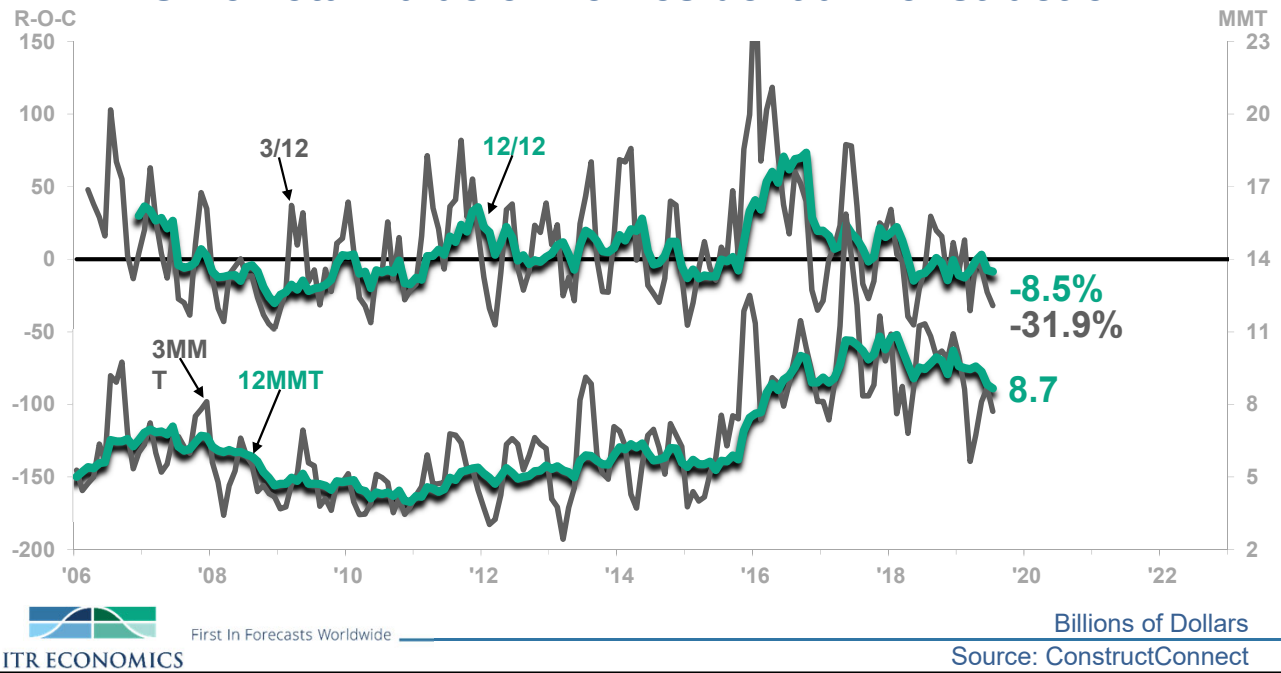
All Construction Workers Are Seeing More \$

US Construction Worker Average Hourly Wage



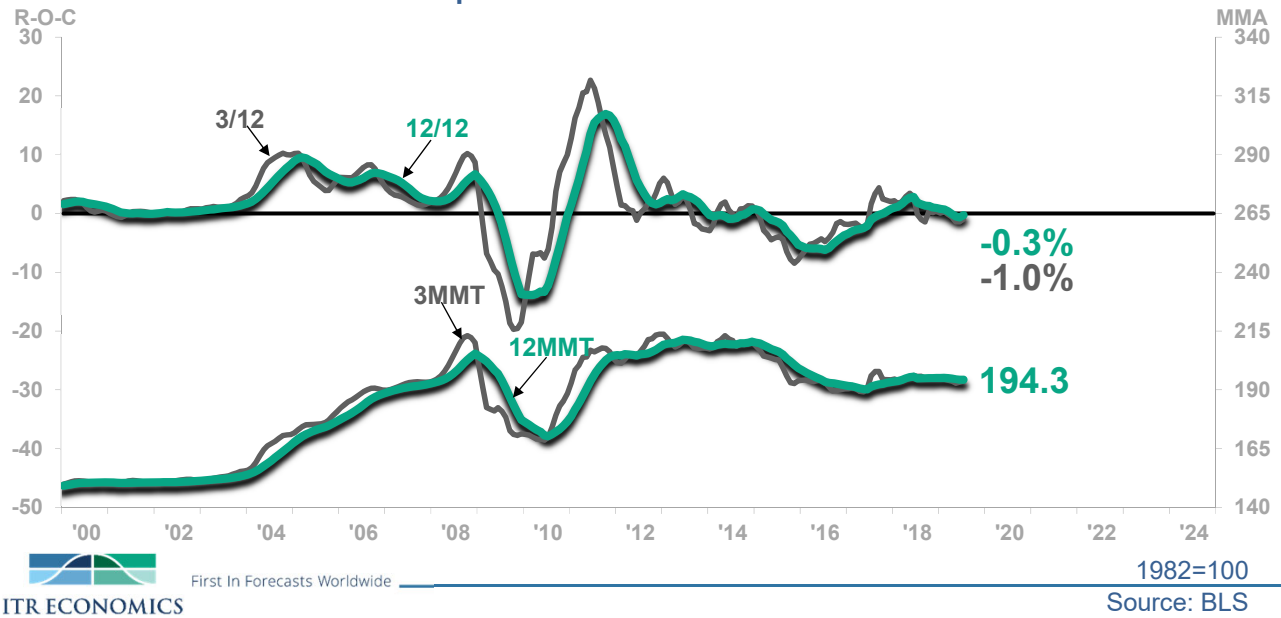


Ohio Total Value of Nonresidential Construction

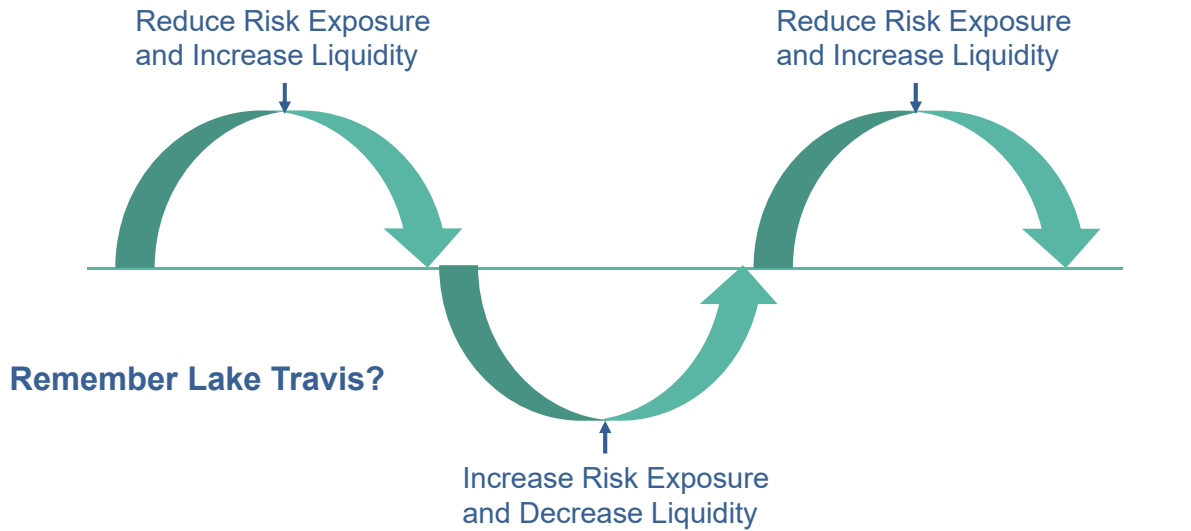


Weak Pricing Pressures

US Materials & Components for Construction Producer Price Index



Riding the Business Cycle



The Long View

Prosperity in the Age of Decline

1. Demographics

2. Health Care Costs

3. Entitlements

4. Inflation

5. US National Debt

World CO2 Emissions by Fuel



US Dollars / MBtu

Source: IEA

US Federal Government Receipts and Payments



Billions of Dollars

Source: BEA


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SPEAKER PROFILE

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Brian Beaulieu

Brian Beaulieu has served as CEO and Chief Economist of ITR Economics™ since 1987, where he researches the use of business cycle analysis and economic forecasting as tools for improving profitability. Brian has shared his highly valued research results via presentations, workshops, and seminars in numerous countries to hundreds of thousands of business owners and executives for the last 35 years.

He is coauthor 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, as well as *Make Your Move*, a practical and insightful guide to increasing profits through inevitable business cycle changes. Brian also coauthored *But I Want It!*, ITR Economics' first children's book.



ABOUT BRIAN

As a speaker and a consultant, Brian has provided valuable and practical advice to companies in need of domestic and global perspectives to increase profits through business cycle trend analysis, forecasting, and effective planning.

Brian serves on the board of directors for the Ariens Company, a leading global manufacturer of outdoor power equipment, as well as the board for Bellwether Wealth, an investment management and strategic wealth planning firm based in Lincoln, NE.

Brian has shared his expertise through various media outlets, including: *USA Today*, *Knight Ridder*, *The Atlanta Journal-Constitution*, *The Wall Street Journal*, *Barron's*, *The Washington Post*, *Kudlow and Friends*, *First on Fox*, Canadian television, and numerous other outlets.

ABOUT ITR ECONOMICS

Founded in 1948, ITR Economics is the oldest privately held, continuously operating economic research and consulting firm in the United States. With a long-term accuracy rating of 94.7%, ITR Economics has forecasted major economic events such as the Great Recession of 2008 years in advance. ITR provides reliable industry and company forecasts tailored to clients' needs. ITR Economics also offers economic webinars, subscription periodicals, consultative reports, and data-collection services.



Click here to check out ITR's Speaker Videos!

TESTIMONIALS

"Brian, just a short note of personal thanks for participating in our ASI Conference last week. I'd have to say the response to your presentation was overwhelmingly positive; everyone appreciated the content and your delivery, even your candid comments about the looming crisis late in the next decade." - [Dick Motley, Director, FANUC America Corporate](#)

"Wow, what a fantastic talk Brian. Your perspective, advice, data, analysis, and presentation were world-class. That was one of the best talks that I've ever attended. My CFO and I will be looking more and more at 3MMA/12MMA metrics within our industry as we get our hands on more data. By the way, you've got a great sense of humor, which you mixed in hilariously with an extremely professional discussion about US economics." - [Dave Handman, President, Sustineo](#)

"Thanks Brian. Your materials help us plan for the future and give us insight into key indicators so we can be successful running our businesses. Very valuable session." - [David Borish, VP of Operations, Bracalente Manufacturing](#)

BOOKING INFORMATION

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

Visit www.itreconomics.com and stay in touch with us through our blog and social media.

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Want to reduce your risk when deciding where and when to allocate your resources?

Join the thousands of businesses who are doing just that by using ITR's forecasting tools ranging from monthly subscriptions to onsite consultations on industry trends that have a direct impact on your business.

ITR has a 94.7% Forecast Accuracy.

Our unmatched 94.7% forecast accuracy at four quarters out since 1985 allows us to help business executives make strategic movements with confidence. Our team of expert economists are ready to coach your team on how to use economic foresight to truly maximize your profitability. We will work directly with you to customize a program that will meet your specific planning needs.

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Initiative	Available Solutions from ITR Economics™			
	EVP Series	Trends Report	Company Forecasts	Insider
Understanding events impacting business activity	●	●		●
Resource Allocation	●	●		
Marketing Initiatives	●	●		
Sales Forecasting	●	●	●	
Setting Sales Goals	●			
Benchmarking for gauging internal success	●			
Budget Setting	●		●	
Increasing internal forecasting accuracy/ability	●			

“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