

PRESTIGE ECONOMICS



The World's Leading Independent Commodity and Financial Market Research Firm

Actionable Predictive Analytics for Large Company CEOs



September 2017

Jason Schenker CMT® CFP® CVA® ERP®
President of Prestige Economics

PRESTIGE ECONOMICS

The Importance of Data:
The Good, The Bad, and The Big

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Data and the Fed

Fed Data and Communication




Source: Prestige Economics

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Fed Statement from January 2004

Federal Reserve Release



Press Release

Release Date: January 28, 2004

For immediate release

The Federal Open Market Committee decided today to keep its target for the federal funds rate at 1 percent.

The Committee continues to believe that an accommodative stance of monetary policy, coupled with robust underlying growth in productivity, is providing important ongoing support to economic activity. The evidence accumulated over the intermeeting period confirms that output is expanding briskly. Although new hiring remains subdued, other indicators suggest an improvement in the labor market. Increases in core consumer prices are muted and expected to remain low.

The Committee perceives that the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. The probability of an unwelcome fall in inflation has diminished in recent months and now appears almost equal to that of a rise in inflation. With inflation quite low and resource use slack, the Committee believes that it can be patient in removing its policy accommodation.

Voting for the FOMC monetary policy action were: Alan Greenspan, Chairman; Timothy F. Geithner, Vice Chairman; Ben S. Bernanke; Susan S. Bies; Roger W. Ferguson, Jr.; Edward M. Gramlich; Thomas M. Hoenig; Donald L. Kohn; Cathy E. Minehan; Mark W. Olson; Sandra Pianalto; and William Poole.

[2004 Monetary policy](#)

[Home](#) | [News and events](#)

[Accessibility](#)

Last update: January 28, 2004

Source: Federal Reserve, Prestige Economics, LLC

Fed Statement from June 2017

June 14, 2017

Federal Reserve issues FOMC statement

For release at 2:00 p.m. EDT

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Information received since the Federal Open Market Committee met in May indicates that the labor market has continued to strengthen and that economic activity has been rising moderately so far this year. Job gains have moderated but have been solid, on average, since the beginning of the year, and the unemployment rate has declined. Household spending has picked up in recent months, and business fixed investment has continued to expand. On a 12-month basis, inflation has declined recently and, like the measure excluding food and energy prices, is running somewhat below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures of longer-term inflation expectations are little changed, on balance.

Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee continues to expect that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, and labor market conditions will strengthen somewhat further. Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.

In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 1 to 1-1/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.

In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee currently expects to begin implementing a balance sheet normalization program this year, provided that the economy evolves broadly as anticipated. This program, which would gradually reduce the Federal Reserve's securities holdings by decreasing reinvestment of principal payments from those securities, is described in the accompanying addendum to the Committee's Policy Normalization Principles and Plans.

Voting for the FOMC monetary policy action were: Janet L. Yellen, Chair; William C. Dudley, Vice Chairman; Lael Brainard; Charles L. Evans; Stanley Fischer; Patrick Harker; Robert S. Kaplan; and Jerome H. Powell. Voting against the action was Neel Kashkari, who preferred at this meeting to maintain the existing target range for the federal funds rate.

[Implementation Note issued June 14, 2017](#)

Last Update: June 14, 2017

Source: Federal Reserve, Prestige Economics, LLC

Fed Schedule for 2004

- March 25, 2004
[Minutes of Board discount rate meetings, December 15, 2003, to January 26, 2004](#)
- March 18, 2004
[Minutes of Federal Open Market Committee, January 27-28, 2004](#)
- March 16, 2004
[FOMC statement](#)
- February 5, 2004
[Minutes of Board discount rate meetings, November 10 to December 8, 2003](#)
- January 29, 2004
[Minutes of Federal Open Market Committee, December 9, 2003](#)
- January 28, 2004
[FOMC statement](#)

2004 Press Releases:

Source: Federal Reserve, Prestige Economics, LLC

Fed Schedule for 2017

2017 FOMC Meetings				
Jan/Feb	31-1	Statement: PDF HTML Implementation Note		Minutes: PDF HTML (Released February 22, 2017)
March	14-15*	Statement: PDF HTML Implementation Note	Press Conference Projection Materials PDF HTML	Minutes: PDF HTML (Released April 05, 2017)
May	2-3	Statement: PDF HTML Implementation Note		Minutes: PDF HTML (Released May 24, 2017)
June	13-14*	Statement: PDF HTML Implementation Note	Press Conference Projection Materials PDF HTML Addendum to the Policy Normalization Principles and Plans	

Source: Federal Reserve, Prestige Economics, LLC

Fed Quarterly Forecasts – Table

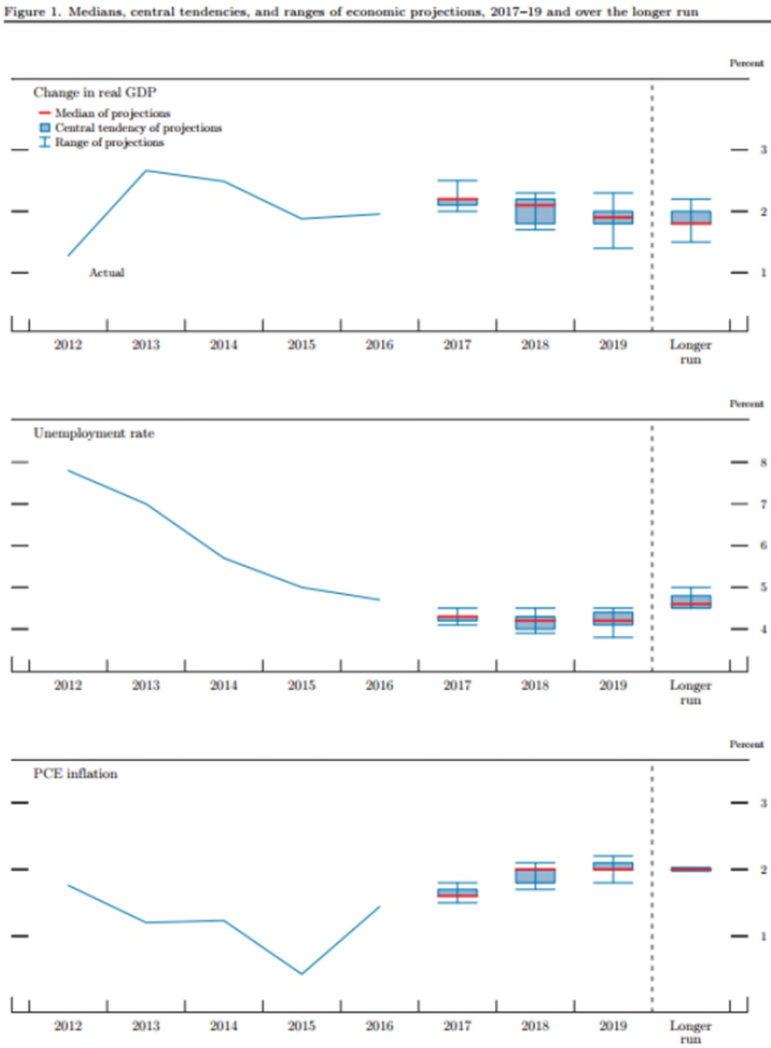
Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, June 2017
Advance release of table 1 of the Summary of Economic Projections to be released with the FOMC minutes

Percent												
Variable	Median ¹				Central tendency ²				Range ³			
	2017	2018	2019	Longer run	2017	2018	2019	Longer run	2017	2018	2019	Longer run
Change in real GDP	2.2	2.1	1.9	1.8	2.1–2.2	1.8–2.2	1.8–2.0	1.8–2.0	2.0–2.5	1.7–2.3	1.4–2.3	1.5–2.2
March projection	2.1	2.1	1.9	1.8	2.0–2.2	1.8–2.3	1.8–2.0	1.8–2.0	1.7–2.3	1.7–2.4	1.5–2.2	1.6–2.2
Unemployment rate	4.3	4.2	4.2	4.6	4.2–4.3	4.0–4.3	4.1–4.4	4.5–4.8	4.1–4.5	3.9–4.5	3.8–4.5	4.5–5.0
March projection	4.5	4.5	4.5	4.7	4.5–4.6	4.3–4.6	4.3–4.7	4.7–5.0	4.4–4.7	4.2–4.7	4.1–4.8	4.5–5.0
PCE inflation	1.6	2.0	2.0	2.0	1.6–1.7	1.8–2.0	2.0–2.1	2.0	1.5–1.8	1.7–2.1	1.8–2.2	2.0
March projection	1.9	2.0	2.0	2.0	1.8–2.0	1.9–2.0	2.0–2.1	2.0	1.7–2.1	1.8–2.1	1.8–2.2	2.0
Core PCE inflation ⁴	1.7	2.0	2.0		1.6–1.7	1.8–2.0	2.0–2.1		1.6–1.8	1.7–2.1	1.8–2.2	
March projection	1.9	2.0	2.0		1.8–1.9	1.9–2.0	2.0–2.1		1.7–2.0	1.8–2.1	1.8–2.2	
Memo: Projected appropriate policy path												
Federal funds rate	1.4	2.1	2.9	3.0	1.1–1.6	1.9–2.6	2.6–3.1	2.8–3.0	1.1–1.6	1.1–3.1	1.1–4.1	2.5–3.5
March projection	1.4	2.1	3.0	3.0	1.4–1.6	2.1–2.9	2.6–3.3	2.8–3.0	0.9–2.1	0.9–3.4	0.9–3.9	2.5–3.8

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The March projections were made in conjunction with the meeting of the Federal Open Market Committee on March 14–15, 2017. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the March 14–15, 2017, meeting, and one participant did not submit such projections in conjunction with the June 13–14, 2017, meeting.

- 1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.
- 2. The central tendency excludes the three highest and three lowest projections for each variable in each year.
- 3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
- 4. Longer-run projections for core PCE inflation are not collected.

Fed Quarterly Forecasts – Distribution of Forecasts

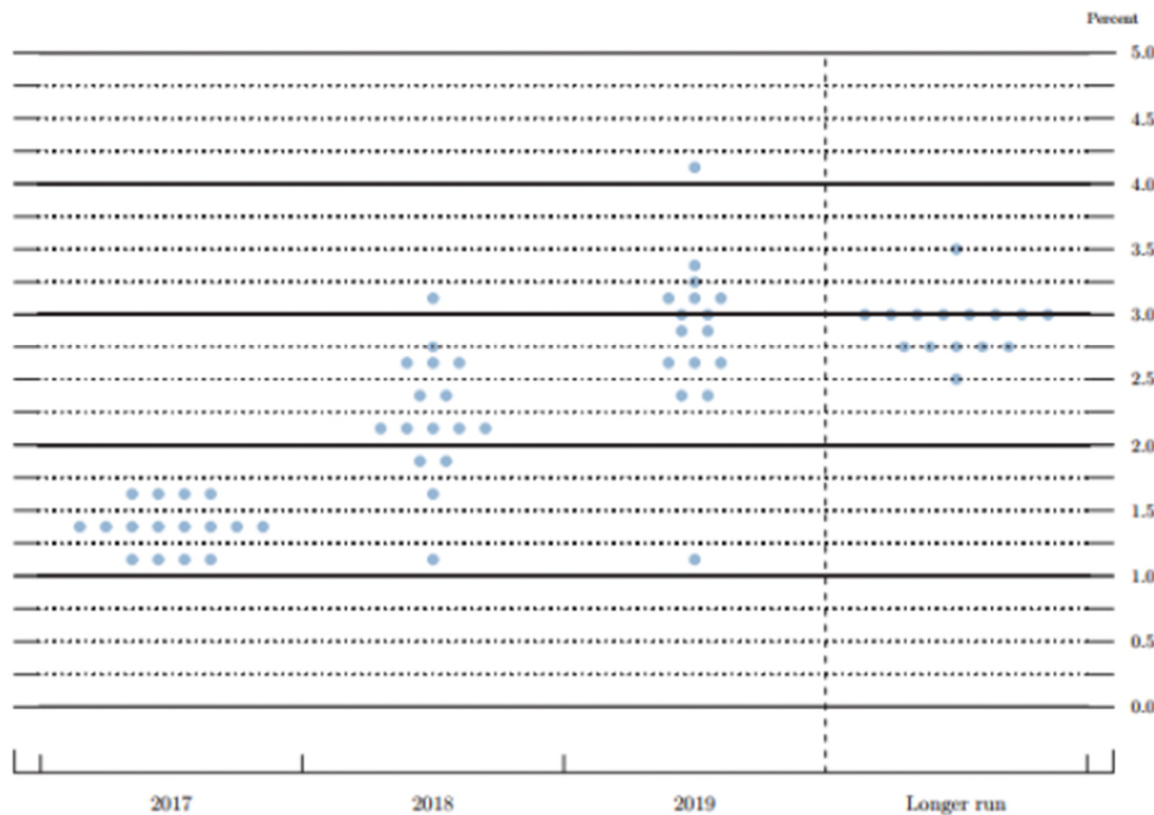


Source: Federal Reserve, Prestige Economics, LLC

NOTE: Definitions of variables and other explanations are in the notes to the projections table. The data for the actual values of the variables are annual.

Fed Quarterly Forecasts – The Dotplot of Individual Forecasts

Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



Source: Federal Reserve, Prestige Economics, LLC

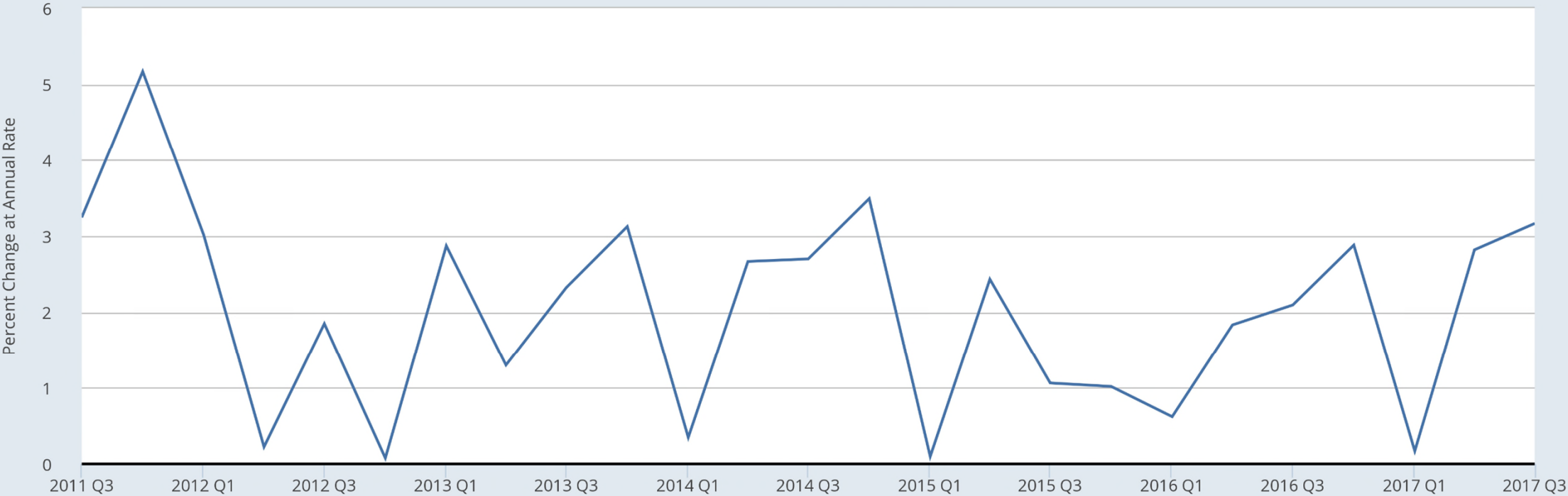
**The Big Question is:
Does it Help?**

“Our ability to predict how the federal funds rate will evolve over time is quite limited.”

Regional Fed GDP Forecast – Atlanta Fed



— GDPNow



Source: Federal Reserve Bank of Atlanta
fred.stlouisfed.org

myf.red/g/eDMo

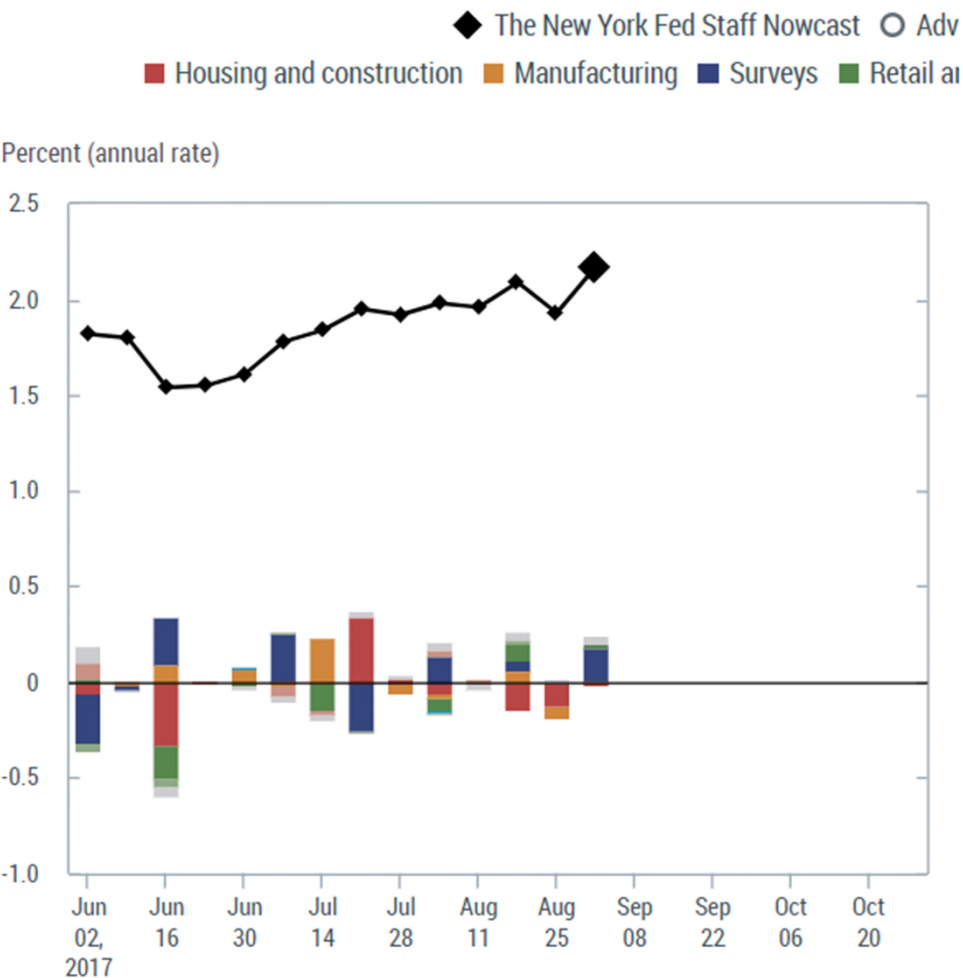
Source: Federal Reserve, Prestige Economics, LLC



Regional Fed GDP Forecasts – New York Fed

2017:Q3 | 2017:Q2 | 2017:Q1 | 2016:Q4

Last Release 11:15am EST Sep 01, 2017

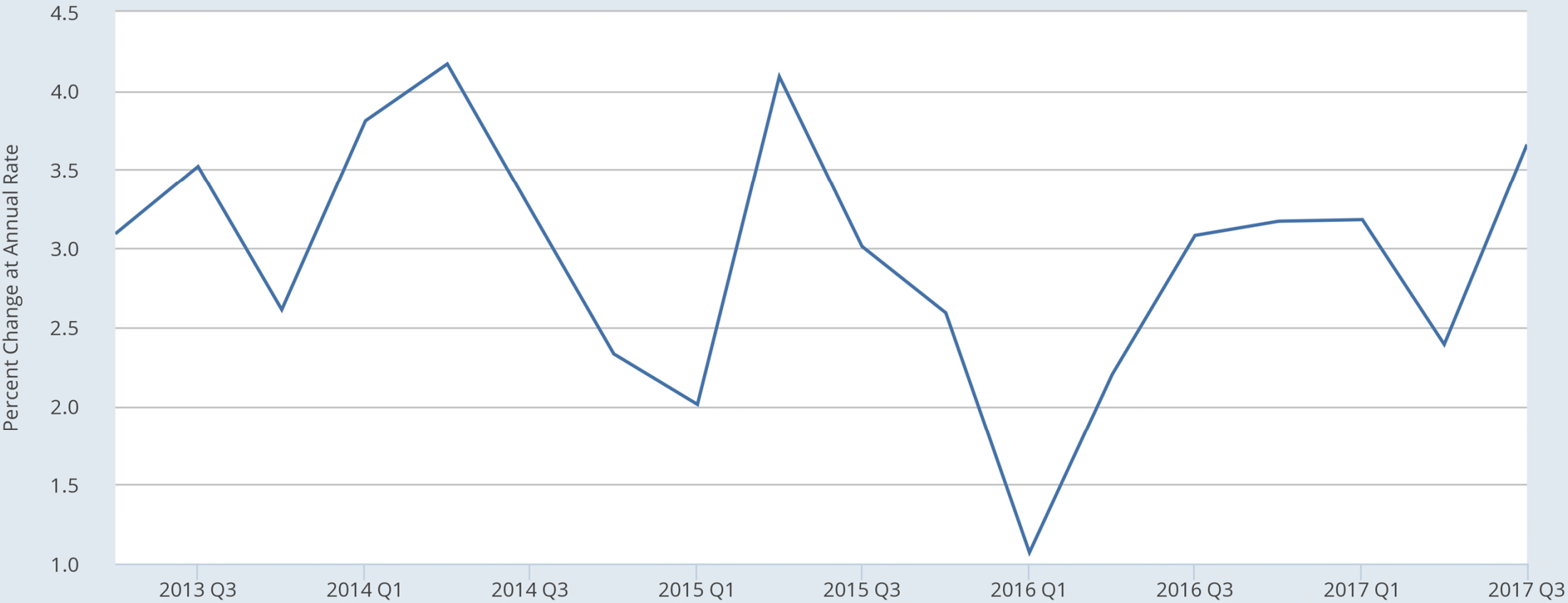


Source: Federal Reserve, Prestige Economics, LLC

Regional Fed GDP Forecasts – St. Louis Fed



— St. Louis Fed Economic News Index: Real GDP Nowcast©



Source: Federal Reserve Bank of St. Louis
fred.stlouisfed.org

Source: Federal Reserve, Prestige Economics, LLC

myf.red/g/eVGr

PRESTIGE ECONOMICS

Prestige Economics Forecasting Examples

Bloomberg News #1 Rankings for Prestige Economics in 23 Different Categories Since 2011

Top Energy Rankings

- #1 WTI Crude Oil Price Forecaster in the World
- #1 Brent Crude Oil Price Forecaster in the World
- #1 Henry Hub Natural Gas Price Forecaster in the World

Top Metals Rankings

- #1 Gold Price Forecaster in the World
- #1 Platinum Price Forecaster in the World
- #1 Palladium Price Forecaster in the World
- #1 Industrial Metals Price Forecaster in the World
- #1 Copper Price Forecaster in the World
- #1 Aluminum Price Forecaster in the World
- #1 Nickel Price Forecaster in the World
- #1 Tin Price Forecaster in the World
- #1 Zinc Price Forecaster in the World
- #2 Precious Metals Price Forecaster in the World
- #2 Silver Price Forecaster in the World
- #2 Lead Price Forecaster in the World
- #2 Iron Ore Forecaster in the World

*Prestige Economics Has Been Top Ranked
Based on Forecasts Produced Every
Quarter Since Being Founded in 2009*

Top Currency Rankings

- #1 Euro Forecaster in the World
- #1 British Pound Forecaster in the World
- #1 Swiss Franc Forecaster in the World
- #1 Russian Ruble Forecaster in the World
- #1 Brazilian Real Forecaster in the World
- #4 Japanese Yen Forecaster in the World
- #5 Major Currency Forecaster in the World
- #5 Australian Dollar Forecaster in the World
- #1 EURCHF Forecaster in the World
- #2 EURJPY Forecaster in the World
- #2 EURGBP Forecaster in the World
- #2 EURRUB Forecaster in the World

Top Agricultural Rankings

- #1 Coffee Price Forecaster in the World
- #1 Cotton Price Forecaster in the World
- #1 Sugar Price Forecaster in the World
- #1 Soybean Price Forecaster in the World

Top Economic Rankings

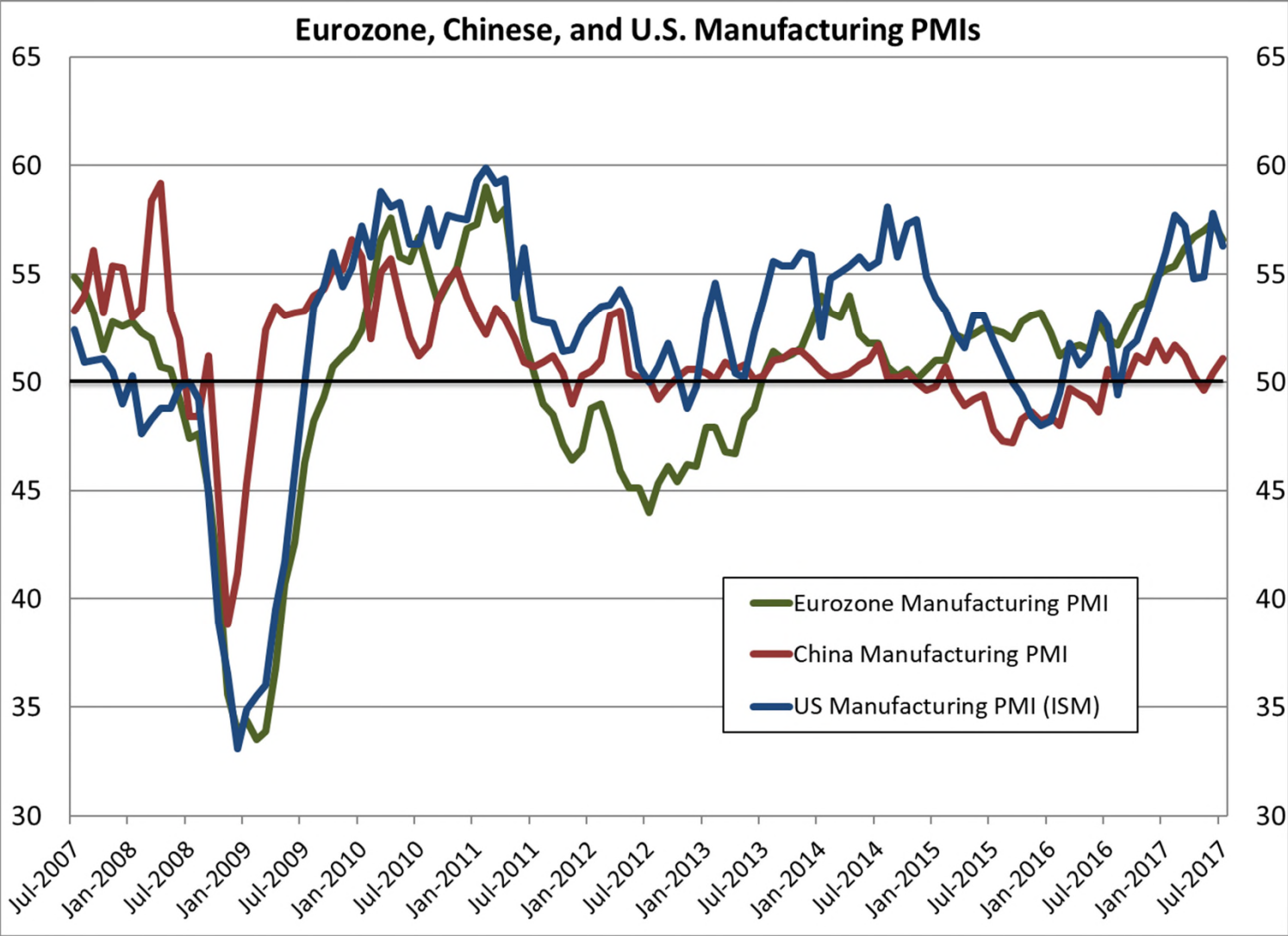
- #1 Non-Farm Payroll Forecaster in the World
- #2 Unemployment Rate Forecaster in the World
- #3 Durable Goods Orders Forecaster in the World
- #7 ISM Manufacturing Index Forecaster in the World

IMF Growth Forecasts Show Modest Growth

IMF Growth Forecasts (July 2017) Annual Forecasts Real GDP, Year-over-Year % Change			
	2016	2017	2018
Global	3.2	3.5	3.6
Eurozone	1.8	1.9	1.7
U.S.	1.6	2.1	2.1
Japan	1.0	1.3	0.6
U.K.	1.8	1.7	1.5
Canada	1.5	2.5	1.9
Brazil	-3.6	0.3	1.3
Russia	-0.2	1.4	1.4
India	7.1	7.2	7.7
China	6.7	6.7	6.4

Source: IMF, Prestige Economics, LLC

Global PMIs Lead Growth and Drive Markets



Source: Markit, Econoday, Prestige Economics, LLC

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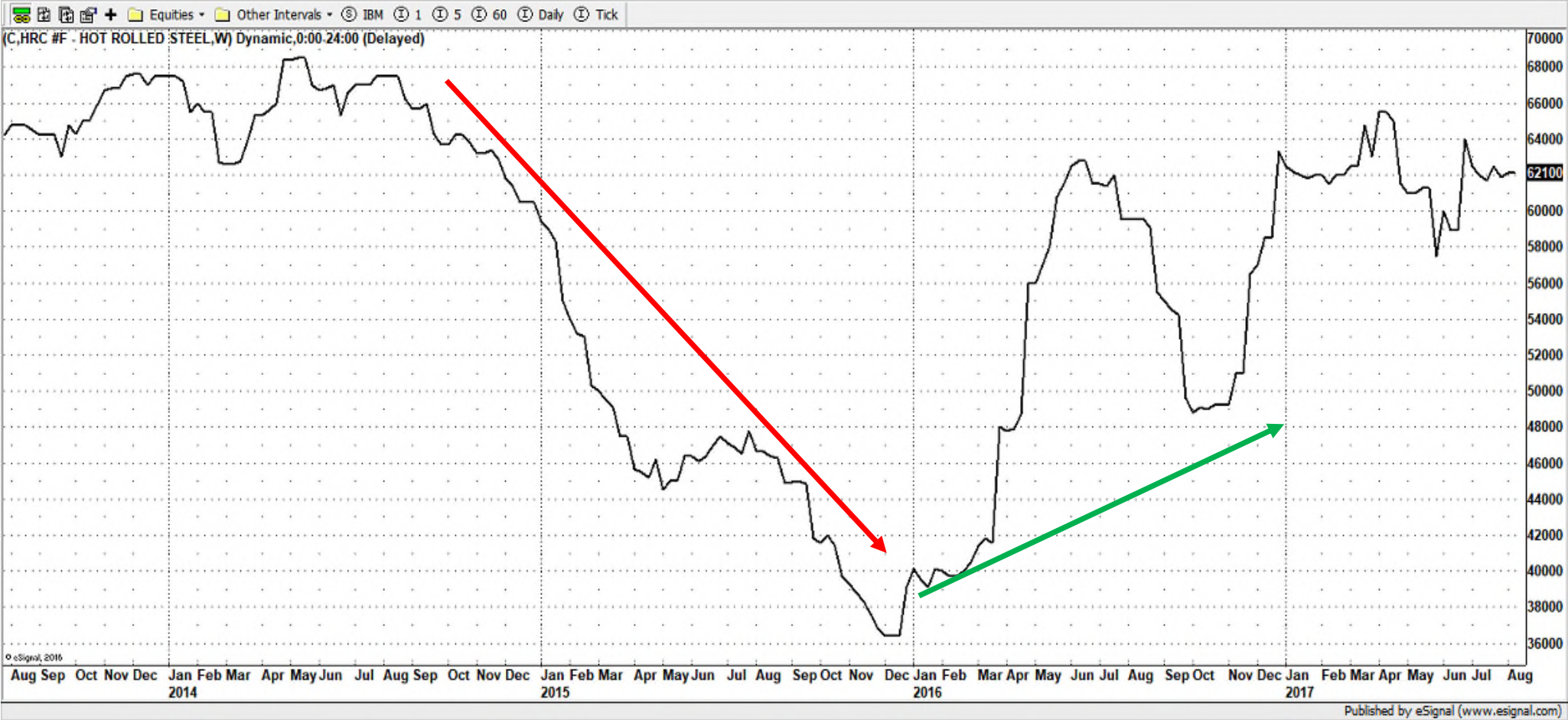
Metal and Energy Prices

Oil Prices



Source: Prestige Economics, eSignal

Steel Prices



Source: Prestige Economics, eSignal

Aluminum Prices



Source: Prestige Economics, eSignal

Copper Prices



Source: Prestige Economics, eSignal

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Government Data Problems: Material Handling

Material Handling Data – Government MHEM Data

Forecasts: Market Value in Billions

	2014	2015	2016	2017	2018	2019
New Orders	\$ 30.8	\$ 29.3	\$ 32.3	\$ 34.8	\$ 36.4	\$ 37.6
Shipments	\$ 29.6	\$ 28.9	\$ 31.6	\$ 34.3	\$ 35.9	\$ 37.0
Unfilled Orders (Average)	\$ 9.6	\$ 10.5	\$ 10.9	\$ 12.2	\$ 12.7	\$ 13.2
Inventories (Average)	\$ 4.0	\$ 4.3	\$ 4.6	\$ 4.7	\$ 4.9	\$ 5.0
Imports	\$ 6.3	\$ 6.9	\$ 6.6	\$ 7.5	\$ 7.8	\$ 7.2
Exports	\$ 5.6	\$ 5.8	\$ 4.9	\$ 5.2	\$ 5.8	\$ 5.7
Net Imports	\$ 0.7	\$ 1.1	\$ 1.7	\$ 2.3	\$ 2.0	\$ 1.6
Domestic Demand	\$ 30.4	\$ 30.0	\$ 33.3	\$ 36.6	\$ 37.9	\$ 38.6

Forecasts Before Revisions: Market Value in Billions

	2014	2015	2016	2017	2018	2019
New Orders	\$ 30.3	\$ 33.7	\$ 36.7	\$ 38.0	\$ 38.9	\$ 36.2
Shipments	\$ 29.2	\$ 32.0	\$ 36.0	\$ 36.6	\$ 36.8	\$ 33.8
Unfilled Orders (Average)	\$ 9.4	\$ 11.0	\$ 12.1	\$ 12.6	\$ 13.1	\$ 12.2
Inventories (Average)	\$ 4.0	\$ 4.3	\$ 4.6	\$ 5.1	\$ 5.1	\$ 5.1
Imports	\$ 6.3	\$ 6.9	\$ 6.6	\$ 7.4	\$ 7.7	\$ 7.0
Exports	\$ 5.6	\$ 5.8	\$ 4.9	\$ 5.3	\$ 5.7	\$ 5.4
Net Imports	\$ 0.7	\$ 1.1	\$ 1.7	\$ 2.1	\$ 2.0	\$ 1.6
Domestic Demand	\$ 30.0	\$ 33.0	\$ 37.7	\$ 38.7	\$ 38.7	\$ 35.4

Prestige Forecast Accuracy Beat MHEM Historical Data

New Orders in 2015 and 2016

Actual: Government Revised 2015 MHEM	\$ 29.3
Actual: Government Revised 2016 MHEM	\$ 32.2

<u>MHEM New Orders in 2015</u>	<u>Reported</u>	<u>Actual</u>	<u>Difference</u>	<u>Margin of Error</u>
Prestige Economics Forecast (July 2015)	\$ 30.3	\$ 29.3	\$ (1.0)	3.4%
Government Reported Historical Data	\$ 33.7	\$ 29.3	\$ (4.4)	15.0%

<u>MHEM New Orders in 2016</u>	<u>Reported</u>	<u>Actual</u>	<u>Difference</u>	<u>Margin of Error</u>
Prestige Economics Forecast (July 2015)	\$ 29.7	\$ 32.2	\$ 2.5	7.8%
Government Reported Historical Data	\$ 36.7	\$ 32.2	\$ (4.5)	14.0%

**Qualitative Data Has Value:
The Plural of Anecdote is Data**

One Solution: Use Survey Data

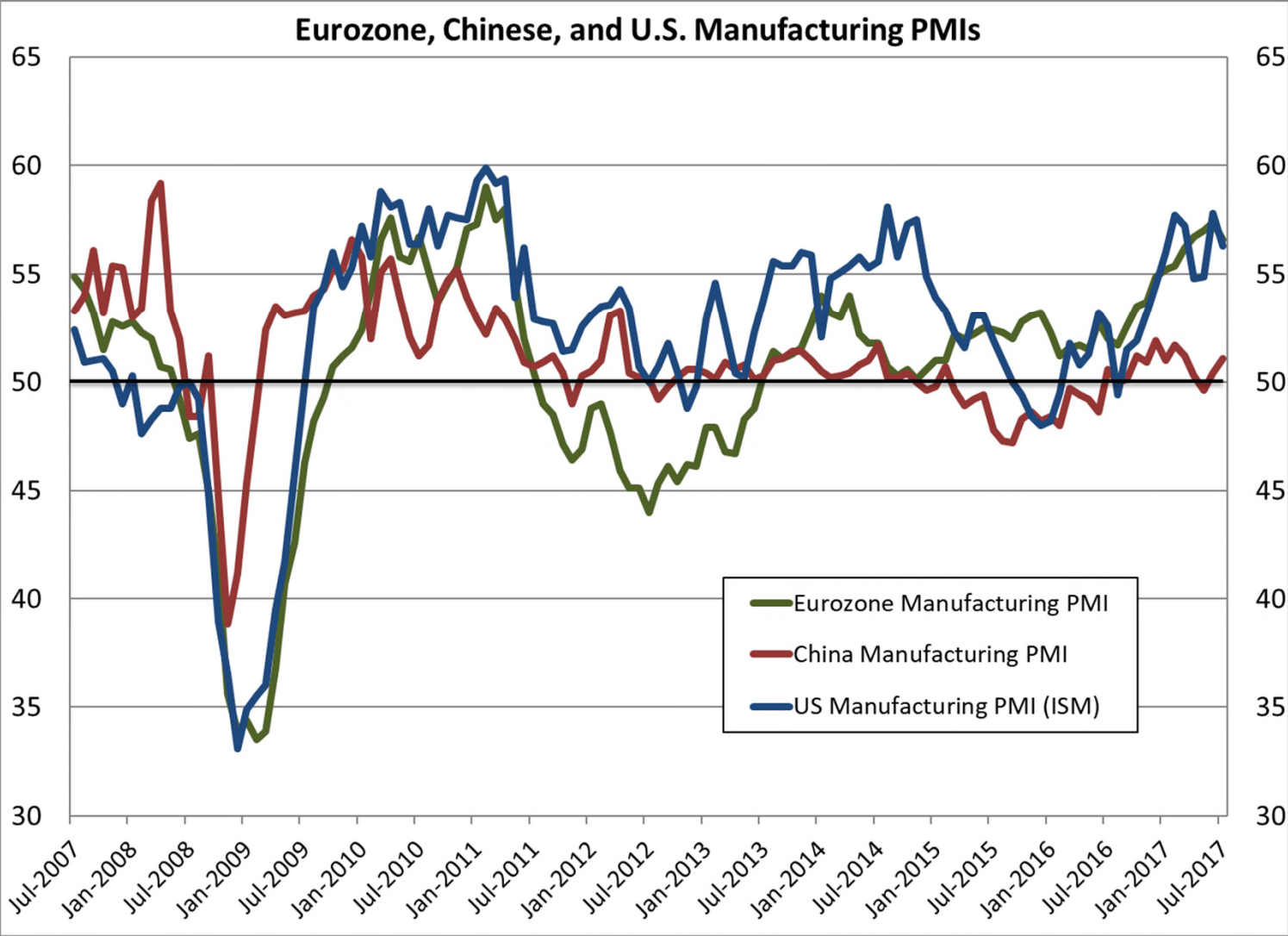


Material Handling Industry Business Activity

	June 2017	May 2017	% Point Change	Growth Indication	Rate of Change	Trend in Months
MHI Business Activity Index	44	73	-29	Contraction	From Expansion	1
Capacity Utilization	38	67	-29	Contraction	From Expansion	1
New Orders	56	62	-6	Expansion	Deceleration	4
Shipments	68	77	-9	Expansion	Deceleration	2
Unfilled Orders	48	39	+9	Contraction	Deceleration	3
Inventories	32	37	-5	Contraction	Acceleration	3
Exports	54	54	0	Expansion	Unchanged	5
Future New Orders	88	92	-4	Expansion	Deceleration	25

June 2017 | MHI Business Activity Index by Prestige Economics

Also Survey Data: Global PMIs



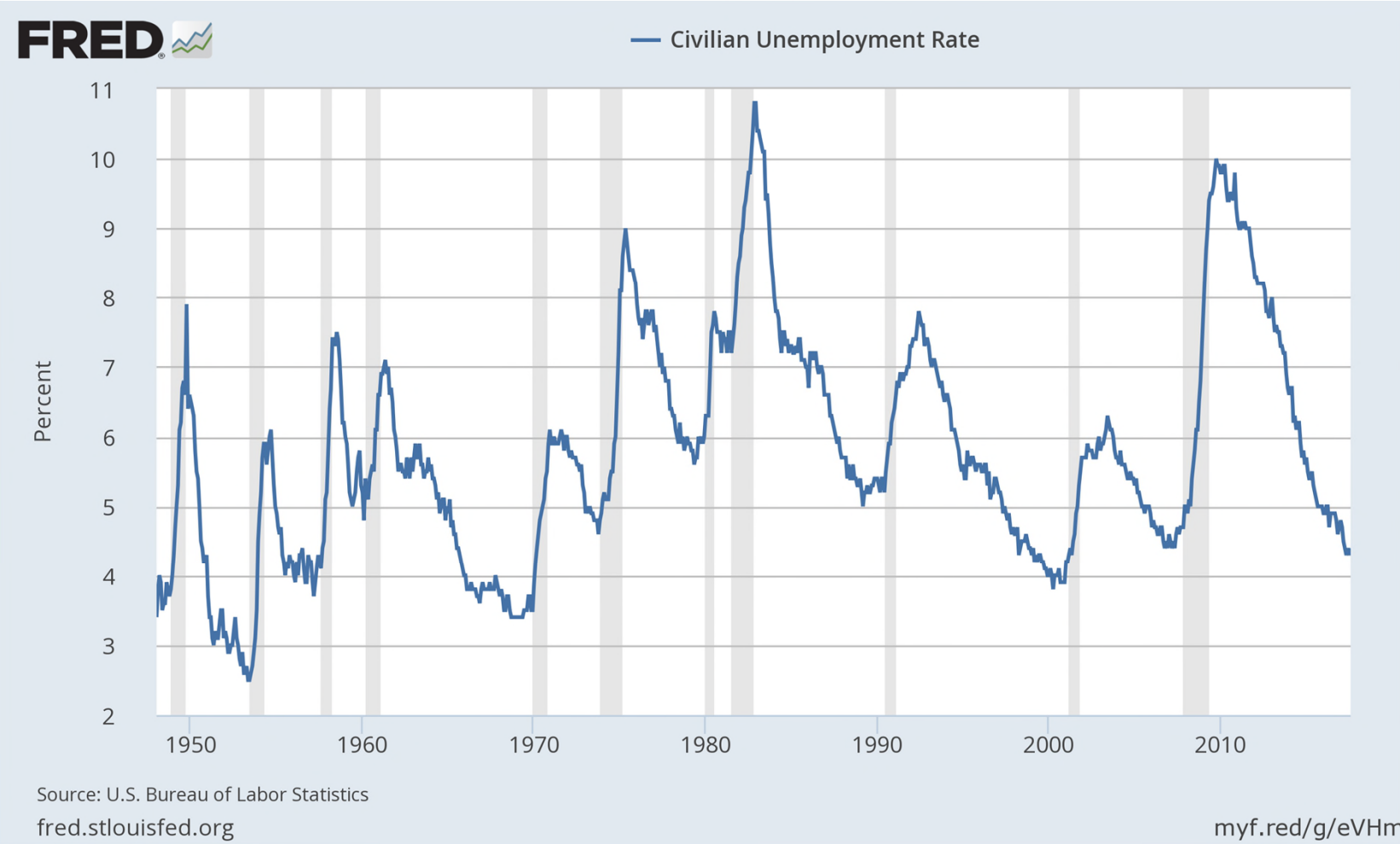
Source: Markit, Econoday, Prestige Economics, LLC

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Specification Matters

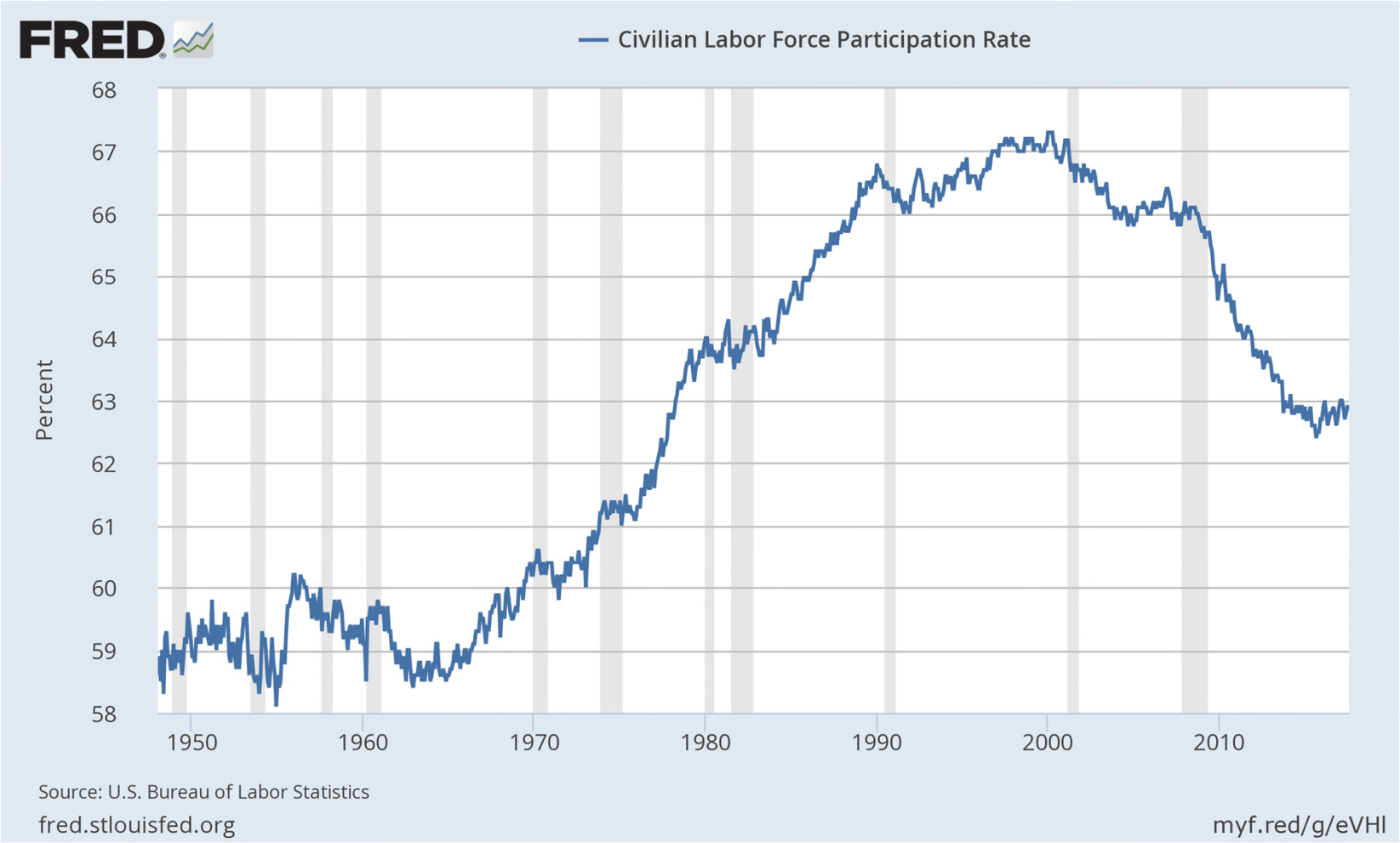
**Official GDP vs. Caixin:
6.7% GDP versus Recession**

Example of Problems We Don't Think About – Jobs Numbers We Trust, Like Unemployment



Source: FRED, BLS,, Prestige Economics, LLC

Problems We Don't Think About – Labor Force Participation



Source: FRED, BLS,, Prestige Economics, LLC

PRESTIGE ECONOMICS

Technology and Data

90% of the world's data has been created in the last two years.

Unfortunately, it seems that 90% of the jargon to discuss data has also been created in the last two years as well:

**The Internet of Things
Machine Learning
Data Visualization
Big Data**

Internet of Things (IoT) Will Generate a Lot More Data



NOW



SOON

Source: Prestige Economics, Adobe Stock

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There is a Process

Seven Critical Steps to Getting the Most Out of Your Data

- **FORMULATE THE RIGHT QUESTION**
- **SCOPE THE PROJECT**
- **COLLECT THE DATA**
- **CLEAN THE DATA**
- **ANALYZE THE DATA**
- **TEST THE RESULTS**
- **RETEST THE RESULTS WITH FUTURE DATA**

While internet connected devices are collecting data at all times, a human is the one who will take the data from the machine to determine actionable insights.

Use Einstein's Framework.

Measure twice, cut once.

No Aardvarks: Make sure the data answer your question.

Data needs to be consistent across time periods, uses the same units of measure, is for the same time period, and is formatted correctly.

**The is the easiest part of the process,
but worthless without the right data.**

Technology is Making Analysis Easier



Test your results until you have success.

Retest your findings with future data – because relationships between data change over time.

Just Follow the Process!

- **FORMULATE THE RIGHT QUESTION**
- **SCOPE THE PROJECT**
- **COLLECT THE DATA**
- **CLEAN THE DATA**
- **ANALYZE THE DATA**
- **TEST THE RESULTS**
- **RETEST THE RESULTS WITH FUTURE DATA**

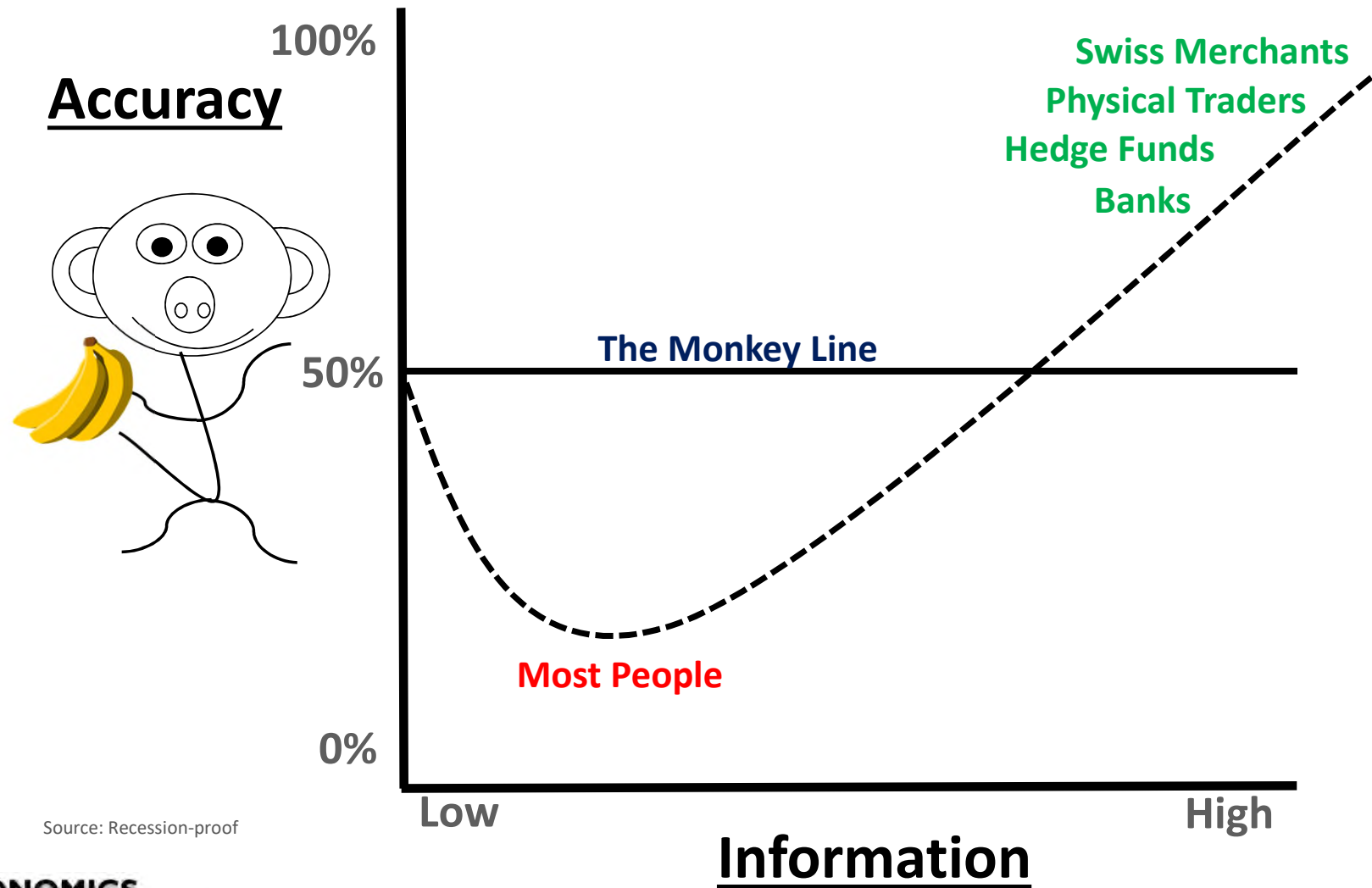
Keep in Mind:

Forecasting is a Process of Trial and Error.

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Get Above the Monkey Line

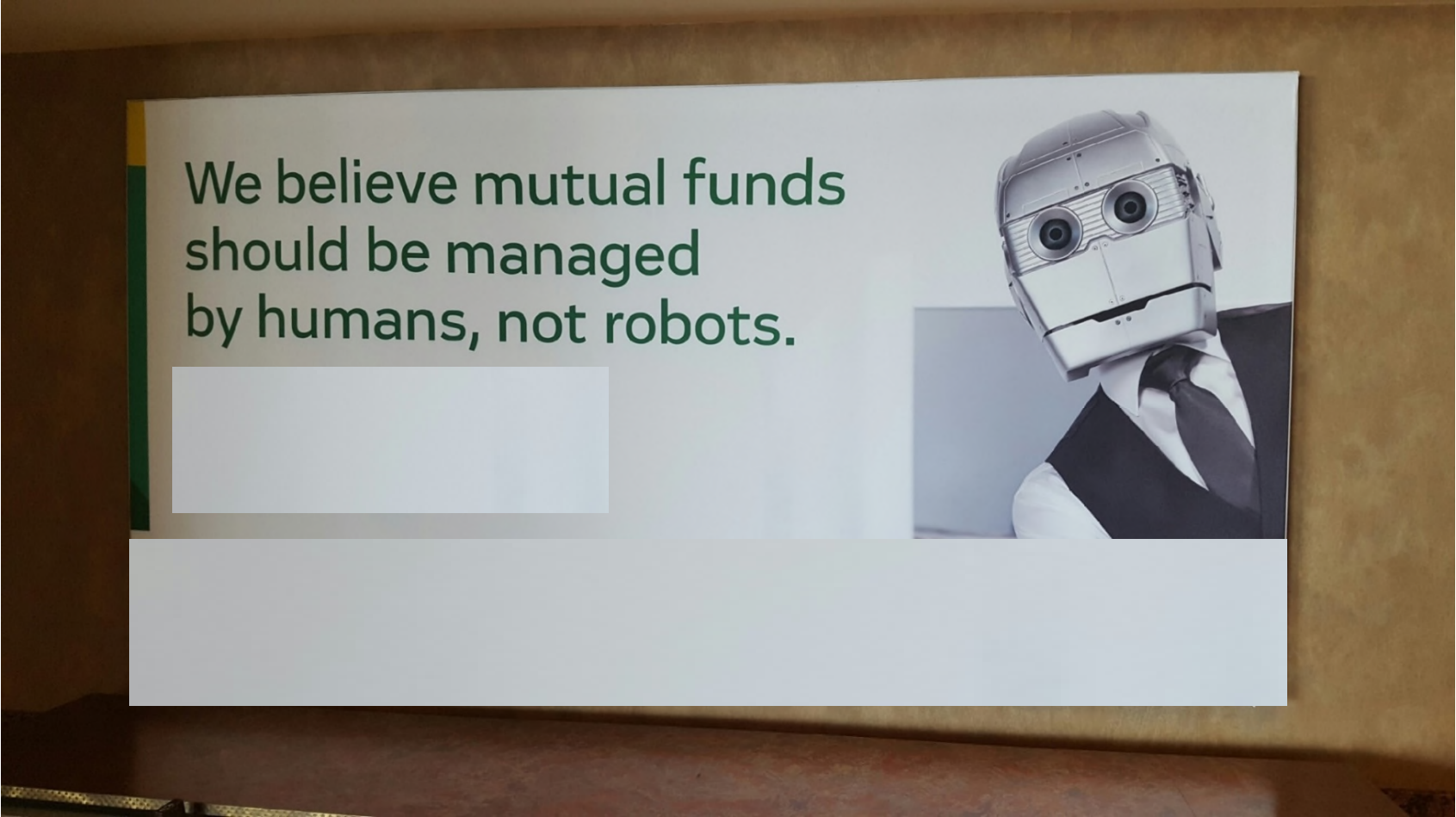
The Monkey Line: Trading Shows the Value of Information



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One Final Point

Everyone Knows



Source: Prestige Economics

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PRESTIGE ECONOMICS

Jason Schenker CMT® CFP® CVA® ERP®

President of Prestige Economics

jasonschenker@prestigeconomics.com

+1.512.425.0670

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by text message:

Text

ROBOT

to **22828** to get started.

Message and data rates may apply.