



Conference Forum—April 2019

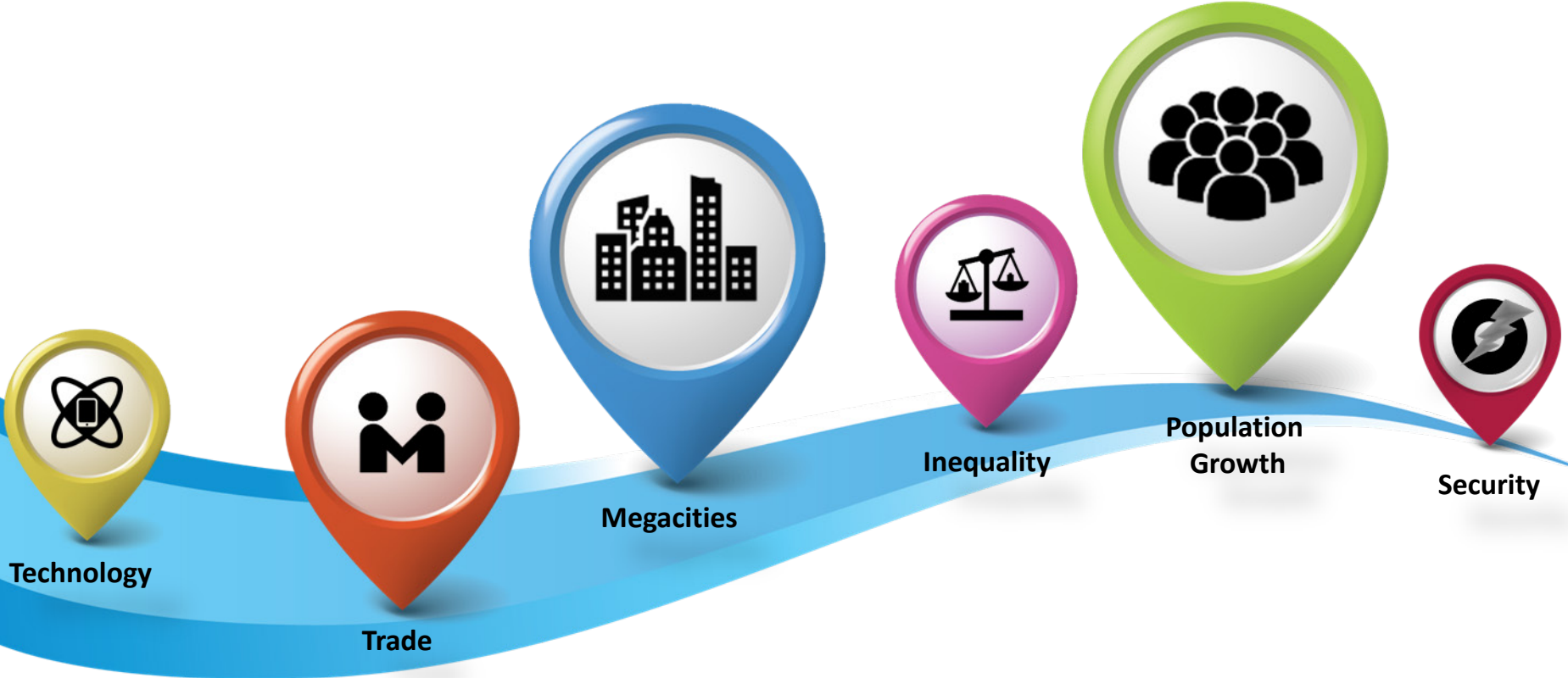


Wespath

BENEFITS | INVESTMENTS

Long-Term and Near-Term Opportunities and Risks Affecting Markets

Themes Influencing Our Lives



Technology

Trade

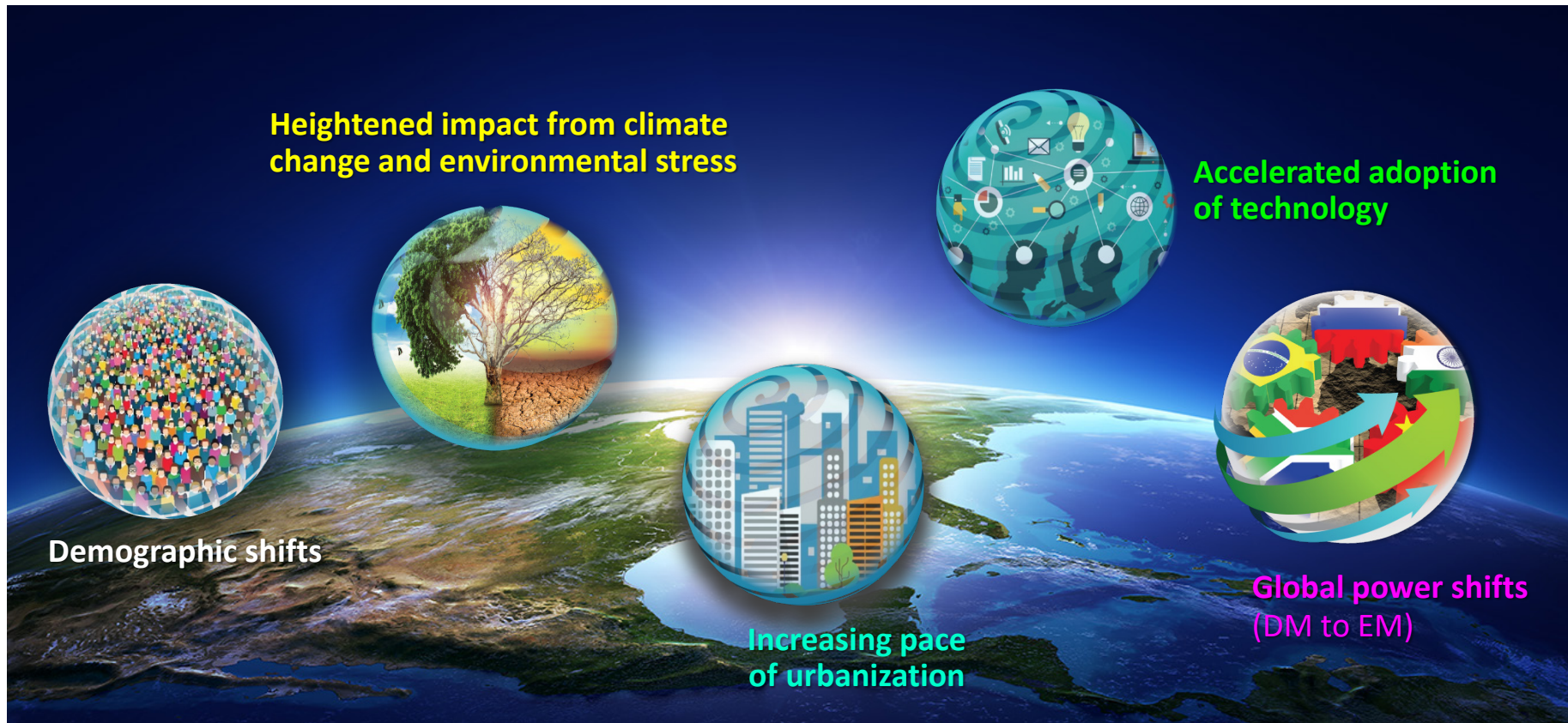
Megacities

Inequality

Population Growth

Security

Megatrends Will Influence Future Economic Growth



Five Long-Term Opportunities and Risks



**One Belt
One Road**

1



**U.S. Retirement
Funding Crisis**

2



**Technological
Disruption**

3



**Low-Carbon
Transition**

4



**Sociological
Challenges**

5

One Belt One Road

1

Megatrends



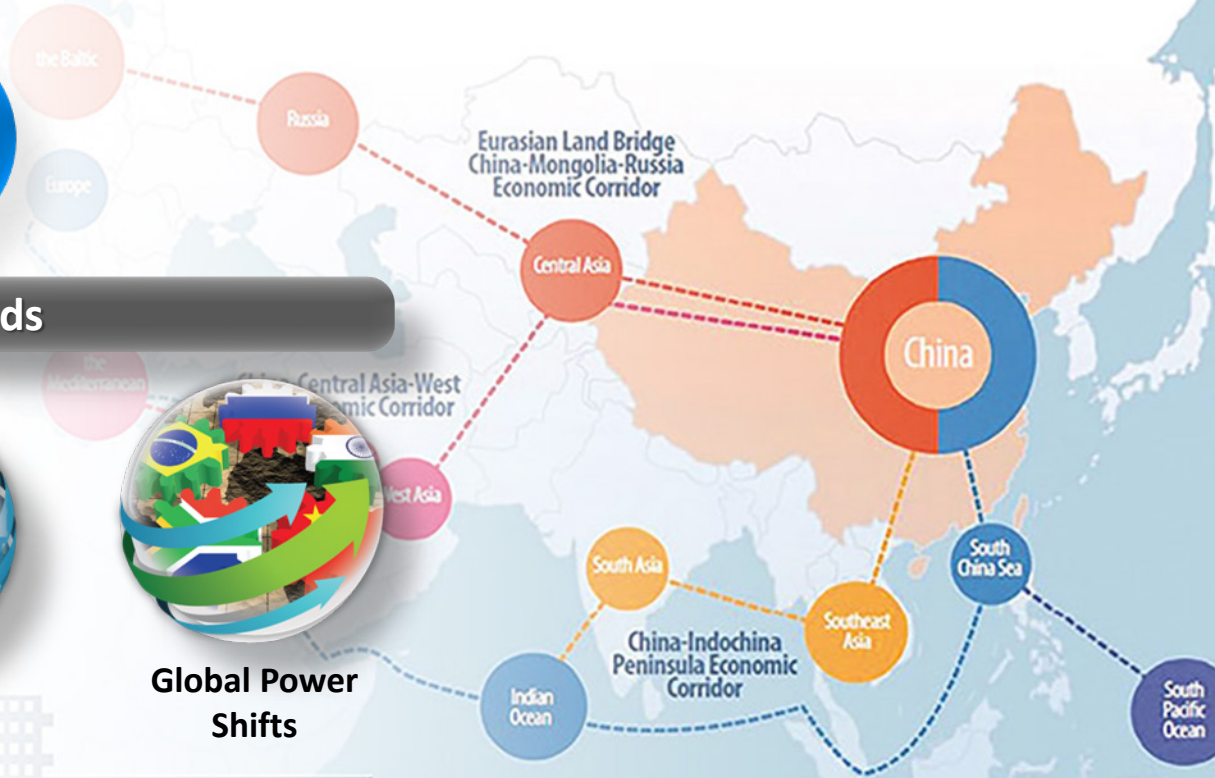
Demographic Shifts



Increasing Urbanization



Global Power Shifts



One Belt One Road: China's Aggressive Initiative



1,700 Projects
\$1 Trillion

Source: Eurasia Review, China's Belt And Road Initiative: Ambition And Opportunity – Analysis, April 20, 2018

Silk Road Economic Belt



Maritime Silk Road



One Belt One Road Will Have a Broad Reach

“Community of Common Destiny for Mankind”

Countries



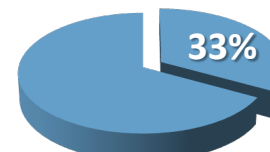
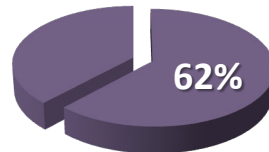
80 countries

People

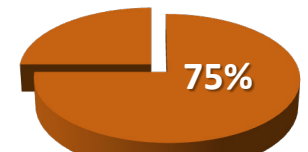


4.7 billion

World Economy



Energy Reserves

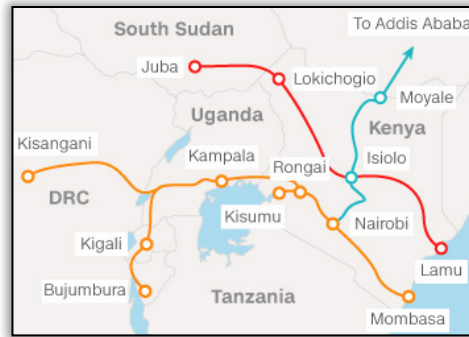


Sources: World Bank, Belt Road Initiative Brief, March 29, 2018 and Alfred Lee, Refinitiv, Belt and Road Initiative : 9 Overlooked Facts, November 22, 2018

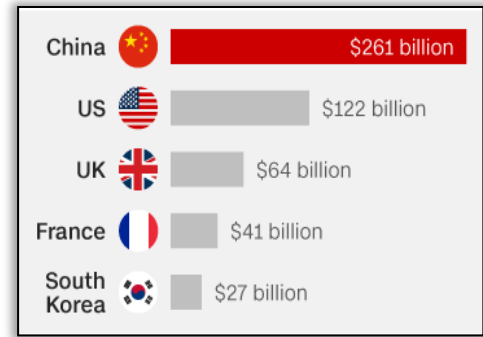
Africa Will Reap Significant Benefits



March 9, 2019 Cover



Rail Projects



Tourism



Sources: The Economist; CNN, China's New World Order

U.S. Retirement Funding Crisis

2

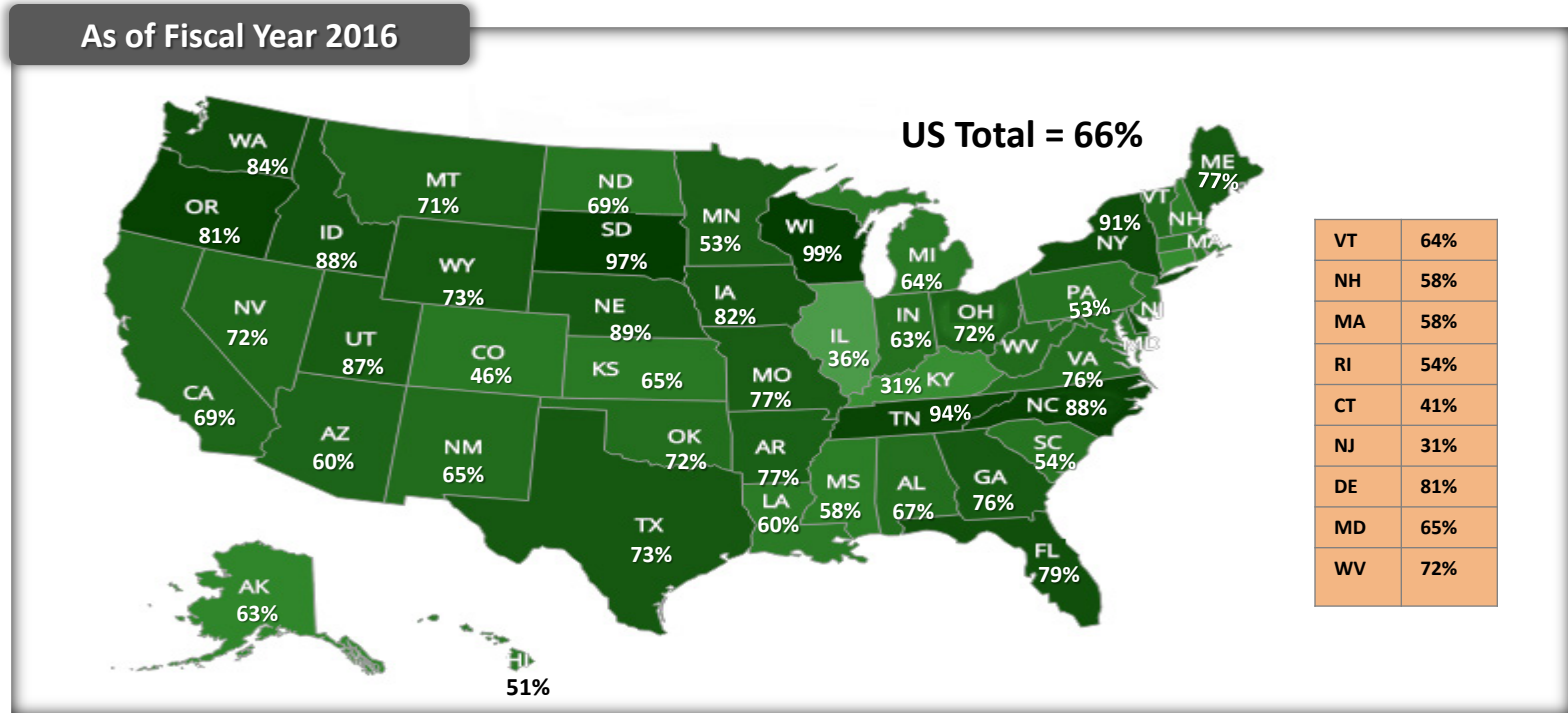
Megatrends



Demographic Shifts

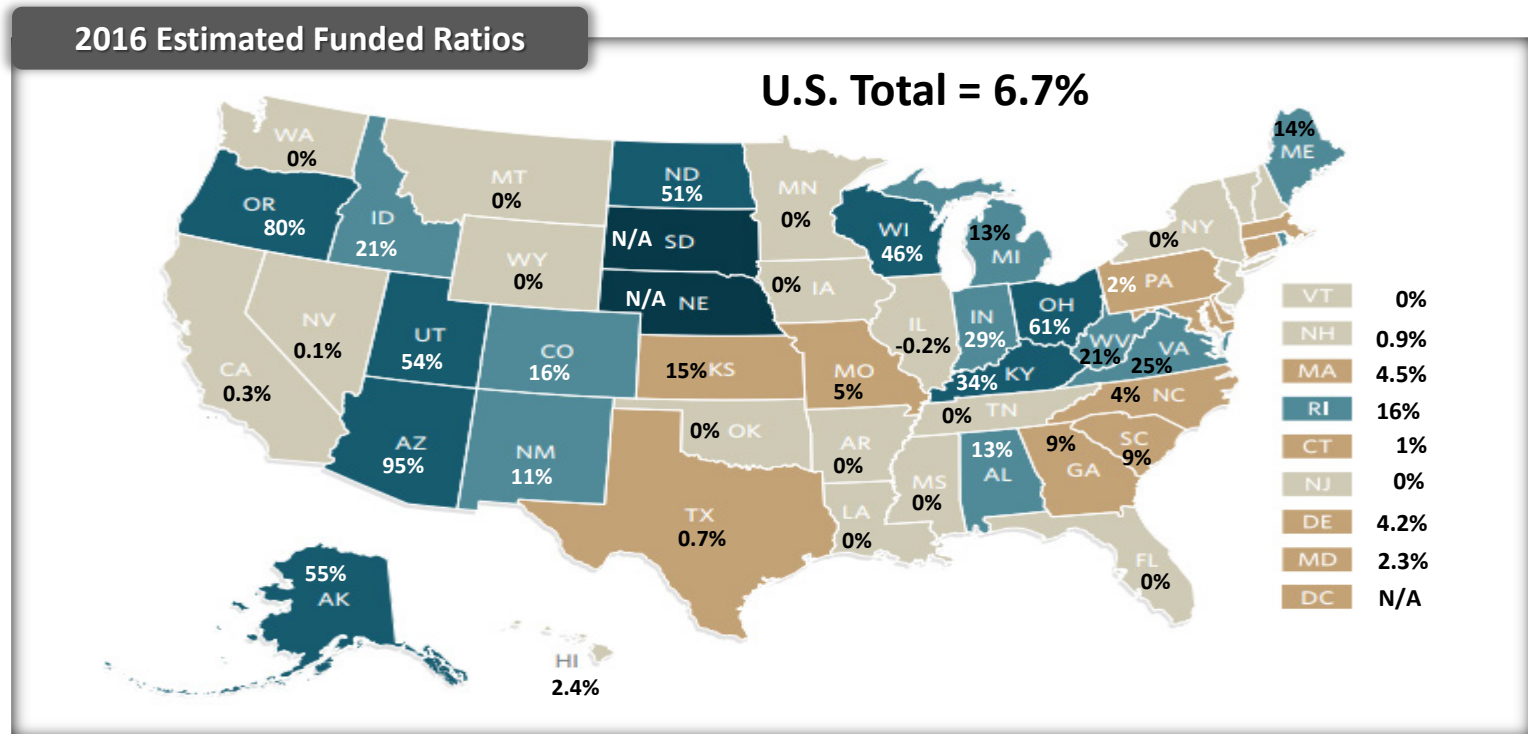


State Public Pension Plans—Underfunded by \$1.4 Trillion



Source: The Pew Charitable Trusts, Public Sector Retirement Systems, April 12, 2018 Data: Fiscal year 2016

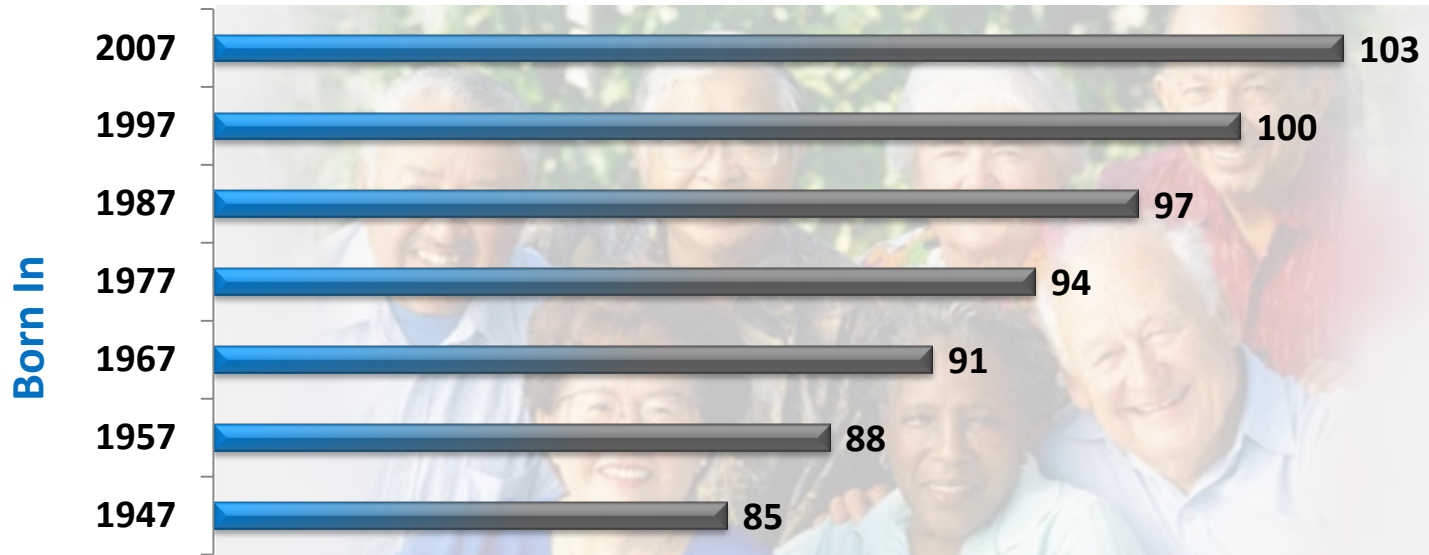
State Retiree Medical Obligations— Underfunded by \$696 Billion



Source: Update: 50-State Survey of Retiree Health Care Liabilities, The Pew Charitable Trusts, December 2018

U.S. Life Expectancies Continue Increasing

Oldest Age to which 50% of Those Born in the Specified Year Will Live



“...since 1840, there has been an increase in life expectancy of three months for every year.”

Source: The 100 –Year Life by Lynda Gratton and Andrew Scott; calculated using data from Human Mortality Database, University of California, Berkeley (USA) and Max Planck Institute for Demographic Research (Germany). Available at www.mortality.org. For an explanation, see ‘Broken Limits to Life Expectancy’ by Jim Oeppen and James Vaupel, Science, May 2002, vol. 296

Disruptive Technological Innovations

3

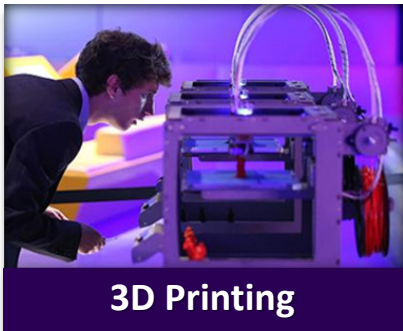
Megatrends



Accelerated adoption of technology



Major Disruptions Are Underway



“Amazonification” of Buying and Selling

Definition: The ability to compare prices across a broad spectrum of sellers
More transparency means more competition, which in turn means lower prices for consumers



“Uberization” of Work

Definition: Where agents exchange under-utilized capacity of existing assets or human resources (typically through a website or software platform), while incurring only low transaction costs

US-Based On-Demand Mobile Services



Source: Anne Dias, CEO of Aragon Global, Crains, February 22, 2018; Image published on 4/14/14 by @schlaf, @RRE

“Alibabification” of the Economy

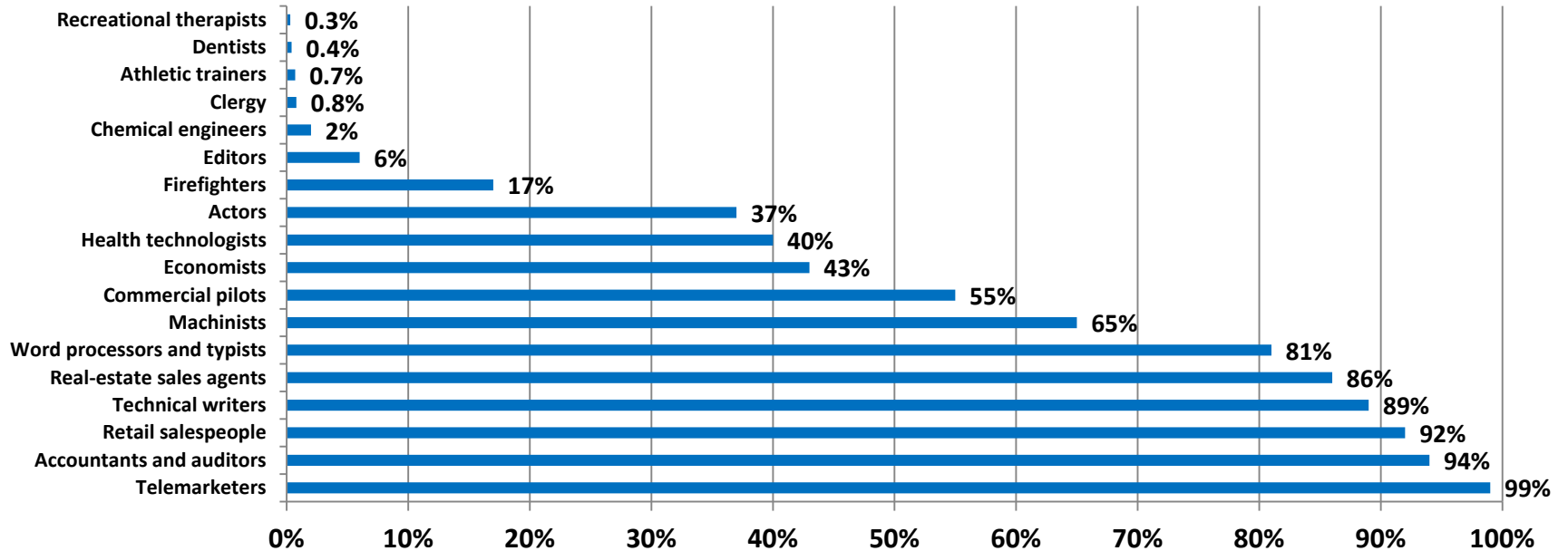
Definition: Using machine learning to predict what goods and services you want, when, where and at what price



Source: Anne Dias, CEO of Aragon Global, Crains, February 22, 2018

Occupational Disruption Is Inevitable

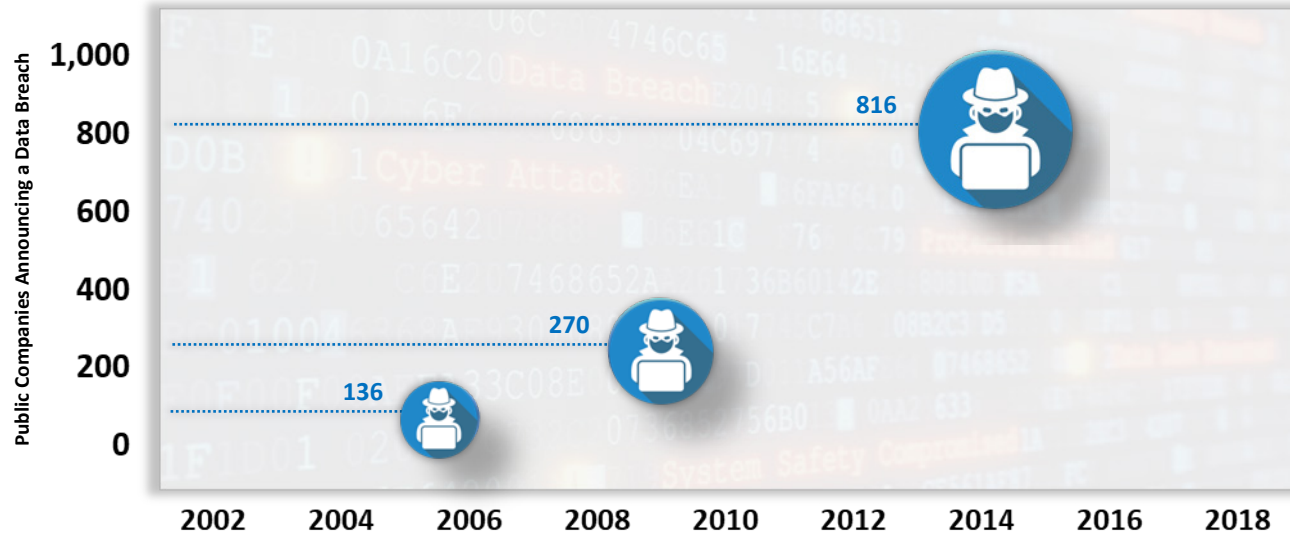
Probability of Computerization of Different Occupations, 2013



Source: "The Future of Employment: How Susceptible are Jobs to Computerisation", by C. Frey and M. Osborne, 2013; Economist, June 25, 2016

Public Data Breaches Continue to Rise

Data Breach Made Public



Between 2005-2016,
publicly announced
data breaches have grown

500%

Source: Privacy Rights Clearinghouse (PRC), April 2018

Low-Carbon Transition

4

Megatrends

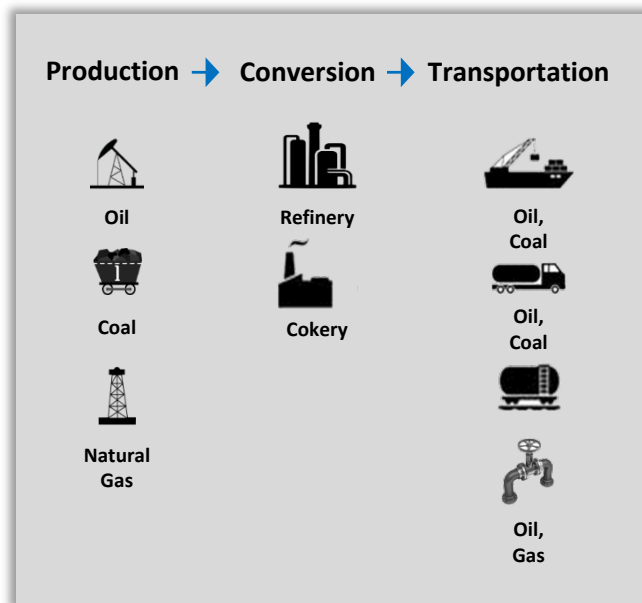


Heightened impact from climate change and environmental stress

Emissions Breakdown by Sector

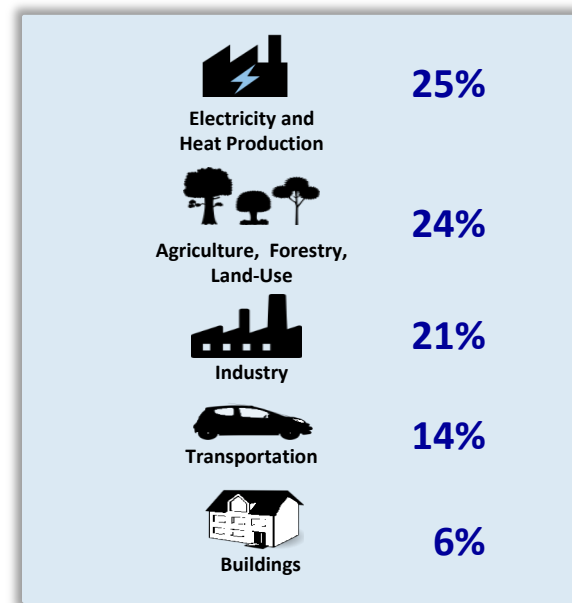
Fossil Fuel Production (Supply)

10% Global Emissions



Consumption (Demand)

90% of Global Emissions

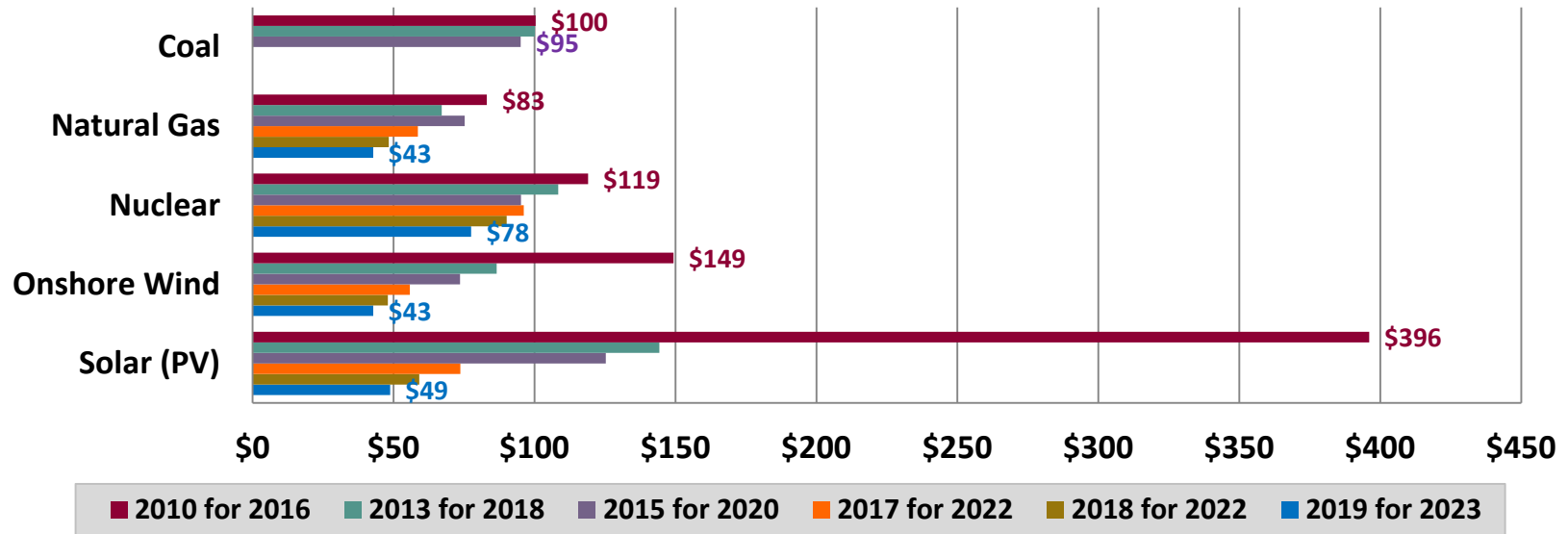


Note: This graphic is for illustration purposes only. It is not meant to be an exact representation of supply and demand

Source: EPA, IPCC, Wespath—all data as of 2010

Renewable Energy Costs Declining Rapidly

Estimated Levelized Cost of Electricity Entering Service (No Subsidies)

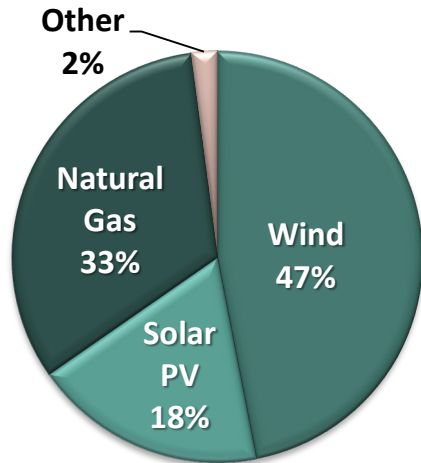


Source: U.S. Energy Information Agency Annual Energy Outlook, 2010, 2013, 2015, 2017, 2018, and 2019 Wikipedia. Coal cost not estimated after 2015 report; PV = photovoltaic

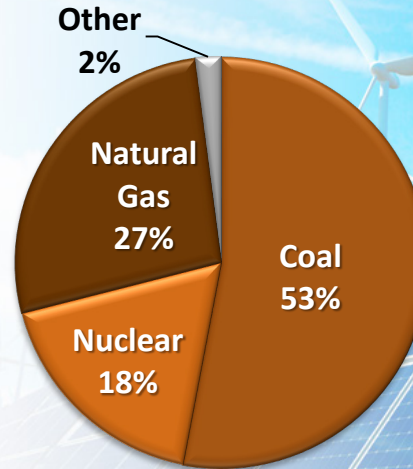
Renewables Rapidly Replacing Fossil Fuels

Change in U.S. Electricity Generating Capacity—2019

Planned Additions—24 Gigawatts



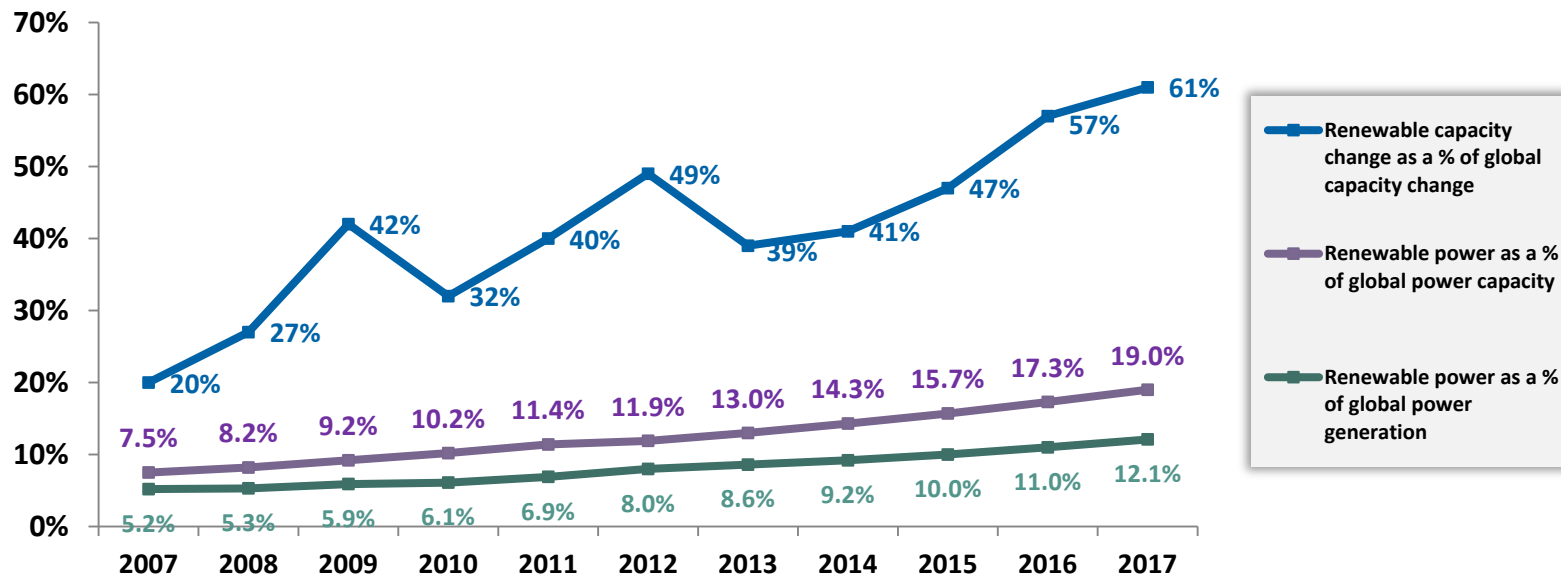
Planned Retirements—8 Gigawatts



Source: U.S. Energy Administration, Today in Energy, January 10, 2019

Renewable Capacity Rapidly Increasing

Renewable Power Generation and Capacity as a Share of Global Power: 2007 – 2017



Note: Renewable figures exclude large hydro. Capacity and generation based on Bloomberg New Energy Finance totals.

Source: UN Environment, Bloomberg New Energy Finance, Global Trends in Renewable Energy Investment

Governments Banning Internal Combustion Engine (ICE) for New Vehicle Sales



2025



2030

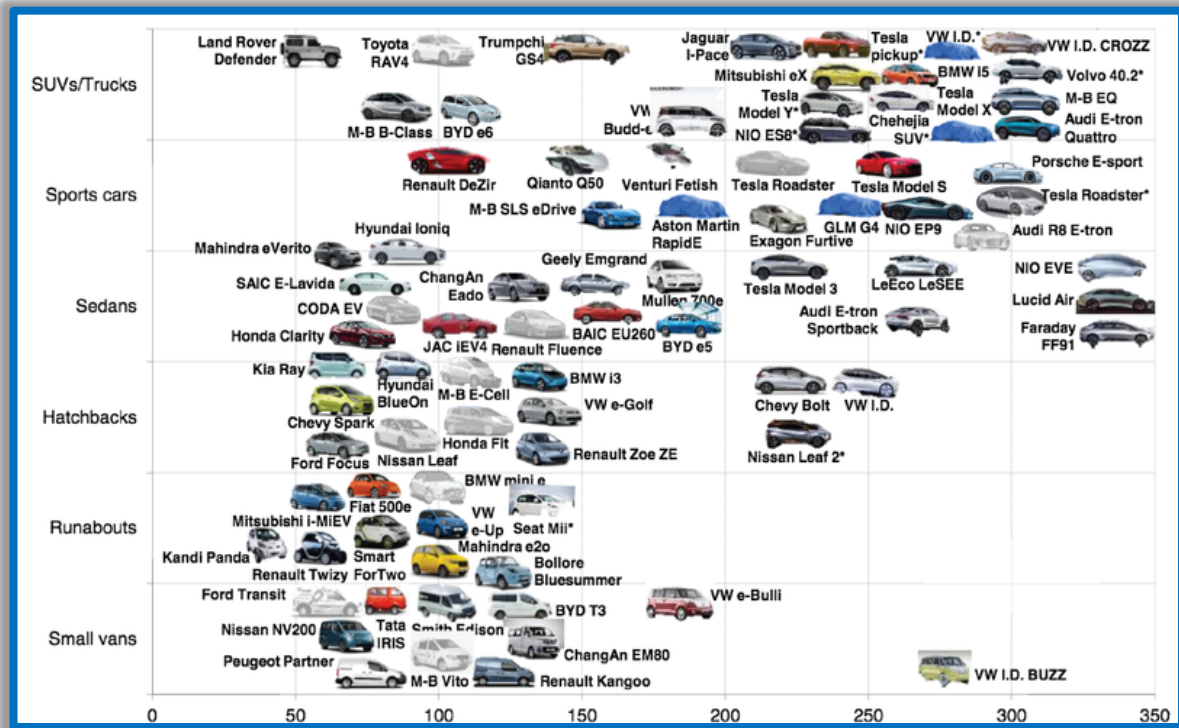


2040



Source: Wikipedia, List of Countries Banning Fossil Fuel Vehicles.

Plethora of Electric Vehicle Choices



Source: Michael Liebreich, Bloomberg New Energy Finance Summit, April 25, 2017

Companies Formally Committing to Sourcing 100% Renewable Electricity



Already 100%

Source: RE100: A project of The Climate Group in partnership with CDP, as part of the We Mean Business coalition

Companies Formally Committing to Sourcing 100% Renewable Electricity

100% by 2020



100% Between
2020 and 2030



AB InBev



Source: RE100: A project of The Climate Group in partnership with CDP, as part of the We Mean Business coalition

Sociological Challenges

5

Megatrends



Demographic Shifts



Income Inequality



Opioid Crisis

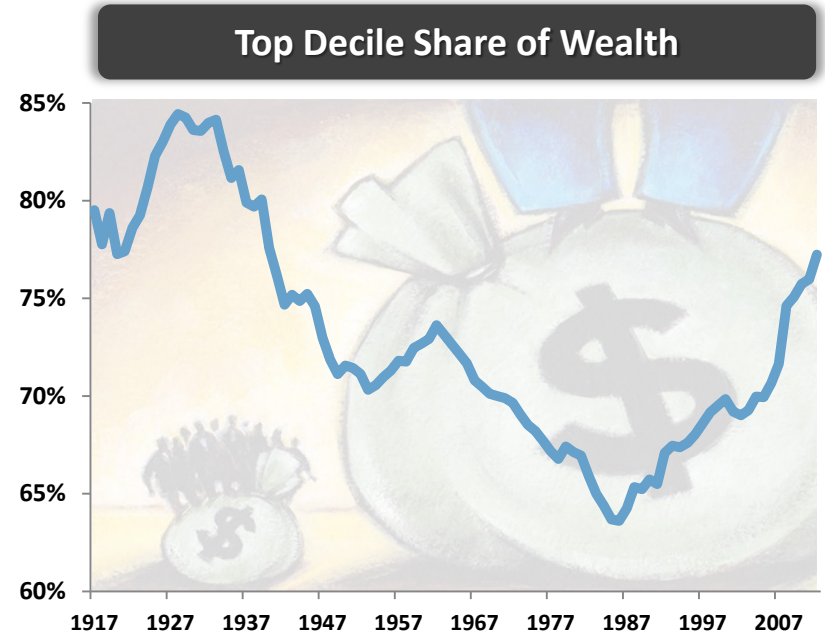
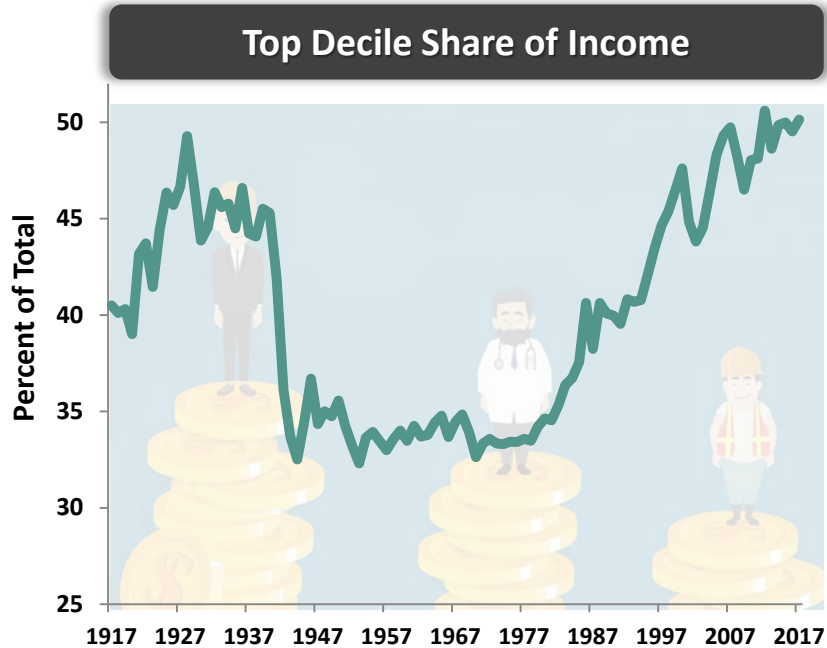


Migration



Nationalism/Populism

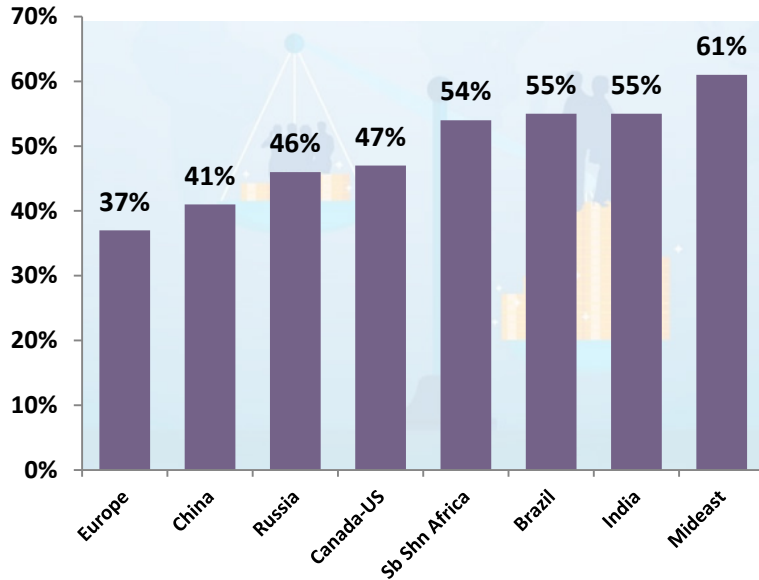
Economic Inequality in the U.S. is Increasing



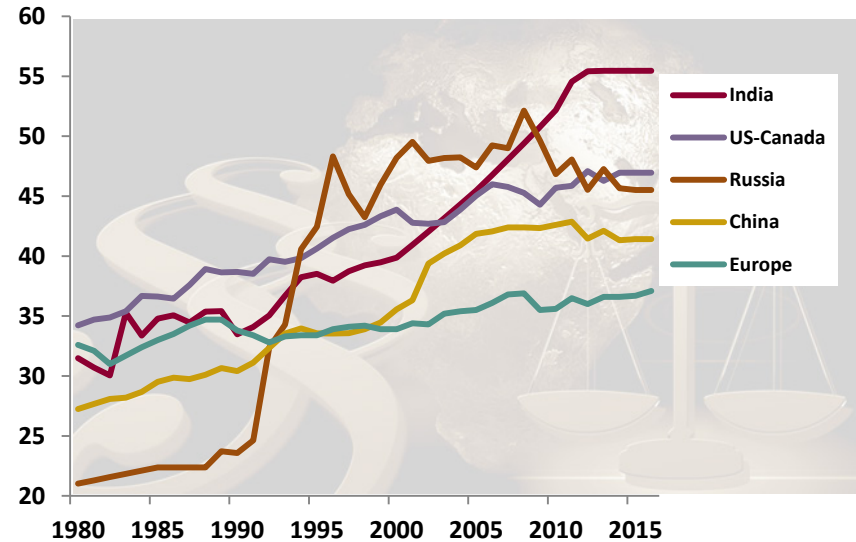
Source: (Income) Emmanuel Saez, UC Berkeley, Striking it Richer: The Evolution of Top Incomes in the United States (Updated with 2017 final estimates), March 2, 2019; (Wealth) Emmanuel Saez and Gabriel Zucman, Wealth Inequality in the United States Since 1913, Evidence from Capitalized Income Tax Data, The Quarterly Journal of Economics, May 2016

Inequality Is a Global Issue

Top Decile Share of National Income

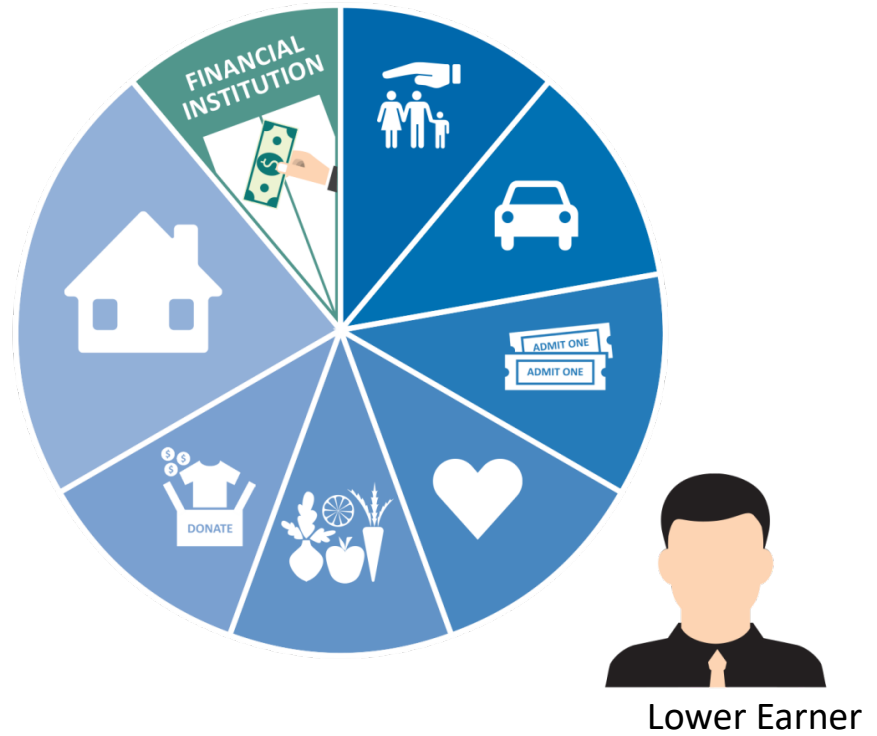
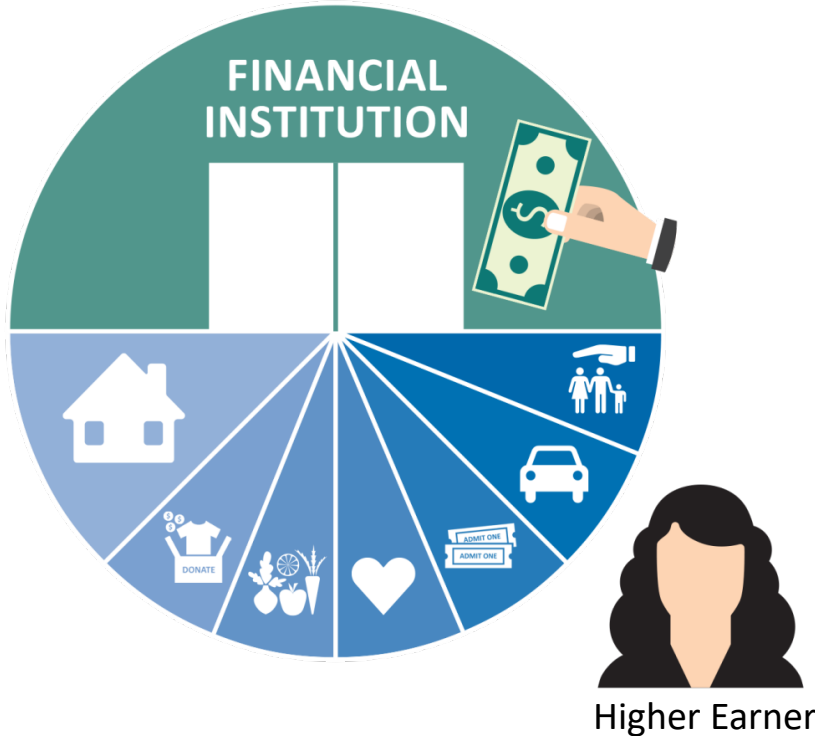


Top Decile Share of National Income



Source: World Inequality Lab, World Inequality Report 2018, <https://wir2018.wid.world>

Income Inequality: Where the Money Goes

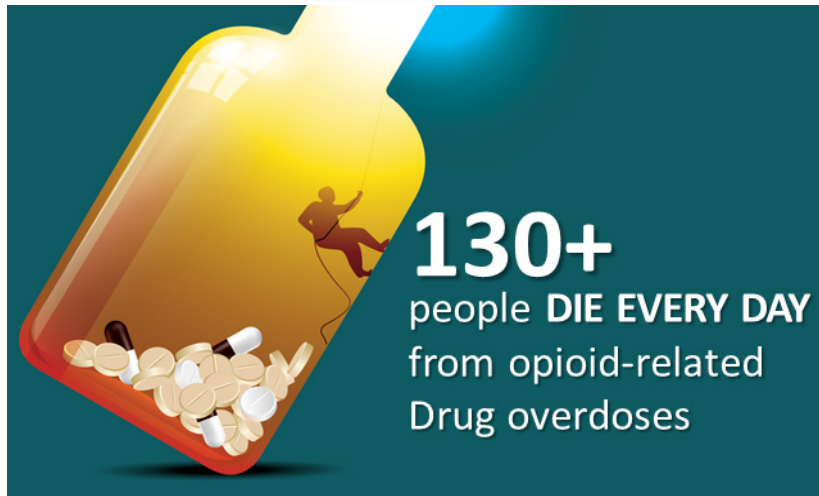


U.S. Opioid Crisis Affects Workforce

“Nearly half of prime age NLF men take pain medication on a daily basis”

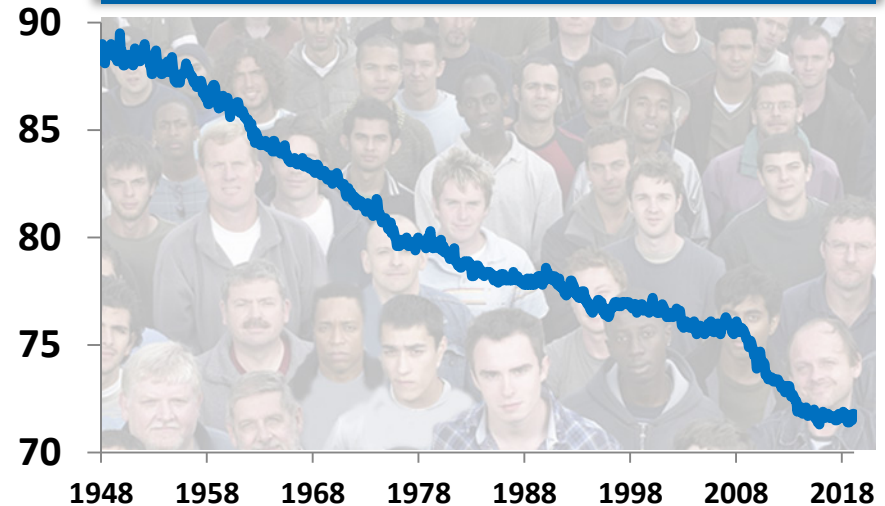
—Alan B. Krueger, Princeton U. and National Bureau of Economic Research, August 26, 2017

Combating the Opioid Crisis



Source: National Institute on Drug Abuse, January 2019

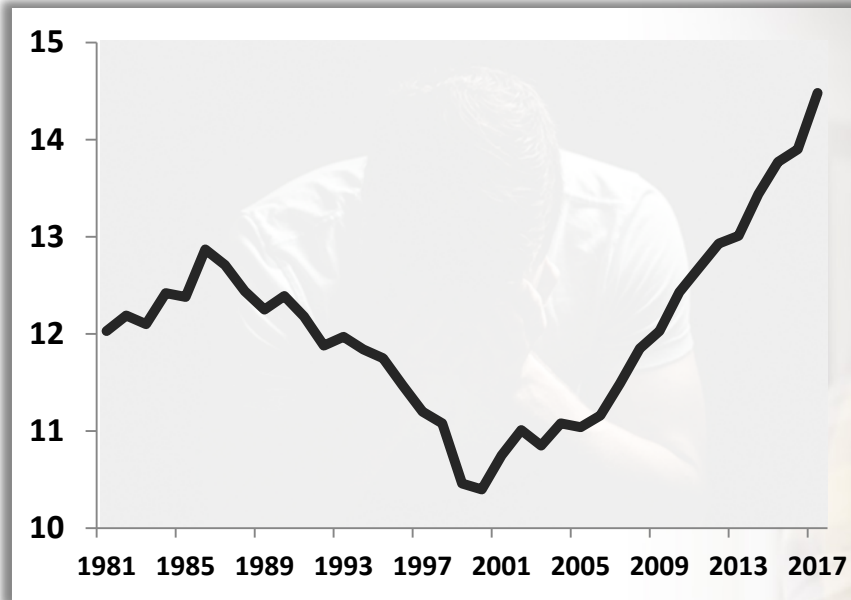
Labor Participation Rate: Men 20+ Years



Source: U.S. Bureau of Labor Statistics, Civilian Labor Force Participation Rate: 20 years and over, retrieved from FRED, Federal Reserve Bank of St. Louis; data as of February 28, 2019

39% Increase in Suicide Rate from 2000

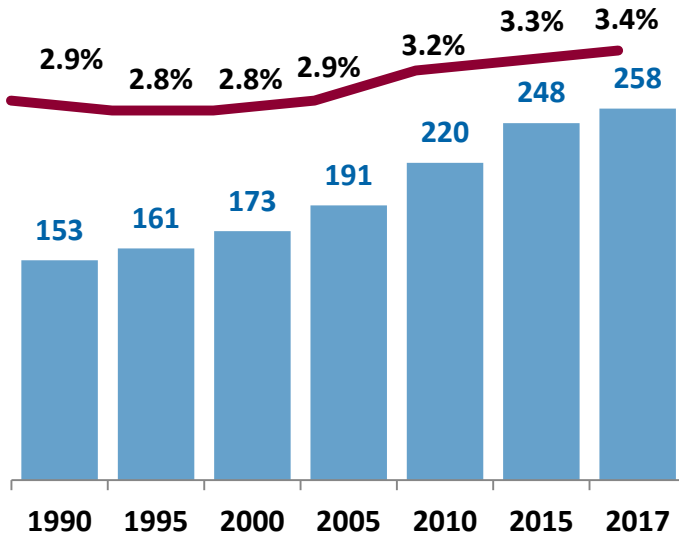
U.S. Suicide Deaths Per 100,000



Source: Centers for Disease Control and Protection, Leading Causes of Death Reports, 1981-2017, WISQARS database

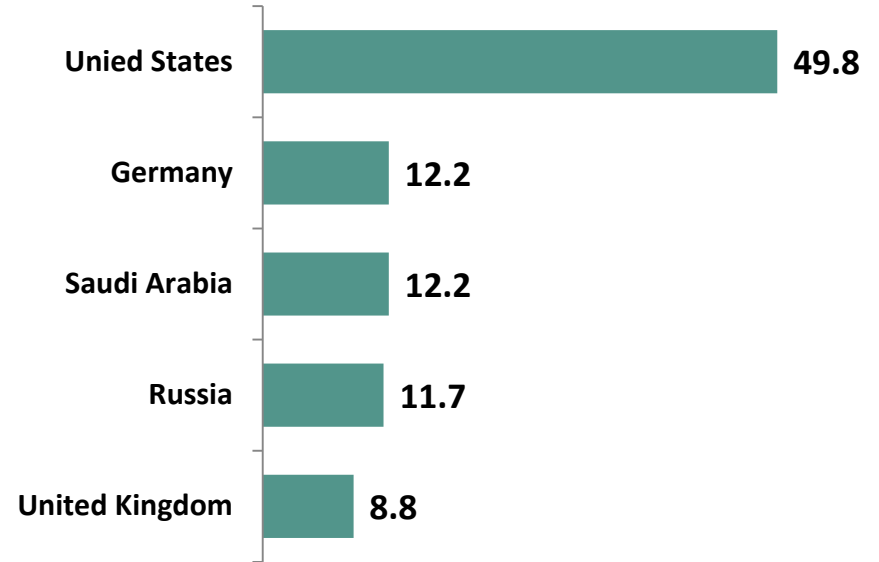
Migration Is Increasing

Millions of Migrants



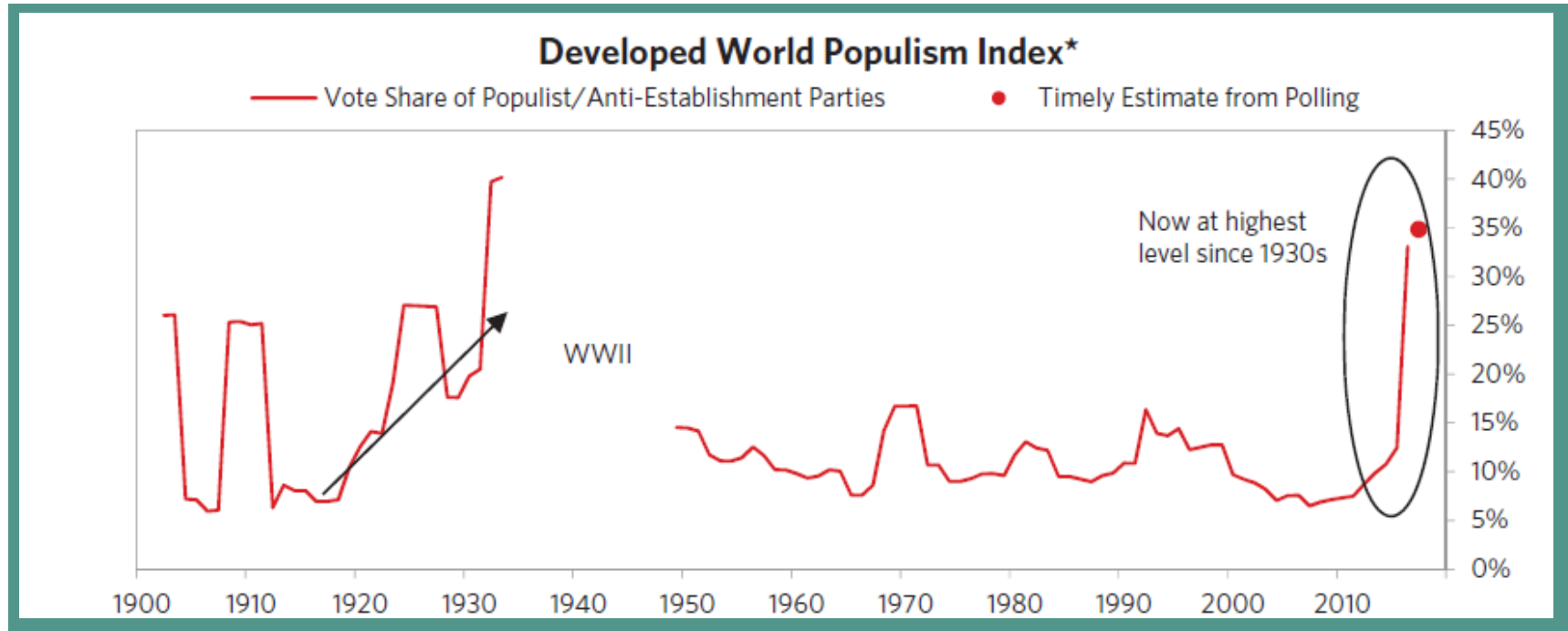
One in every 30 people on earth is a migrant

U.S. is the Leading Destination



Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). Trends in International Migration Stock

Populism Is Rising




Source: Bridgewater Associate, Daily Observations, "Populism: The Phenomenon, March 22, 2017

Five Near-Term Opportunities and Risks




Populism



Global Growth



Trade and Tariffs



Global Central Banks



Inflation and the Fed

1

2

3

4

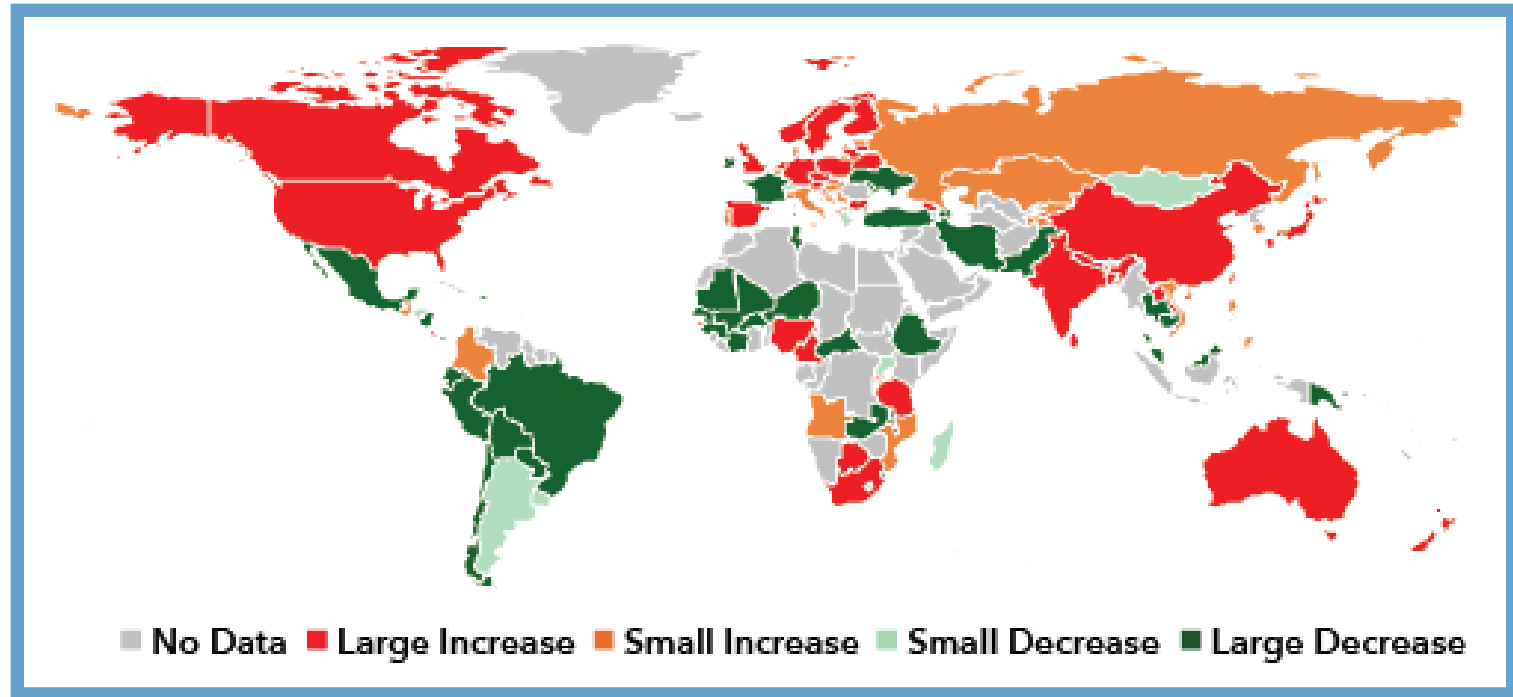
5

Populism

1

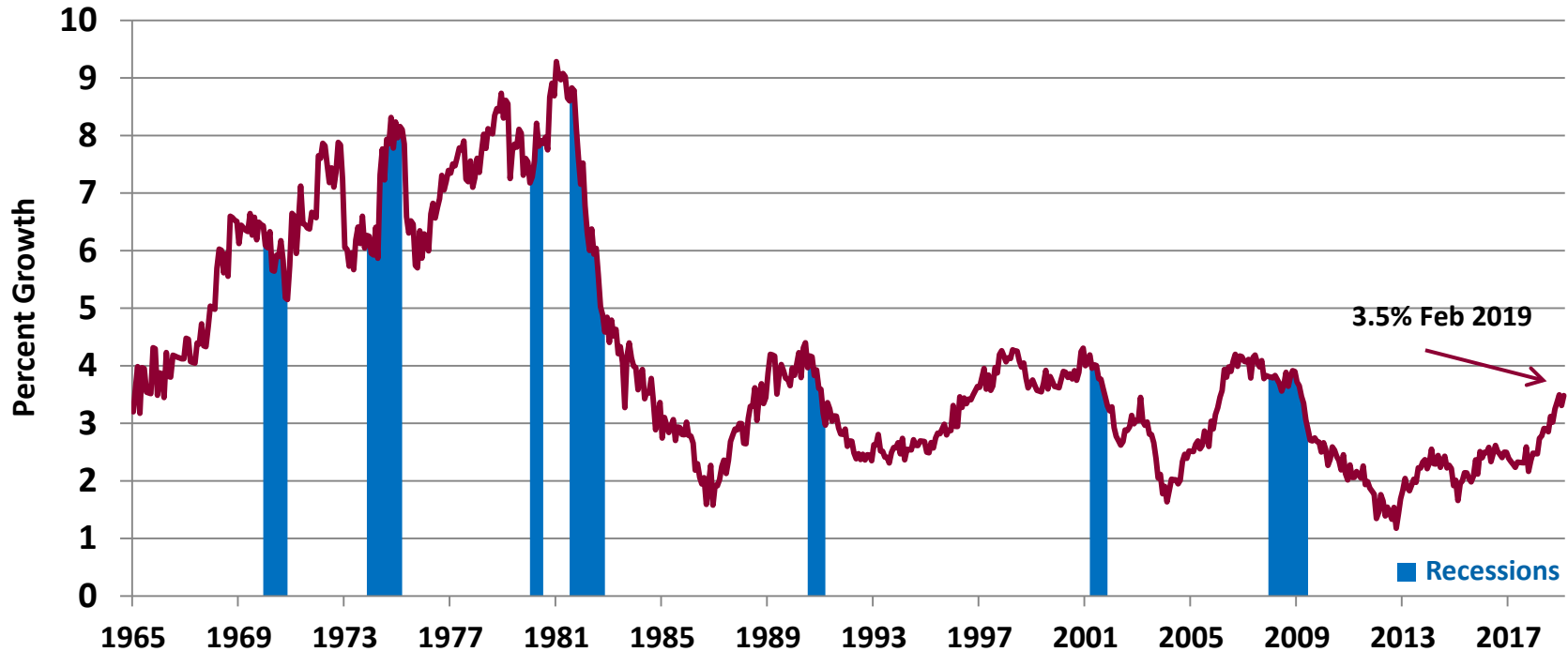


Inequality Increases in Major Economies



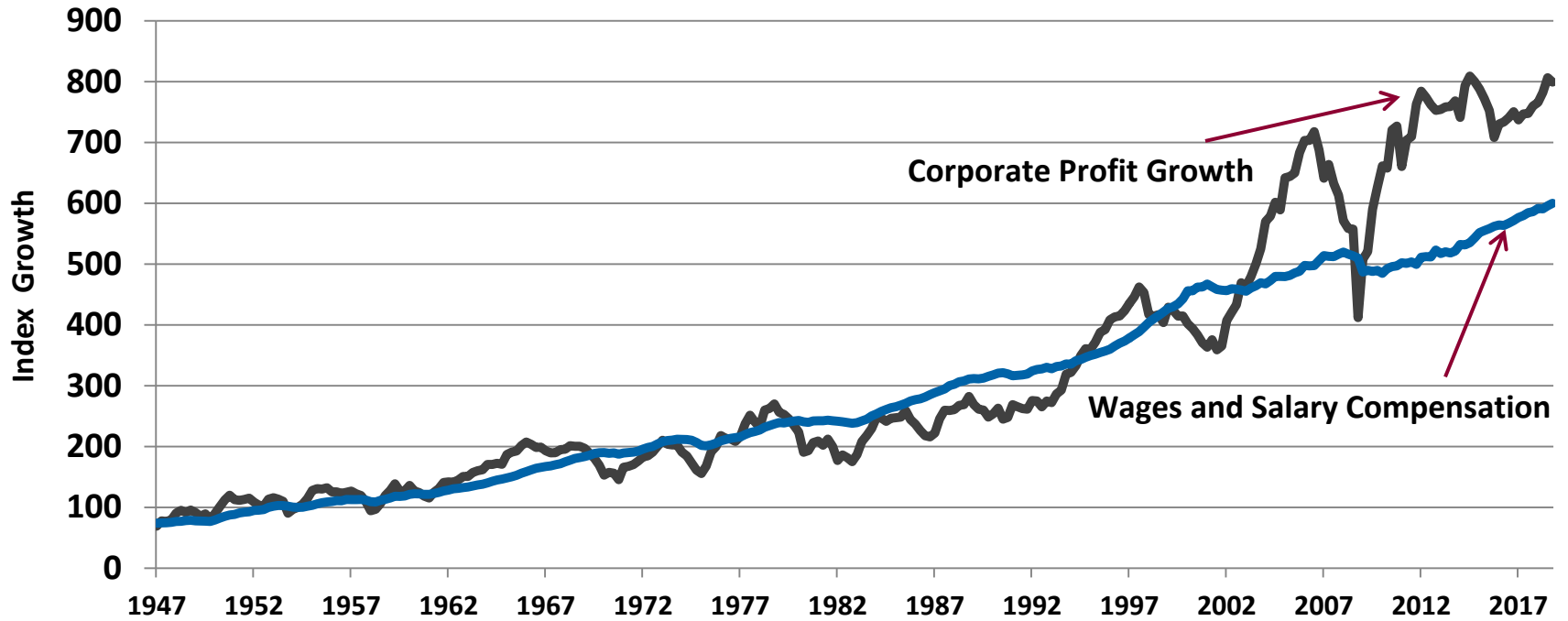
IMF, Changes in GINI coefficient between 1985–2015

Subdued Annual Average Hourly Earnings Growth



U.S. Bureau of Labor Statistics

Corporate Profits Outstrip Wages and Salary



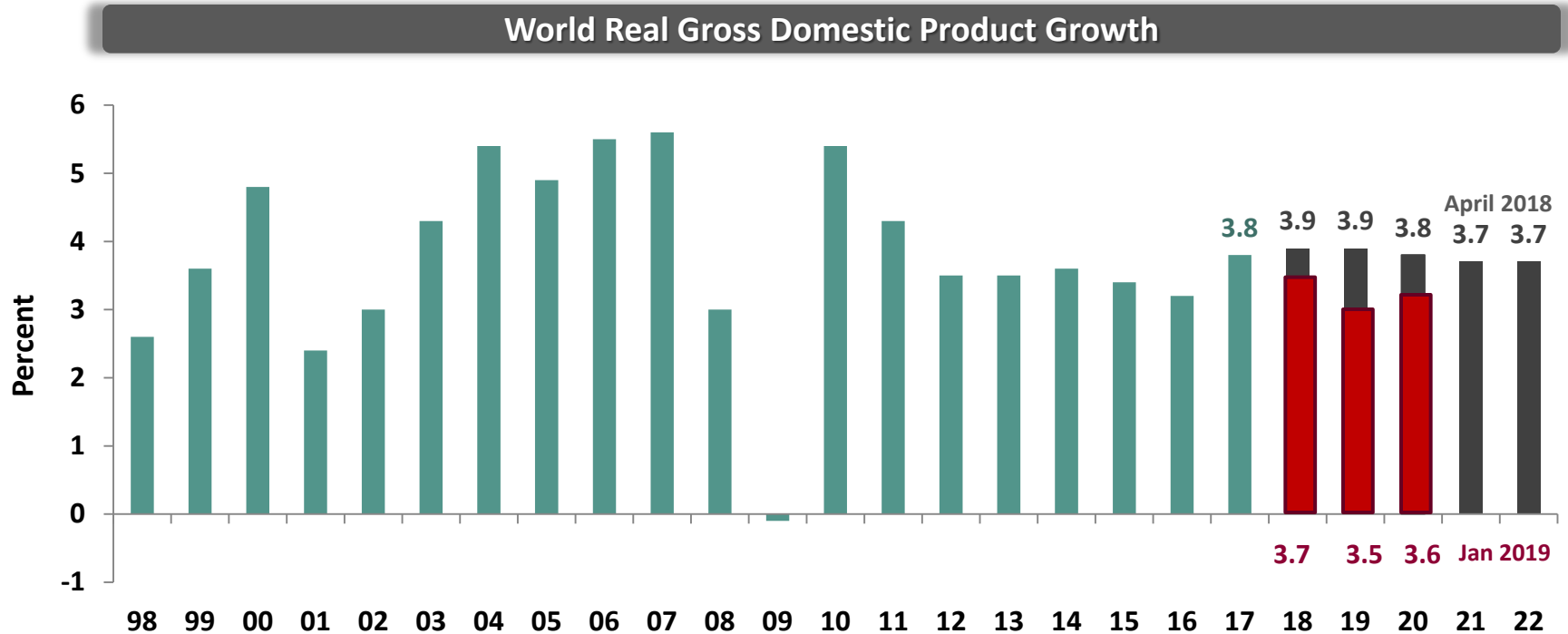
Source: U.S. Bureau of Economic Analysis

Near-Term Global Growth

2

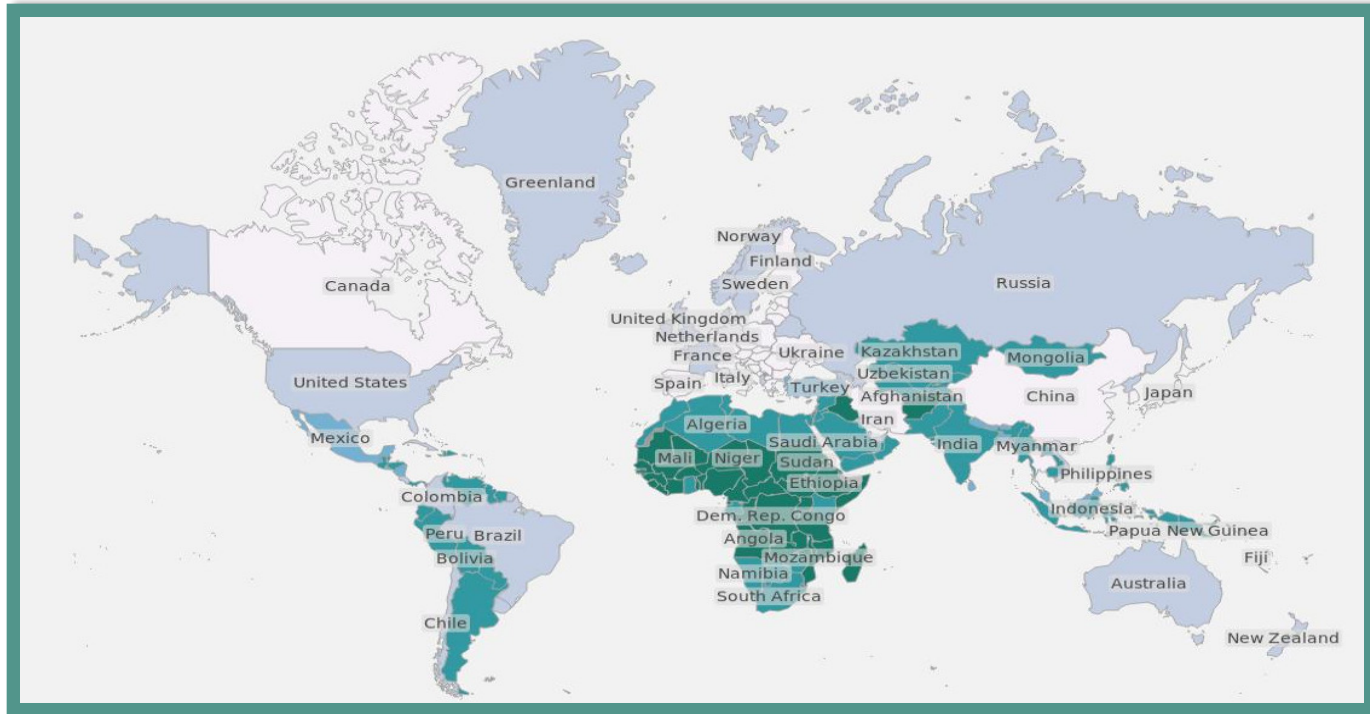


Growth Forecast Updated Downward



Source: International Monetary Fund World Economic Update, January 2019

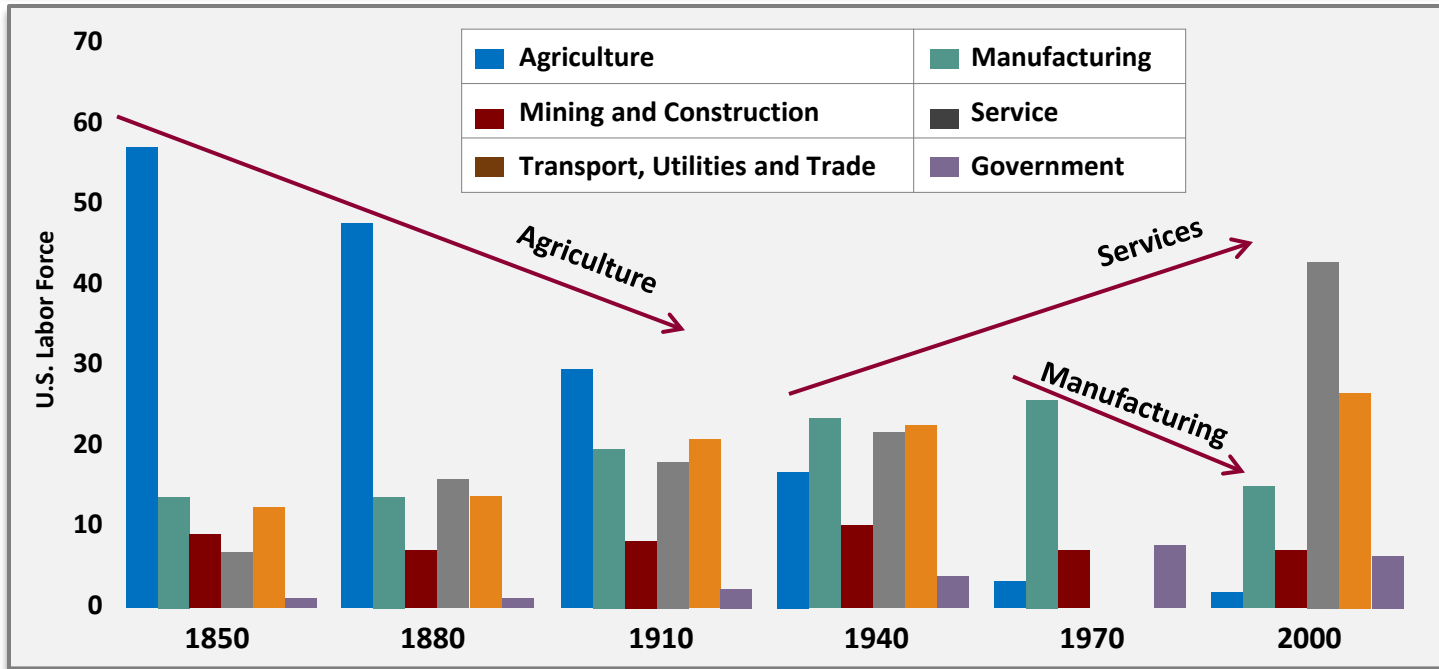
Low Fertility Impacting Most Regions Ex-Africa



The World Bank, Fertility Rate by Region 2016

Impact of Technological Change on Jobs

Employment by Industry as a Percentage of the U.S. Labor Force



U.S. Census Bureau and IMF Staff Calculations

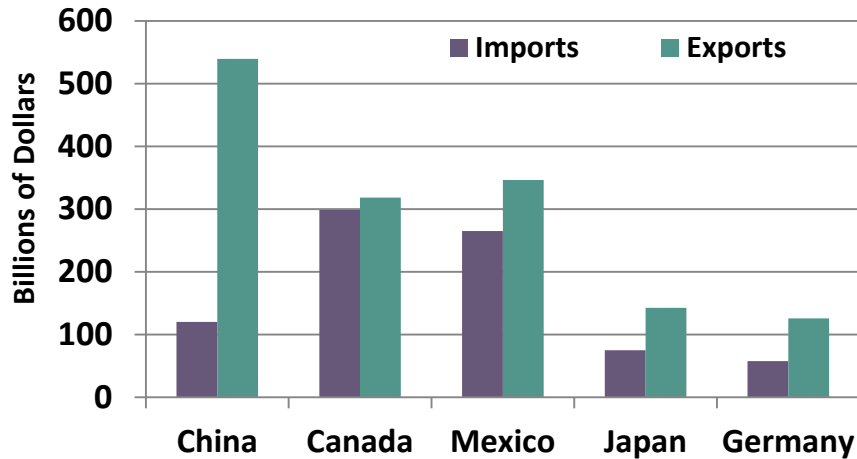
Trade and Tariffs

3



Top U.S. Trading Partners

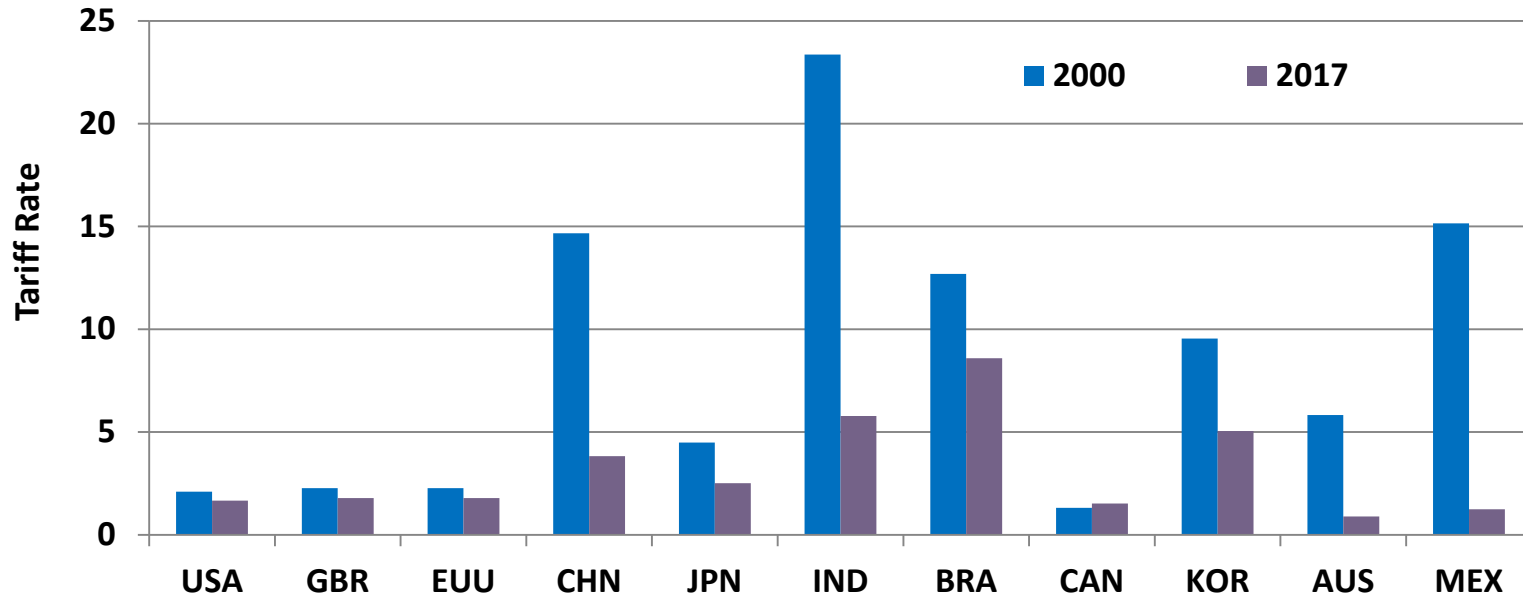
2017 U.S. Trade in Goods by Selected Countries



U.S. Department of Commerce, Census Bureau. Data as of December 31, 2018

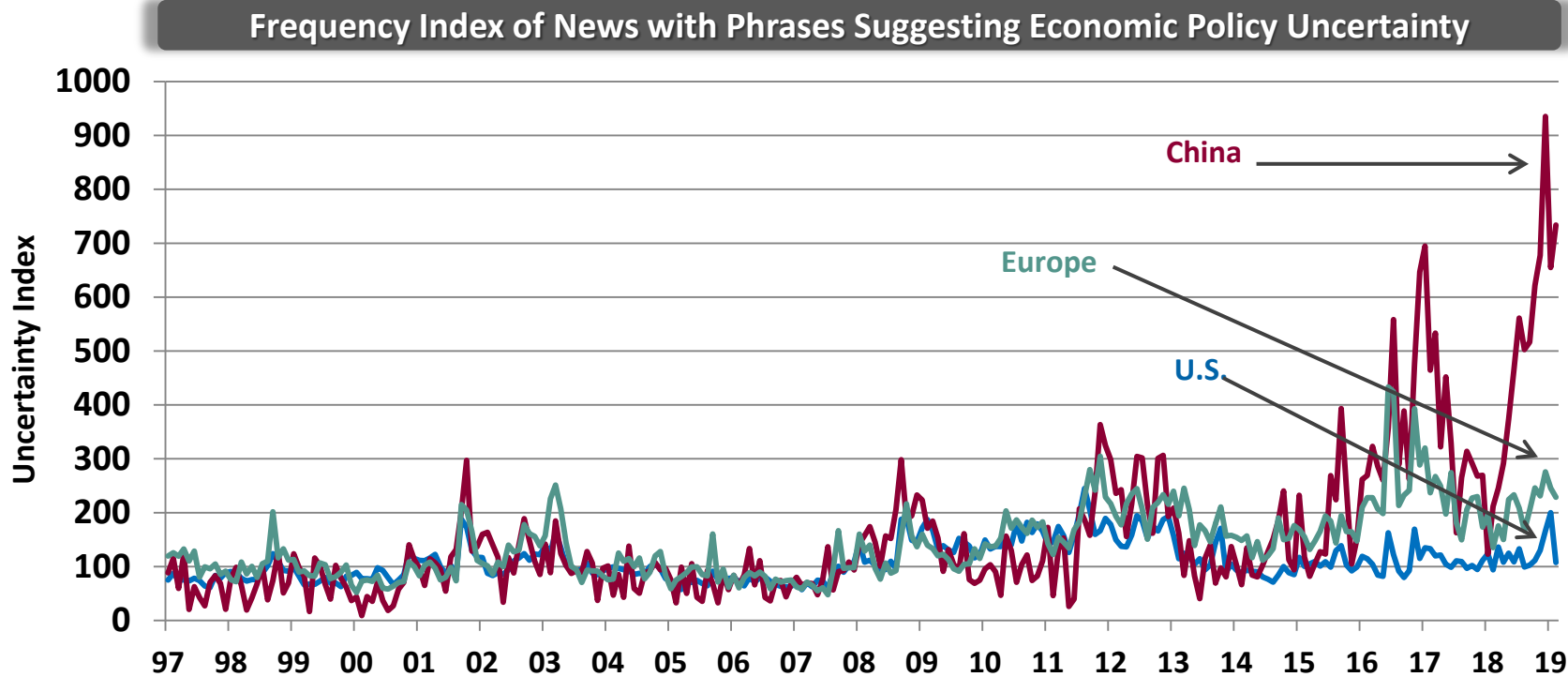
Comparatively, U.S. Tariffs Are Presently Low

Weighted Mean Tariff Rate Applied, All Products



Source: The World Bank, Data Bank, World's Largest Economies

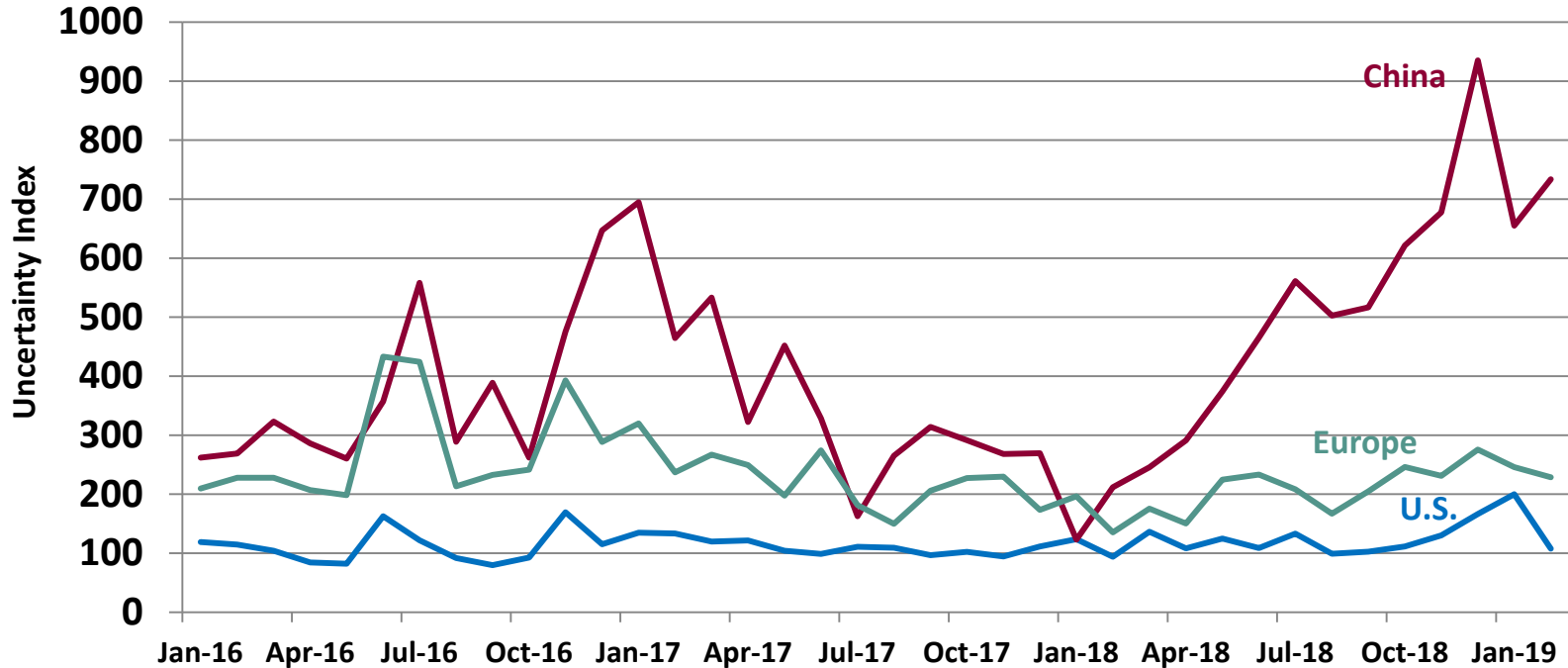
Economic Policy Uncertainty—High in China, Low in U.S.



Federal Reserve Bank of St. Louis, Economic Research Division

A Closer Look at Recent Economic Policy Uncertainty

Frequency Index of News with Phrases Suggesting Economic Policy Uncertainty



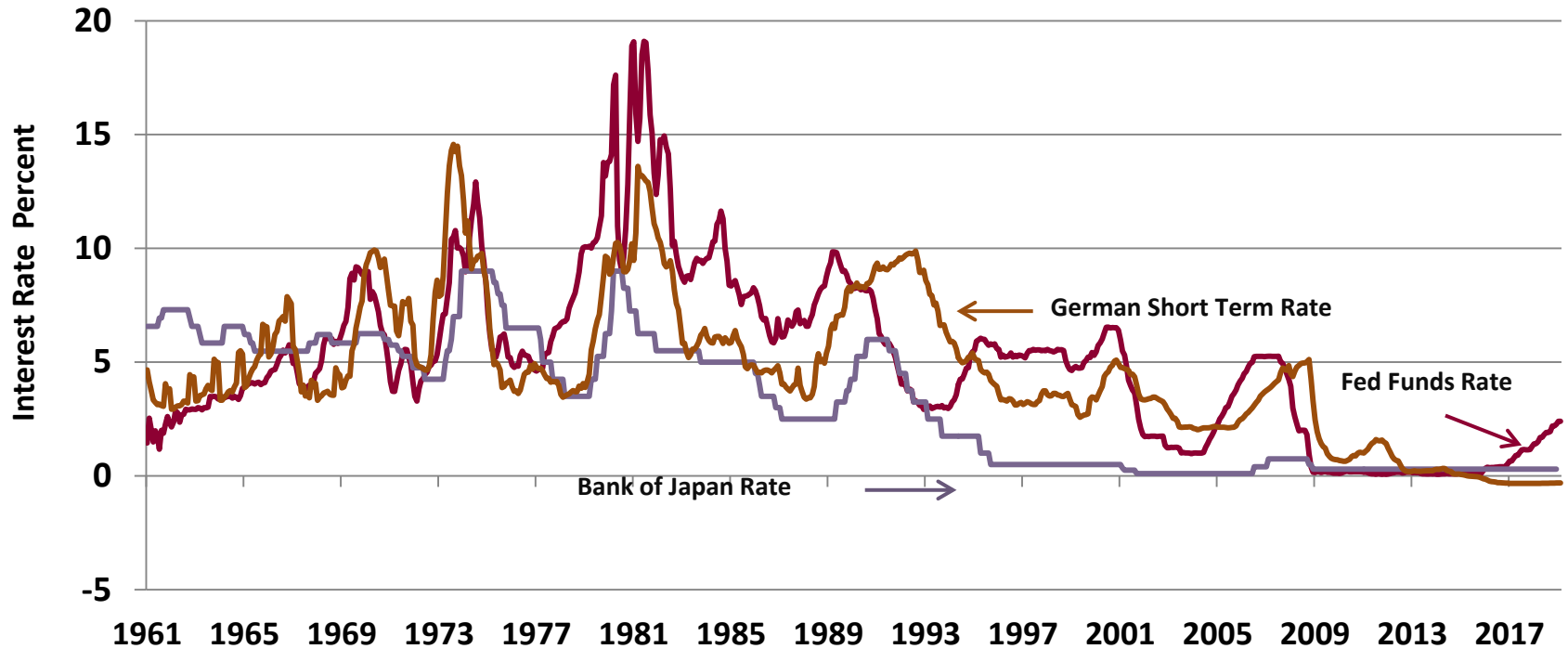
Federal Reserve Bank of St. Louis, Economic Research Division

Global Central Banks

4



Major Central Bank Rates Are Already Low











Bloomberg

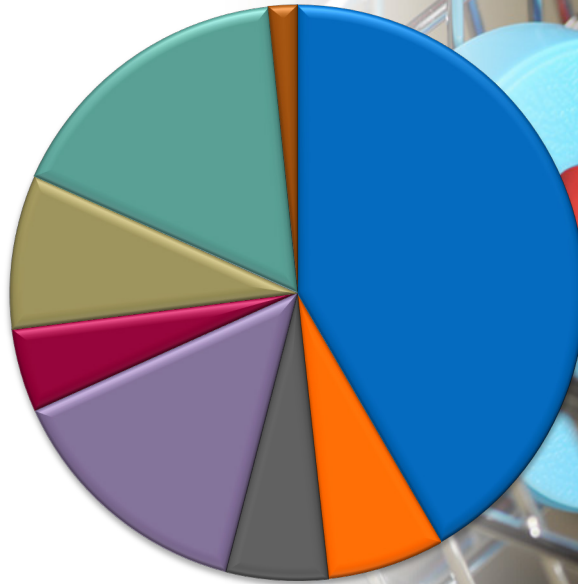
Inflation and the Federal Reserve

5



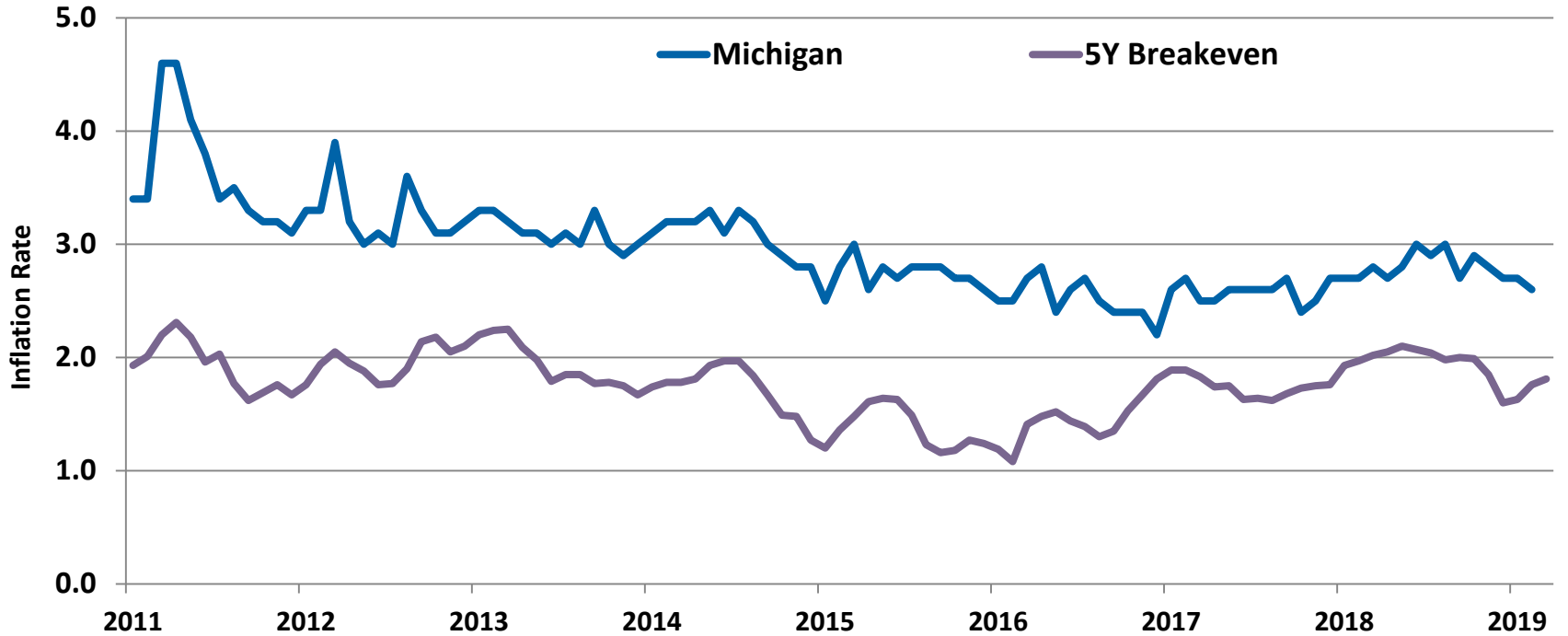
Components of CPI

 Housing	41.7%
 Transportation	16.7%
 Food and Beverage	14.3%
 Medical Care	8.7%
 Education and Communication	6.6%
 Recreation	5.7%
 Fuels and Utilities	4.7%
 Other	1.6%



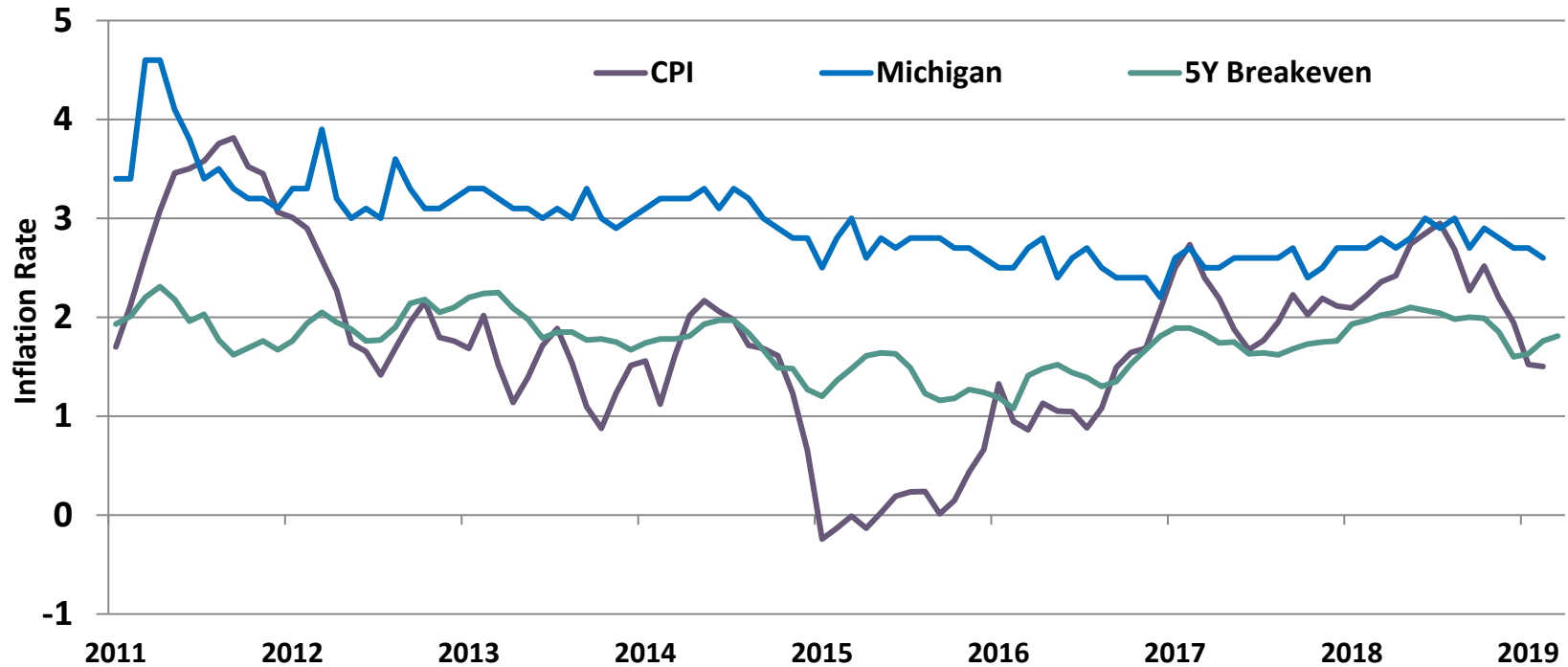
Source: U.S. Department of Labor Bureau of Labor Statistics, Wespath. Data as of February 28, 2018

Consumer Inflation Survey Based Expectations Move with Market Expectations



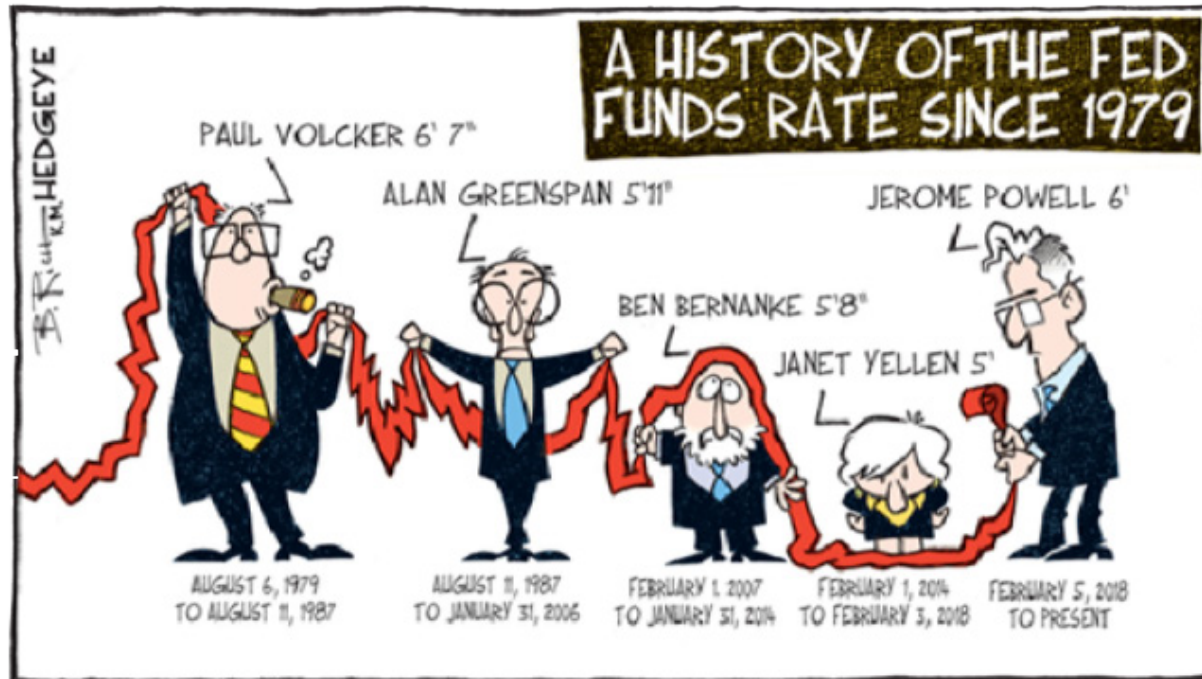
U.S. Bureau of Labor Statistics, University of Michigan, Federal Reserve Bank of St. Louis

....But Actual CPI (Headline) Is Not Well Behaved



U.S. Bureau of Labor Statistics, University of Michigan, Federal Reserve Bank of St. Louis

Federal Reserve Action: A More Illustrative View



Source: Hedgeye, March 22, 2018

Save the Date—Investment Webinar

Monday, April 22—11:30 a.m., Central Time

First Quarter 2019 Update

- Markets and the Global Economy
- Wespath Funds
- Sustainable Investments

Mark your calendars and
share with your colleagues!





Wespath

BENEFITS | INVESTMENTS