2018 Ag Forum - ASFMRA

Economic Trends & Relevance to Ag Markets

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Arizona State University

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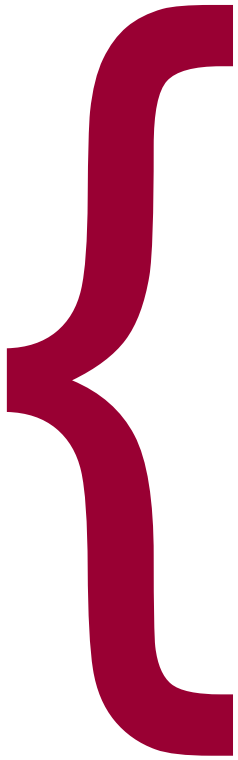
JOKE
ALERT

economists: only correct 49% of time

economic data: view through your own lens

Overview

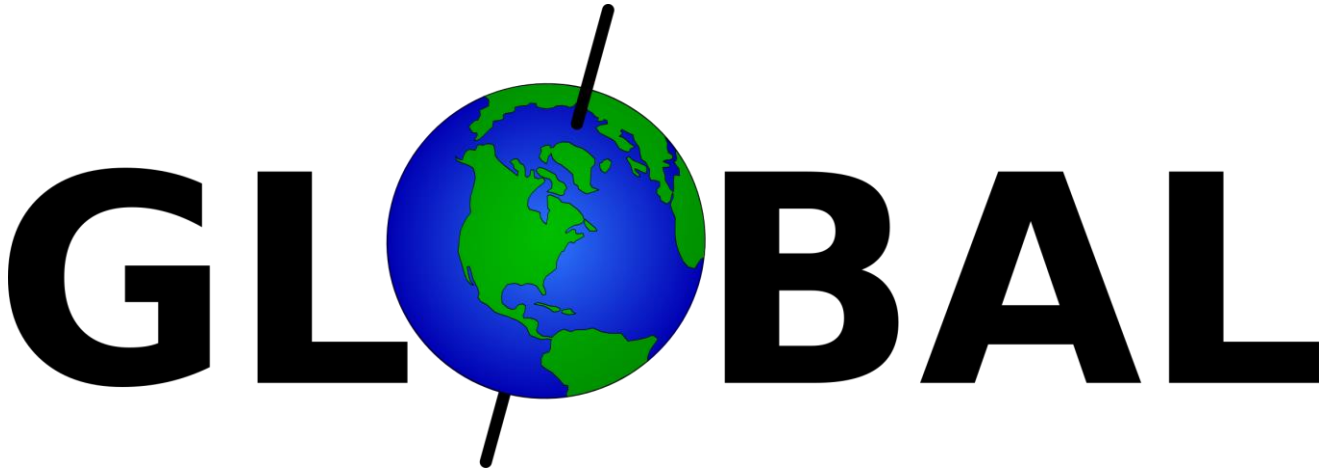


Global Output

Interest Rates

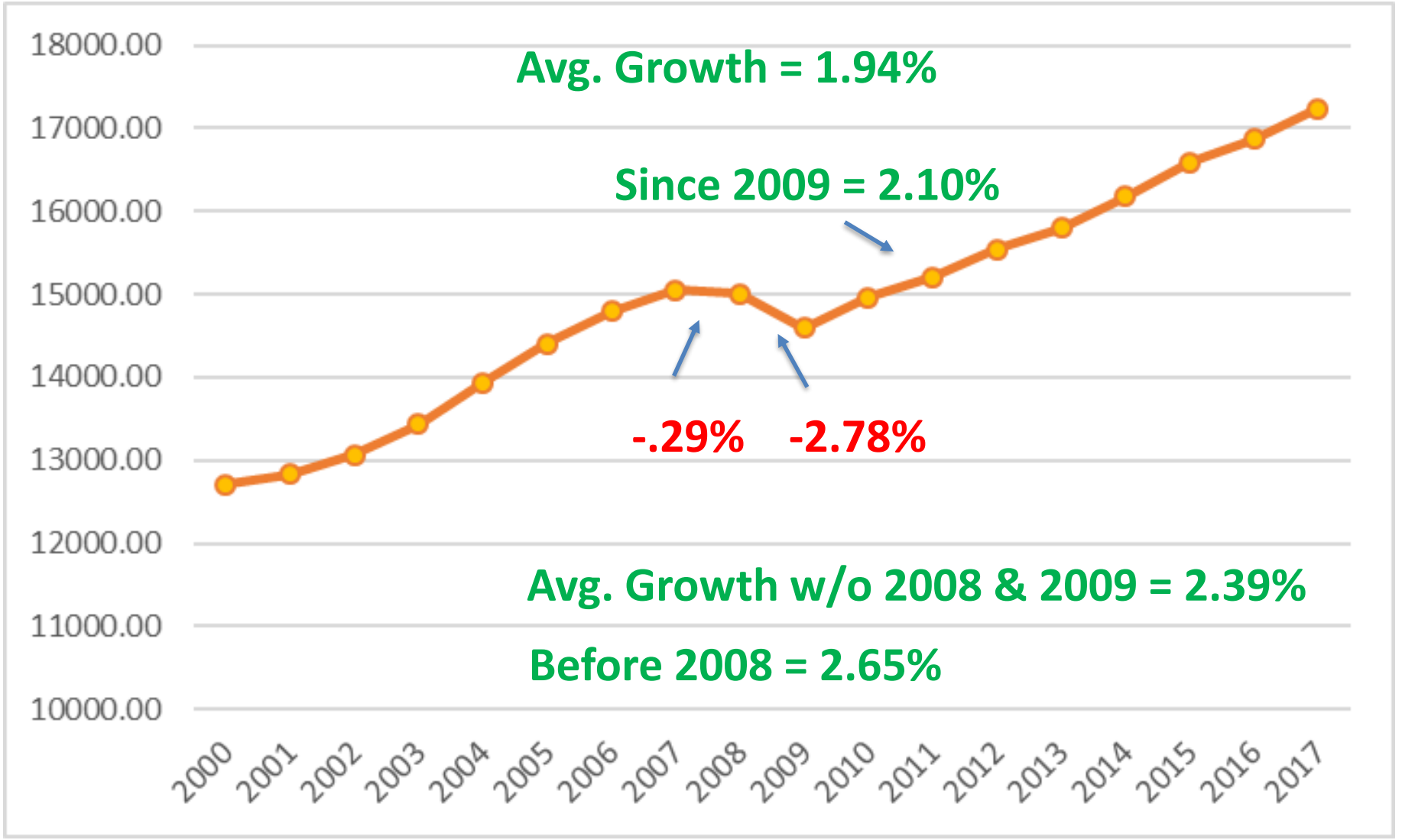
Farm Income

output trends



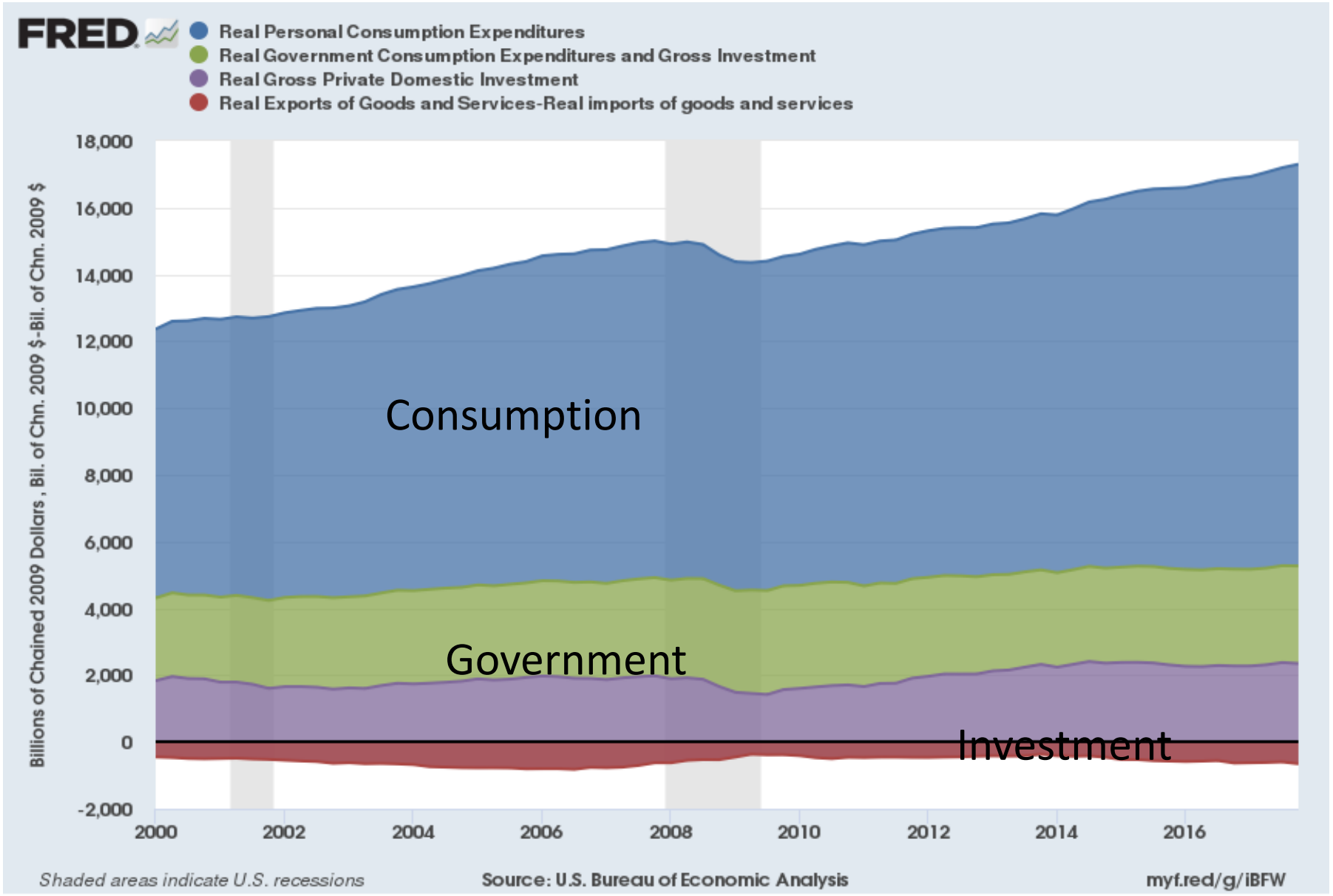
a look at

U.S. Real GDP (Billions $) – 2000 to 2017



Source: World Bank World Development Indicators, International Financial Statistics of the IMF, IHS Global Insight, and Oxford Economic Forecasting, as well as estimated and projected values developed by the Economic Research Service all converted to a 2010 base year. See: USDA-ERS International Macroeconomic Dataset at https://www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx

GNP Components: C + I + G + NX



Source: https://fred.stlouisfed.org/

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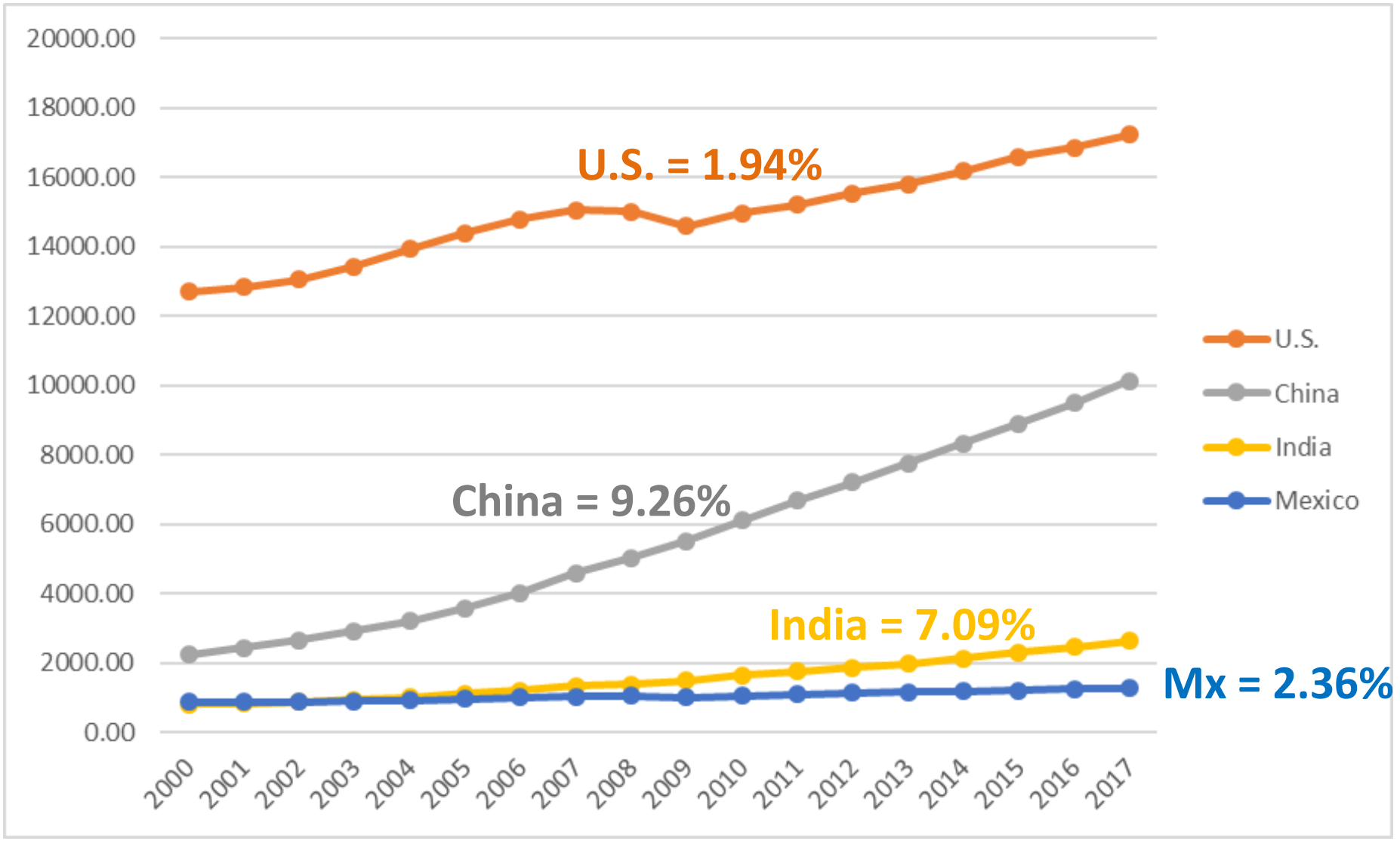

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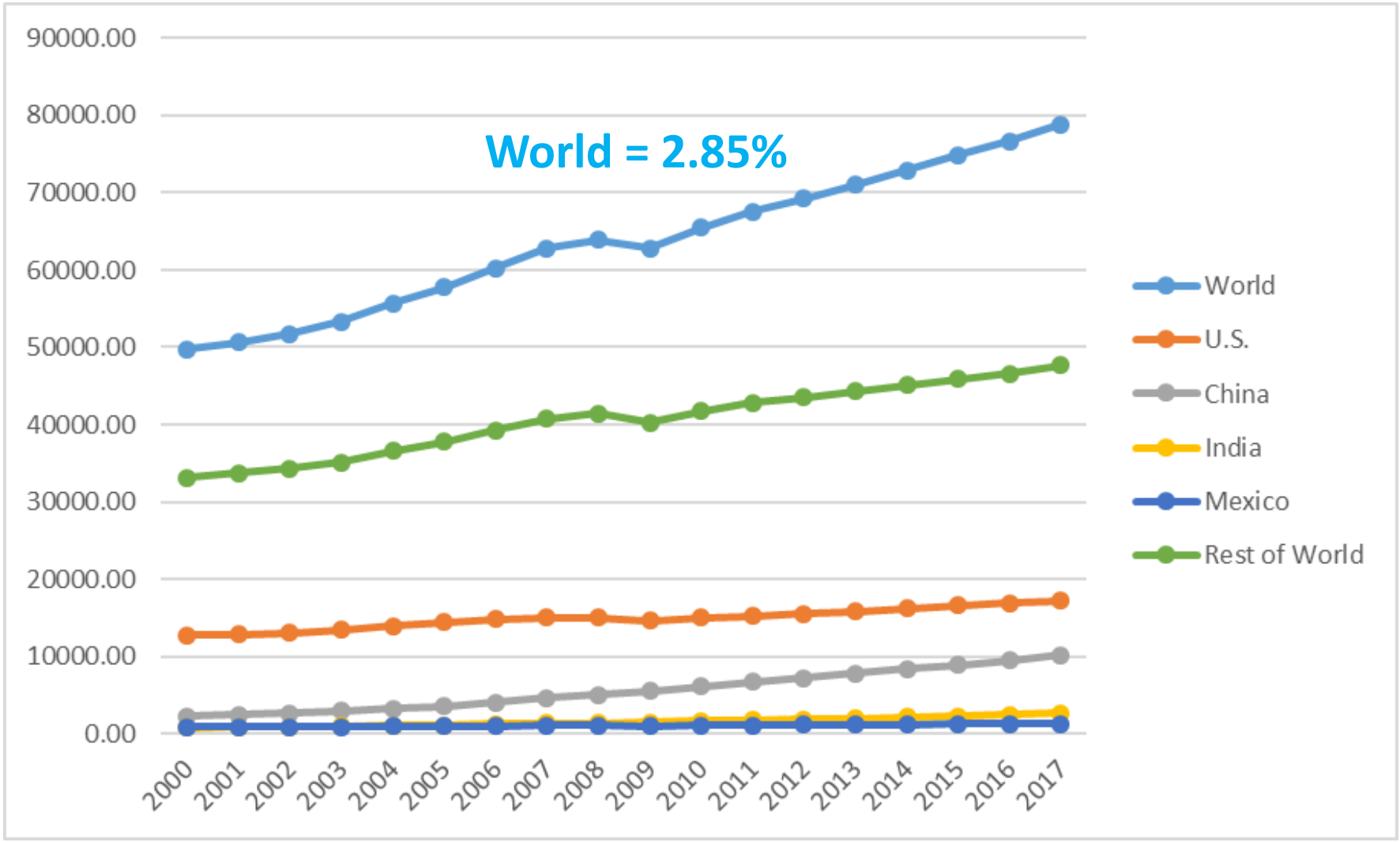

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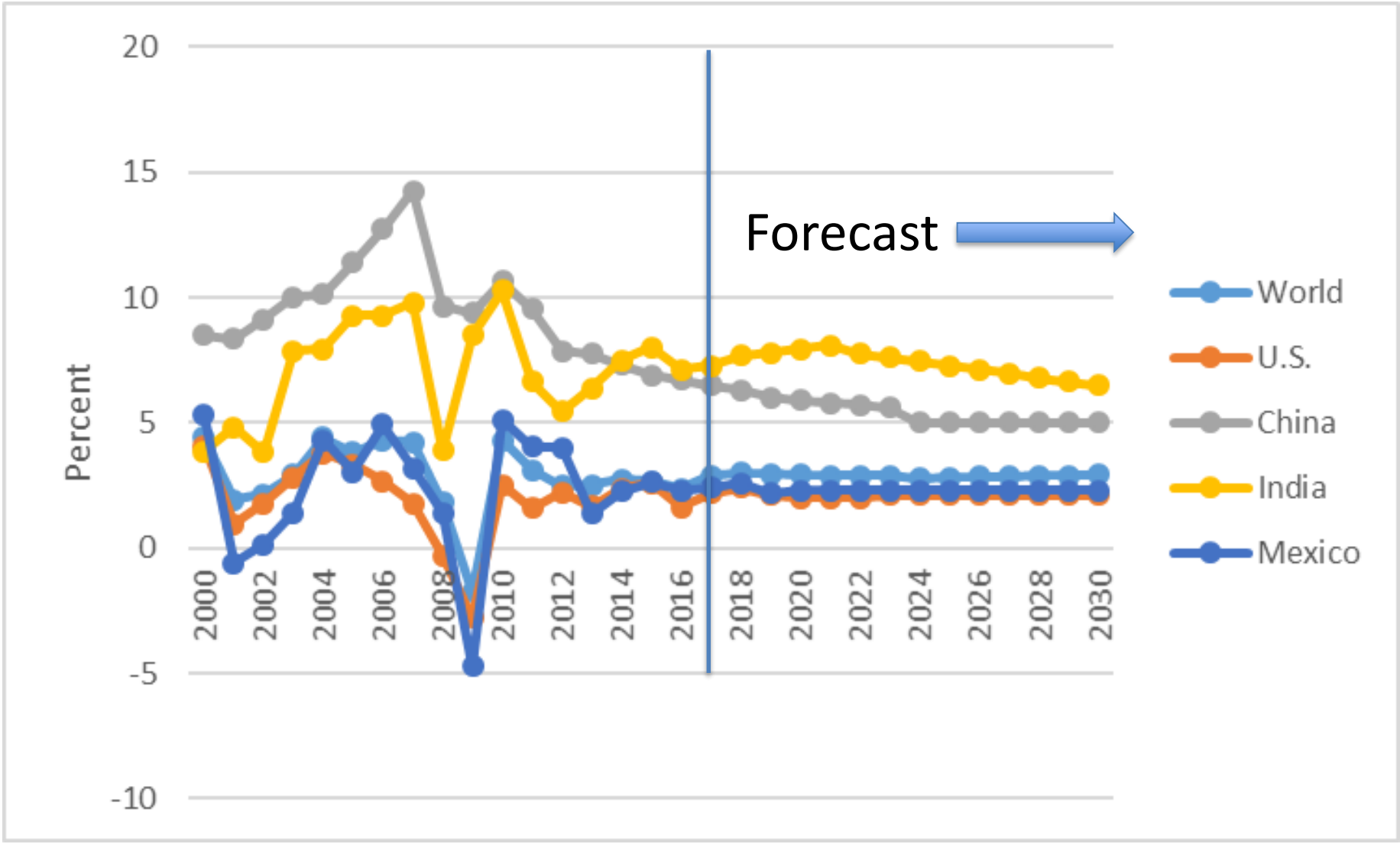
Actual & Forecasted GDP Growth (2000 – 2030F)



Source: World Bank World Development Indicators, International Financial Statistics of the IMF, IHS Global Insight, and Oxford Economic Forecasting, as well as estimated and projected values developed by the Economic Research Service all converted to a 2010 base year. See: USDA-ERS International Macroeconomic Dataset at https://www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx

Summary of Forecasted Avg. GDP Growth (2018 – 2030)

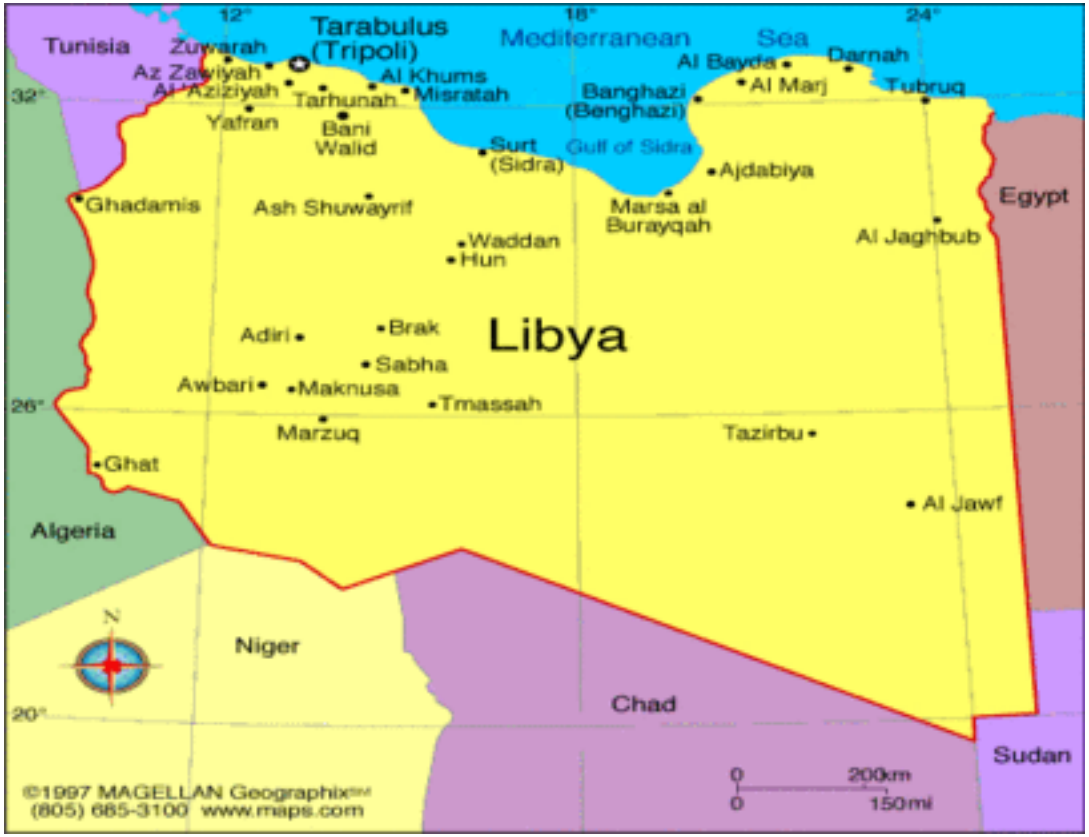
Country	Avg. Forecasted GDP Growth
U.S.	2.10%
China	5.41%
India	7.35%
Mexico	2.32%
World	2.89%

Source: World Bank World Development Indicators, International Financial Statistics of the IMF, IHS Global Insight, and Oxford Economic Forecasting, as well as estimated and projected values developed by the Economic Research Service all converted to a 2010 base year. See: USDA-ERS International Macroeconomic Dataset at https://www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx

Multiple Choice: the country with highest forecasted avg. real GDP growth rate from 2018 to 2030 is….

a) India
b) Brazil
c) Libya
d) Norway

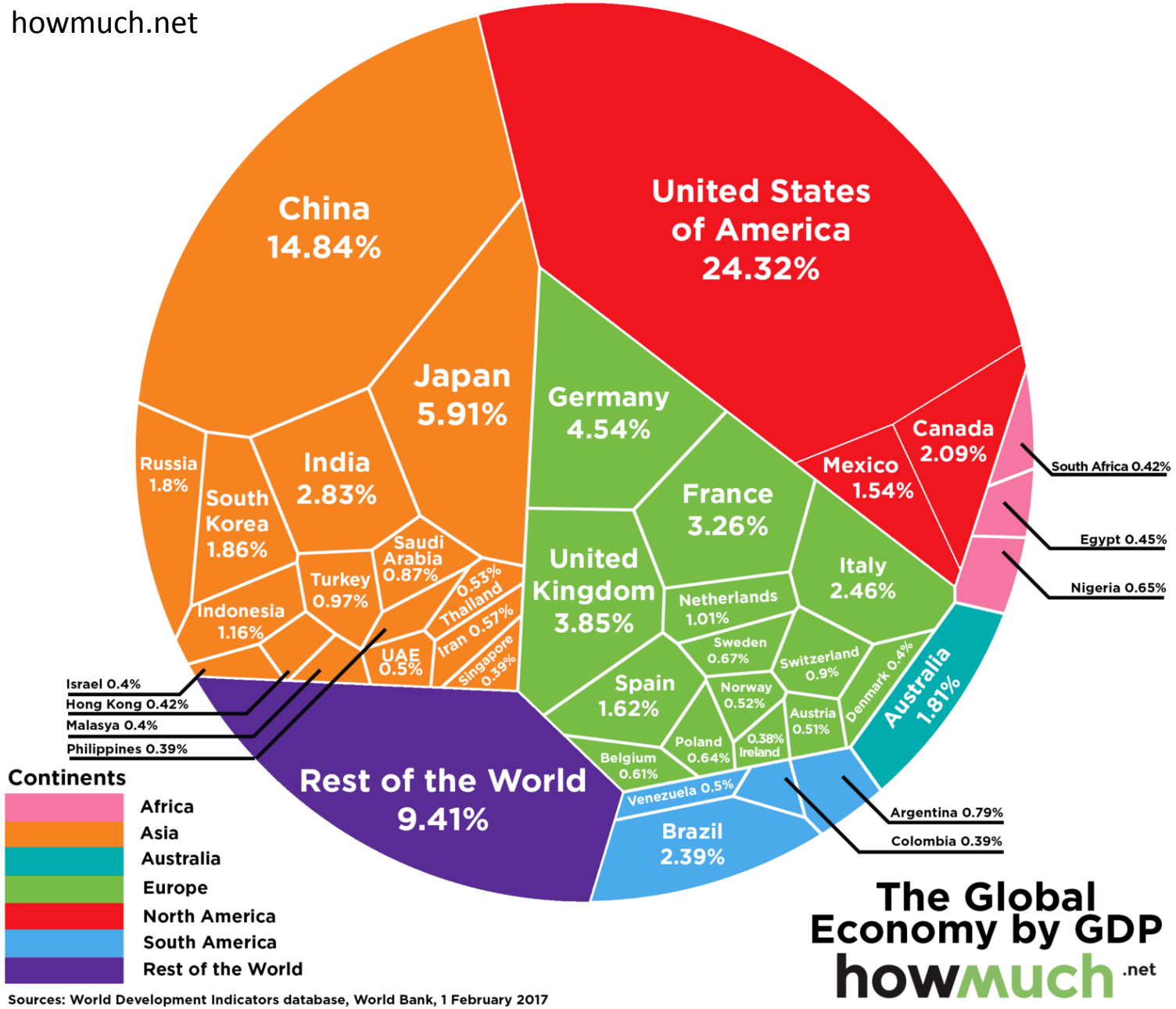
Libya



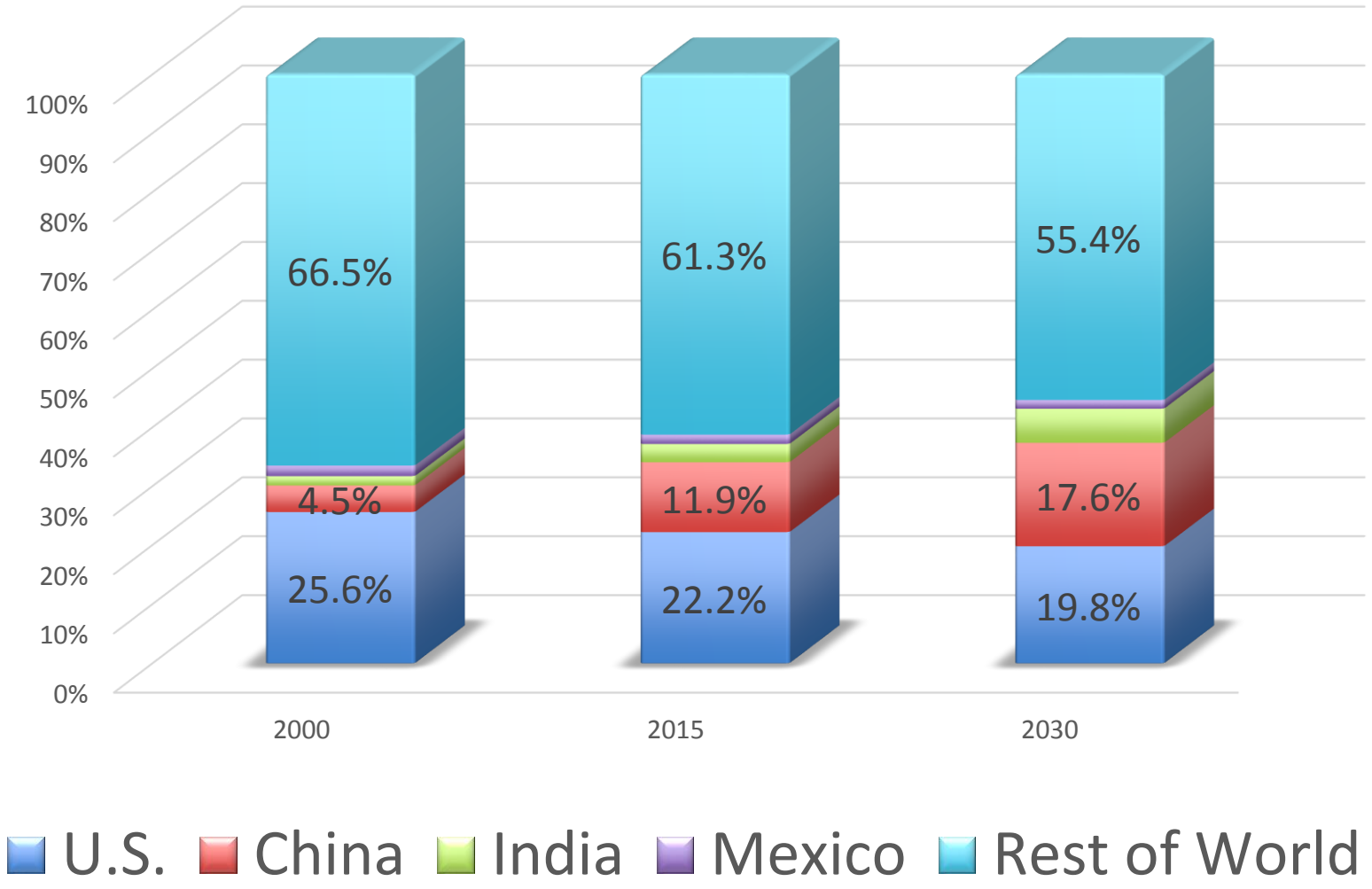
9.6%

Source: World Bank World Development Indicators, International Financial Statistics of the IMF, IHS Global Insight, and Oxford Economic Forecasting, as well as estimated and projected values developed by the Economic Research Service all converted to a 2010 base year. See: USDA-ERS International Macroeconomic Dataset at https://www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx

Source: howmuch.net



Real GDP Share (%)



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global output solid with opportunities and risks for agribusiness

trends

a look at

Stylized Interest Rate Behavior

economic growth ↑ interest rates ↑

economic growth ↓ interest rates ↓

inflation ↑ interest rates ↑

inflation ↓ interest rates ↓

money supply ↑ interest rates ↓

money supply ↓ interest rates ↑

Stylized Interest Rate Behavior

budget deficits ↑ interest rates ↑

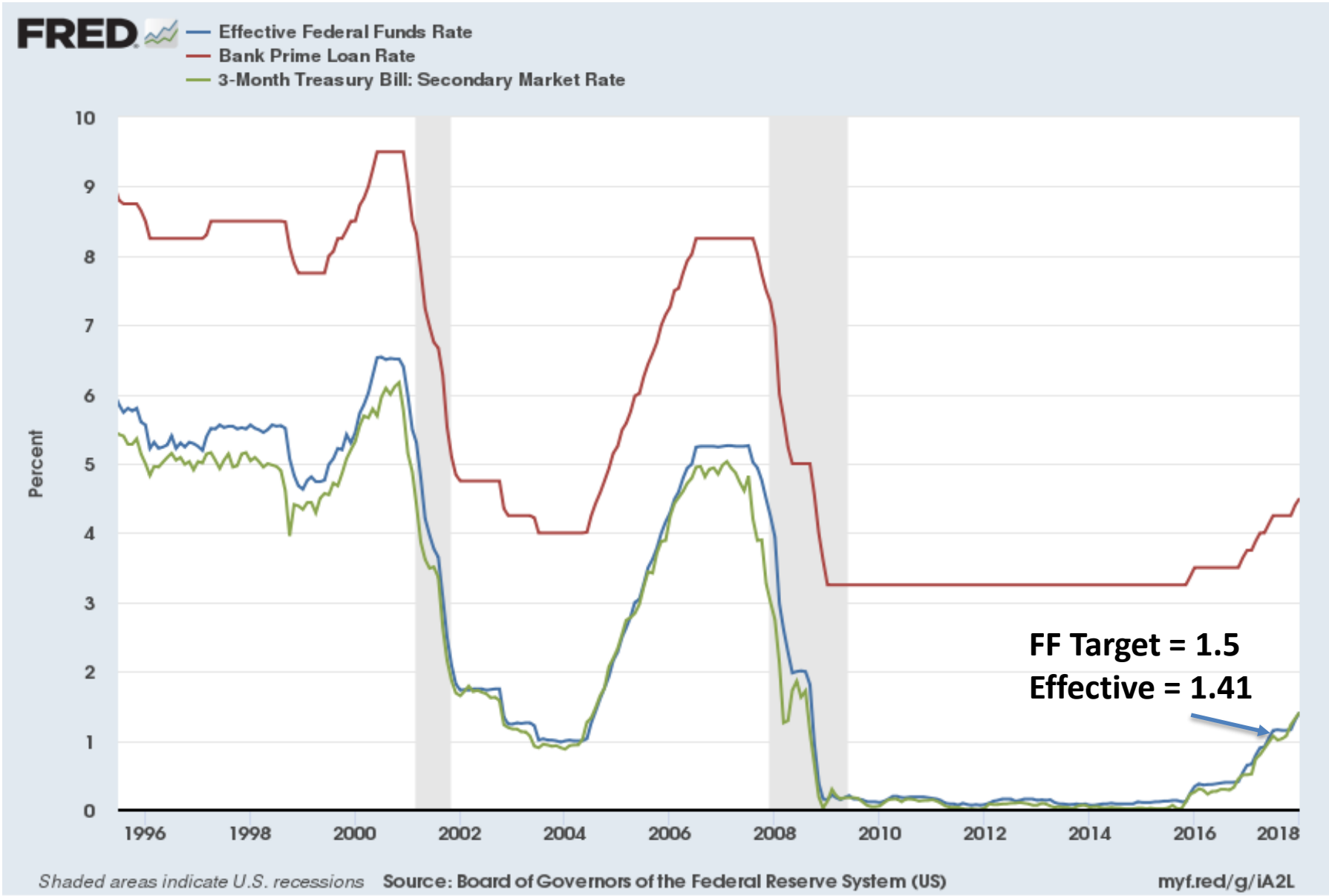
budget deficits ↓ interest rates ↓

foreign investment ↑ interest rates ↓

foreign investment ↓ interest rates ↑

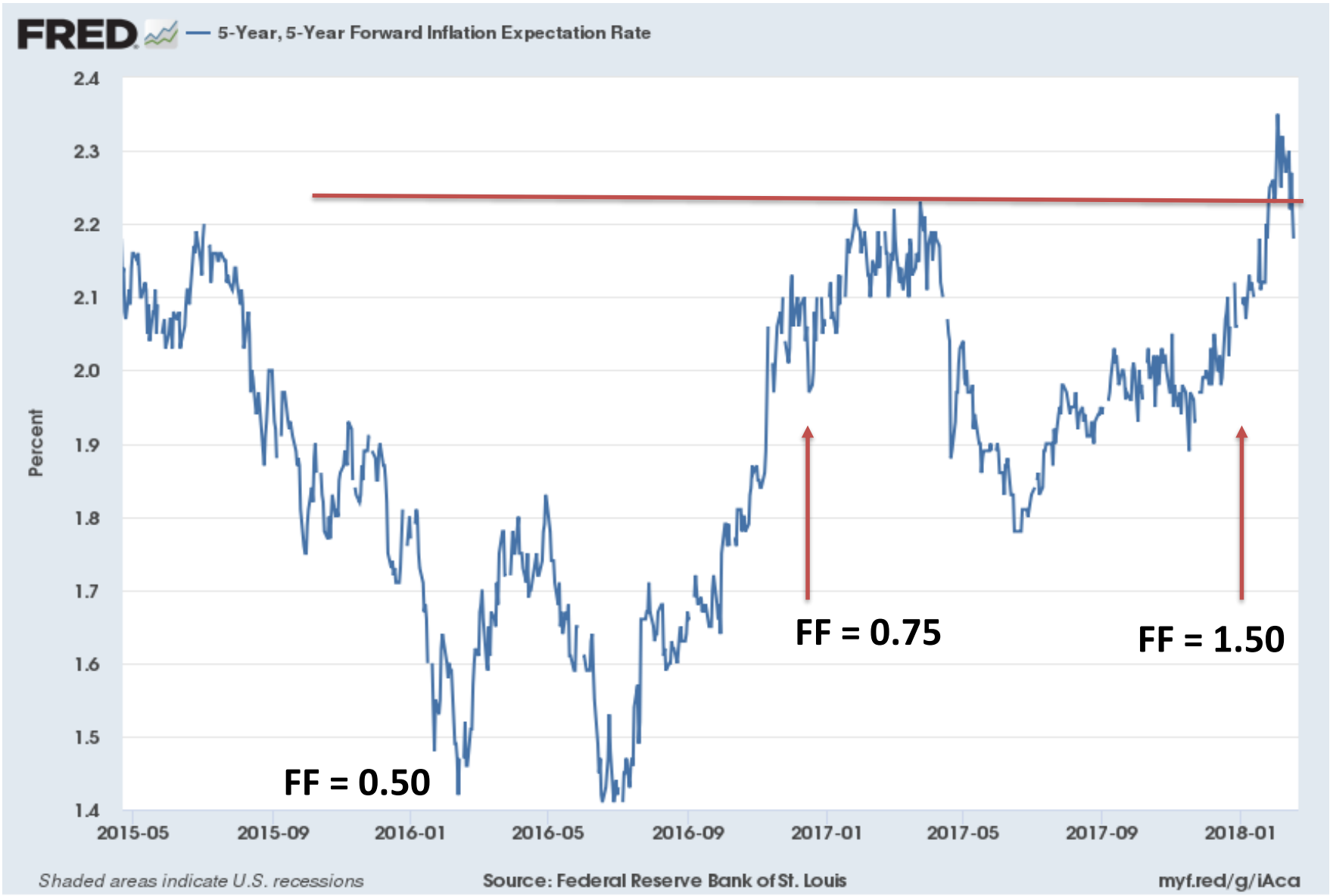
short-term rates: half of the story

Federal Funds, Prime, 3 mo. T-bill (1996 to 2018)



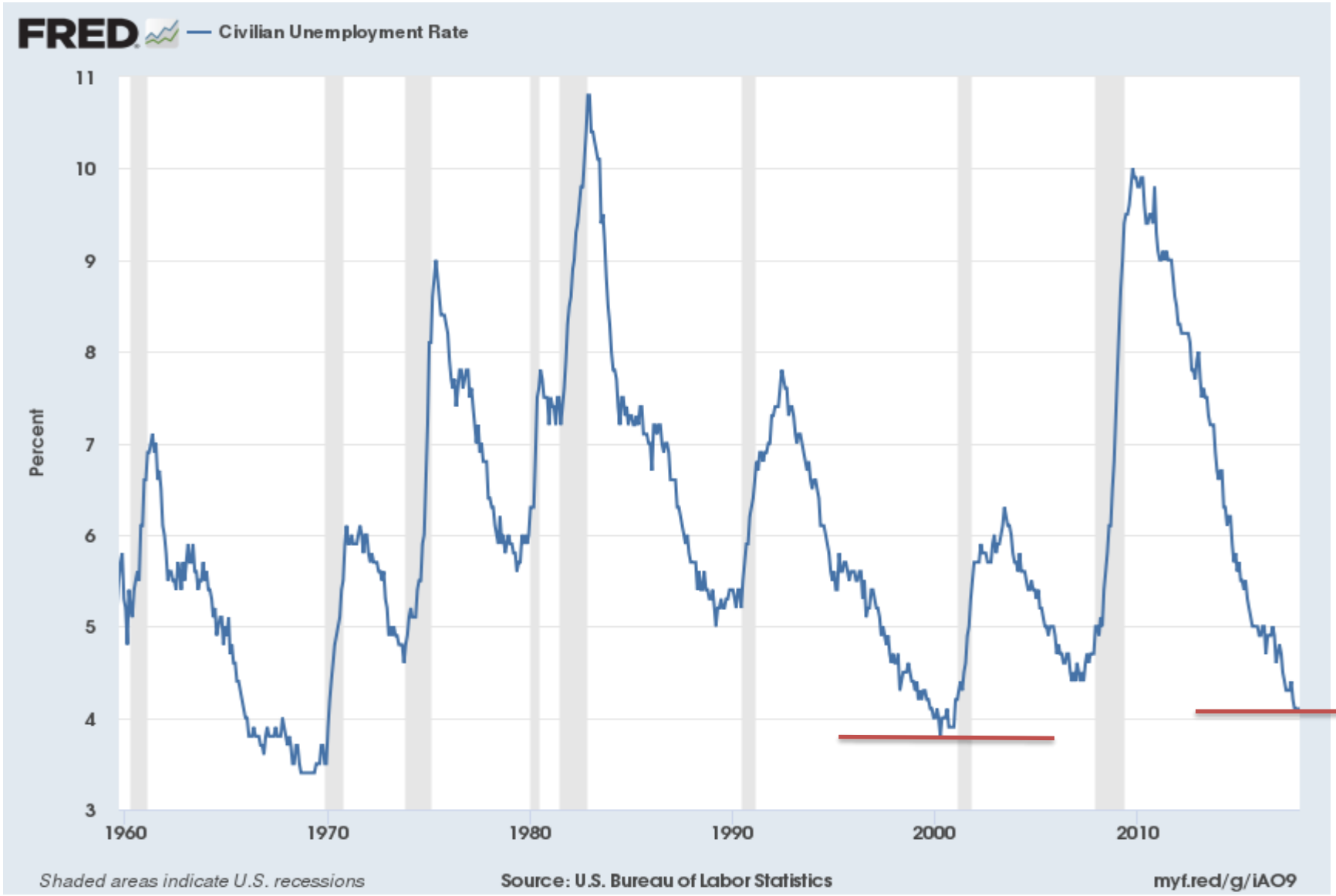
Source: https://fred.stlouisfed.org/

Expected 5-Year Inflation, 5 Years from Now



Source: https://fred.stlouisfed.org/

Unemployment Rate (1960 to 2018)



Source: https://fred.stlouisfed.org/

CME Fed Watch (March 21st Meeting)

16.9 % chance FF target 125 to 150 bps

83.1 % chance FF target to 150 to 175 bps

http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html/?redirect=/trading/interest-rates/fed-funds.html

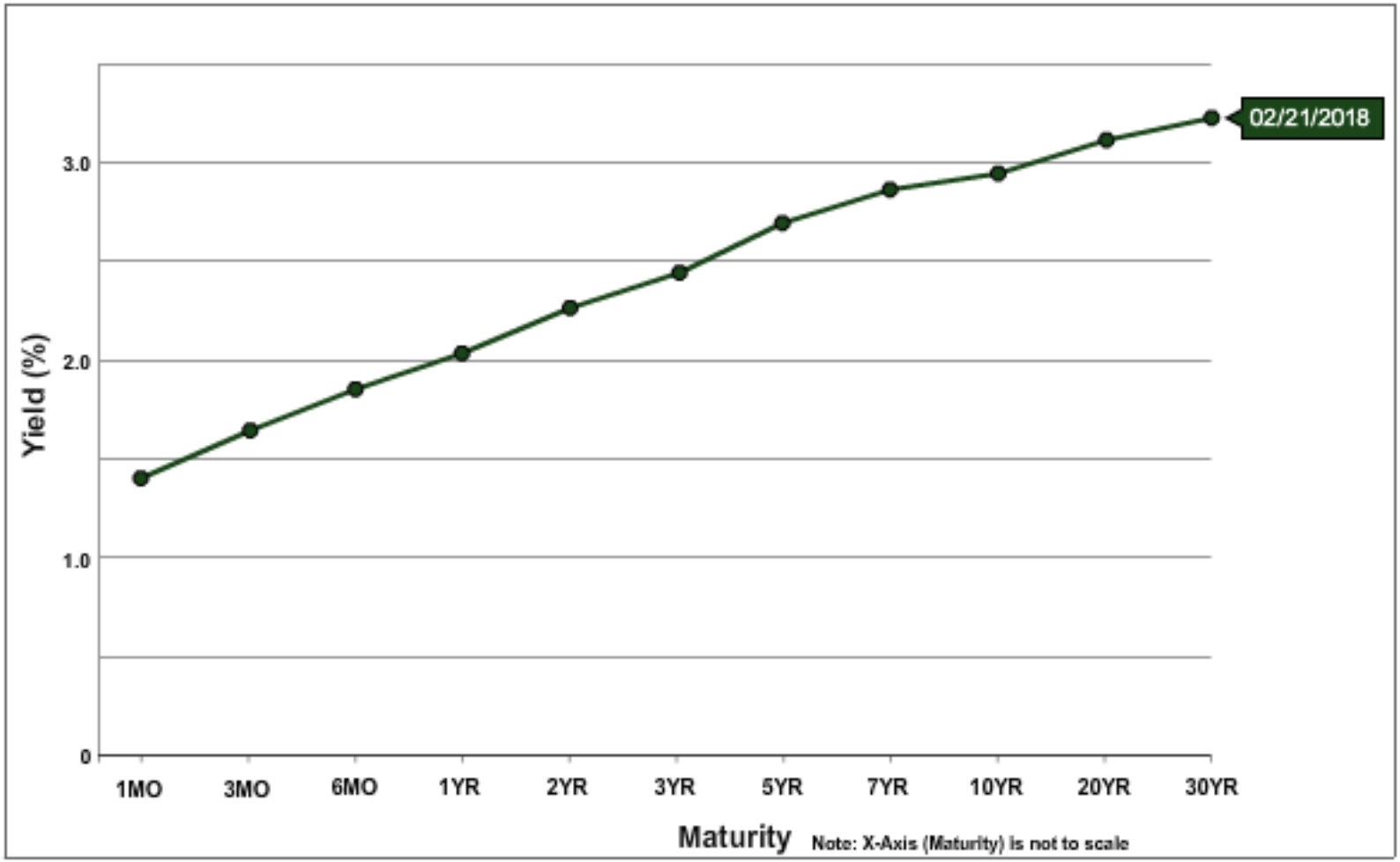
TARGET RATE	2017	2018	2019	2020
4.125				2
4.000				
3.875				
3.750				
3.625			1	
3.500				1
3.375			2	
3.250				
3.125			1	5
3.000				3
2.875			3	1
2.750			1	
2.625		1	4	2
2.500				
2.375		3	2	1
2.250				
2.125		6		
2.000				
1.875		3		
1.750				
1.625		1	1	
1.500				
1.375	14	1	1	1
1.250				
1.125	2	1		
1.000				

Fed FOMC Participants' Expected Target
CME Group Fed Watch

http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html/?redirect=/trading/interest-rates/fed-funds.html

relationship between short and long rates: the market story

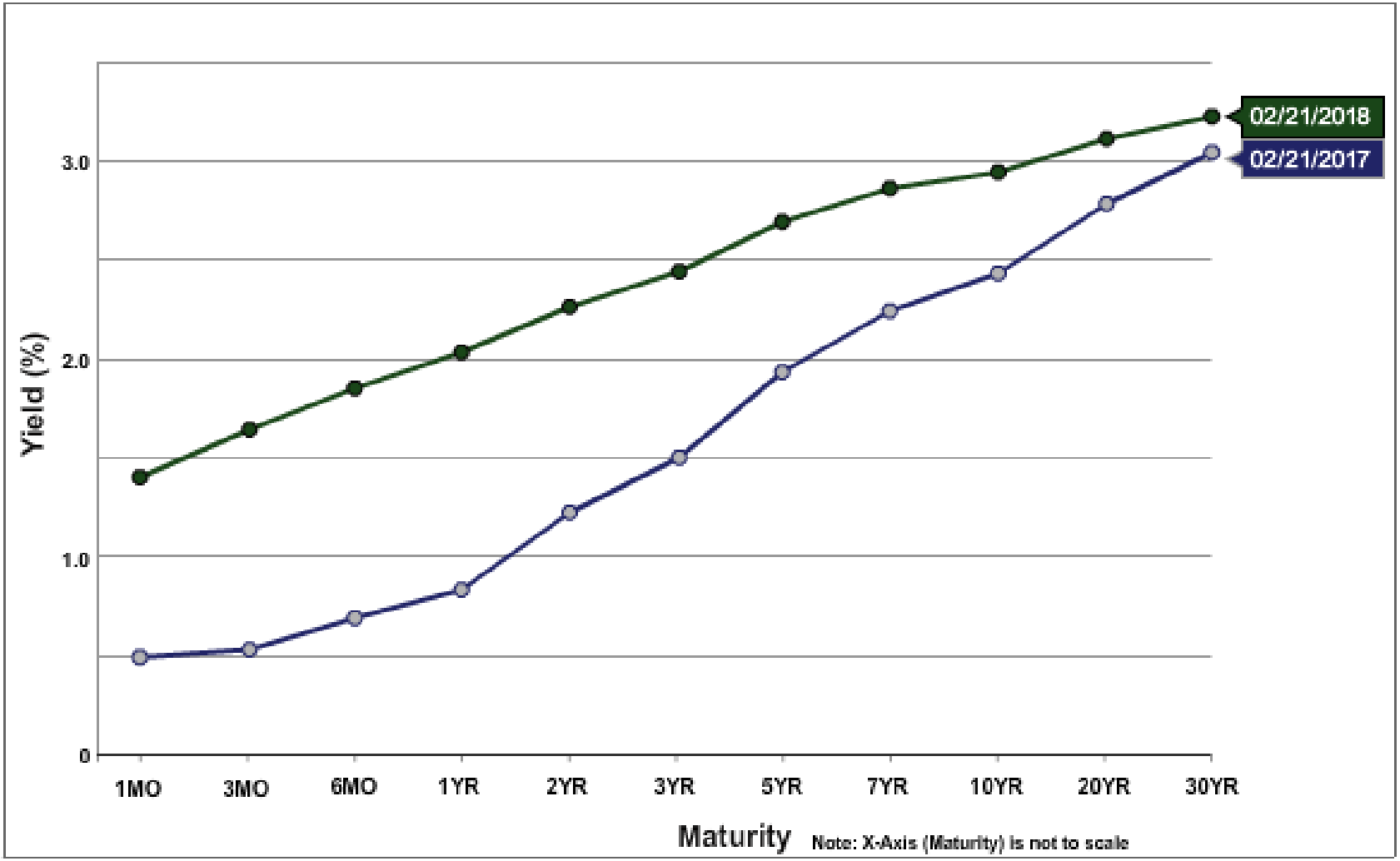
U.S. Treasury Yield Curve



1 Mo. = 1.40
3 Mo. = 1.64
6 Mo. = 1.85
1 Yr. = 2.03
2 Yr. = 2.26
3 Yr. = 2.44
5 Yr. = 2.69
7 Yr. = 2.86
10 Yr. = 2.94
20 Yr. = 3.11
30 Yr. = 3.22

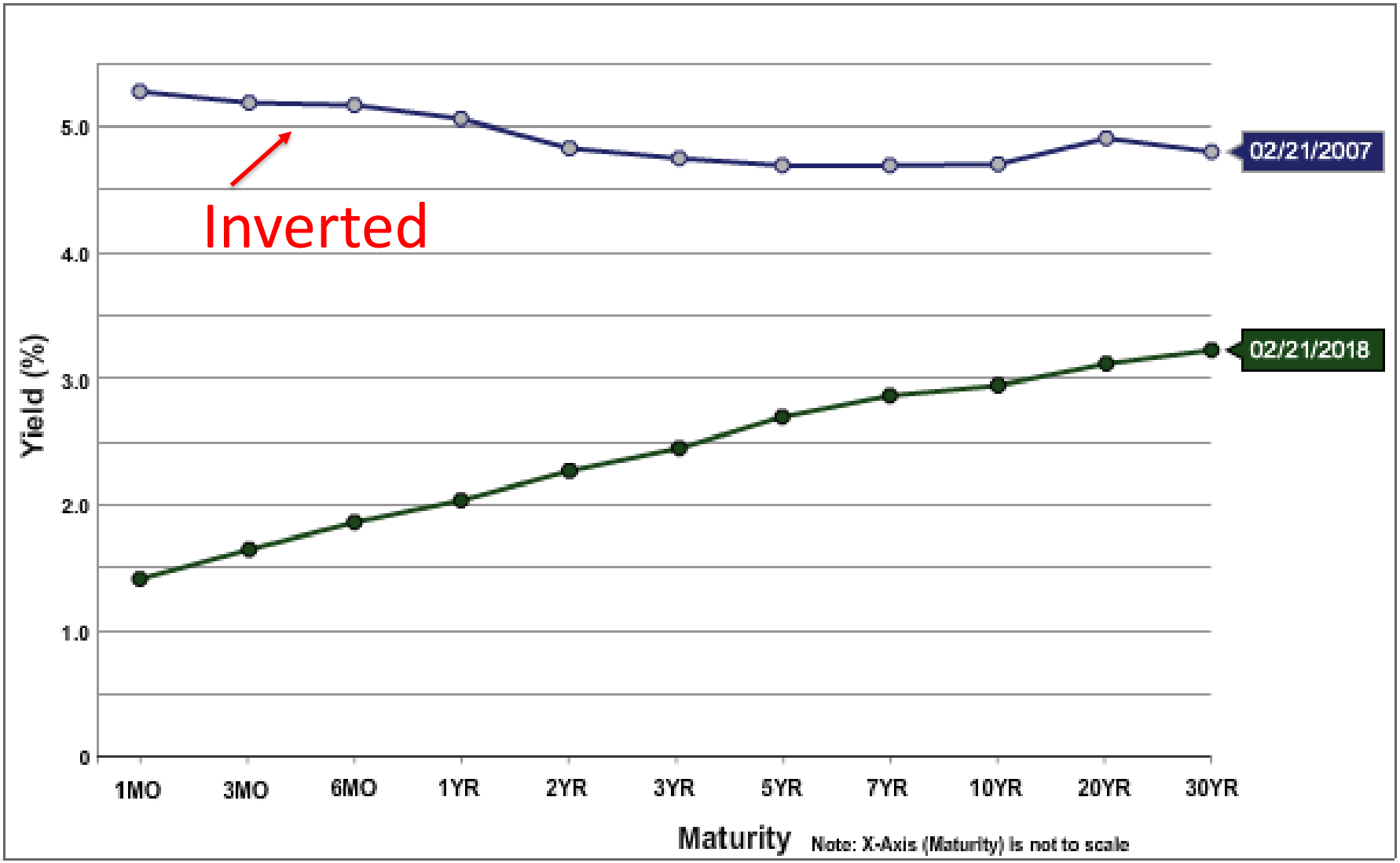
* Source = U.S. Dept. of Treasury:
https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield

U.S. Treasury Yield Curve (2018 vs. 2017)



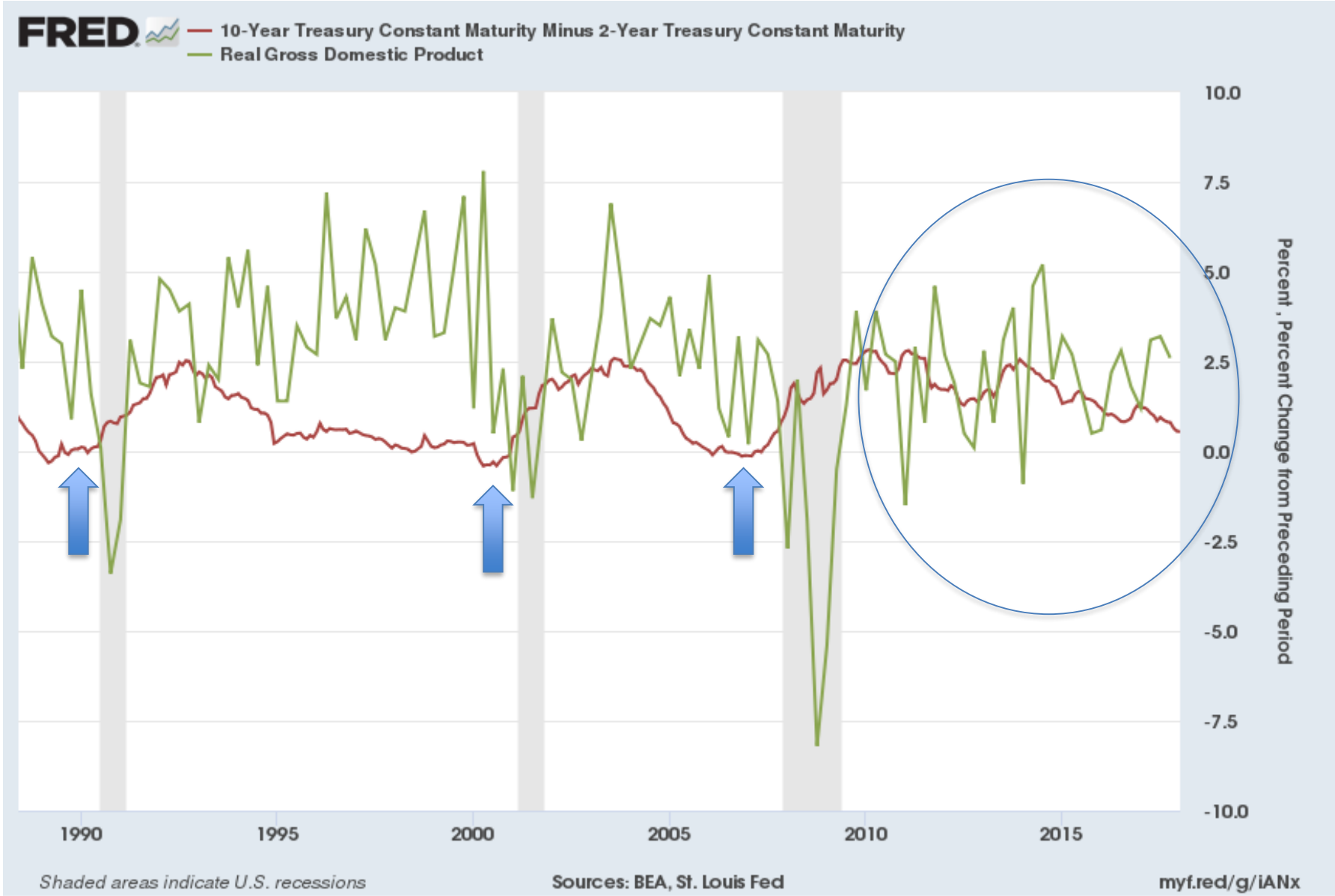
* Source = U.S. Dept. of Treasury:
https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield

U.S. Treasury Yield Curve (2007 vs. 2018)



* Source = U.S. Dept. of Treasury:
https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield

Real GDP vs. 10 Yr. – 2 Yr. Treasury Spread



Source: https://fred.stlouisfed.org/

Implied Forward Rates from Yield Curve (2.21.18)

	Expected (Implied) Yield*	Today (From 2.21 Yield Curve)
1-yr. rate, 1 year from now	2.4905%	2.03% (1 yr. rate)
5-yr. rate, 5 years from now	3.1906%	2.69% (5 yr. rate)

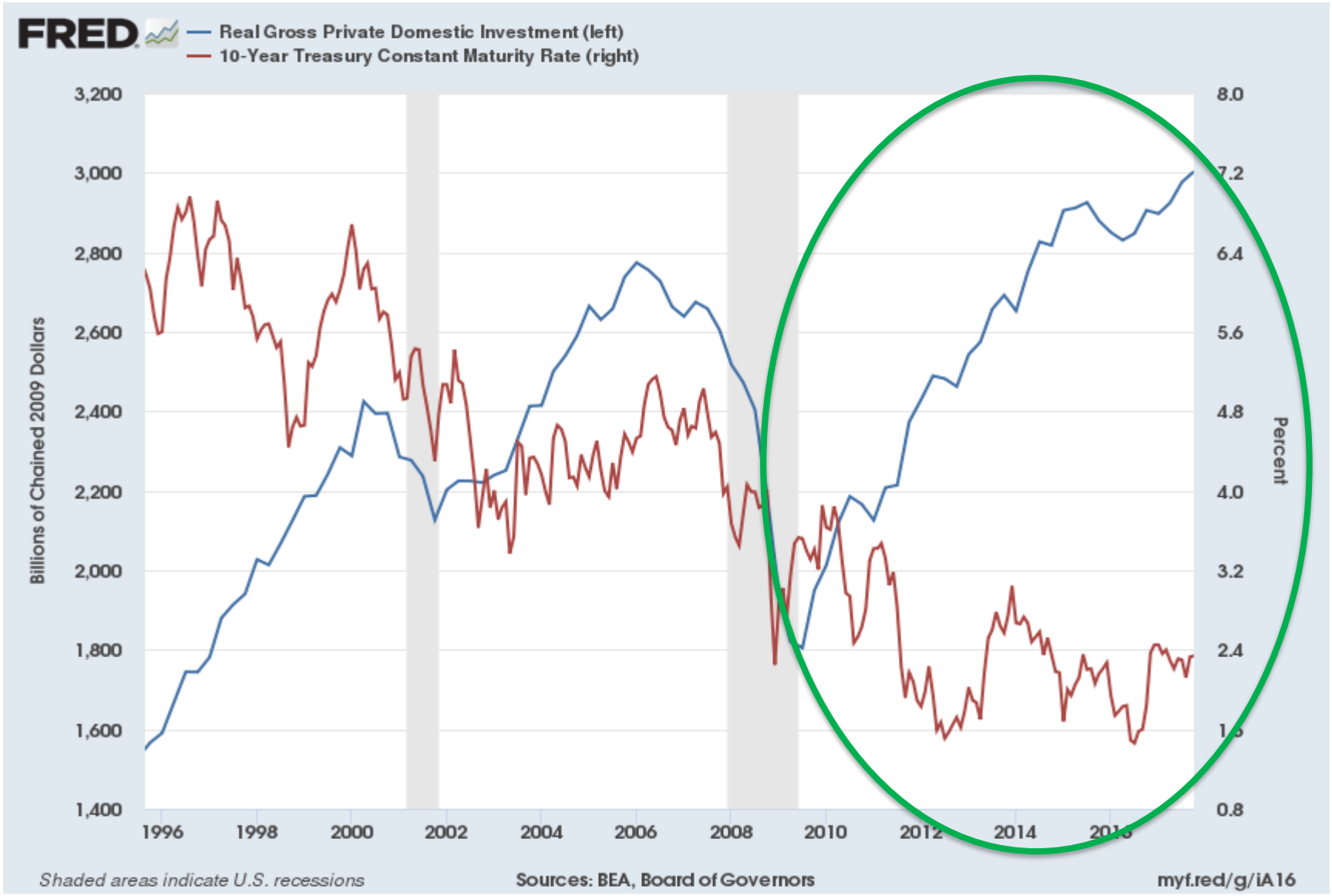
*Presenter's calculations

Treasury Futures (2.21.18)

10-Year T-Note Futures	Expected Yield**	Today (From 2.21 Yield Curve)
March 2018 = 120-115	3.56%	2.94% (10 yr. rate)
June 2018 = 119-255	3.62%	2.94% (10 yr. rate)

**Expected yield is the yield to maturity derived from corresponding bond futures price. Presenter's calculations.

Real Investment vs. 10 yr. Treasury Rate

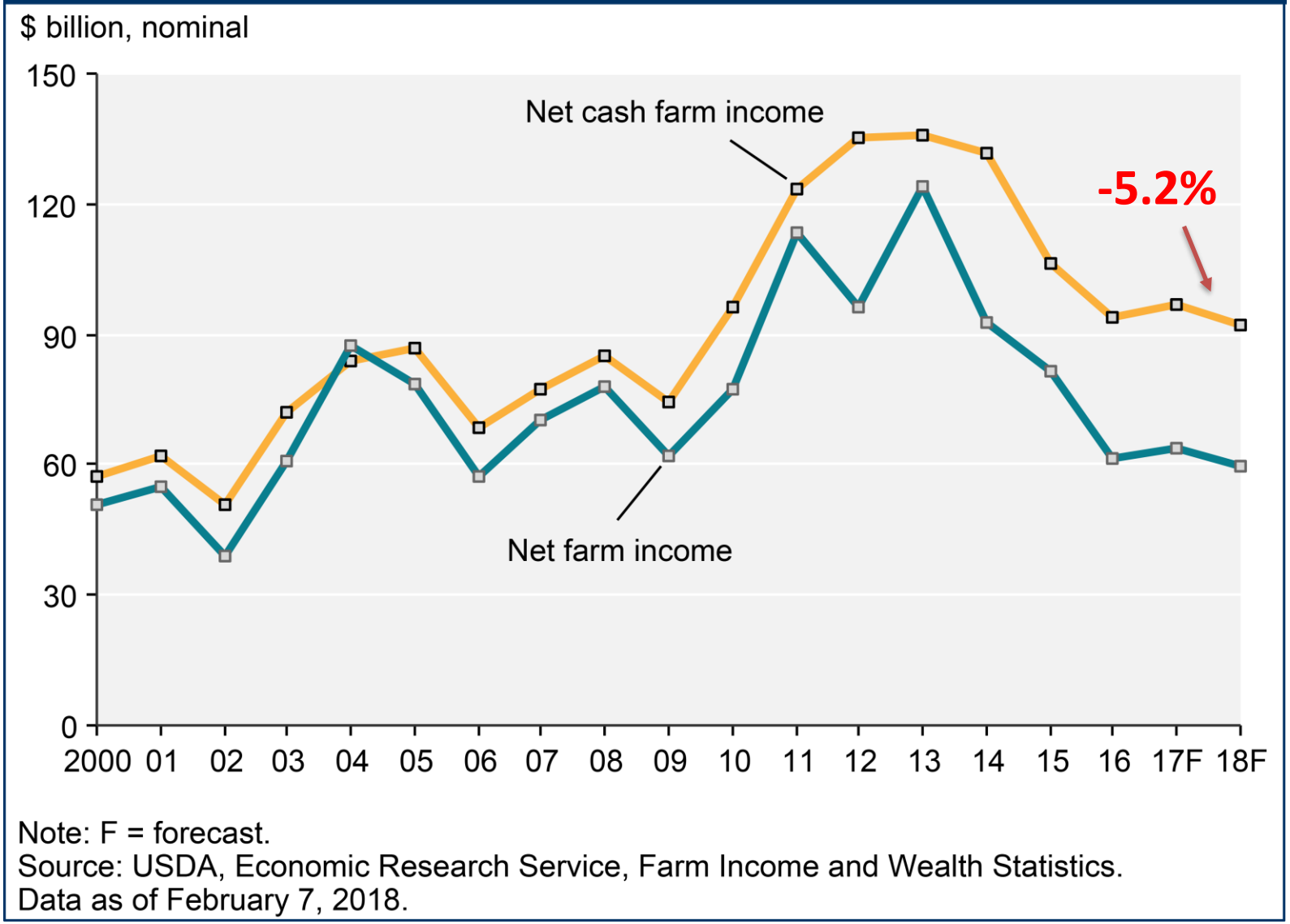


Source: https://fred.stlouisfed.org/

interest rates? watch fed and yield curve

farm income: not as exciting

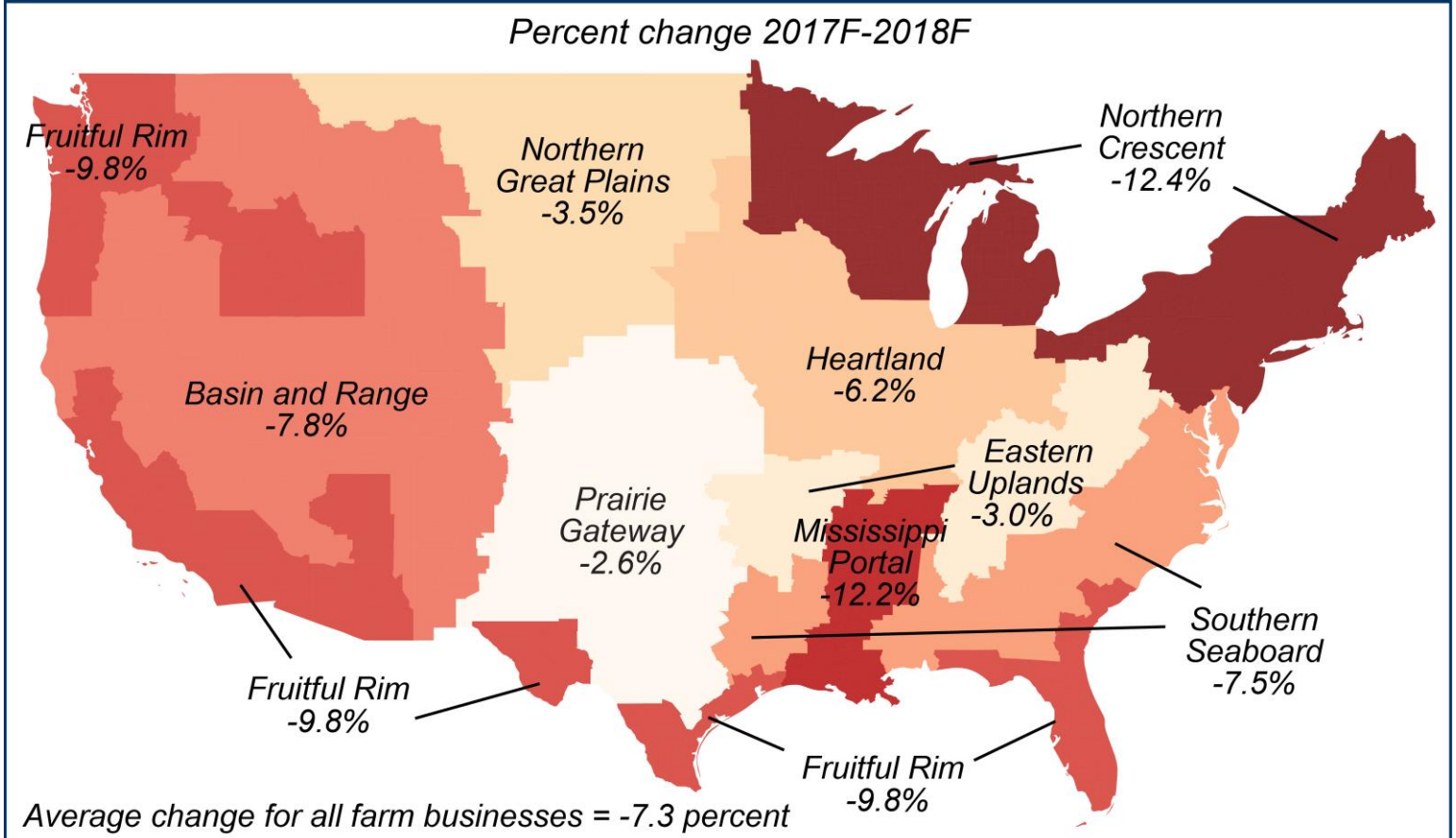
Net farm income and net cash farm income, 2000-18F



Note: F = forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of February 7, 2018.

See: https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-sector-income-forecast/

Farm business average net cash farm income by resource region, 2018F compared with 2017F



Note: F = forecast. The partial budget forecast model is based on the 2016 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and does not account for changes in crop rotation, weather, and other location-based production impacts that occurred after the base year. Data as of February 7, 2018.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

See: https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=82237

Average Net Cash Farm Income 2018F vs. 2017F

Commodity Specialization	Change 2017F to 2018F
Cotton	-9.1%
Specialty Crops	-7.8%
Other Crops	-6.7%
Cattle / Calf	+6.2%
Dairy	-19.2%

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics data product, Farm business average net cash income by commodity specialization and region. Data as of February 7, 2018.

See: https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-business-income/

Arizona

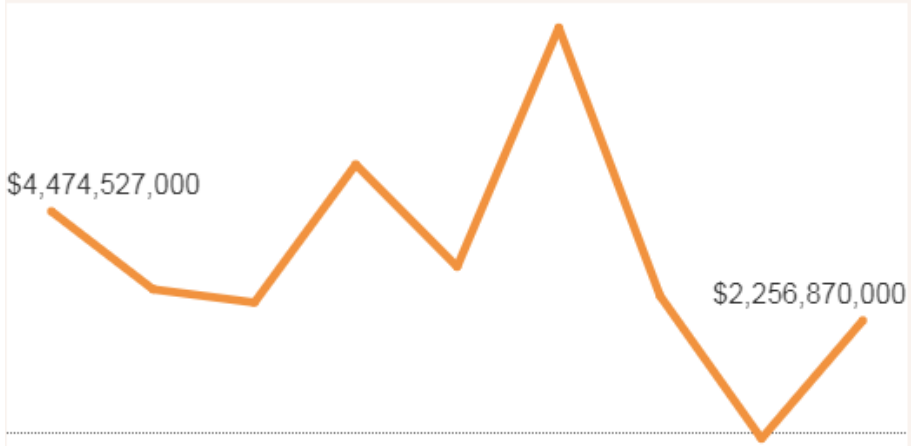
Net farm income
2008-2016

Top 5 production expenses

1	Hired labor	$514,166,000
2	Feed	$468,858,000
3	Miscellaneous*	$358,668,000
4	Capital consumption*	$288,649,000
5	Livestock purchases	$274,916,000

Illinois

Net farm income
2008-2016

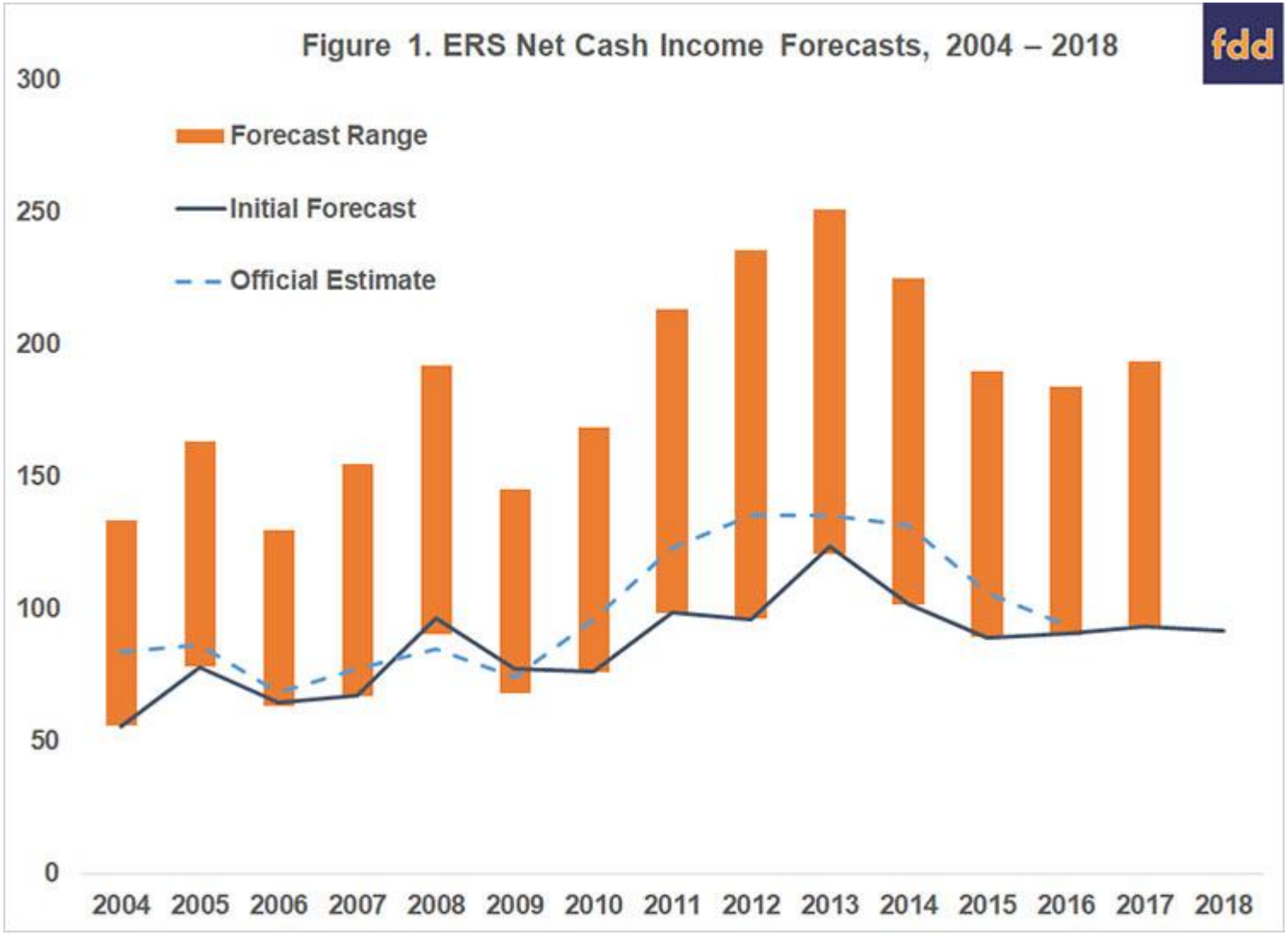


Top 5 production expenses

1	Capital consumption*	$2,952,667,000
2	Net rent to nonoperator landlords**	$2,298,729,000
3	Fertilizer, lime, & soil conditioner	$1,870,000,000
4	Seed	$1,860,000,000
5	Pesticide	$1,130,000,000

Created by: The ERS Farm Income Team.
Source: https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics.aspx (Released February 7, 2018). Number of farms and acres of farmland come from USDA, National Agricultural Statistics Service, June Area Survey (https://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1259).

Net Cash Income Forecast – Bias (2004 to 2018)



Kuethe, T. "Will Farm Income Really Drop to a 12-Year Low in 2018?" *farmdoc daily* (8):30, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 21, 2018.

Thoughts for Agribusiness?

- Respectable growth in output
- Emerging market growth - opportunities vs. risk
- Shocks that could derail economic growth?
- Short-term interest rates – Fed will watch inflation
- Long-term rates - capital expenditures and valuations?
- Farm income – a story of commodity prices

Thank you!

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