

**WEALTH MANAGEMENT INDUSTRY - IN AN ERA OF DISRUPTION
DEBT DISINFLATION DEMOGRAPHICS & DIGITISATION**

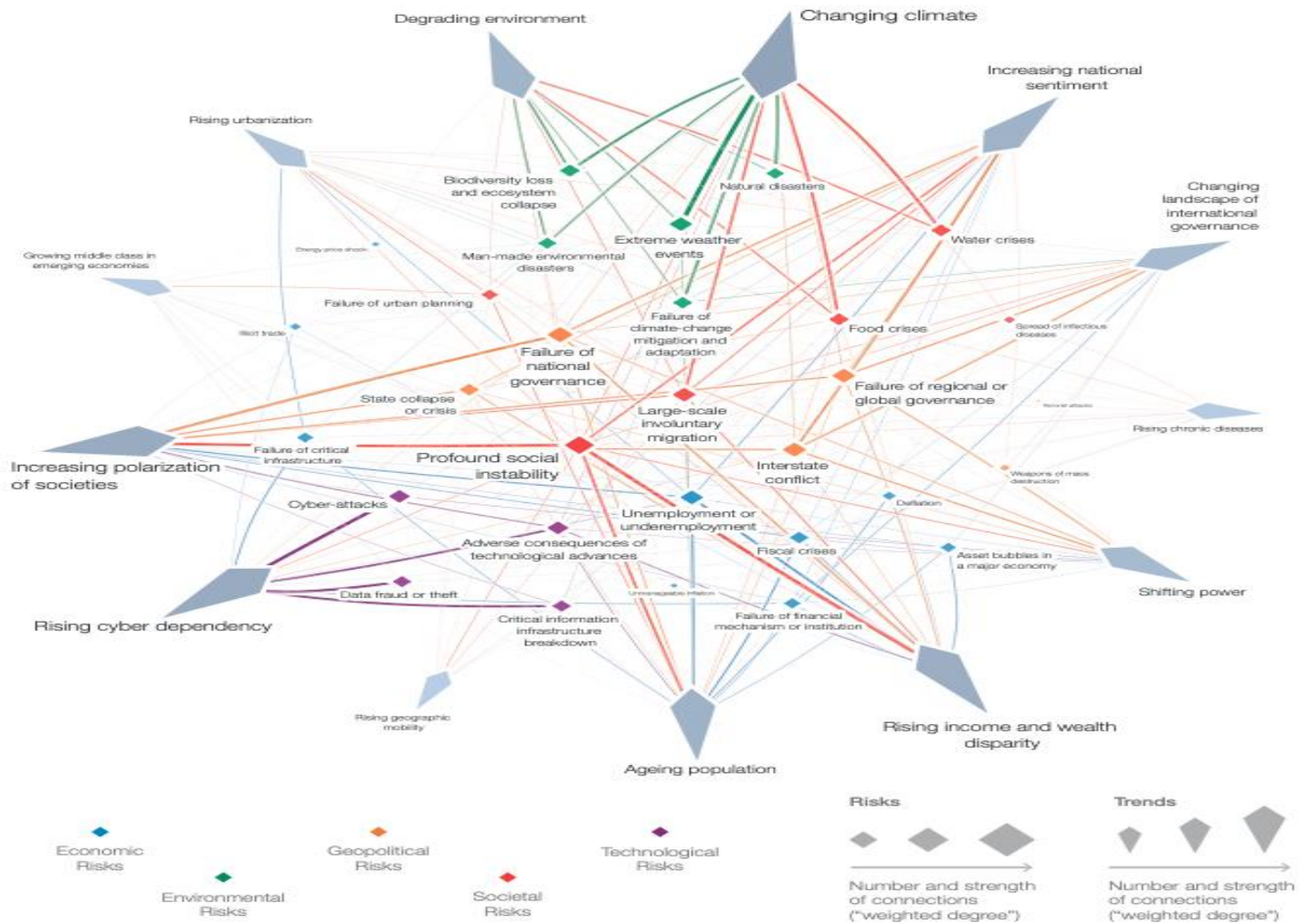
**Rajendra Kalur, CFA
Hyderabad, March 15, 2019**

The Future comes too fast and in the wrong order: Alvin Toffler



THE AGE OF DISRUPTION

KEY GLOBAL RISKS & TRENDS



Source: WEF, Global Risks & Trends

2017 *This Is What Happens In An Internet Minute*

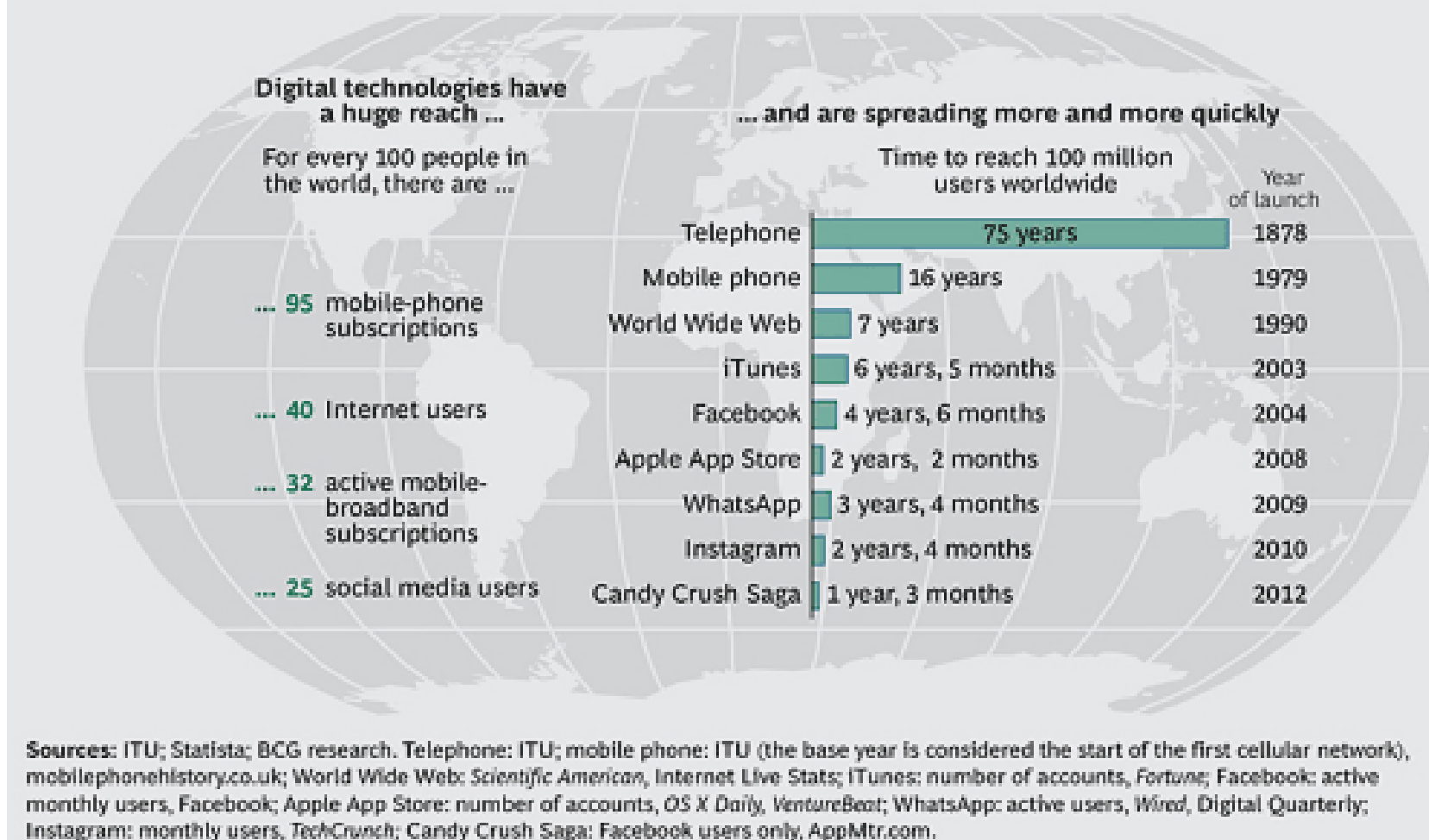


2018 *This Is What Happens In An Internet Minute*



The Increased Pace of Disruption

The pace of change has increased exponentially...

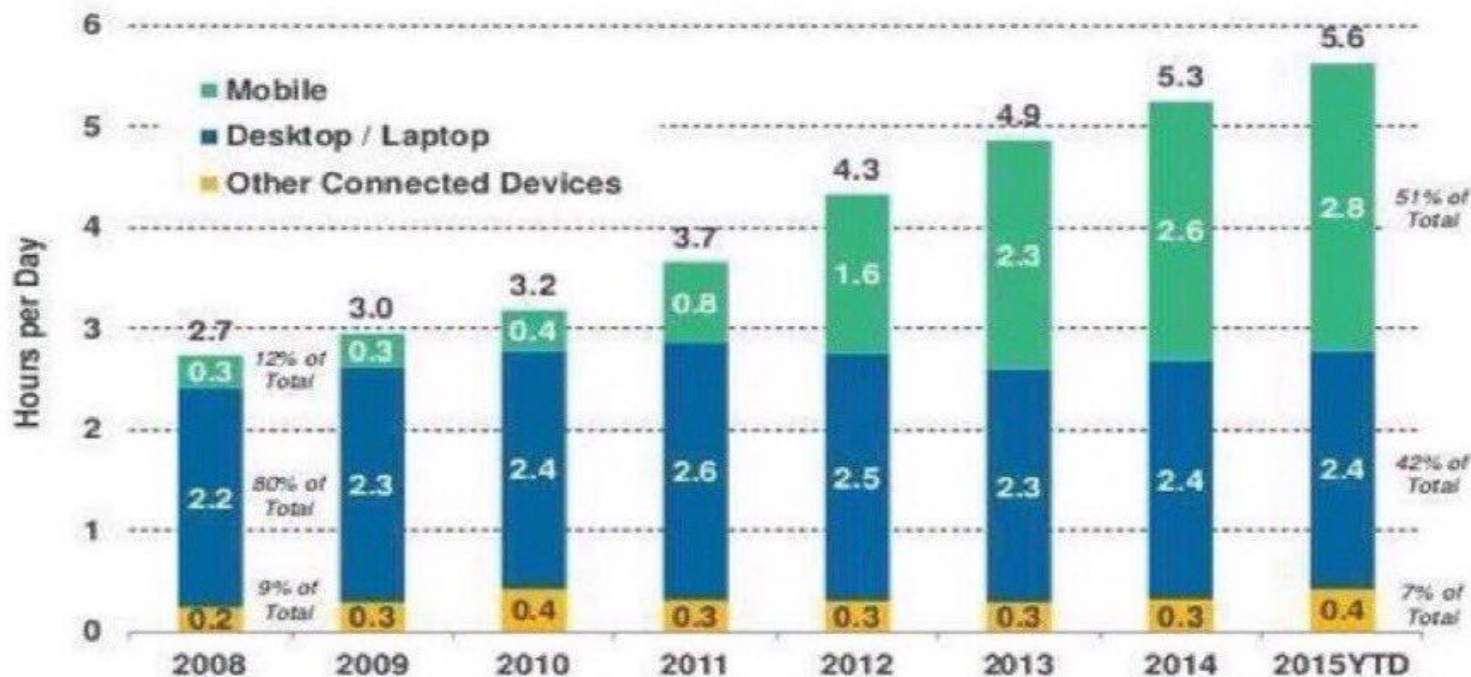


Source: BCG Perspectives, The Digital Imperative Mar 2015

The Changing Usage Patterns

Internet Usage (Engagement) Growth Solid
 +11% Y/Y = Mobile @ 3 Hours / Day per User vs. <1 Five Years Ago, USA

Time Spent per Adult User per Day with Digital Media, USA, 2008 – 2015YTD

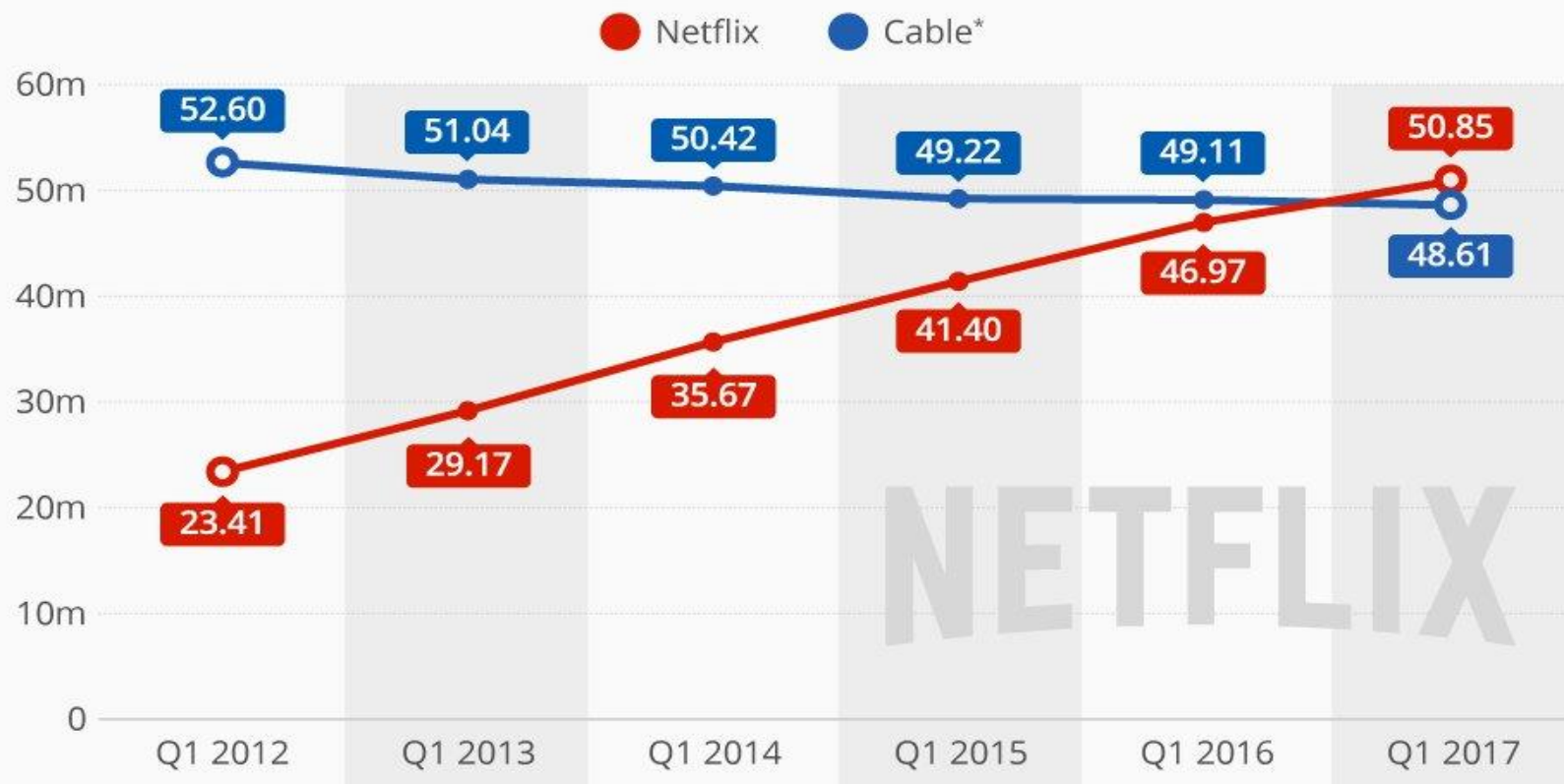


 Source: eMarketer 9/14 (2008-2010), eMarketer 4/15 (2011-2015). Note: Other connected devices include OTT and game consoles. Mobile includes smartphone and tablet. Usage includes both home and work. Ages 18+. Time spent with each medium includes all time spent with that medium, regardless of multitasking.

Source: Vala Afshar

Netflix Surpasses Major Cable Providers in the U.S.

Number of Netflix subscribers vs. cable pay-TV subscribers in the U.S. (in millions)



* includes major cable providers accounting for roughly 95% of cable subscribers and slightly less than half of all multichannel pay-TV subscribers

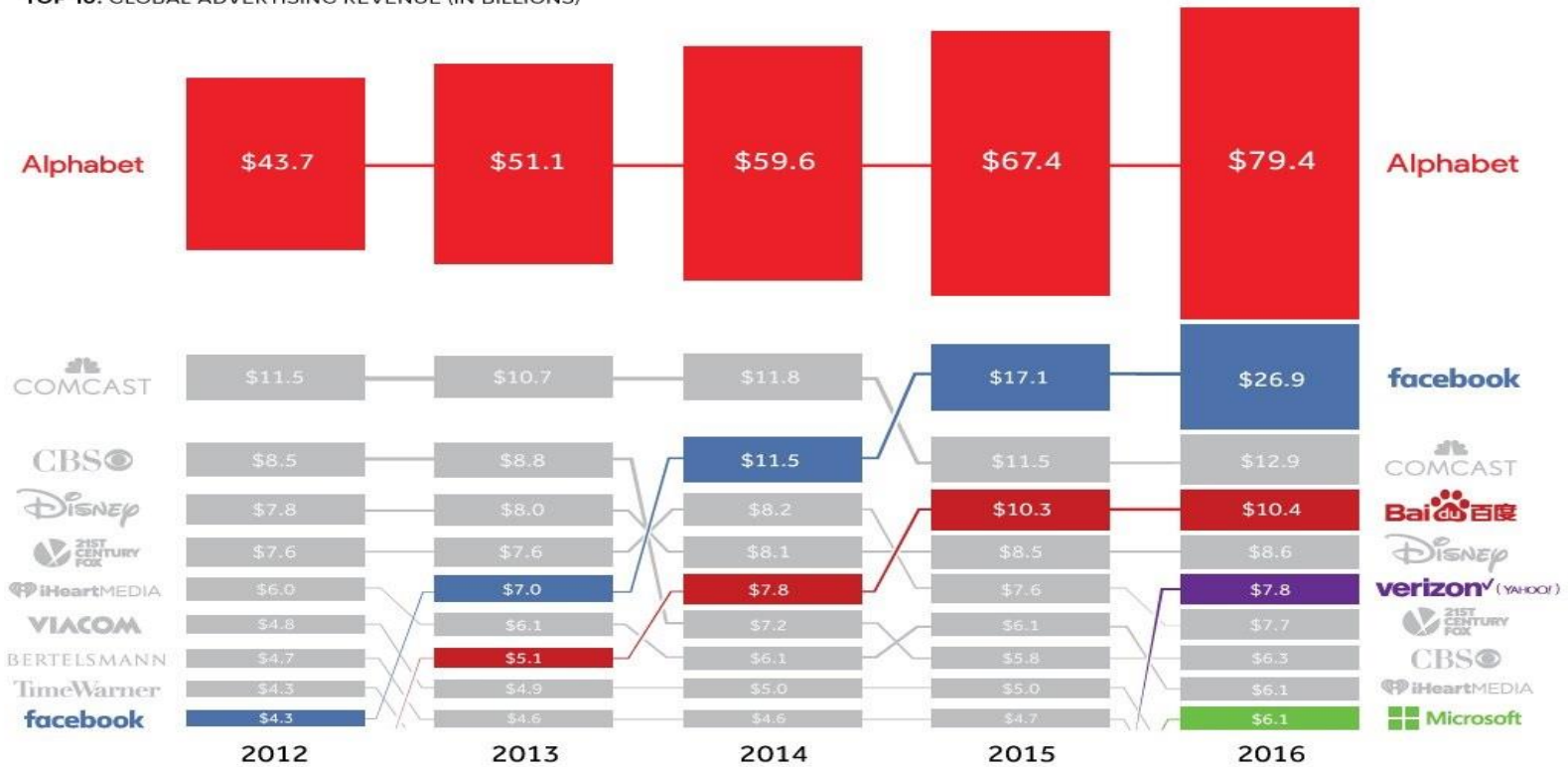
Sources: Netflix, Leichtman Research Group



THE TECH TAKEOVER OF ADVERTISING

Legacy media brands are falling hard and fast

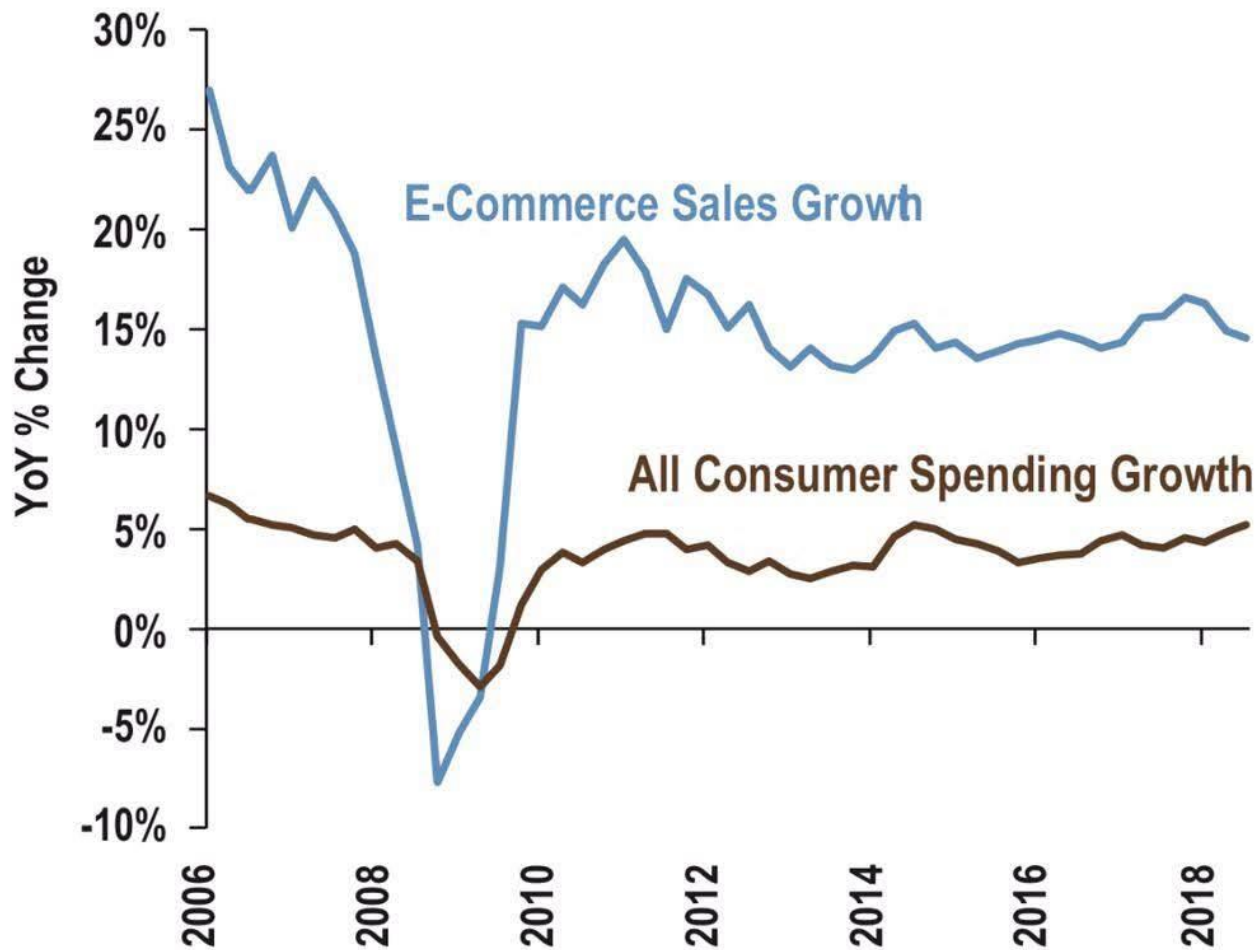
TOP 10: GLOBAL ADVERTISING REVENUE (IN BILLIONS)



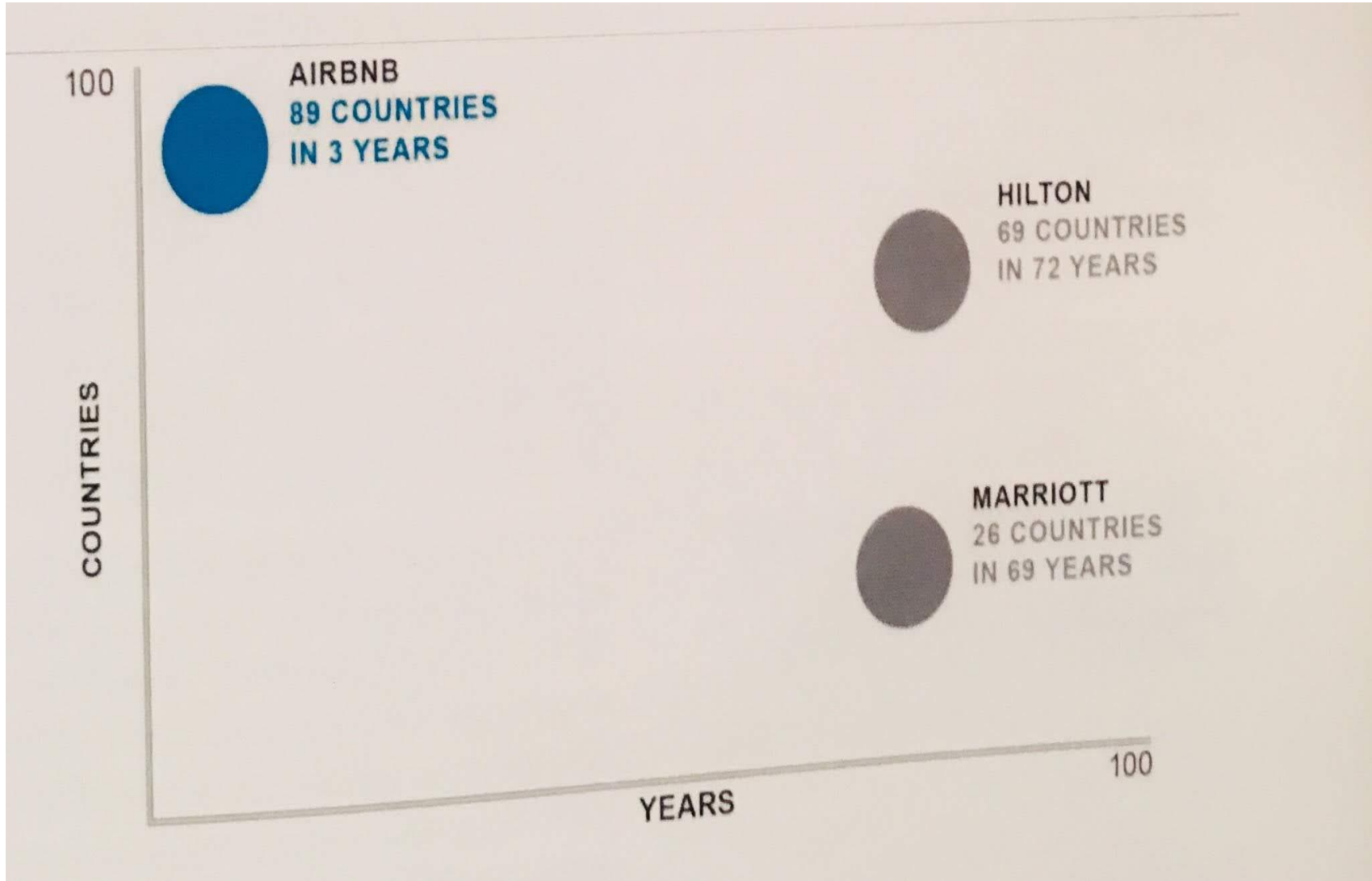
SOURCE: Bloomberg, Zenith Media



Fortune Favors the Internet – E-Commerce Sales vs All Consumer Discretionary Spending, 2006-2018



Source: FRED Economic Data



.FAANGCAP U 3MLN Description FAANG Mktcap
As of 3/9/2019 d Owner HOLGER ZSCHAEPLITZ

.FAANGCAP U Index

96 Actions

97 Edit

G 888: FAANG MktCap

11/22/2013 - 03/09/2019 Local CCY

1D 3D 1M 6M YTD 1Y 5Y Max Daily

Table

Chart Content

Combined Mkt Cap FAANG

Total Mkt Cap Germany

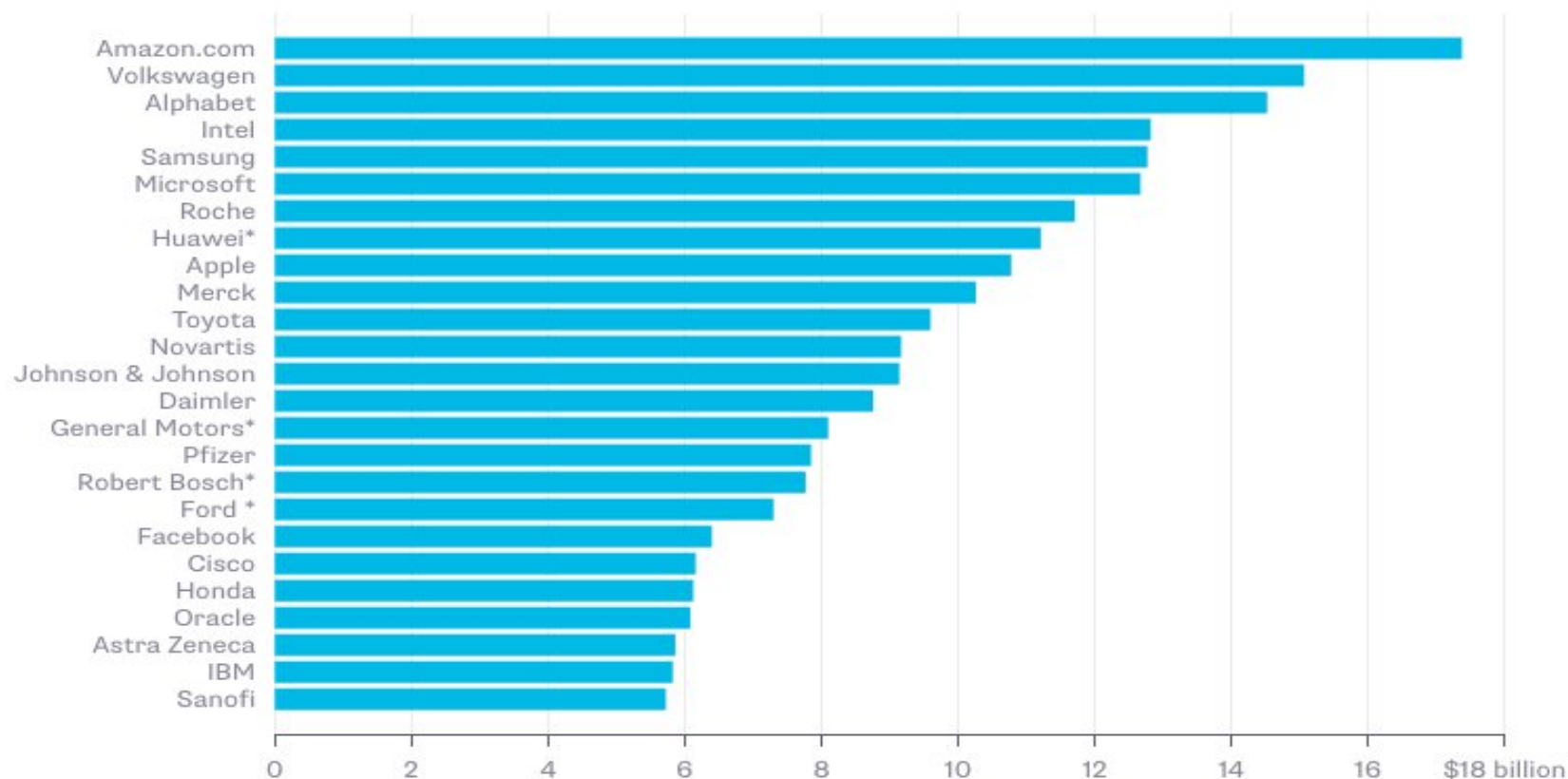


Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000
Copyright 2019 Bloomberg Finance L.P.
SN 270491 6729-297-3 09-Mar-19 16:04:52 CET GMT+1:00

R&D KEY TO HANDLE THE FUTURE

The Top Corporate R&D Spenders

Research and development spending, trailing 12 months



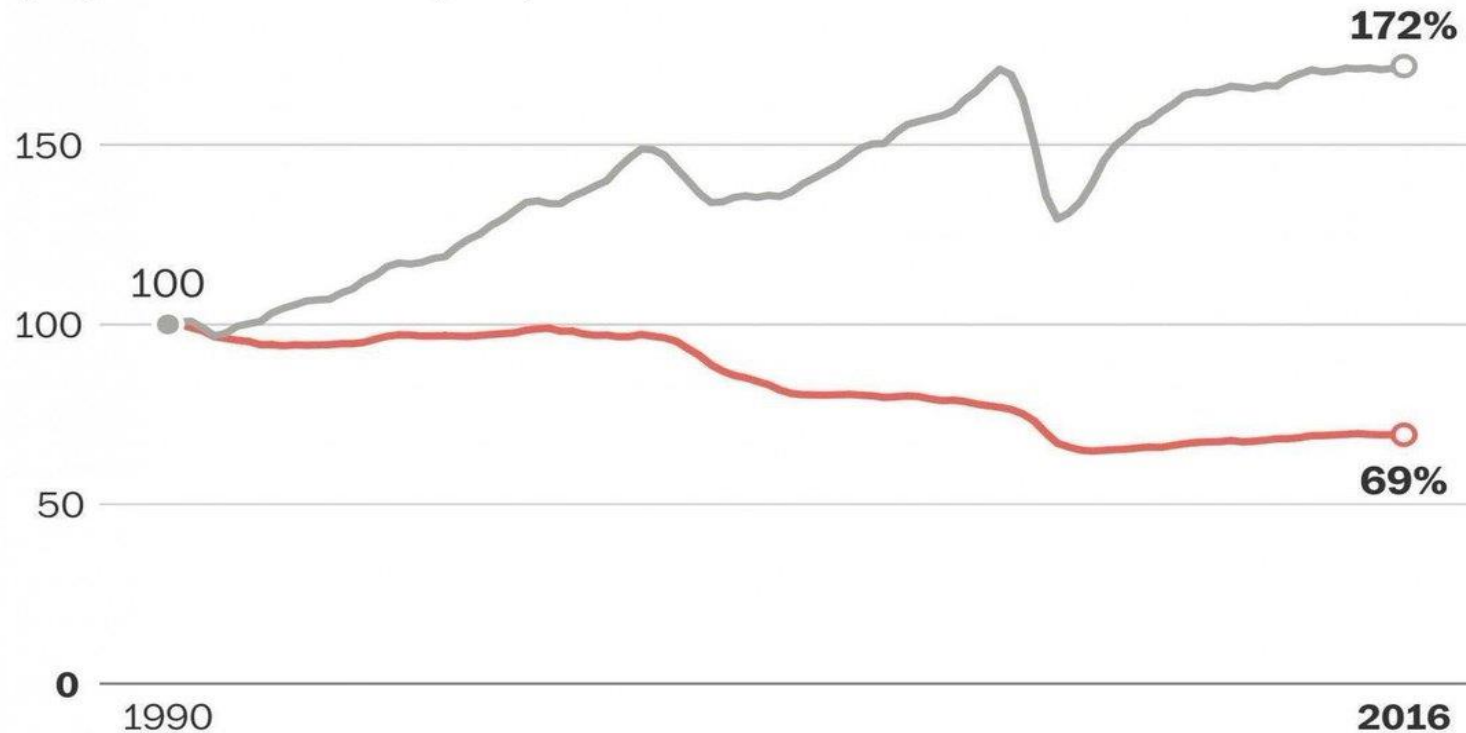
Sources: Bloomberg, company reports

*These companies only report R&D spending annually.

ROBOs are taking over shopfloors...

Manufacturing output rose even as employment fell

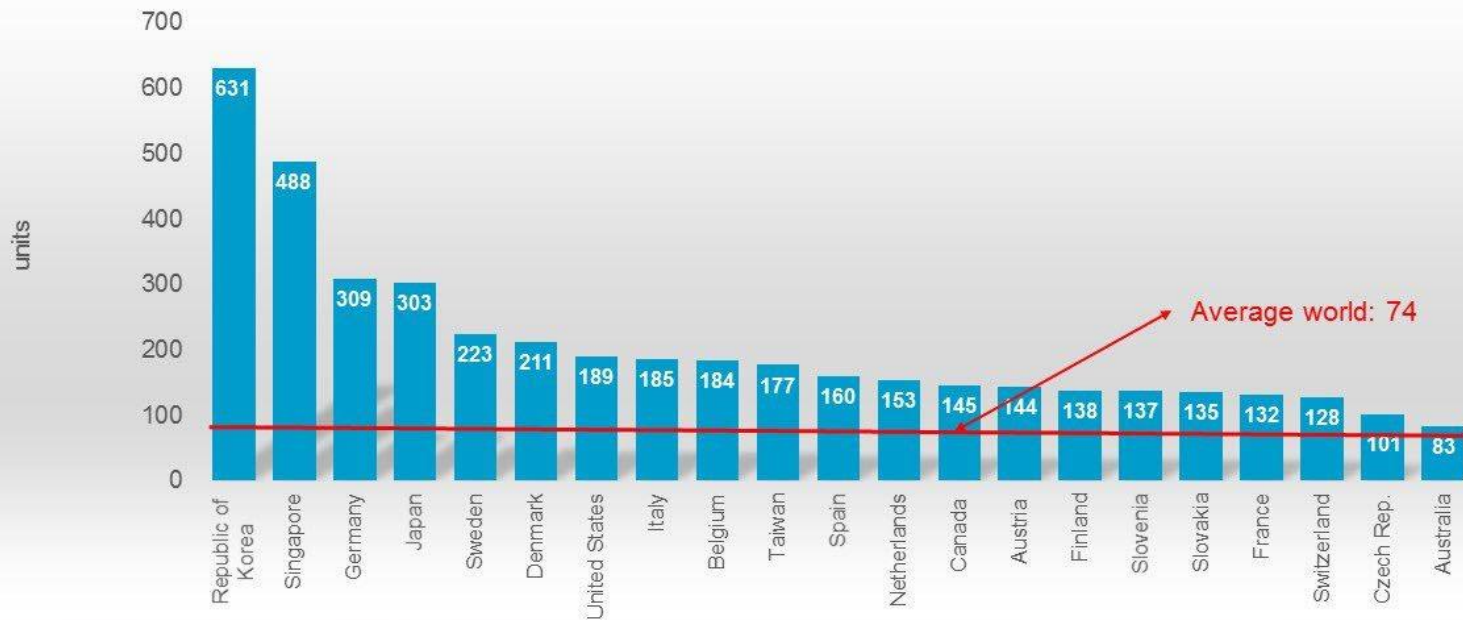
Since 1990, manufacturing output has increased by 72 percent. But manufacturing employment has fallen by 31 percent.



Source: BLS via FRED

WASHINGTON POST

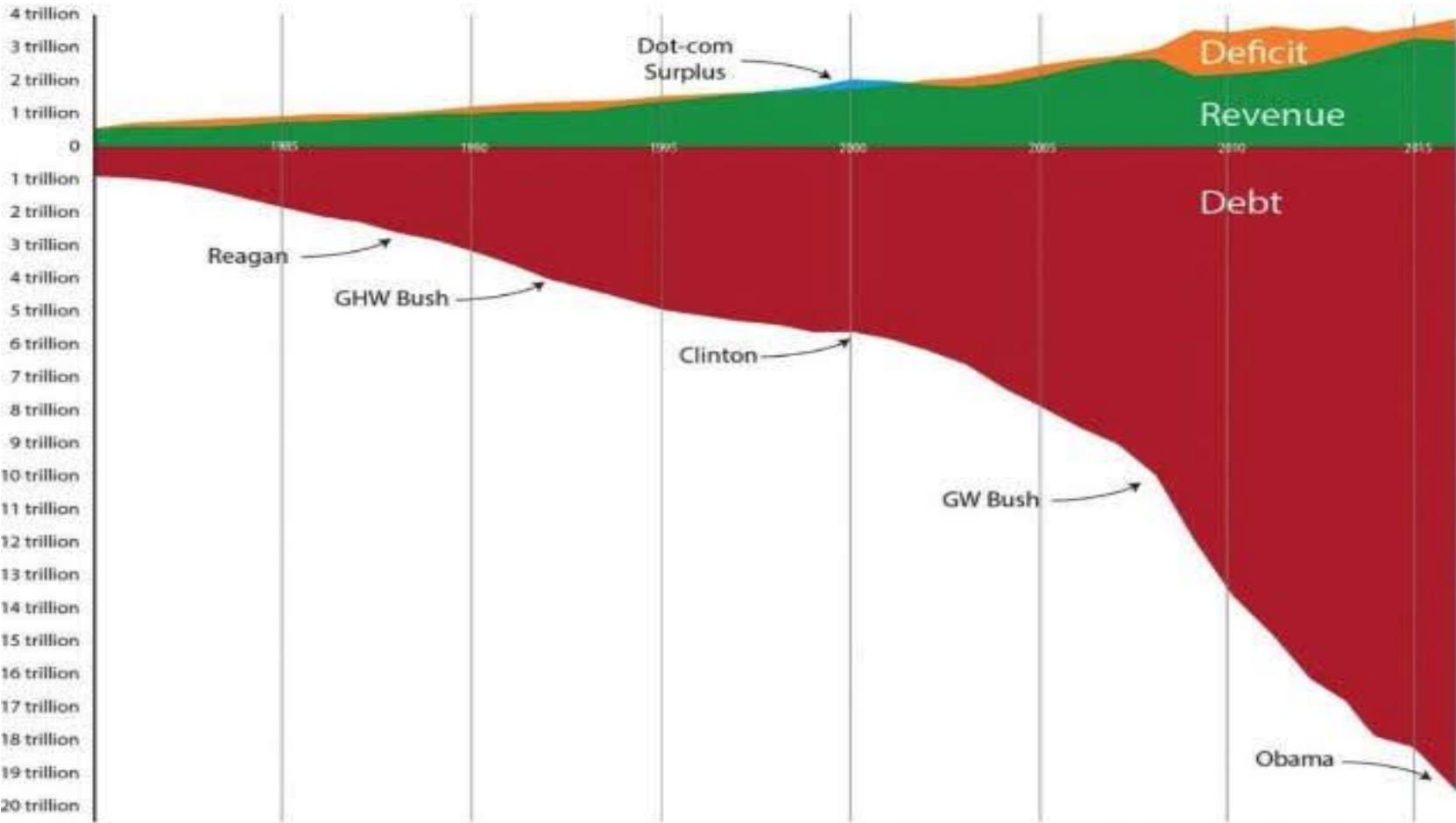
Number of installed industrial robots per 10,000 employees in the manufacturing industry 2016



Source: World Robotics 2017

THE WORLD'S MOUNTAIN OF DEBT

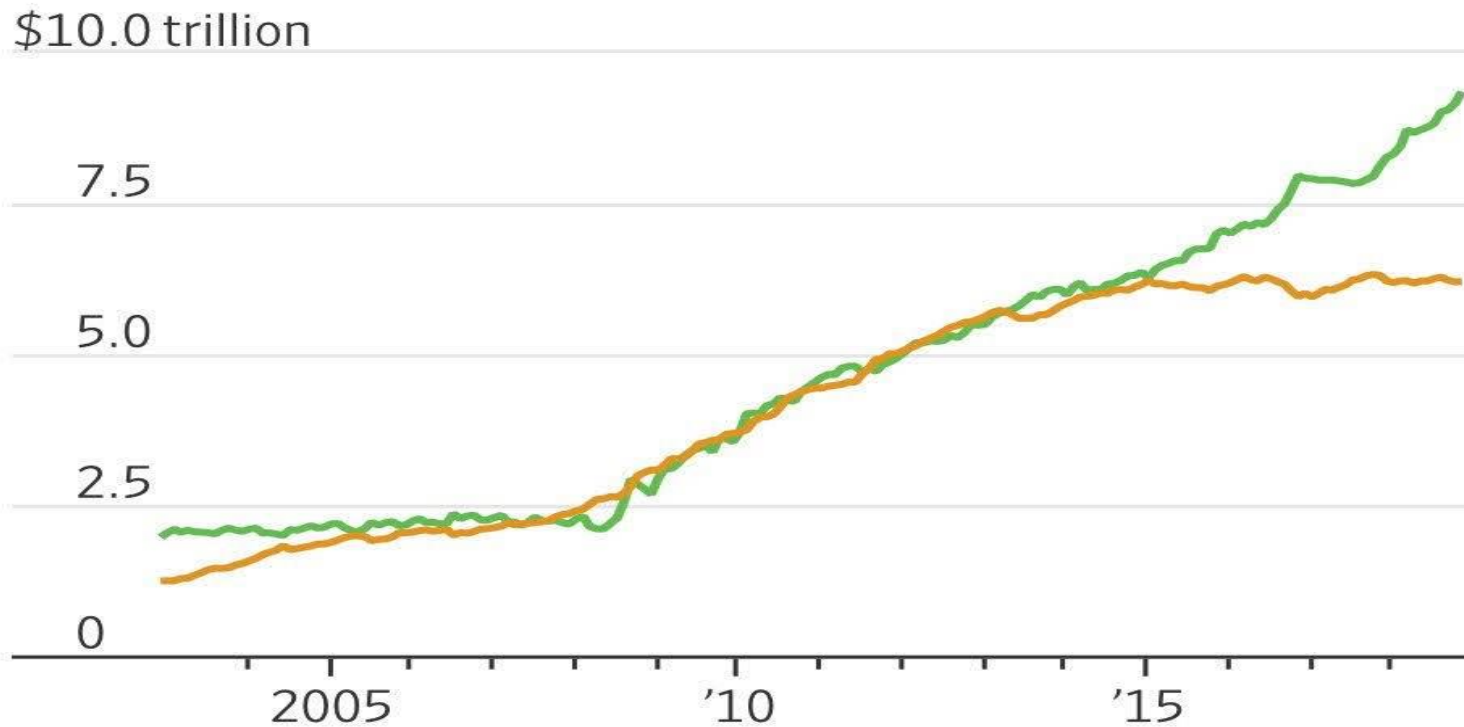
America's Finances



Created by Jon Gabriel. All figures from the U.S. Treasury and the Congressional Budget Office.

Ownership of U.S. debt

Foreign investors U.S. investors

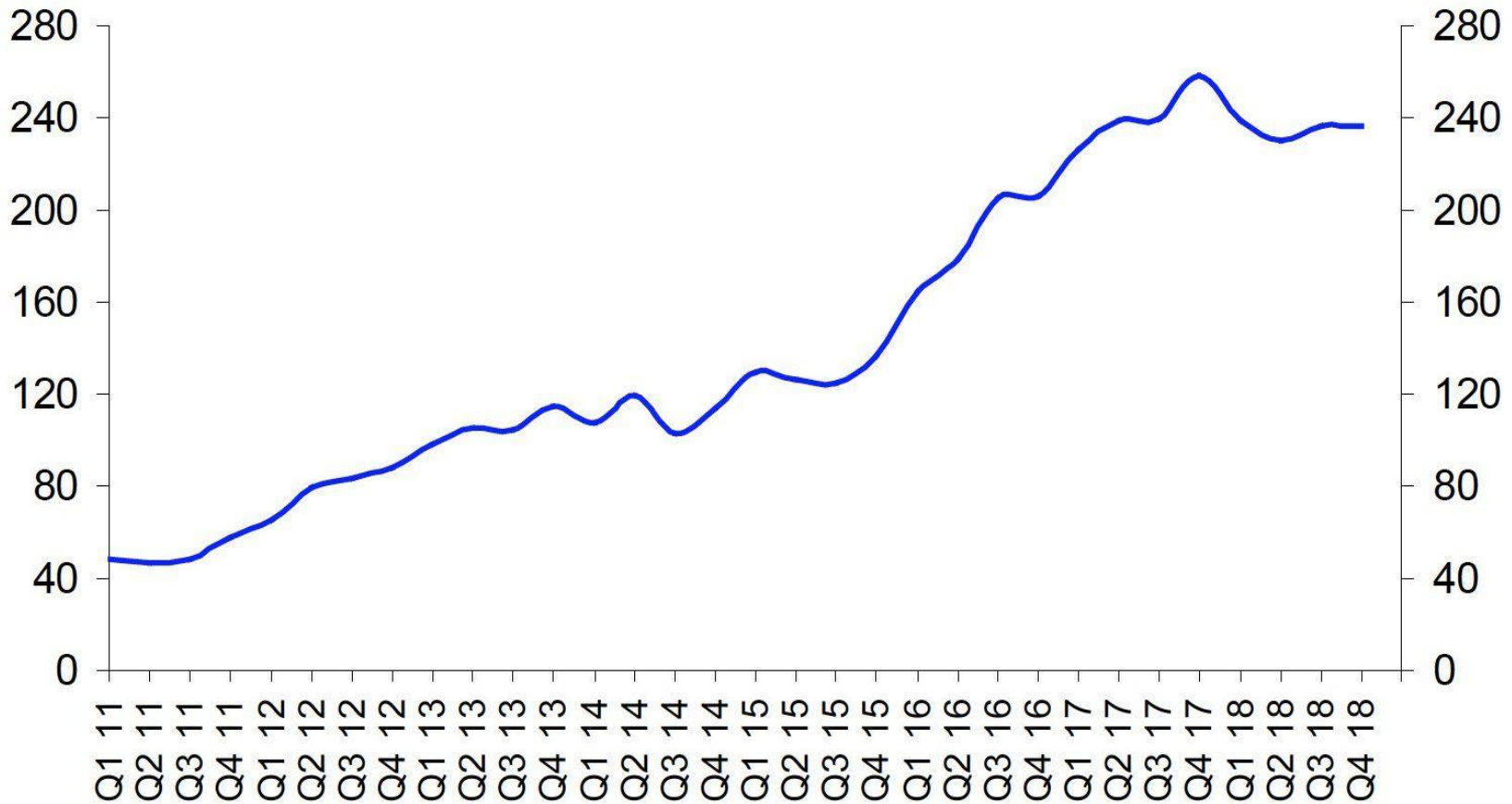


Source: U.S. Treasury Department

\$ Bln

Total US treasury holdings: Microsoft, Apple, Google, Facebook & Amazon

\$ Bln



Source: Company sources, DB Global Research

EBBSTOTA 4702.787 As Of 02/15/19 EUR/Billion
ECB Balance Sheet All Assets European Central Bank

EBBSTOTA Index 96 Actions 97 Edit G 103: ECB Balance sheet

01/05/2007 - 02/15/2019 EUR

EBBSTOTA Index : ECB Balance Sheet All Assets Daily 1/5/2007-2/15/2019

1D 3D 1M 6M YTD 1Y 5Y Max Daily Table

Chart Content

Last Price 4702.79
High on 01/25/19 4708.90
Average 2574.80
Low on 02/09/07 1127.20

ECB Balance sheet

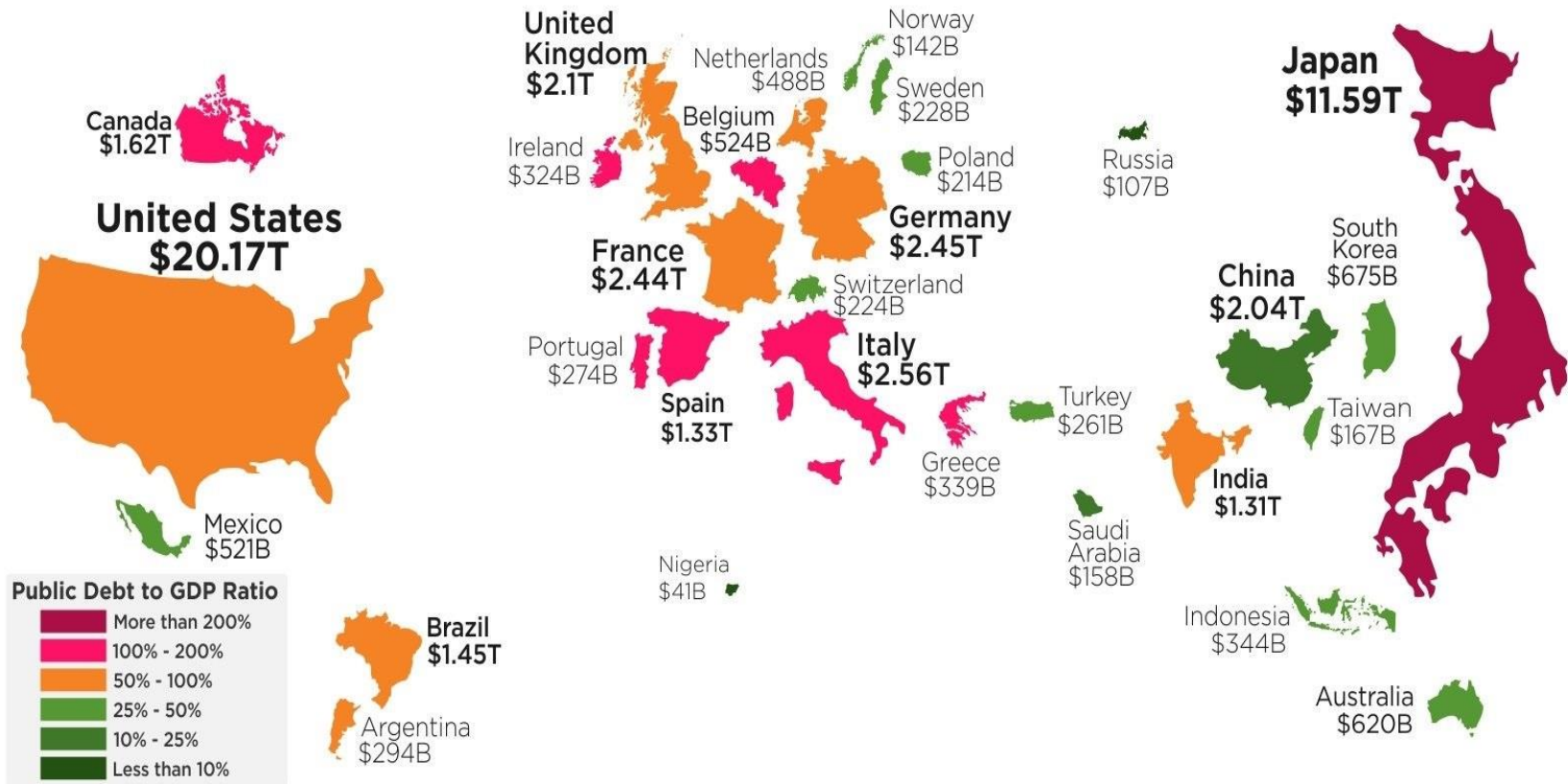


Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000

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SN 696916 H762-2655-0 19-Feb-19 19:36:34 CET GMT+1:00

The Financial Impact of Sovereign Debt Around the World - 2017

This Map Shows Countries' Debt and Their Ability to Pay It Back



How to read this map: Countries appear bigger as their national debt is higher. e.g. USA. Conversely, countries with lower national debt appear smaller. e.g. Nigeria. The colour represent countries' debt to GDP ratio.

Article & Sources:

<https://howmuch.net/articles/worlds-debt-2017>

<http://www.usdebtclock.org/>

U.S. Treasury Department

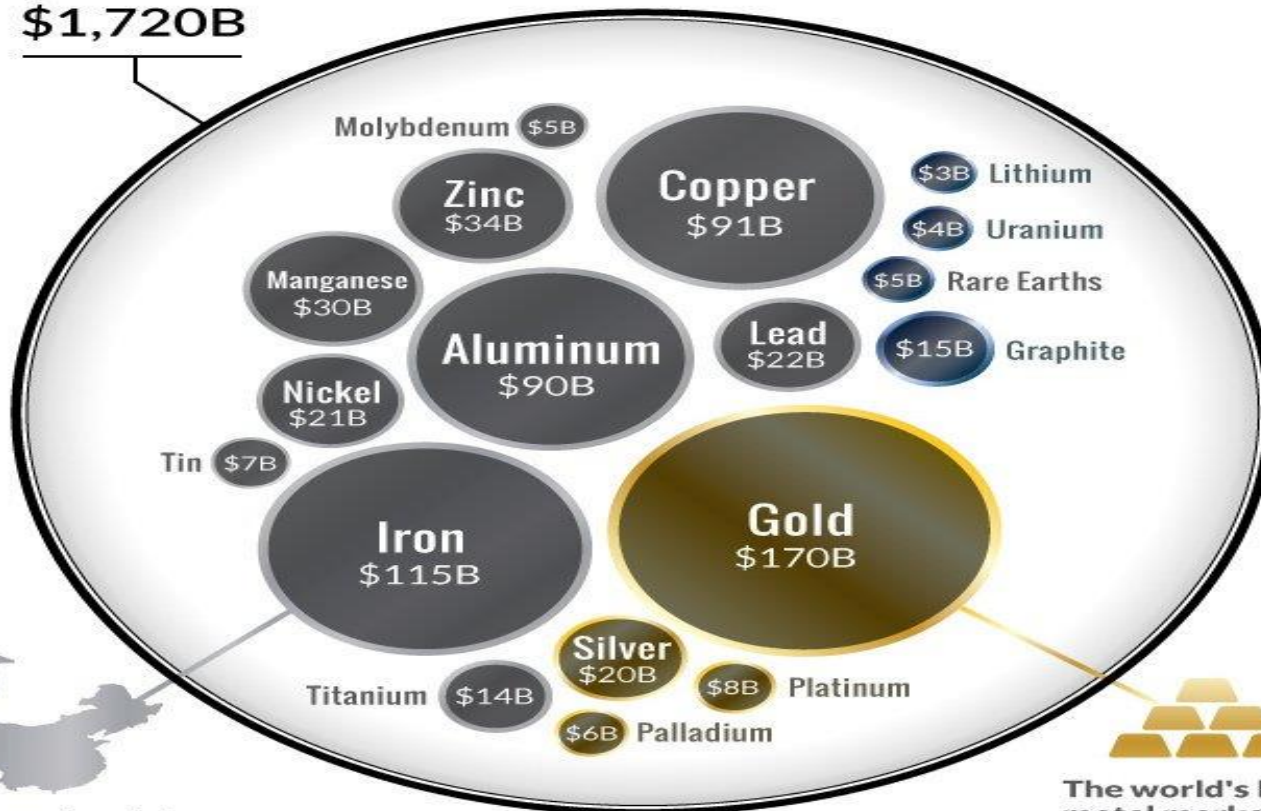
howmuch net

IS OIL THE NEXT VICTIM OF DISRUPTION?

Oil
\$1,720B

The global market for oil was 94 million barrels per day in 2015.

This puts the oil market at \$1.7 trillion per year with today's prices - far more than all raw metals combined!



The largest metal market by tonnage is iron ore.

China alone consumes 1 billion tonnes per year mostly to produce steel.



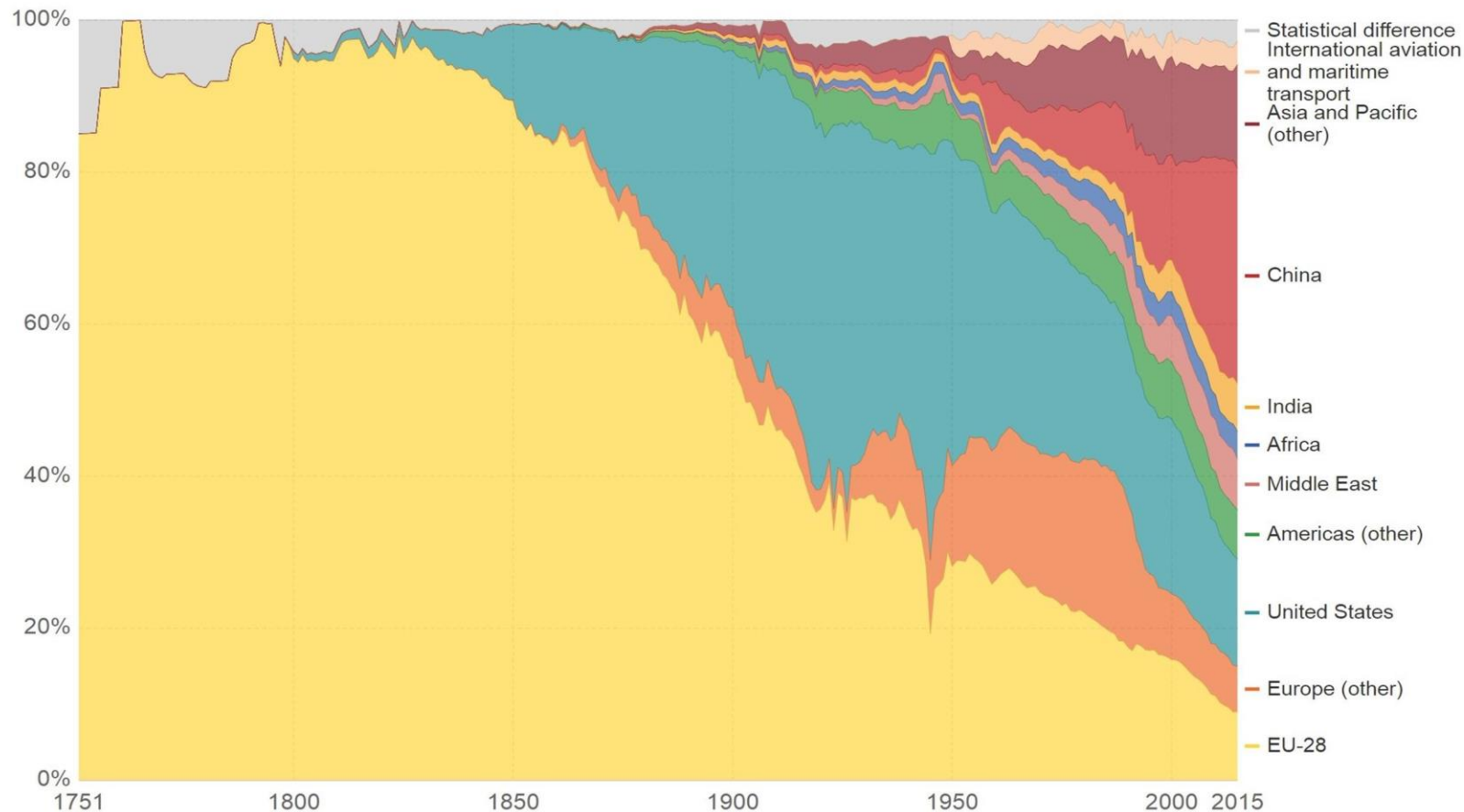
The world's largest metal market by dollar value is gold.

The physical market is worth \$170 billion per year at today's spot price.

GROWING AWARENESS ABOUT POLLUTION

Annual CO₂ emissions by world region

Annual carbon dioxide (CO₂) emissions measured in billion tonnes (Gt) per year



Source: Carbon Dioxide Information Analysis Center (CDIAC)

OurWorldInData.org • CC BY-SA

Note: Emissions data have been converted from units of carbon to carbon dioxide (CO₂) using a conversion factor of 3.67. Regions denoted "other" are given as regional totals minus emissions from the EU-28, USA, China and India. Here, we have rephrased the general term "bunker (fuels)" as "international aviation and maritime transport" for clarity.

China To Dominate Global Renewables Sector

Non-Hydropower Capacity Additions By Market, MW Posted on The Daily Shot, 14-Feb-2019

@SoberLook



f = Fitch Solutions forecast. Source: EIA, Irena, Fitch Solutions.

THE CHALLENGE OF INCREASED LONGEVITY...

40% of all deaths

30%

20%

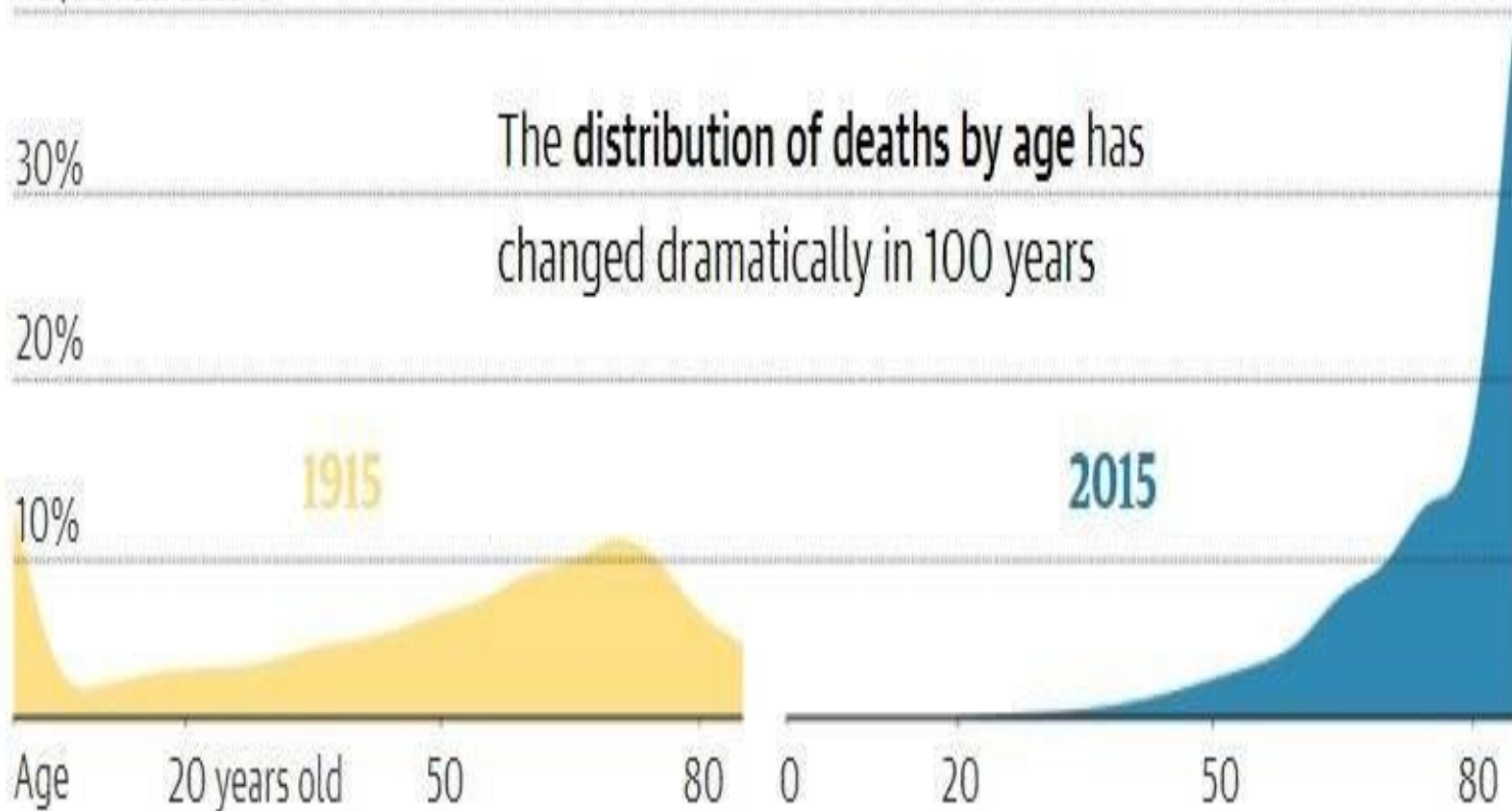
10%

The **distribution of deaths by age** has changed dramatically in 100 years

1915

2015

Age 20 years old 50 80 0 20 50 80

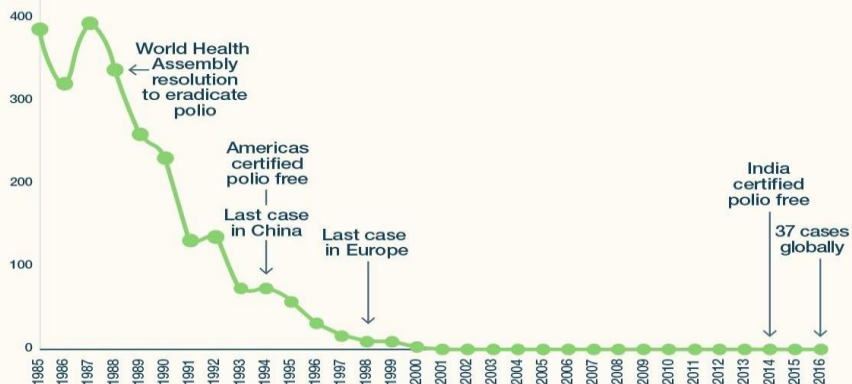


However, the world is becoming better...

gatesletter.com

Don't Back Down

New polio cases, 1985-2016, *thousands*

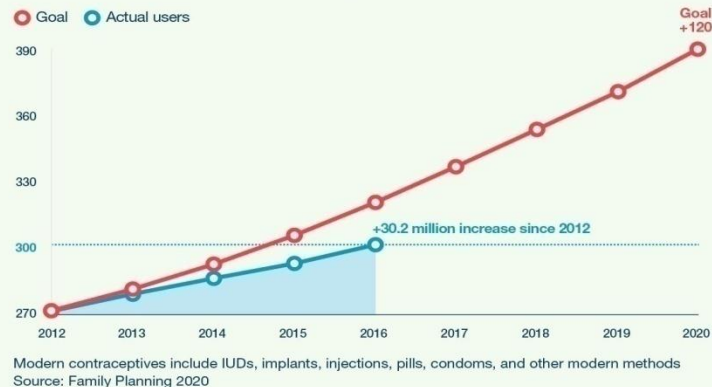


Source: WHO/GPEI

gatesletter.com

Empowering Women

Total modern contraceptive users in the 69 poorest countries, *millions*

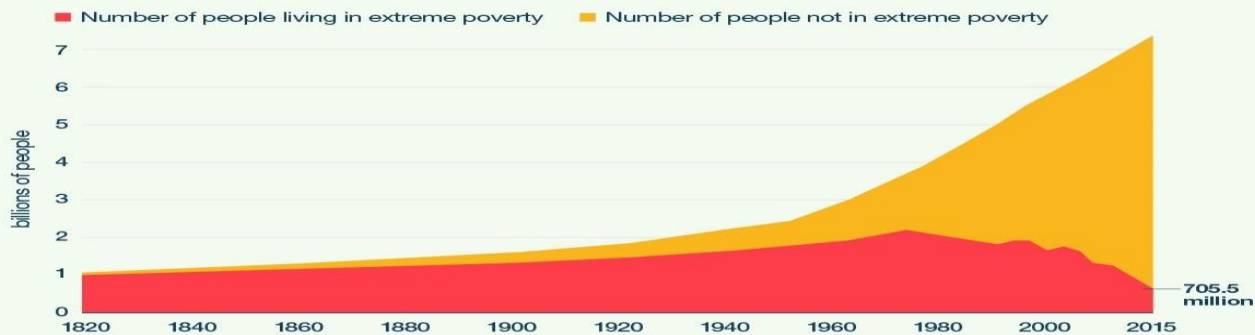


Modern contraceptives include IUDs, implants, injections, pills, condoms, and other modern methods
Source: Family Planning 2020

gatesletter.com

Out of Poverty

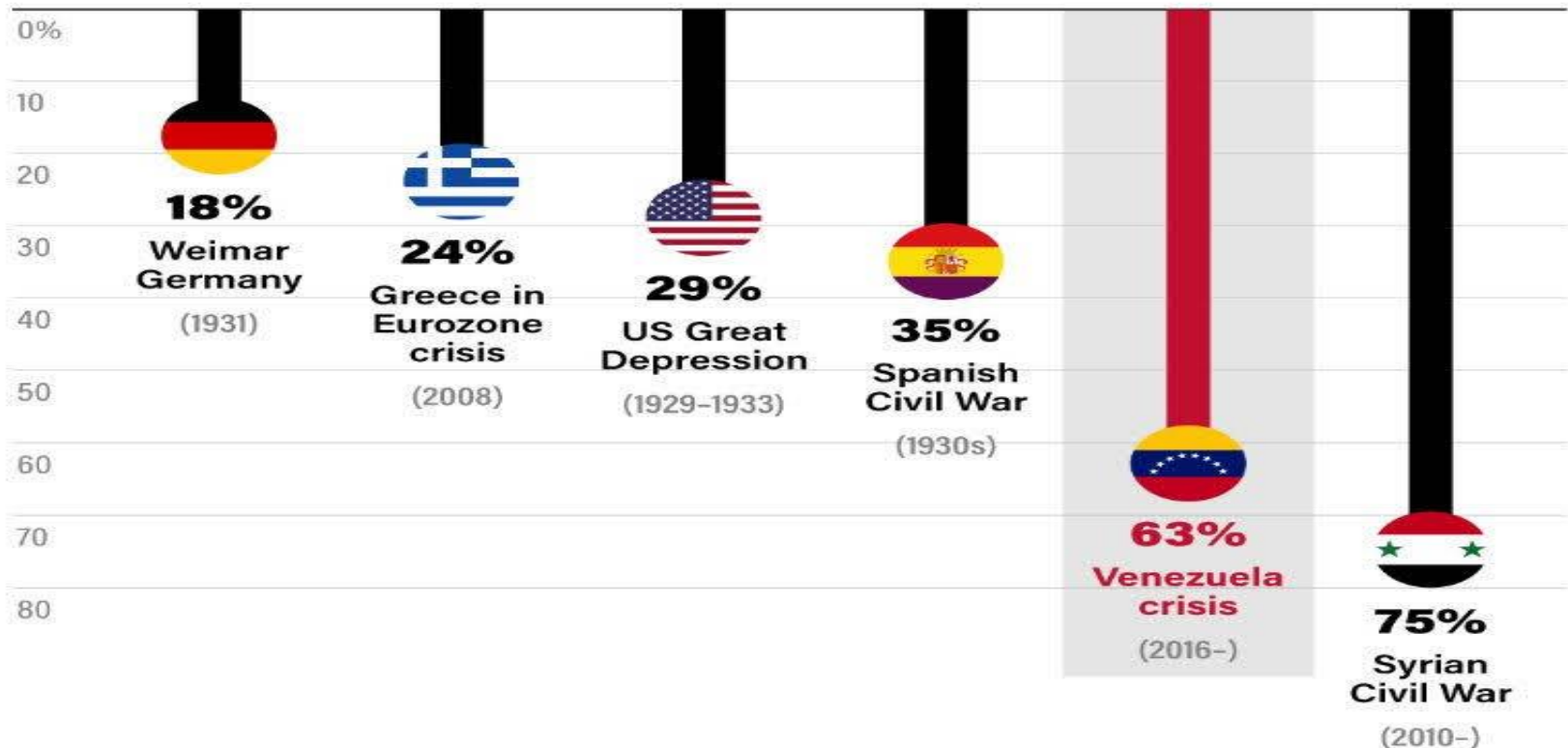
Over the past 25 years, an average of 137,000 people were lifted from extreme poverty each day



Source: Our World in Data; extreme poverty defined as living on less than \$1.90/day in 2015 dollars

HOW BAD IS VENEZUELA'S COLLAPSE?

Historical economic contractions during war or crisis (% change in GDP)



Subscribe at gzeromedia.com

Sources: IMF, Rienhart & Rogoff

SIGNAL

Chinese Banks steal a march...

TOP 10 MOST VALUABLE BRANDS

RANK	BRAND	COUNTRY	VALUE
1	ICBC 		\$79.8B
2	 中国建设银行 China Construction Bank		\$69.7B
3	 中国农业银行 AGRICULTURAL BANK OF CHINA		\$55.0B
4	 中国银行 BANK OF CHINA		\$50.9B
5			\$39.9B
6			\$36.6B
7			\$36.4B
8			\$36.3B
9	 招商银行 CHINA MERCHANTS BANK		\$22.4B
10	HSBC 		\$20.1B

Oil as Percent of Total Energy Consumption

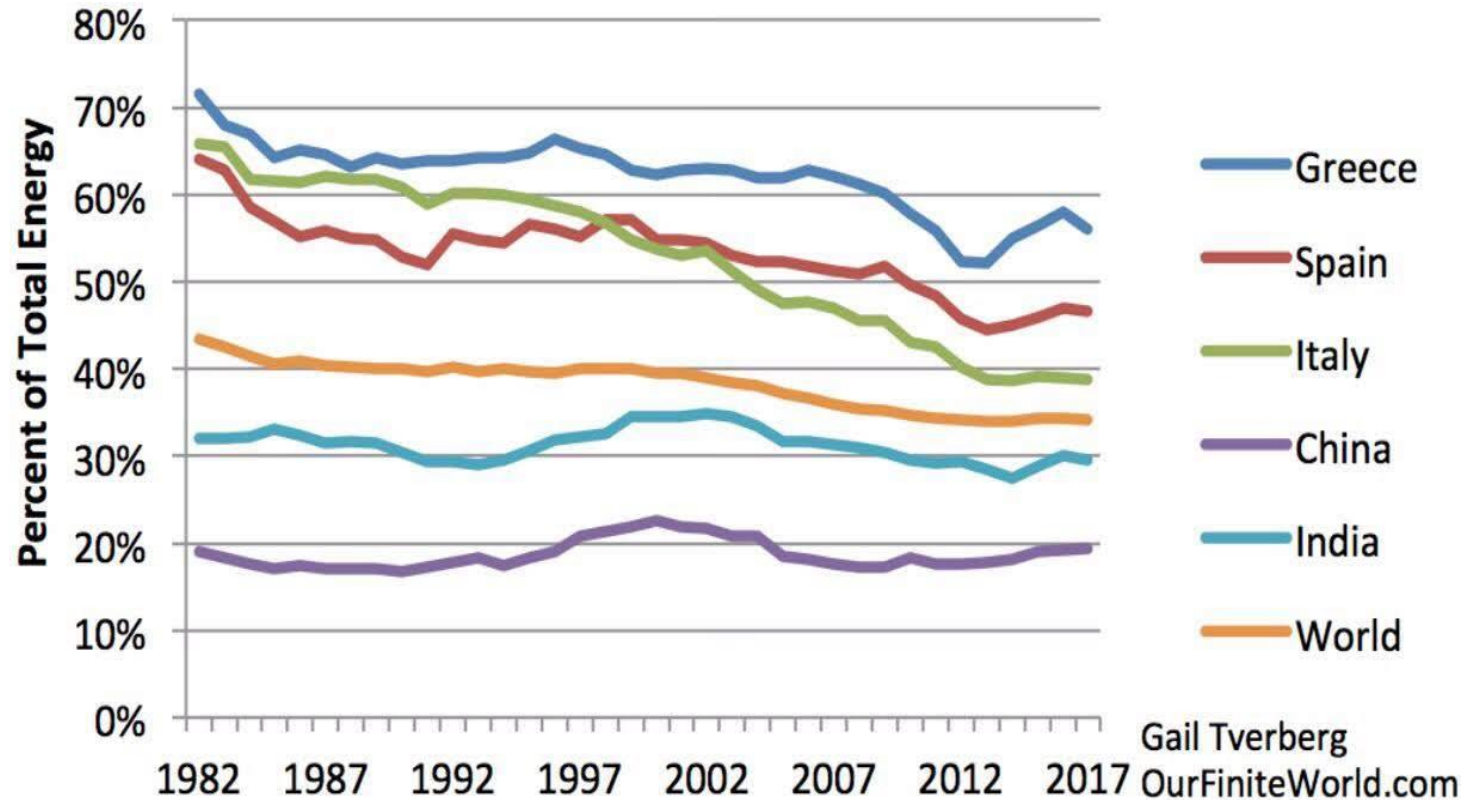


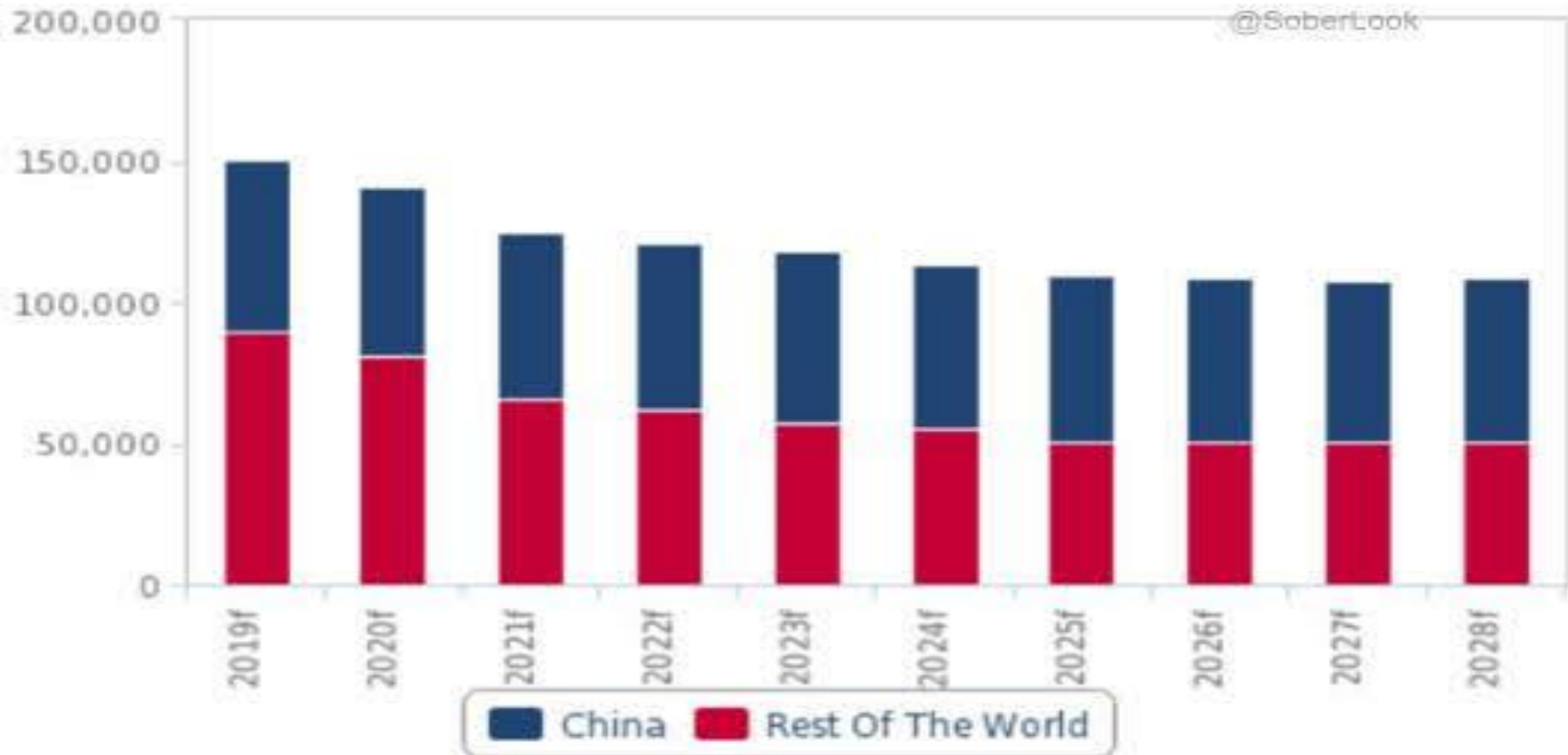
Figure 7. Oil consumption as a percentage of total energy consumption, based on 2018 *BP Statistical Review of World Energy* data.

China To Dominate Global Renewables Sector

Non-Hydropower Capacity Additions By Market, MW

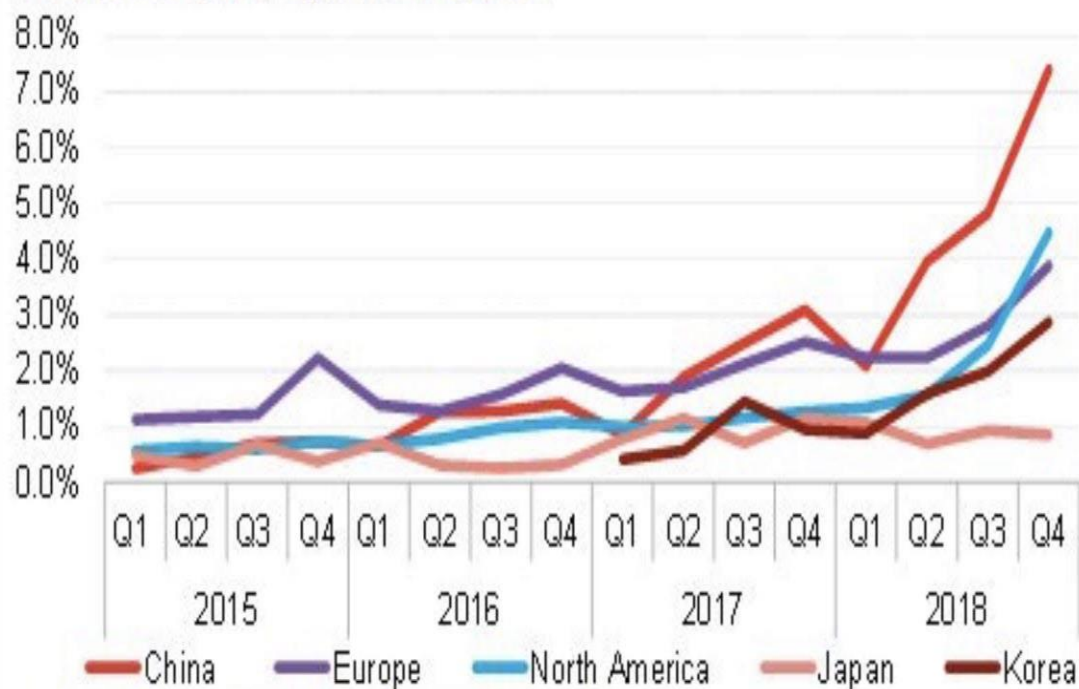
Posted on
The Daily Shot
14-Feb-2019

@SoberLook



f = Fitch Solutions forecast. Source: EIA, Irena, Fitch Solutions.

EV share of passenger vehicle sales



Source: China Association of Automotive Manufactures, BloombergNEF.

- 2018 EV sales: **1.1 million**
- 2019 expected: **1.5 million**
- 2011-18 compound annual growth rate: **118%**
- EV adoption rate in 4Q 2018:

7%

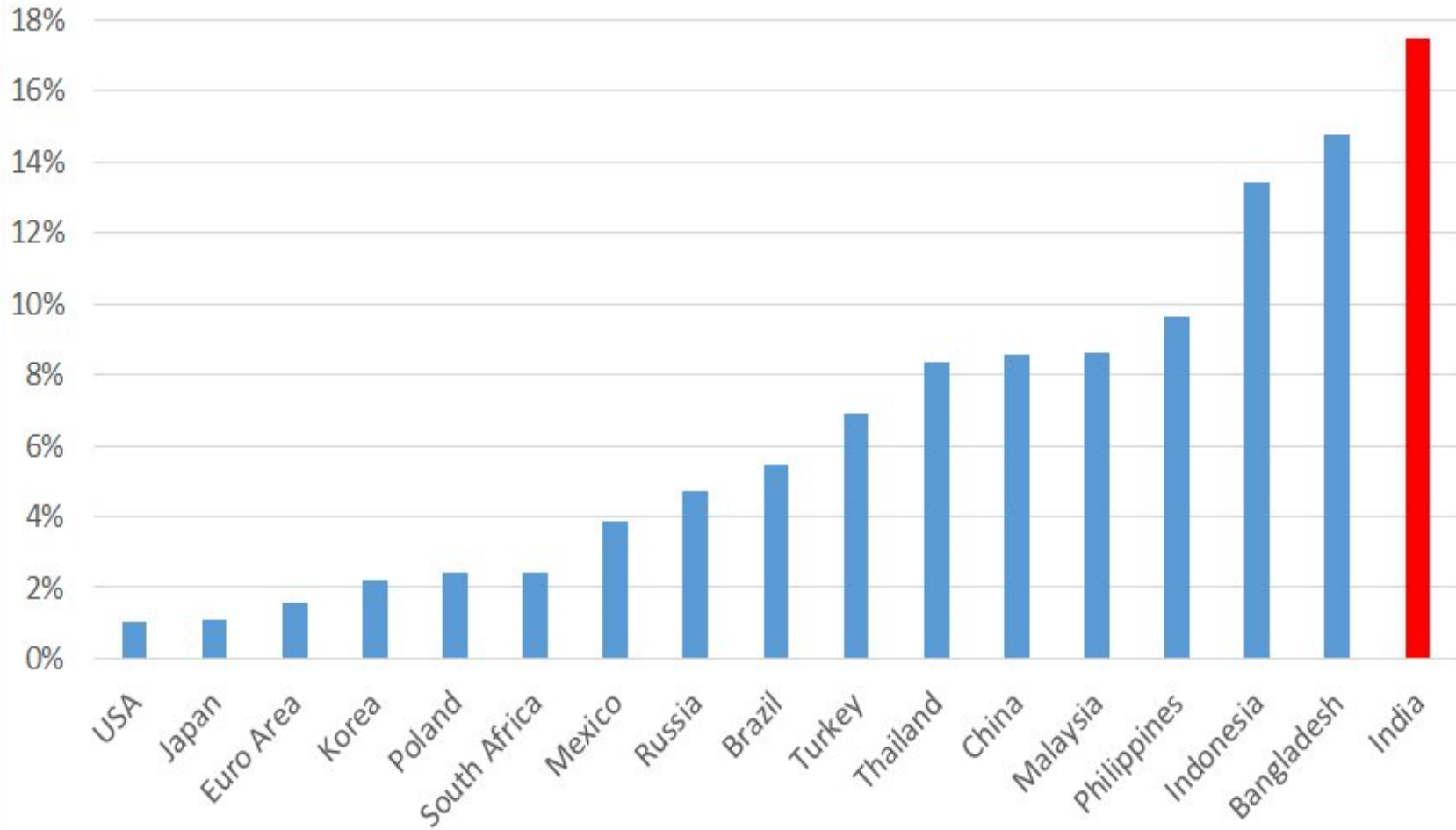
CHINA AS A % OF WORLD CONSUMPTION

	1995	2000	2005	2010	2015	2018
Cement	31.5%	35.7%	45.3%	56.2%	57.7%	58.0%
Coal	29.9%	30.0%	42.7%	48.5%	50.8%	50.7%
Steel	12.7%	15.1%	31.7%	43.2%	43.2%	44.7%
Industrial Robots	—	—	3.5%	6.7%	27.0%	39.2%
Cotton	22.0%	25.0%	37.8%	39.8%	31.7%	32.1%
Rice	35.8%	34.1%	31.0%	30.5%	30.2%	29.5%
Hydroelectricity	7.7%	8.4%	13.6%	20.7%	28.6%	28.5%
University Grads	7.4%	9.0%	17.1%	20.5%	25.7%	26.6%
Mobile Phones	4.0%	11.6%	17.8%	16.2%	18.0%	19.2%
Beef & Veal	8.4%	9.6%	10.1%	11.2%	12.7%	14.0%
Oil	4.7%	6.1%	8.2%	10.7%	12.6%	13.0%
Nuclear Energy	0.6%	0.6%	1.9%	2.7%	6.6%	9.4%
Nat Gas	0.8%	1.0%	1.7%	3.4%	5.6%	6.6%
Coffee	0.0%	0.0%	0.2%	0.8%	1.7%	2.4%

DISRUPTION – THE INDIAN CONTEXT

INDIA'S SHARE OF AGRICULTURE: STILL HIGH?

Share of Agriculture (% of GDP)

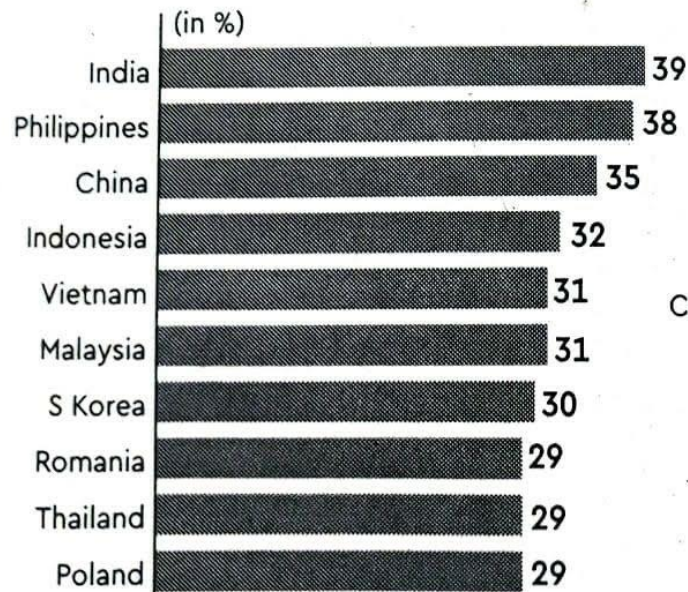


Minting billionaires

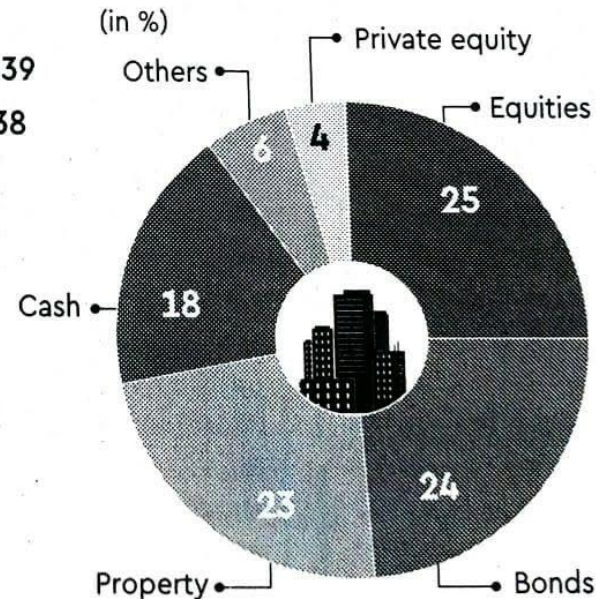
Asia leads the world, India fastest

ASIA WILL SEE the fastest billionaire population growth in the world over the next four years, despite economic uncertainties in the region triggered by the China-US trade war. Asia will also see the biggest increase in ultra-high net worth individuals (people with net assets of \$30 million or more). India leads the world with an expected 39% surge, followed by the Philippines and China.

Growth rate of ultra-high net worth population from 2018 to 2023



Property remains a significant part of portfolios in Asia



Note: UHNW defined as those with net assets of \$30 million or more Source: Knight Frank; Bloomberg

The Cost of Mobile Internet Around The World

Average cost of 1GB of mobile data in selected countries in 2019 (U.S. dollars)



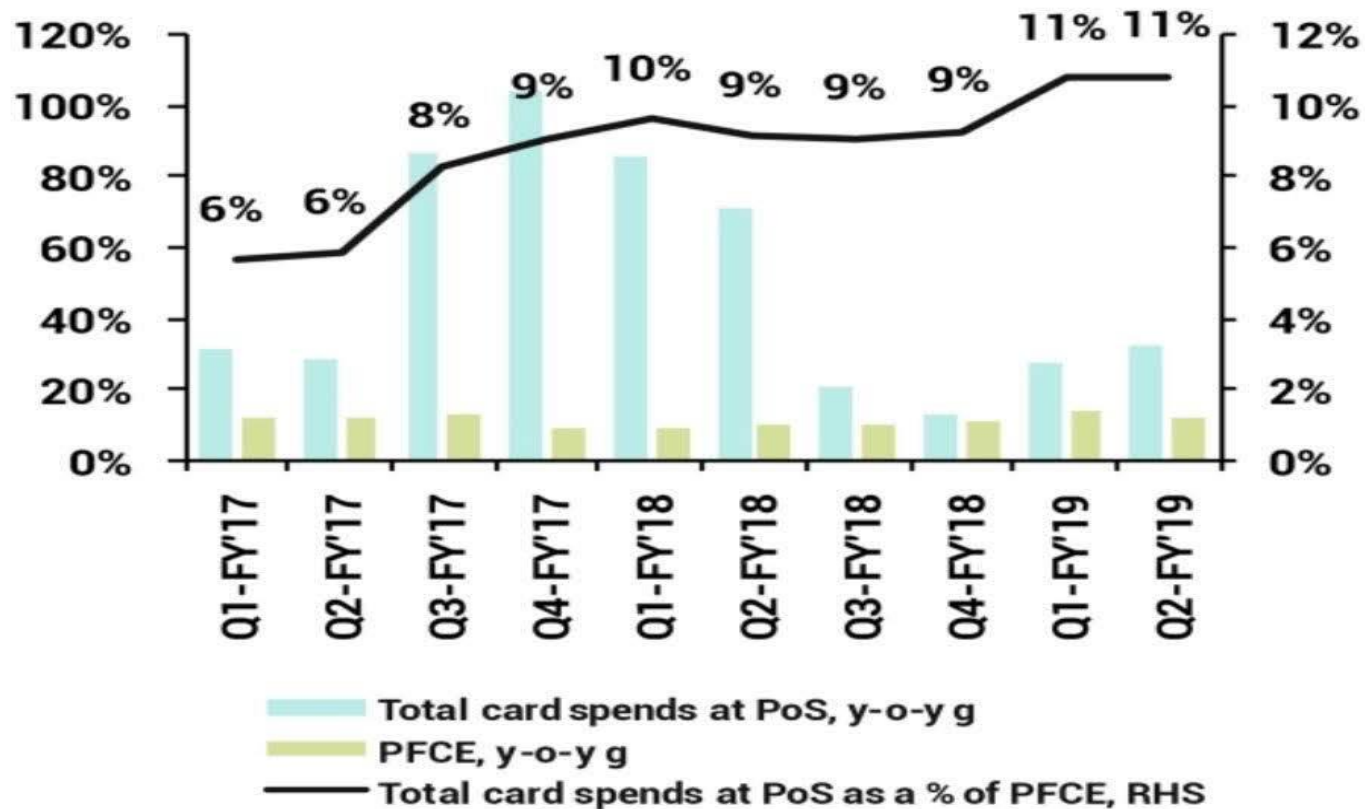
© StatistaCharts

6,313 mobile data plans in 230 countries were gathered and analyzed by Cable.co.uk
Source: Cable.co.uk

Forbes statista

Average cost of 1GB of mobile data in selected countries in 2019 (U.S. dollars). STATISTA

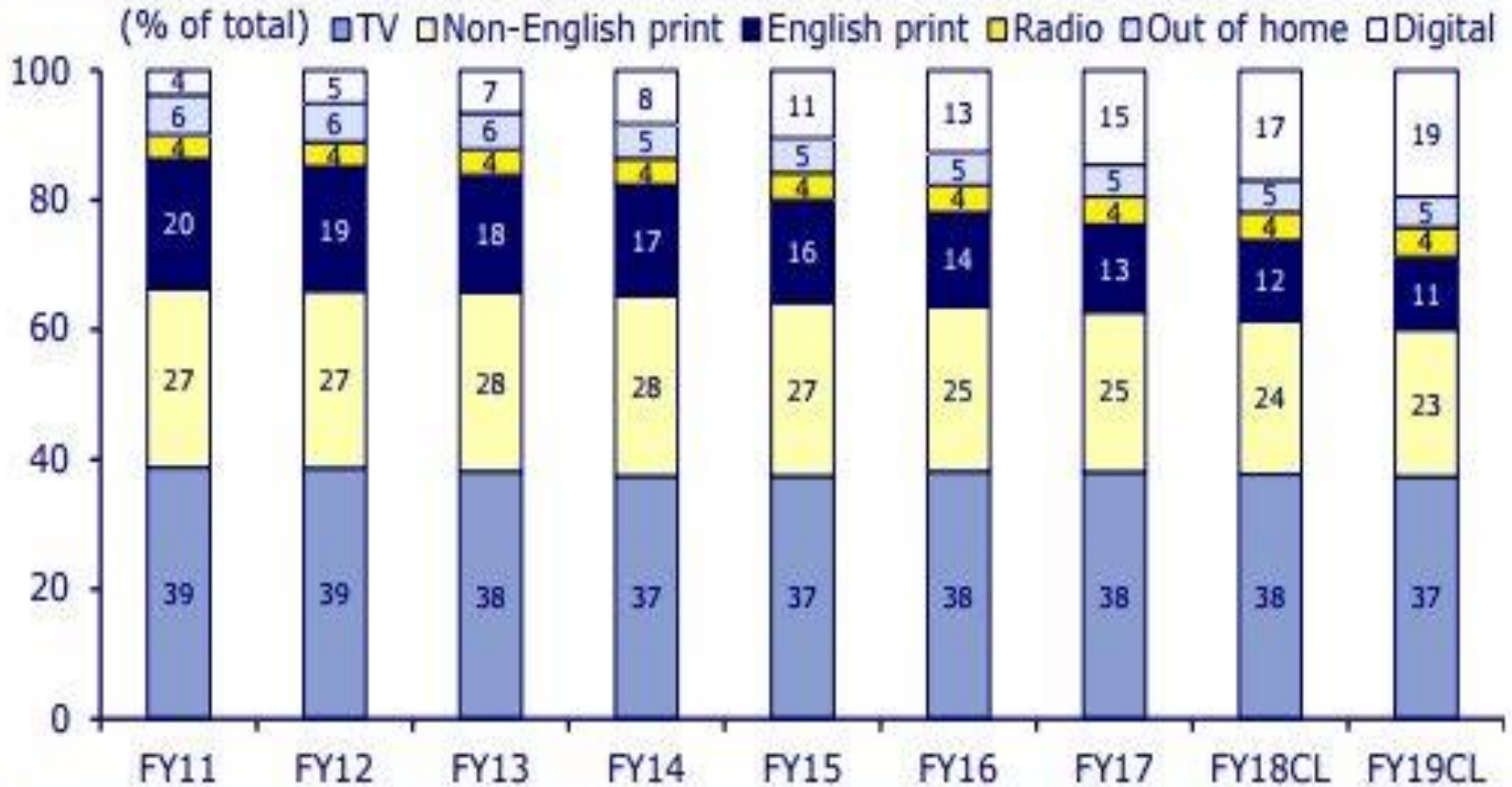
India: Total Card Spends As A % Of Private Final Consumption Of Expenditure



Source: Bernstein Research

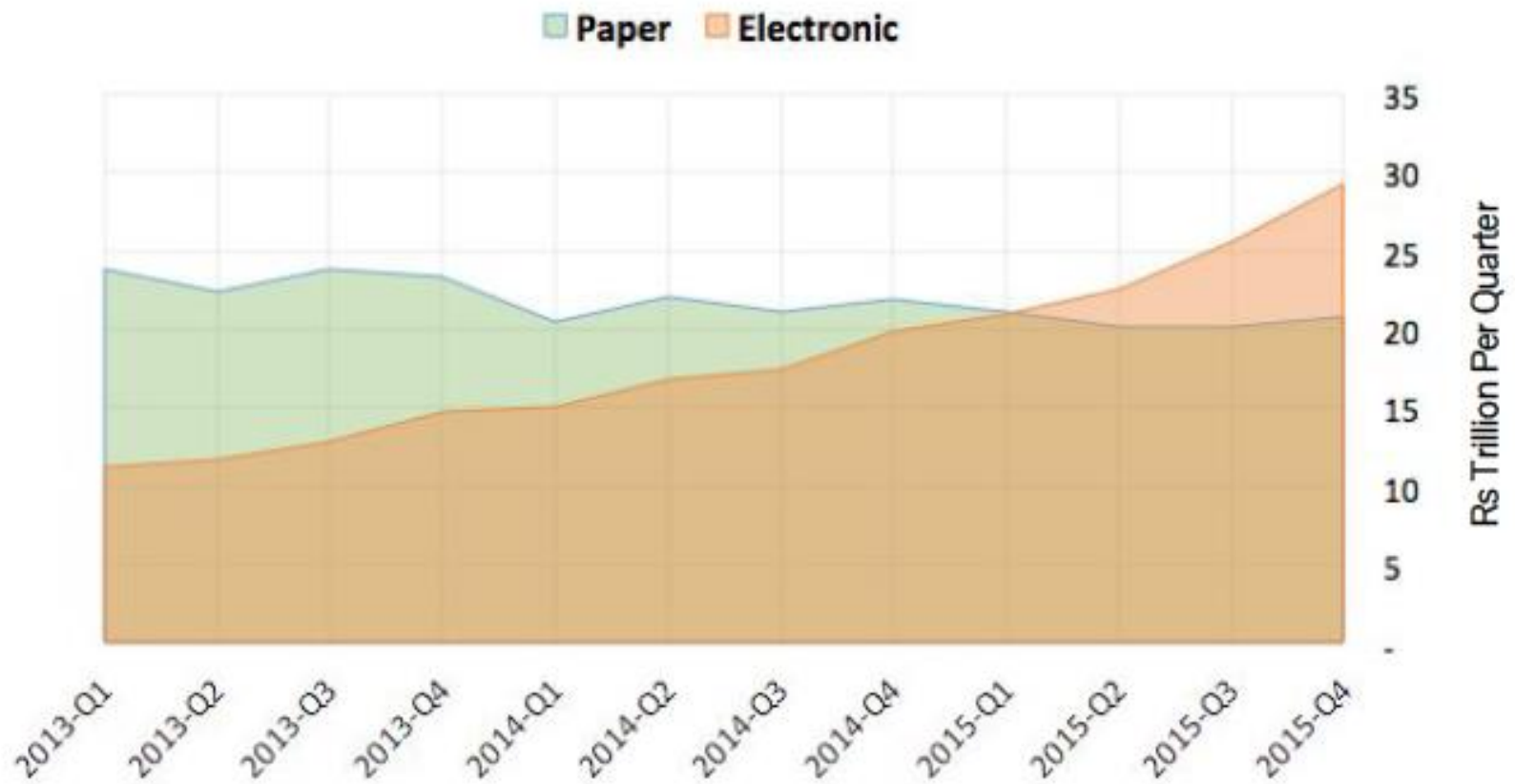
Bloomberg | Quint

Medium-wise share in ad spends



Source: FICCI-KPMG, CLSA

Indian Payment Patterns: Undergoing a Structural Shift

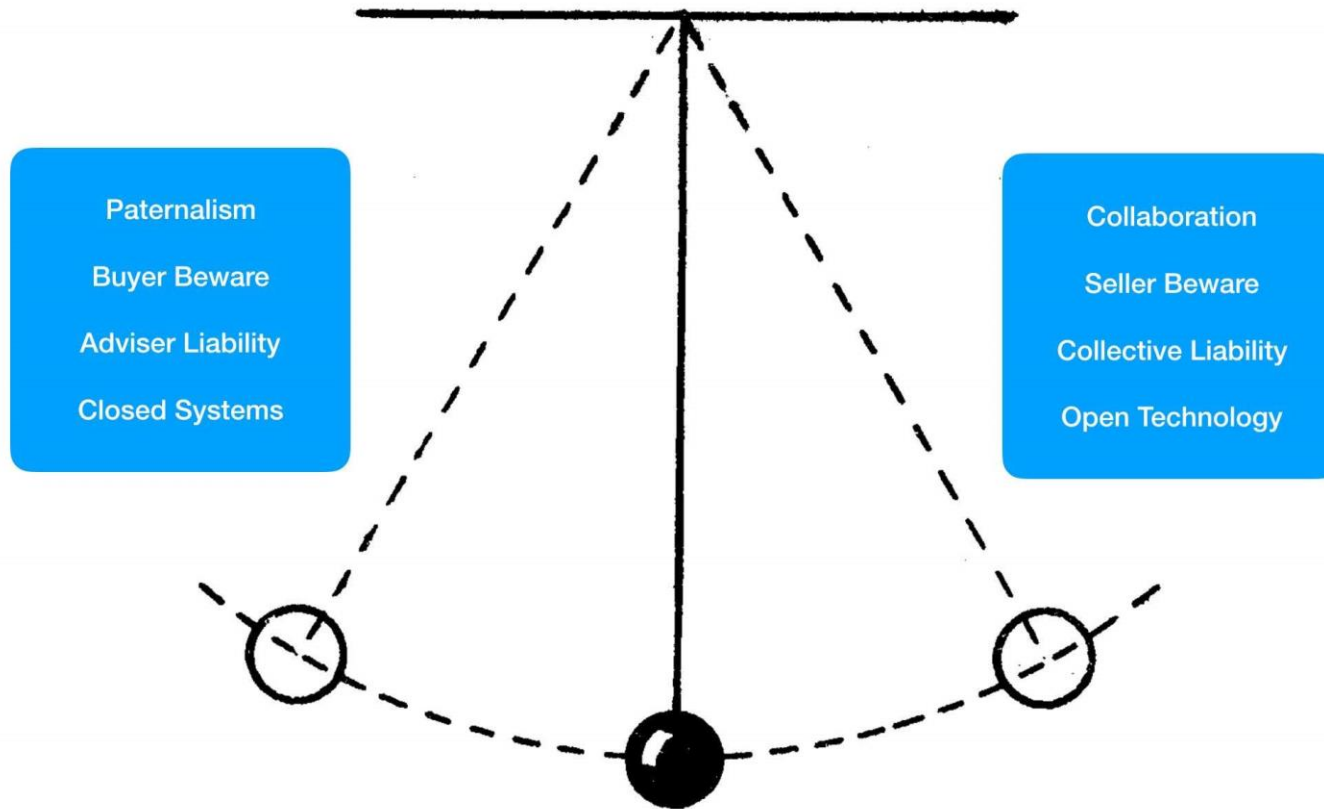


Source: Nandan Nilekani, Indian Banking in a time of change, 2016

The 6 most expensive words in business are: we've
always done it this way: Catherine De Vrye

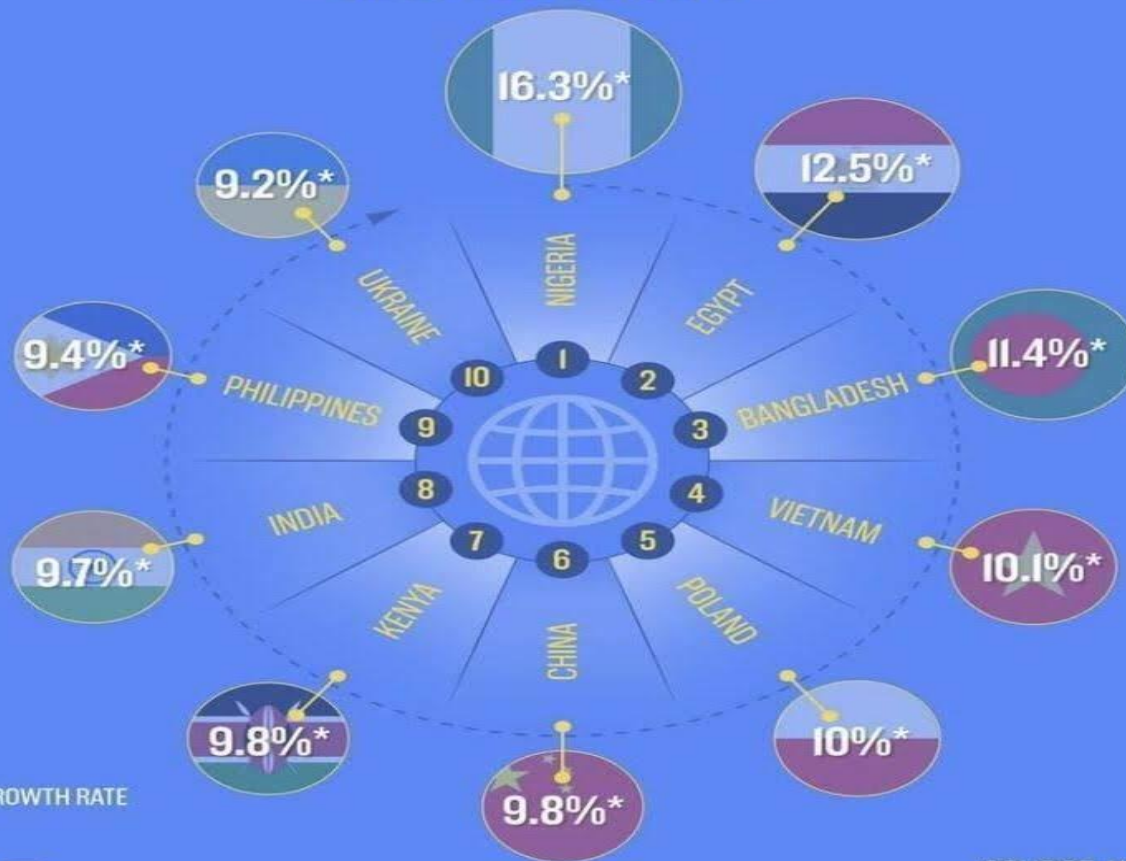
WEALTH MANAGEMENT: AT THE CUSP OF CHANGE

Changing Emphasis



THESE COUNTRIES ARE SET TO SEE THEIR MILLIONAIRE POPULATIONS SKYROCKET

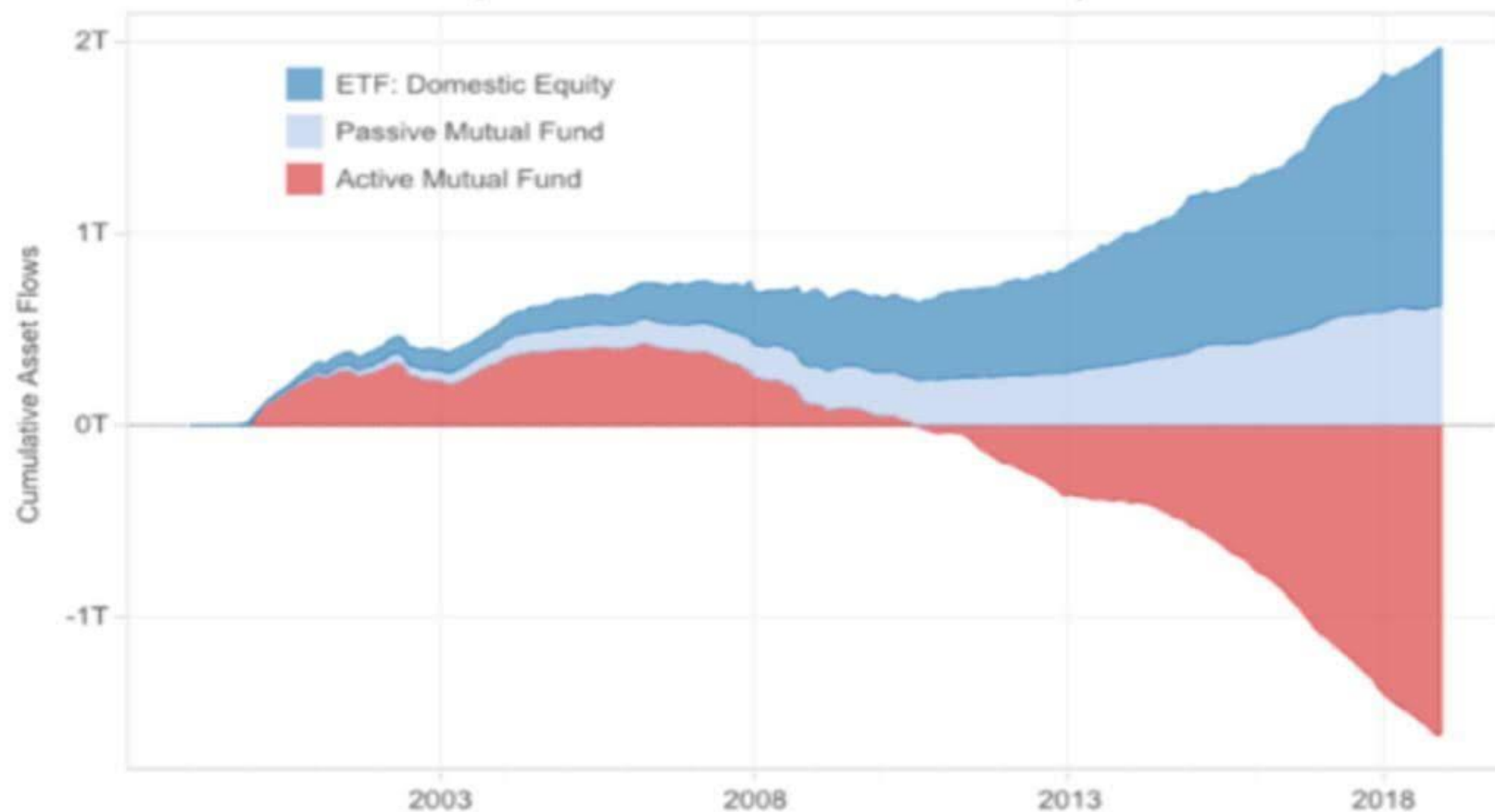
THE FASTEST-GROWING HIGH NET WORTH COUNTRIES
IN THE NEXT FIVE YEARS



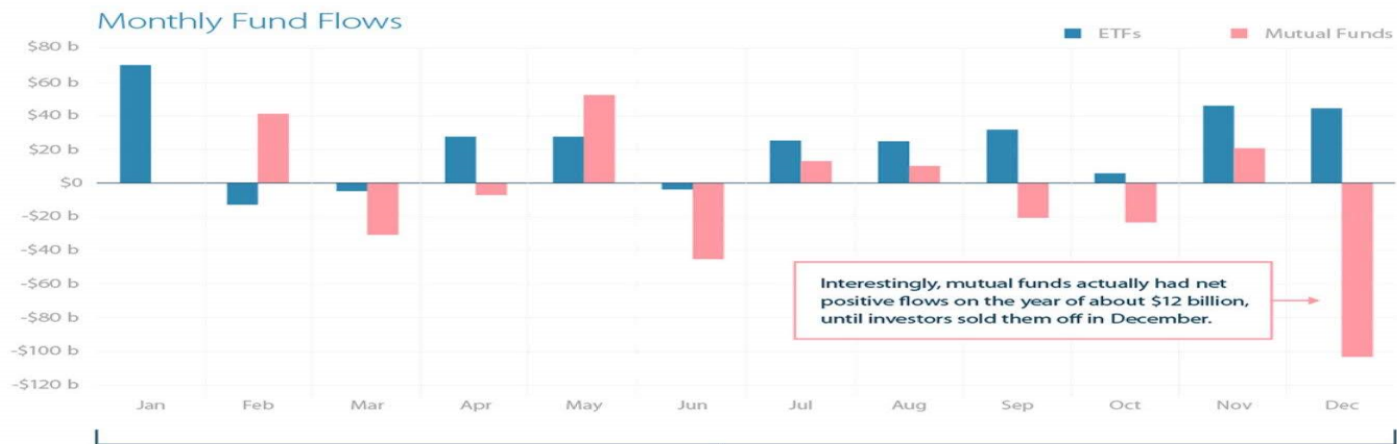
*COMPOUND ANNUAL GROWTH RATE

Exhibit 28: Structural Shift Away from Active U.S. Equity Funds into Index Funds

Active vs Passive Flows (Domestic Mutual Funds + ETFs)

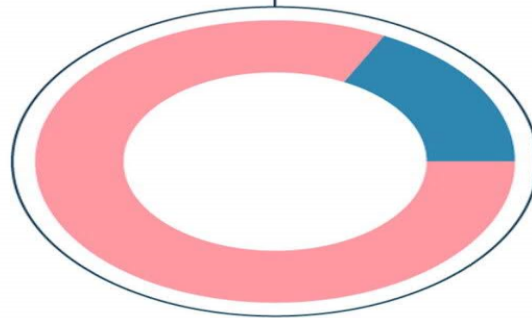


Source: Credit Suisse: Trading Strategy, ICI, Factset



[Source: New York Life Investments 2018, Visual Capitalist analysis 2019]

Over the course of the year, a net amount of \$192 billion flowed into funds, bringing total assets invested up to **\$19.7 trillion.**



ETFs
\$3.4 trillion

Despite growing for another year, ETFs still make up a smaller part of the fund universe overall.

Mutual Funds
\$16.3 trillion

THE TRILLION DOLLAR CLUB

The world's largest asset holders are overwhelmingly U.S. based



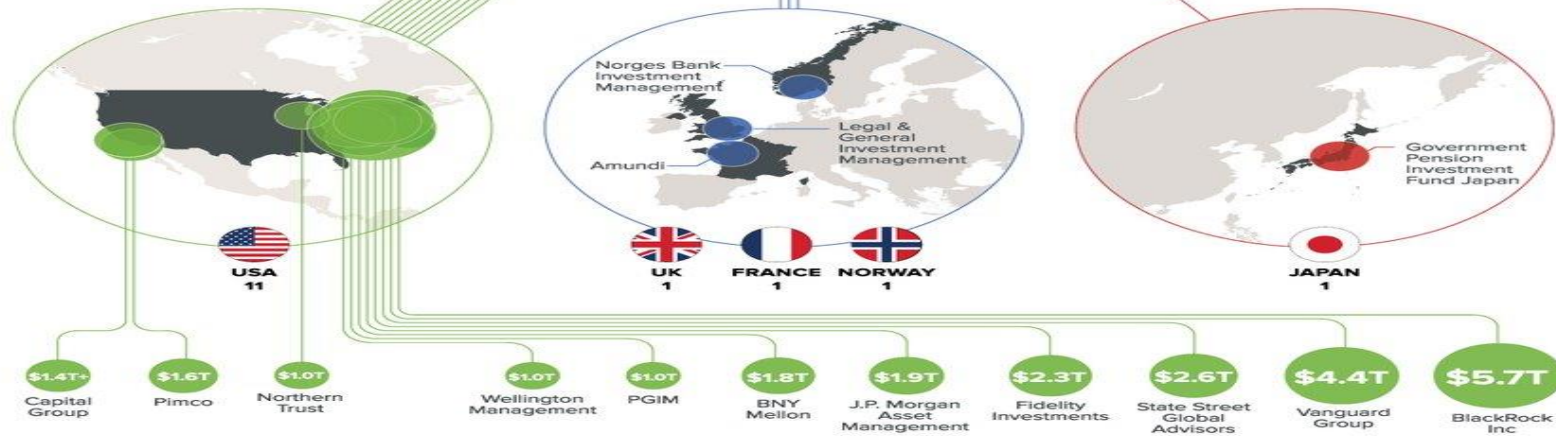
THE WORLD'S LARGEST ASSET MANAGERS

Together, these 15 companies hold and manage much of the world's financial assets, such as stocks and bonds.



Amazingly, **82.9%** of these total assets are managed by companies within the United States.

Only **17.1%** of these total assets are managed by companies outside of the United States.



SOURCE: Bloomberg, company websites, Willis Towers Watson



THE 10 DISRUPTORS

- ❑ New Generation of Investor
- ❑ Rise of The Machine
- ❑ Big Data & Advanced Analytics
- ❑ Holistic Goal Based Solutions
- ❑ Democratisation of Investment Solns
- ❑ Demographics & Advisor Skill Sets
- ❑ Challenges of Wealth Transfer
- ❑ Macro economic Environment
- ❑ Regulatory & Compliance Costs
- ❑ Business Models & Intensity of competition



Source: The 10 disruptive trends in wealth management, Deloitte, 2015

New Generation of Investor

The New Gen Investor

Tech Savvy

Needs to be in control

24 Hour accessibility

Skeptical of Authority

Risk understood as drawdown

Implications for the Firm

Customised solutions

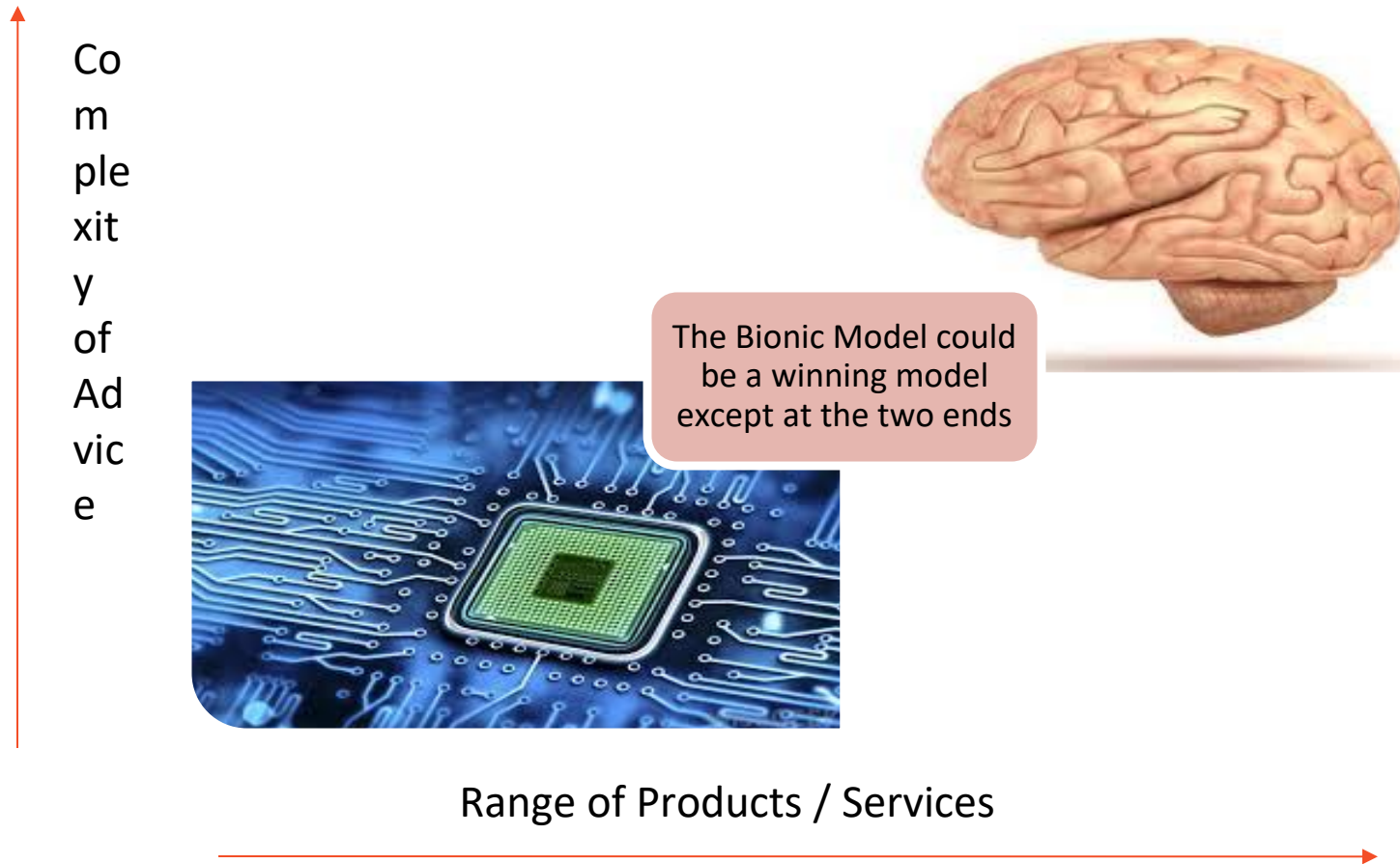
Multiple communication channels

Multiple Advisors

Democratisation of solutions

Downside Protection

Rise of the Machine



Complexity of Advice

The Bionic Model could be a winning model except at the two ends

Range of Products / Services

Biz Performance
Mgt

Client
Acquisition

Client Retention:
Client Risk,
Advisor Match

Client Sales

Client Advice

From Products to Solutions

From Portfolio to Goals

From Financial Planning to Life Planning

From Volatility as Risk to Draw Downs

Connect

- Consolidate Accounts
- Connect with Advisors

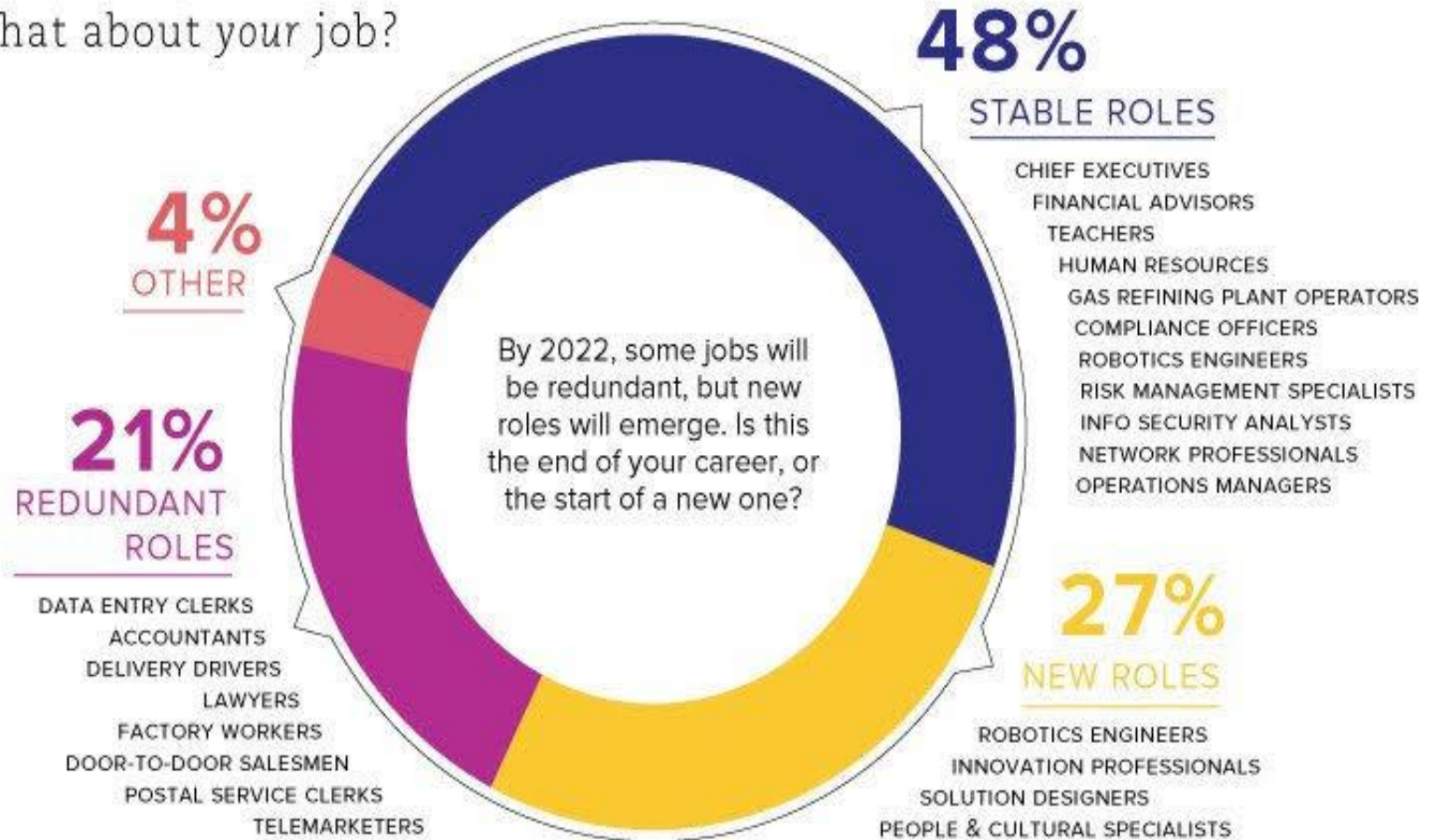
Advise

- Tailored Advice
- Enhanced Reporting

Invest

- Institution like treatment
- Access to Non traditional products

What about your job?

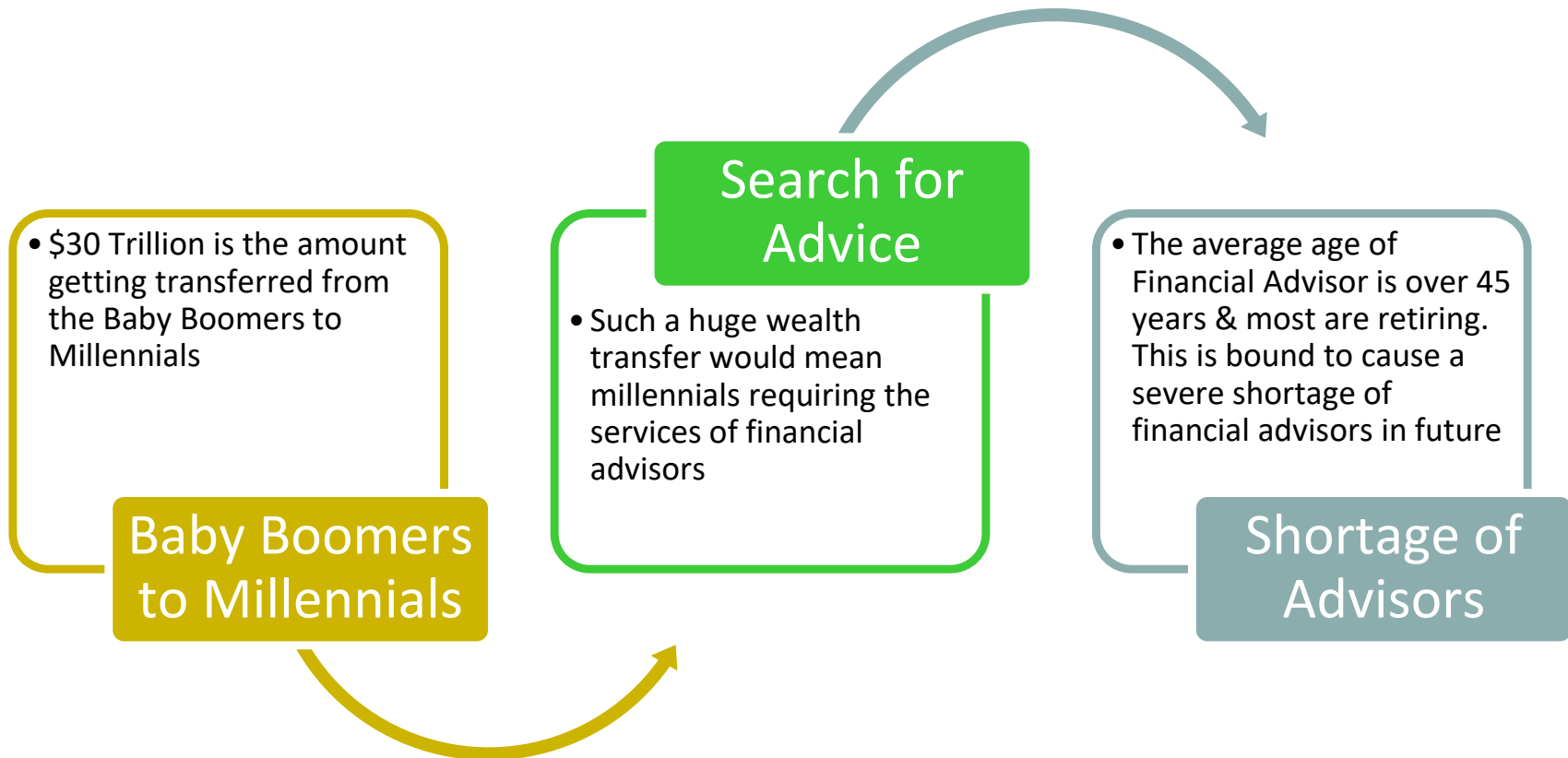


SOURCE: Future of Jobs Survey 2018, World Economic Forum, Statista

visualcapitalist.com



Challenges of Wealth Transfer



Source: WWR, Cap Gemini, 2016

Macro Economic Environment

Low interest rate environment

Low Inflation rate

Low growth rate

High correlation of asset classes

High levels of financial leverage

Increased regulatory & compliance costs

Consumer protection

Suitability of products

Conflicts of interest

Outsourcing

Data integrity & cyber security

New Business Models & Intensity of competition

Convergence
of Broking, IB
& WM

WM as
Xselling Divn
of Banks

Growth of
RIAs

Robos & Tech
enabled
startups

Platform
providers

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THANK YOU