

GLOBAL ✕



Looking Ahead with Thematic Investing

Q2 2019

About Us

Global X Mission

To listen to and empower customers to **invest wisely in unexplored and intelligent solutions**

Global X History

Founded in 2008, we are distinguished by our thematic growth, income and international access suites of ETFs, and we have **more than 60 funds available** across U.S. and foreign exchanges. Global X is recognized as a leader in developing intelligent investment solutions for our clients.

Global X Investment Philosophy



Independent Advantage

To open market access to unexplored, intelligent solutions, **we leverage our independence to choose the best path** – in-house development or strategic partnership with the right solution provider



Value Focus

We are focused on providing value to our customers through our **methodical, low-cost index-based solutions**, which provide the potential for better outcomes



Transparent Precision

Our funds' **systematic, published methods eliminate manager drift** and are available to every customer

Global X Overview: ~\$9.8bn in AUM across 67 ETFs

AUM (\$mil) by Fund Family as of 3/31/19





Two Competing Ideas for Portfolio Management

Learn from the Past

- Backward-looking
- “History repeats itself”
- Harvesting factor premias/smart beta
- Mean reversion

Anticipate the Future

- Forward-looking
- “Next time will be different”
- Growth-oriented investment approaches
- **Thematic investing**



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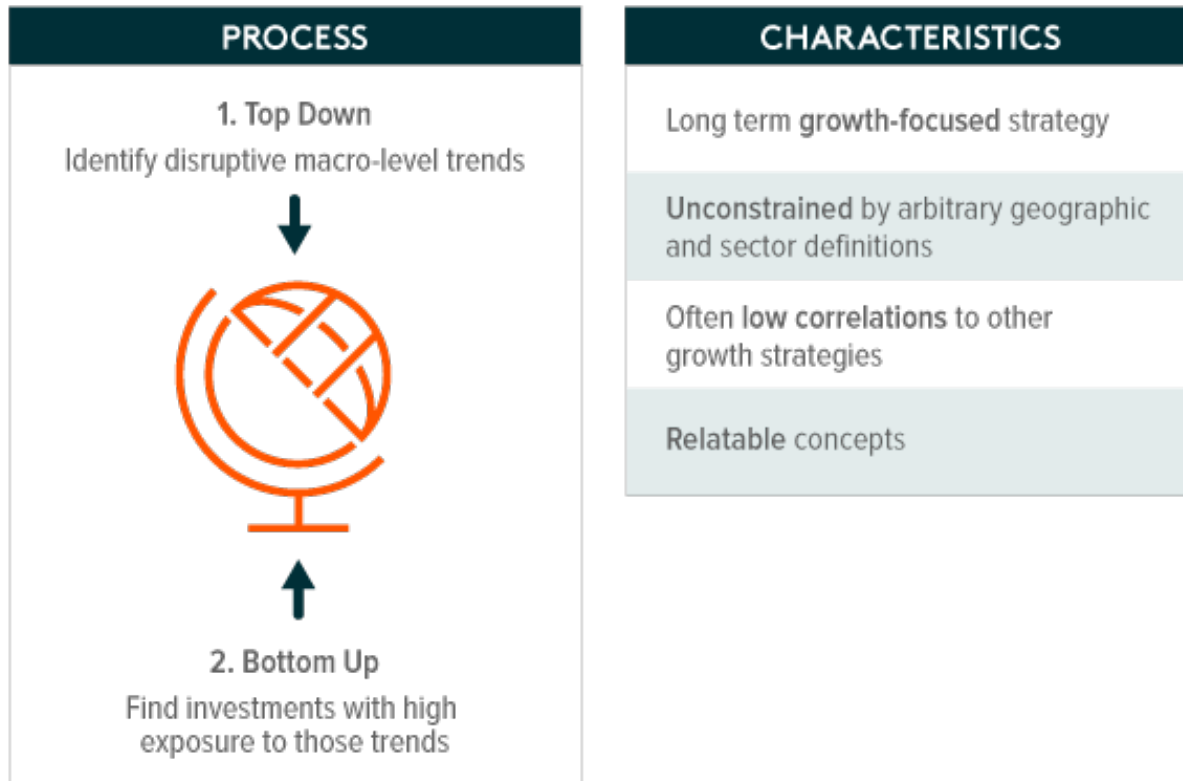
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What is Thematic Investing?

IDENTIFYING DISRUPTIVE MACRO-LEVEL TRENDS

Thematic investing refers to the process of identifying disruptive macro-level trends and the underlying investments that stand to benefit from the materialization of those trends.





3 Steps for Choosing a Theme

Keys to approaching thematic investing: Look for high conviction themes, investments with high exposure to those themes, and a multi-year time frame

	Stronger Approach	Weaker Approach
Conviction	High, due to observable structural changes in demographics, technology, behavior, or politics/regulations	Limited, due to conjecture and low likelihood of theme materializing
Investability	Broad group of publicly traded companies, with high liquidity, that provide targeted exposure to the theme	Narrow group of companies with low liquidity, and only tangential exposure to the theme
Time Frame	Medium to long term (5 or more years), making market timing less of a factor	Shorter term placing greater importance on timing



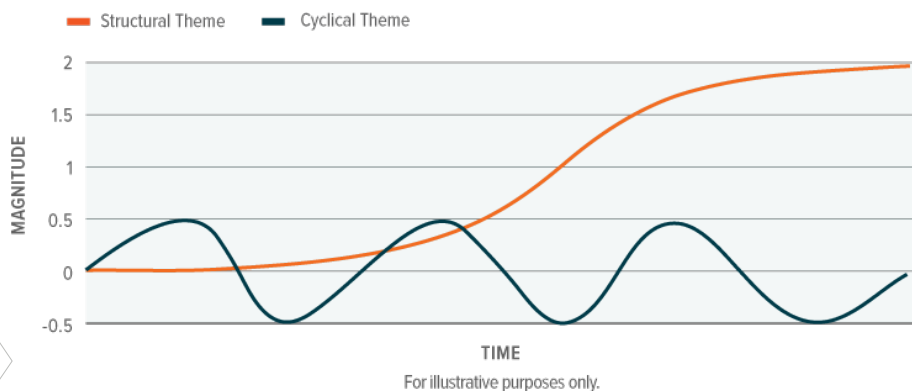
Cyclical vs. Structural Themes

Thematic investing is often used to broadly describe a forward-looking investment approach, but we believe it's important to distinguish between two distinct types themes: cyclical and structural themes

Cyclical Themes (waves)

- Occur at somewhat regular short - or medium-term intervals, typically based on changes in the business cycle.
- Can be mean-reverting, so that over a long period of time they tend to converge with some average level.
- Examples can include asset valuations, volatility, interest rates, and currency values.

CYCLICAL VS. STRUCTURAL THEMES



Structural Themes (S-shape)

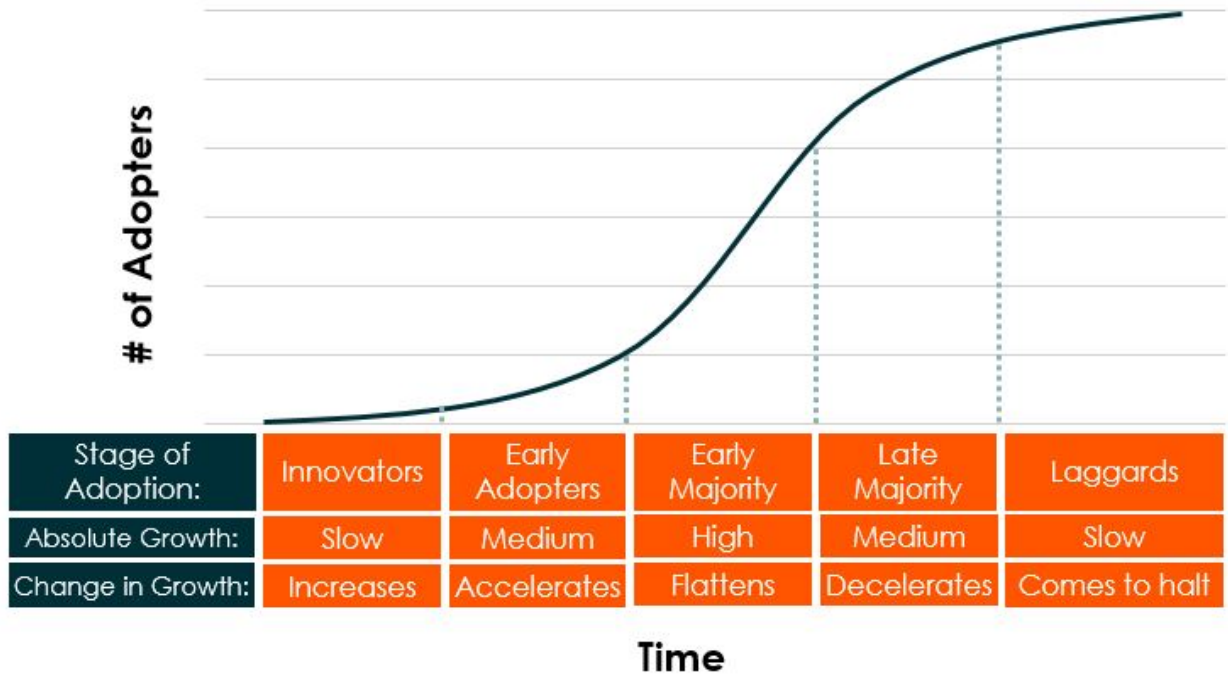
- Occur as one-off shifts that change an existing paradigm.
- Tend to be longer-term in nature.
- Typically driven by powerful forces such as disruptive technologies or changing demographics and consumer behavior.



What Does Disruptive Growth Look Like?

The Diffusion of Innovation Theory holds that the adoption of new technologies tends to follow an S-curve adoption pattern, aligning with the shape of structural themes.

Adoption Curves in Theory



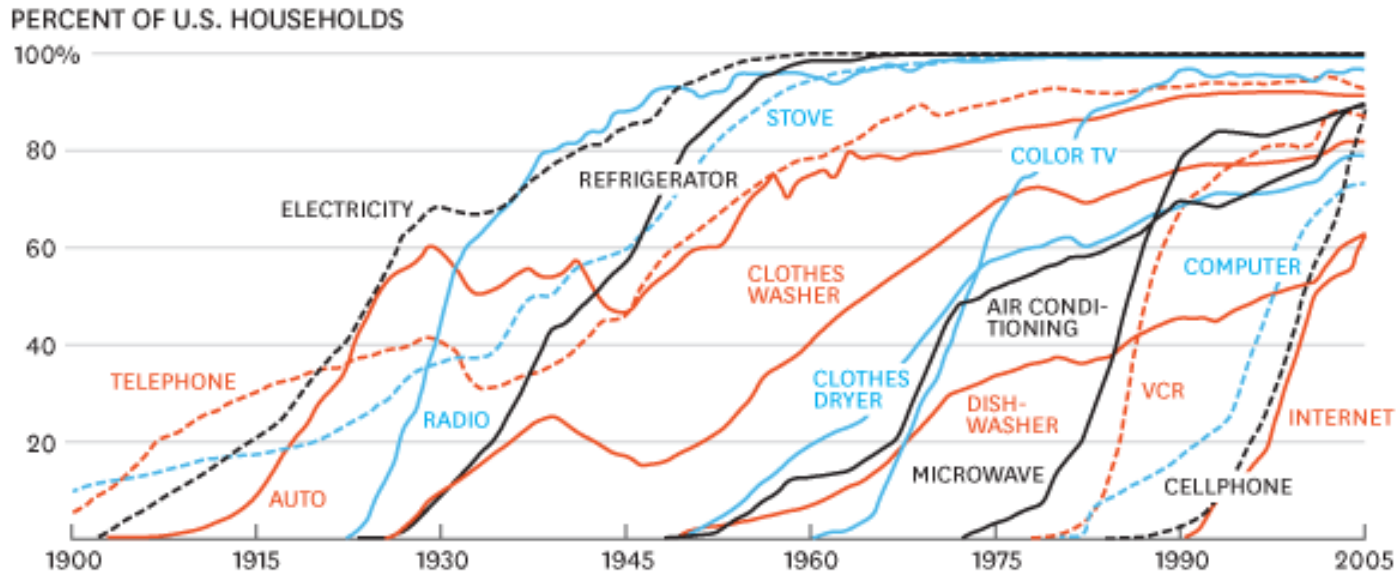
Sources: E.M. Rogers, Diffusion of Innovations, Global X Research.



What Does Disruptive Growth Look Like?

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Adoption Curves in Practice



Source: Michael Felton, *The New York Times* and *Harvard Business Review*.

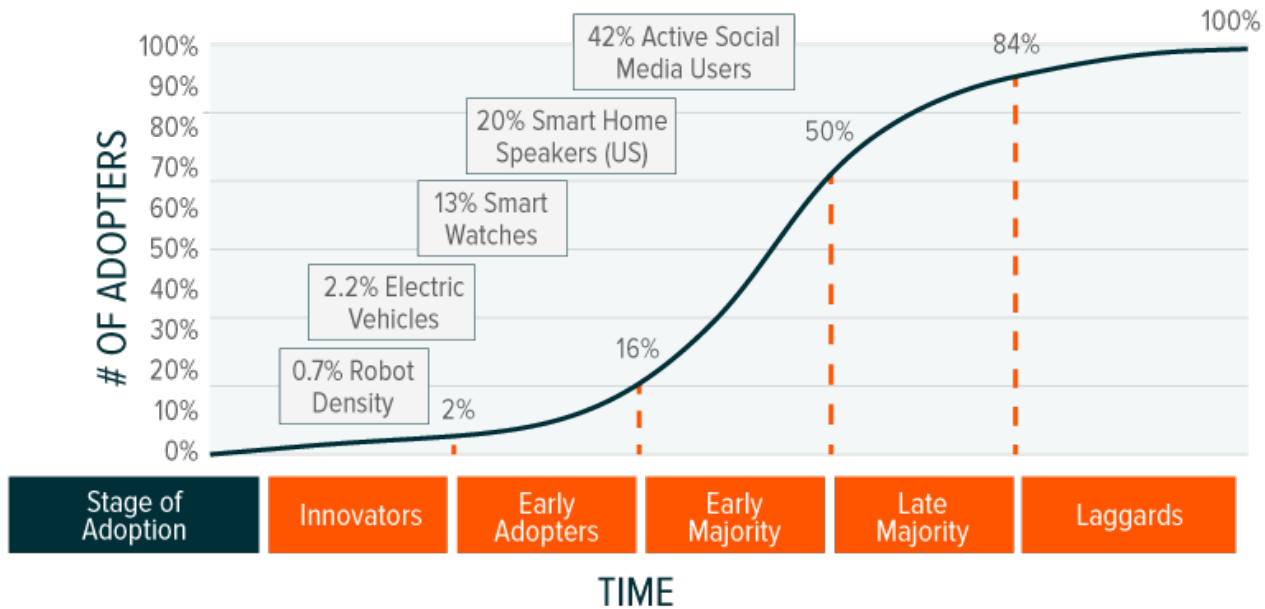


What Does Disruptive Growth Look Like?

Many new technologies are still early in their adoption

WHERE ARE WE WITH CERTAIN NEW TECHNOLOGIES

Source: International Federation of Robotics, S&P Global Platts, Delloite, Smartinsights.com





Why Consider Thematic Investing Now?

Rapid advancements in technology and changing consumer preferences are disrupting existing paradigms throughout the economy.

Traditional Sector

Old Paradigm

New Paradigm

Consumer Discretionary

Consumer firms primarily target the spending preferences of baby boomers and Gen Xers, selling through brick-and-mortar channels and appealing to suburban lifestyles and material wants.

Millennials are set to see their incomes rise and inherit trillions from the baby boomer generation. Their unique spending preferences, such as buying online via **E-commerce** platforms, living in cities and favoring experiences, are expected to radically alter what types of products are sold and how they are bought.

Energy

The energy sector largely revolves around the extraction and sale of fossil fuels.

Falling costs and rising production of **Lithium-ion batteries** is leading the shift to renewable energy and electric vehicles.

Financials

Financial firms primarily rely on employee skills to effectively allocate financial capital and provide services to customers.

FinTech allows financial firms to leverage cutting edge technology to reduce costs, improve decision making and risk controls, remove middlemen, and enhance customer experiences.



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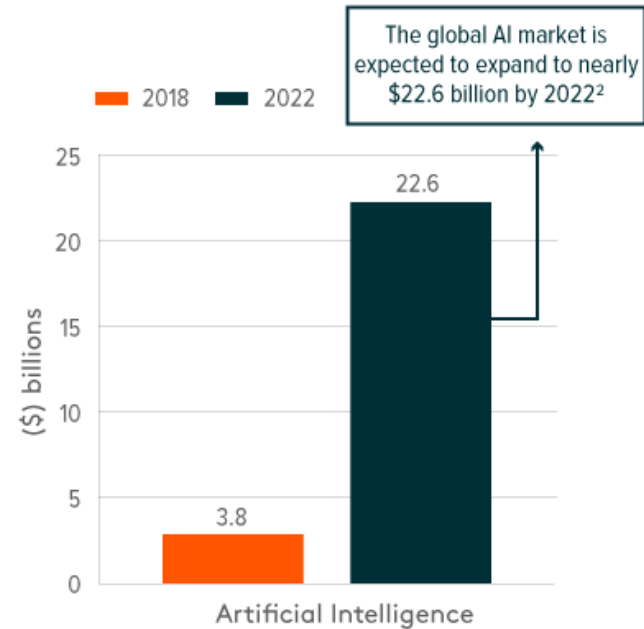
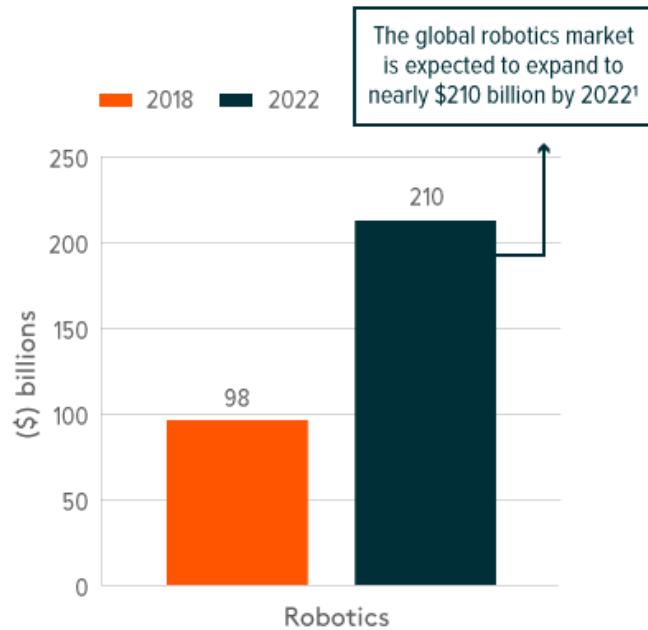
Traditional Sector	Old Paradigm	New Paradigm
Health Care	Health care systems are designed to treat symptoms or ailments once they occur.	<p>Increasing lifespans (Longevity) and rising health care costs are driving people to proactively improve their health & wellness, through physical activity, healthy eating, and greater mindfulness of their well-being. Genomics is helping personalize medicine, preventing and treating illness with innovative treatments.</p>
Industrials	Manufacturers provide workers with tools and training to complete tasks in an efficient and consistent manner.	Advancements in robotics & AI are making machines smarter and more capable than ever before, allowing robots to take on increasingly sophisticated tasks for faster and more accurate production
Information Technology	The technology ecosystem largely revolves around computers, servers, and mobile devices communicating with each other.	Declining chip costs and improving connectivity allows for virtually any object to connect to internet-enabled networks, allowing it to collect or receive data, in a massive expansion of the Internet of Things , supported by the scalable infrastructure of cloud computing .
Communication Services	People communicate or consume information primarily through traditional mediums like phone, TV, or radio.	People around the world are communicating via social media platforms, to share mobile video and photos, chat with friends, listen to podcasts, and read blogs.



Robotics & AI

Robotics involves the idea, creation, design, and application of programmable mechanical devices that can perform tasks and interact with their environments without human input.

Artificial intelligence (AI) is a division of computer science that emphasizes the conception of intelligent machines that can work, react, and learn like humans in order to recognize speech, plan, and solve problems.



(1) Statista, Size of the global market for industrial and non-industrial robots from 2016 to 2022, 2018.
 (2) Allied Market Research, Artificial Intelligence Market by Technology, 2016.




Robotics & AI

Robotics and AI is a rapidly emerging theme because there are large economic incentives relating to aging populations, rising labor costs, and opportunity for performance improvements.


A

AGING POPULATIONS
 The world is aging as lifespans increase and birth rates plummet. Economists fear that this trend will result in fewer people producing goods and services relative to the number of retirees. Japan's labor force, for instance, is projected to decline to roughly half of its peak level by 2060, as its population becomes increasingly senior.³ As a consequence of a shrinking labor force, Japan's economy could benefit from the development of robot technologies that can offset declining output from a smaller workforce.



B

LABOR COSTS
 Labor-intensive businesses, like manufacturing, have high labor costs which continue to rise. Many firms seek to lower these costs by outsourcing labor to cheaper countries. While offshoring jobs to lower-cost sites delivers expected savings of 65% on labor costs, replacing human workers with robots could save even more, with some estimating 90% in savings.⁴



C

PERFORMANCE IMPROVEMENTS
 Robots are often faster and more precise than human labor, resulting in less waste, improved quality, and higher output.




In China, Germany, Japan, South Korea, and the US, robotics adoption is estimated to enhance productivity in many industries by up to 30% by 2025.⁷

3. The Guardian, 4. PwC, 5. Technavio, 6. The Boston Consulting Group, 7. The Boston Consulting Group



Robotics & AI

Robotics and AI have the ability to disrupt a broad range of sectors, particularly manufacturing, military and defense, medicine, transportation, and agriculture.

MANUFACTURING

In 2015, around 10% of manufacturing functions were automated. Boston Consulting Group estimates the share to increase by 15% by 2025.

MILITARY & DEFENSE

The U.S. Army expects that by 2030, it could reduce Brigade Combat Teams from 4,000 soldiers to 3,000, using robots to maintain the unit's effectiveness despite less manpower.

MEDICINE

IBM's Watson supercomputer has a 90% diagnostic accuracy rate for lung cancer compared with the average diagnostic accuracy rate of 50% for human physicians.

TRANSPORTATION

In 2030, autonomous cars could account for up to 15% of passenger vehicles sold worldwide.

AGRICULTURE

The global market for agriculture robots is projected to exceed \$15 billion by 2020.

8. CBS News, 9. Wellpoint, 10. McKinsey & Company, 11. Global Industry Analysts, Inc., 12. Bank of America Merrill Lynch Global Research

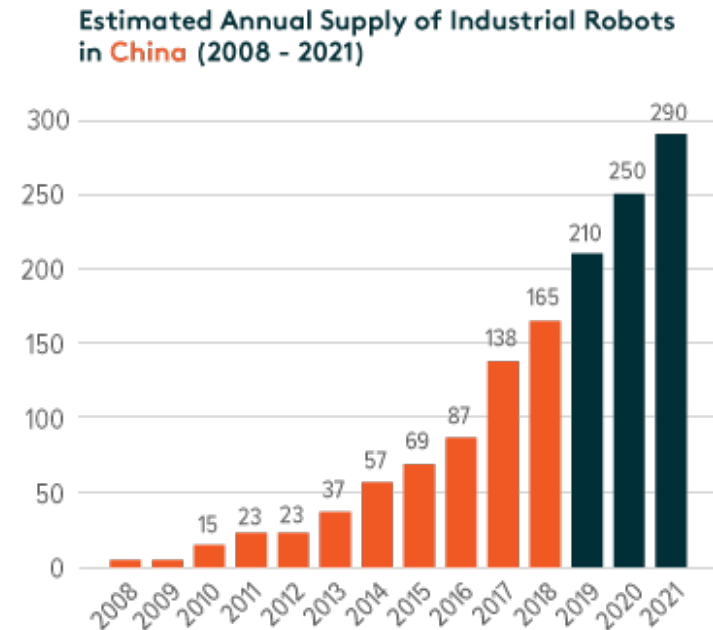


Robotics & AI

Industrial robotics are expected to grow at a rapid pace, receiving a strong tailwind from China, which is looking to make up for low robotic density compared to world averages.

GROWTH OF INDUSTRIAL ROBOTICS WORLDWIDE & IN CHINA (THOUSANDS)

Source: IFR World Robotics, 2017. *Forecasted



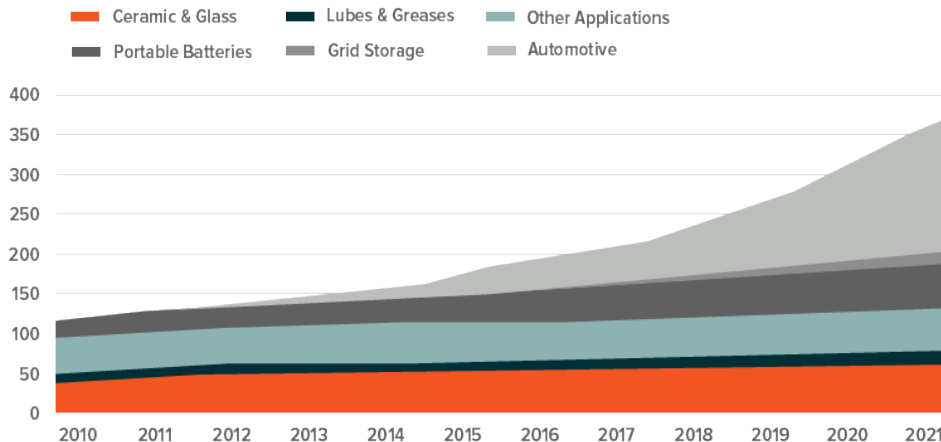


Lithium & Battery Tech

Lithium is the world's lightest metal and has been dubbed "white petroleum" due to its common usage in state-of-the-art batteries.

HISTORICAL LITHIUM DEMAND AND EXPECTATIONS BY SOURCE
(THOUSANDS LCE IN METRIC TONS)

Source: Siemens, 2017



1
Approx. 60% of lithium demand has come from industrial applications

2
Batteries could make up almost 75% of total demand by 2021

¹Source: Albemarle Investor Presentation, May 2017.



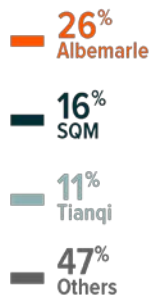
Lithium & Battery Tech

The majority of the world's lithium production is currently controlled by just a handful of producers.

The Lithium 'Cartel'

LITHIUM PRODUCTION BY SOURCE

Source: Bloomberg 2018



Key Points

1

Three lithium producers contributed more than half of the world's lithium in 2018¹

2

Given rising lithium prices, various junior lithium miners are arriving on the scene

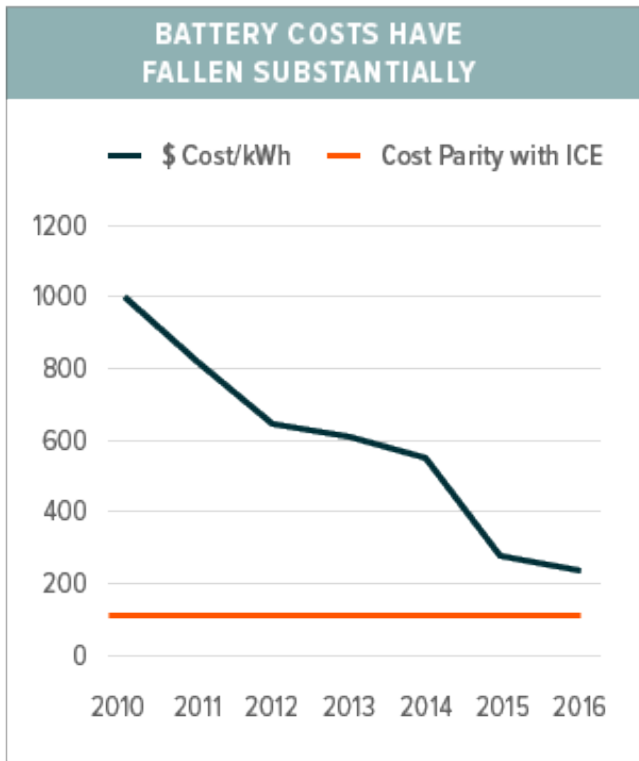
3

The large share of lithium controlled by just a few firms provides little incentive to flood the market with cheap lithium



Lithium & Battery Tech

Historically, EVs have been limited to affluent early adopters due to higher costs than traditional international combustion engines (ICE). Yet **falling battery costs and new regulations** are closing the gap.



NEW POLICIES ARE ACCELERATING THE ADOPTION OF EVs

- 2019 & Beyond - China (28m cars/year):** recently introduced a scoring method that will phase out ICE vehicles
- 2025 - Norway (0.2m):** new passenger cars and vans must have zero emissions
- 2030 - India (3.7m):** will ban the sale of new gasoline and diesel cars
- 2040 - UK (3.1m):** will ban the sale of new gasoline and diesel cars
- 2040 - France (2.5m):** will ban the sale of new gasoline and diesel cars

London, Athens, Madrid, Mexico City, and Paris are seeking to ban dirty vehicles in favor of low or zero emissions cars and trucks




Aggressive fuel economy standards for ICE vehicles could raise costs relative to EVs

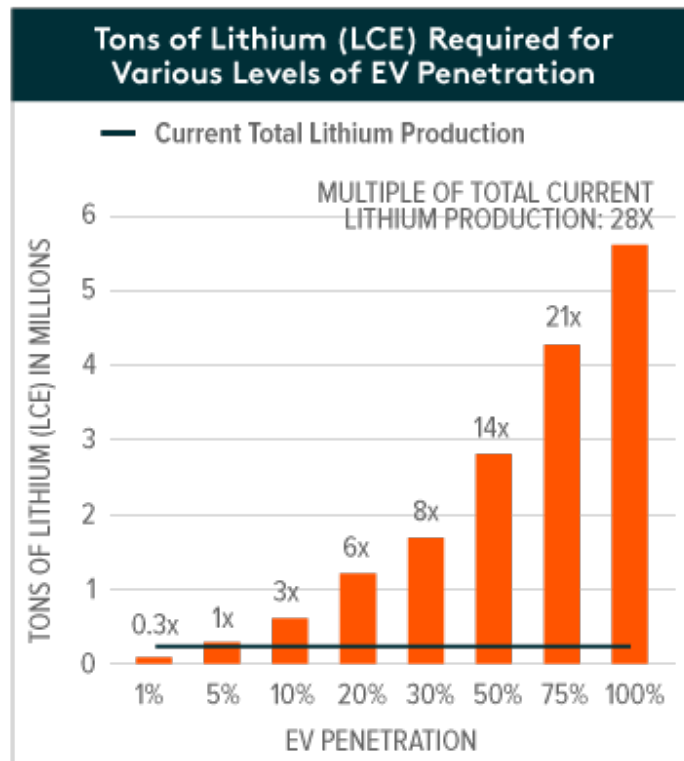
¹Source: McKinsey, "Electrifying Insights: How Automakers can Drive Electrified Vehicle Sales and Profitability," Jan 2017. ICE = Internal Combustion Engines
²2016 car sales data. Sources: International Organization of Motor Vehicle Manufacturers (OICD), CNN 2017.
³Cities banning dirty vehicles from Green Car Reports, 2017



Lithium & Battery Tech

While still a small part of overall lithium demand, EVs require approx. 10,000 times more lithium than a typical smartphone

Lithium use by product		
	Smart Phone	5-7 grams
	Tablet	20-30 grams
	Laptop	35-45 grams
	Hybrid Vehicle	5,000 grams
	Electric Vehicle	40,000-80,000 grams



¹Source: Albemarle, 2015

²Source: Bloomberg New Energy Finance and Global X Research, 2017



Lithium & Battery Tech

Vehicle manufacturers are starting to taking Electric Vehicles (EVs) seriously now, too, with significant plans for electrified models and in some cases, proprietary battery factories.

	EV Plans
GM	plans 20 electric vehicle models by 2023
Mercedes	investing \$1 bn in a battery plant and plans 50 electrified car models by 2022
Ford	plans to spend \$4.5 bn over five years to develop electrified vehicles
Volvo	all cars will have electric motor by 2019 (EV and Hybrids)
BMW	plans for 25 EV models by 2025
Volkswagen	developing 5 electric car models for 2019, with a focus on the Chinese car market. Entire fleet will be electric by 2030
Jaguar/ Land Rover	all cars will have electric or hybrid option by 2020 (EVs and Hybrids)

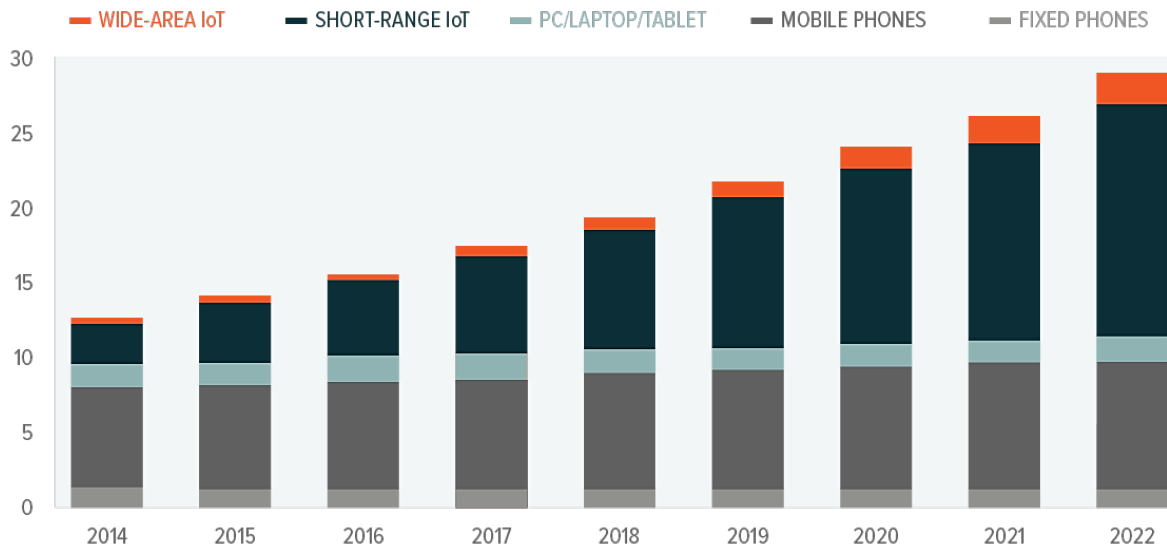
Sources: Wired, "General Motors is Going All Electric," Oct 2, 2017. LA Times, "General Motors, with an Eye on China, Promises at least 20 all-electric vehicles by 2023," Oct 2, 2017. Clean Technica, "Jaguar Land Rover – All Models to Include Electric or Hybrid Option by 2020," Sep 7, 2017. Greentech Media, "Mercedes Plans to Invest \$1 Billion in an Electric SUV-Plus-Battery Plant in Alabama," Sep 21, 2017. TechCrunch, "BMW's I Vision Dynamics targets Tesla-Topping Range in four-door Coupe," Sep 12, 2017.



The Internet of Things

How Fast is the IoT Growing?

Connected Devices (billions)¹



What is Driving the Growth of the IoT

- **Rapidly falling costs** for chips that can connect devices to the internet
- **Improved internet speed and coverage** allows for more data transmission from more devices
- **Strong consumer demand** for IoT products like wearables and smart home devices
- **Growing commercial adoption** in industrial manufacturing, infrastructure, health care, and real estate

1. Source: Ericsson Mobility Report, June 2017. Data after 2016 are estimates.



The Internet of Things

The Internet of Things is at the crossroads of many disruptive themes and technologies.

What's the IoT's role?

Driverless Cars

Autonomous vehicles depend on the internet of things for the sensors and networking ability to download maps and communicate with other cars and infrastructure

Smart Cities

The IoT allows cities to improve safety via wireless video cameras, reduce traffic through smarter stoplights, and improve the environment by using smart meters for better resource management.

Smart Homes

Many home appliances and devices are becoming internet-enabled, from refrigerators that know what food you have, to lighting and climate control that know your personal preferences.

Robotics

Robots are getting smarter. While much of the attention goes to advancements in artificial intelligence, the IoT plays a critical role in data collection and sharing among robots that facilitates machine learning and enhanced abilities.



The Internet of Things

The internet of things is not just one industry, but an ecosystem of firms from chip manufacturers, to network providers, and product manufacturers.

Which Companies Potentially Stand to Benefit from the Emergence of the Internet of Things?

1

Connected Device Manufacturers: Creators of wearables, smart meters, and appliances.

2

Network Providers or Services: IoT depends on fast, secure, and reliable networks to transmit information from sensors to data processors and control systems.

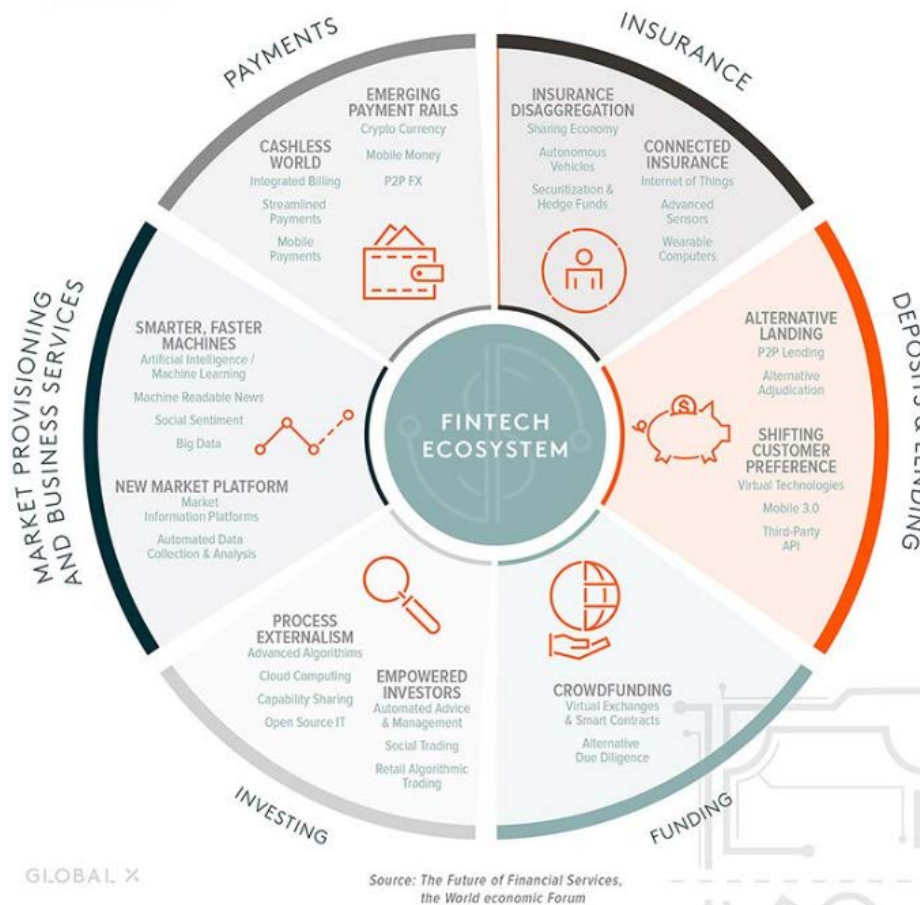
3

Semi-Conductor Manufacturers: IoT is expected to increase demand for microcontrollers, sensors, communication devices and flash memory.



What is FinTech?

Financial technology, or 'FinTech' firms, apply technological innovations such as advancements in software, mobile connectivity, and data & analytics, to disrupt or improve the financial services industry

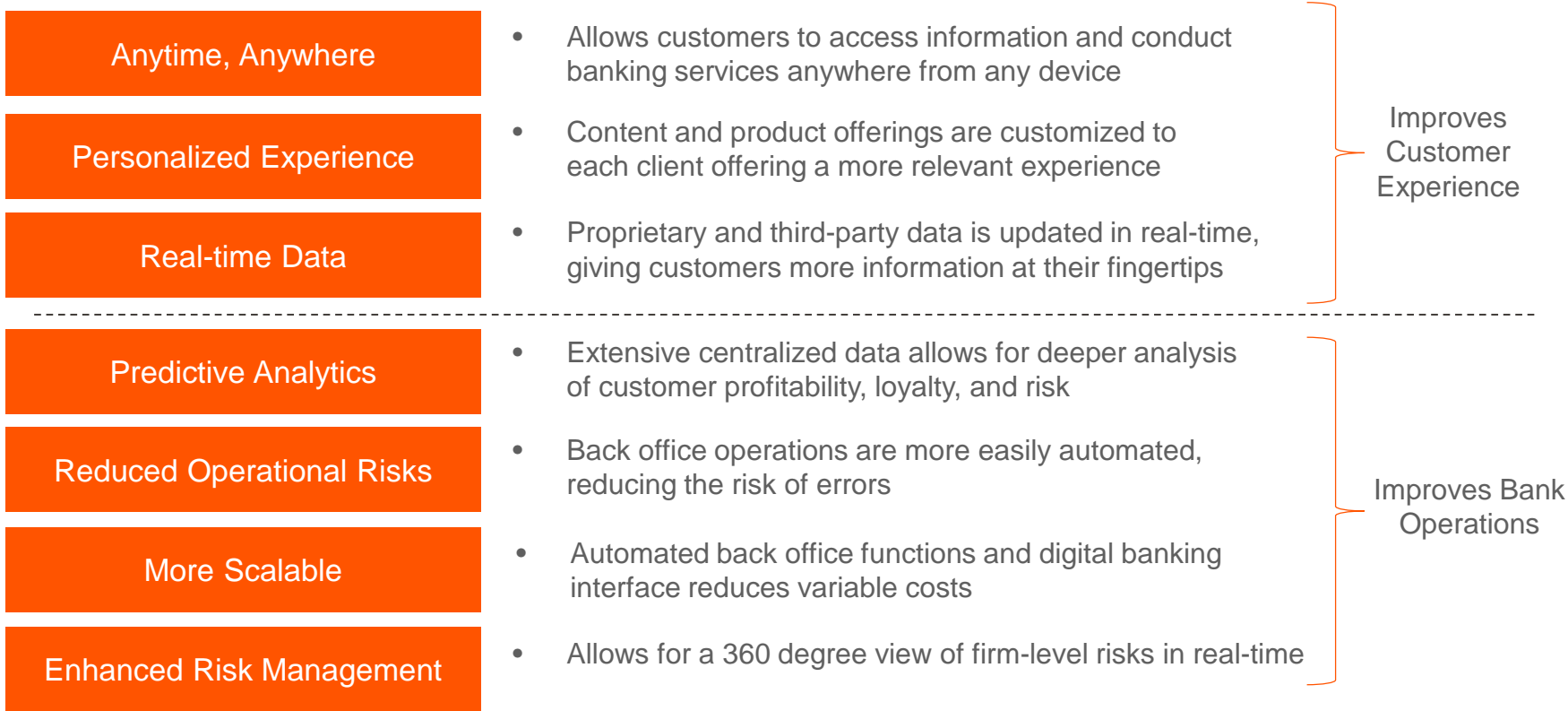




FinTech: Digitalization of Banks

Banks that are effectively digitalized have significant advantages over others in both customer experience and bank operations

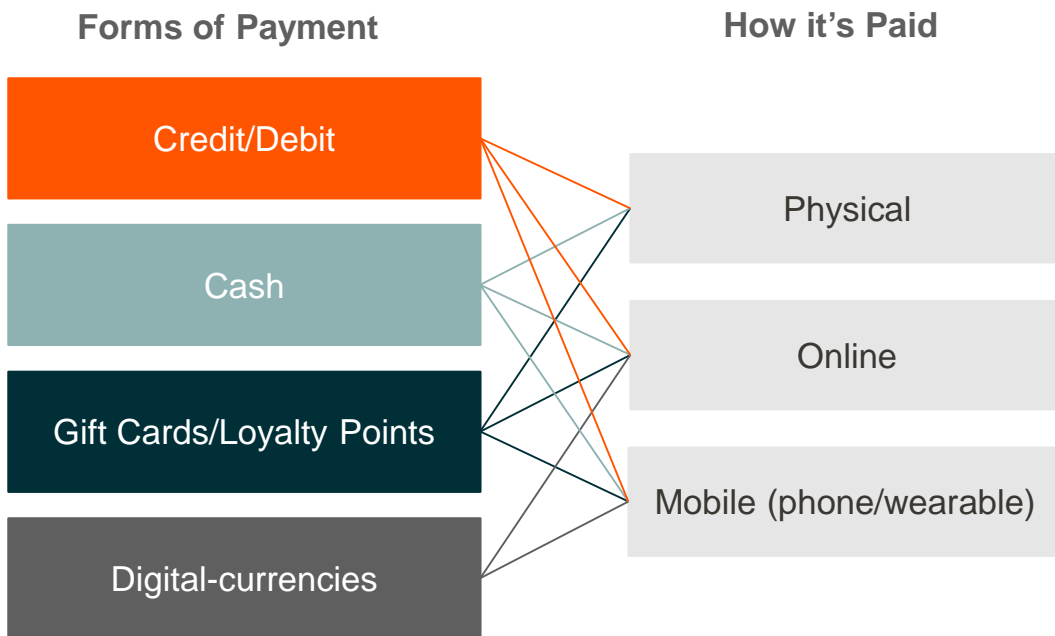
Advantages of going digital





FinTech: Digital Payments

Buying a Cup of Coffee has Never been so Complicated...



Ways to Buy a Coffee at Starbucks¹

- Starbucks Cards
- Starbucks Mobile App
- Chase Pay
- Apple Pay
- Google Pay
- PayPal
- Visa Checkout
- Credit Cards
- Cash
- Digital Currency*

*reportedly under development

1. Starbucks, CNBC.com



FinTech: Digital Payments

Why are digital payments on the rise? Customers want reliable, convenient, and secure transactions



Potential Advantages of Digital Payments

- 1 Convenience**
 - Eliminates need for a physical wallet
 - Seamlessly facilitates transactions
- 2 Security**
 - Potentially less risk of loss through theft or misplacement of physical cash
 - Record of transactions can be audited to settle disputes
- 3 Data**
 - Personal spending can be recorded, categorized, and monitored
- 4 Costs**
 - Often avoids or reduces traditional fees like ATM withdrawal or money-transfer

Growth of Digital Payments¹

- Non-cash transactions increased 11.2% from 2014 to 2015
 - 21.6% in developing markets vs. 6.8% in mature markets
- Growth expected to continue at 10.9% pace annually through 2020
- Online and mobile payments made up 31.2% of these payments, which is expected to grow to 45% by 2019

1. Capgemini, "World of Payments Report, 2017," Oct 2017.



FinTech in Emerging Markets

FinTech is uniquely suited to disrupt financial services in emerging markets given a rising consumer population entering the banking system for the first time

Why FinTech may be Poised to Disrupt Emerging Markets

- 1 Market Size:** In China and India, the number of middle class consumers has grown at 6% per year, compared to just 0.5% growth in developed markets. Analysts estimate \$380 billion in potential revenue from extending financial services to the unbanked.^{1,2}
- 2 Competition:** Traditional financial institutions in emerging markets tend to be very concentrated, creating opportunities for FinTech firms to compete on price or innovation through scalable technologies.
- 3 Leapfrogging Technology:** Many EM consumers are using banking and non-cash payments for the first time, allowing them to be quicker adopters of new technologies and business models like mobile payments and peer-to-peer lending.
- 4 Government Support:** governments typically support FinTech development given that it can extend financial services to the unbanked, create high tech jobs, and make wealth and transactions more trackable.

¹The Atlantic, "the Uprising of the Global Middle Class," Aug 25, 2017.

²Accenture, "Billion Reasons to Bank Inclusively," 2015.



What is Cloud Computing?

The cloud computing industry is involved in the delivery of computing services such as servers, storage databases, networking, software, analytics and more over the Internet, often referred to as 'The Cloud'.

TYPES OF CLOUD COMPUTING COMPANIES^{1,2,3}

CATEGORY	DESCRIPTION	'18 MARKET SIZE (\$ BN)	'22-22 MARKET SIZE (\$ BN)
Software as a Service (SaaS)	Licensing and delivery of software over the internet on a subscription basis which is sometimes called as "on-demand software."	\$72.2	\$113.1
Platform as a Service (Paas)	Providing a platform for creating software applications which are delivered over the internet.	\$15.2	\$27.2
Infrastructure as a Service (IaaS)	Providing virtualized computing resources over the internet. These services include pooled resources like shared storage, shared servers, etc.	\$46.6	\$63.0
Data Center REITs	Owning and managing facilities that customers use to safely and efficiently store data. They typically offer a range of products and services to help keep servers and data protected, including providing uninterruptable power supplies, air-cooled chillers and physical security.	\$25.0	\$31.0
Cloud and Edge Computing Infrastructure/Cloud Infrastructure Components	Manufacturing or distributing hardware components like chips that are built into servers, specialized network switches and routers, etc. used in cloud and edge computing activities.	\$53.8	\$88.6
TOTAL		\$187.8	\$323.4

Sources: 1. Gartner 2018, 2. Credit Suisse 2018, 3. IDC, 2019



Cloud Computing: Empowering business & consumer applications

Cloud computing provides the scalable resources to gather, analyze and store all kinds of data used for a variety of advanced applications.

Propelling Innovation Forward

CLOUD ENABLES EMERGING TECHNOLOGY



Key Points

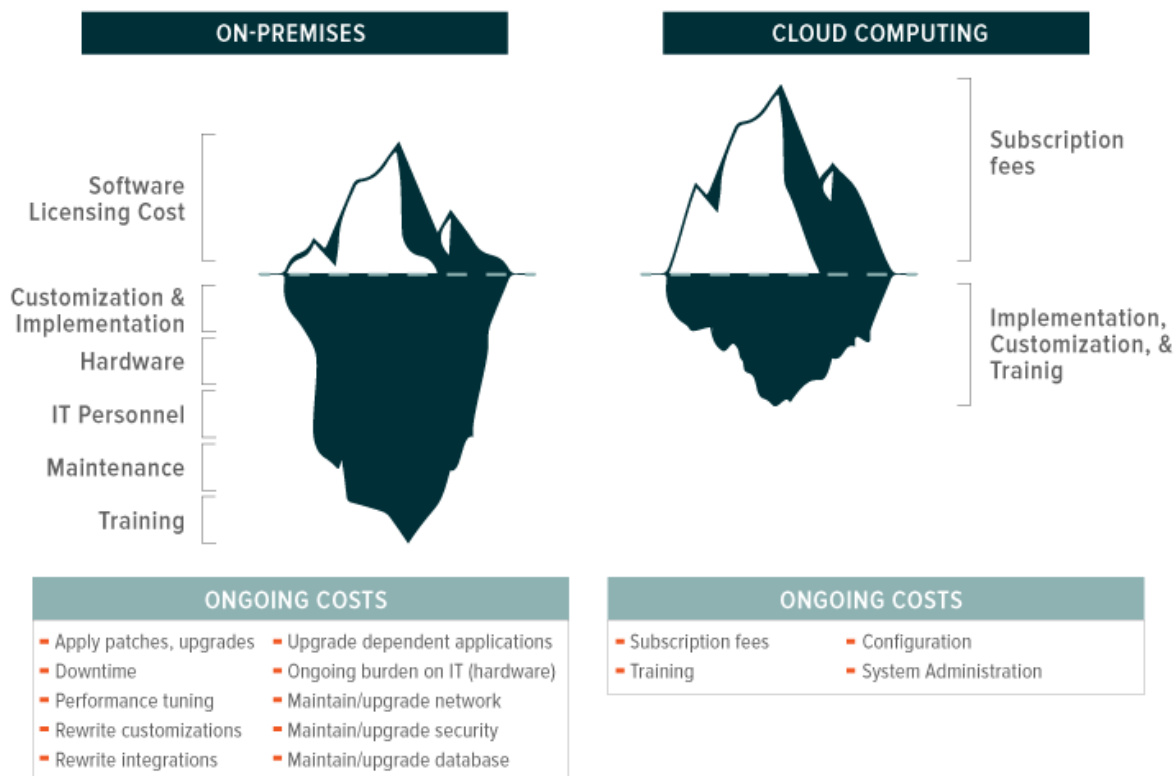
- 1 Cloud enables mission critical business applications from cybersecurity to enterprise resource planning (ERP) and customer relationship management (CRM).
- 2 Consumers also increasingly engage with cloud-enabled streaming services, including AR/VR, gaming and social media.
- 3 Cloud computing provides the scalable infrastructure to process big data collected from the internet of things, as well as the compute power needed for artificial intelligence.



Cloud Computing: Attractive business model

Users of the public cloud generally pay a recurring subscription fee based on usage, offering a more predictable, service-oriented model for consumption of IT resources.

THE TIP OF THE ICEBERG: CLOUD VS. ON-PREMISES INFRASTRUCTURE



Sources: WestMonroe Partners

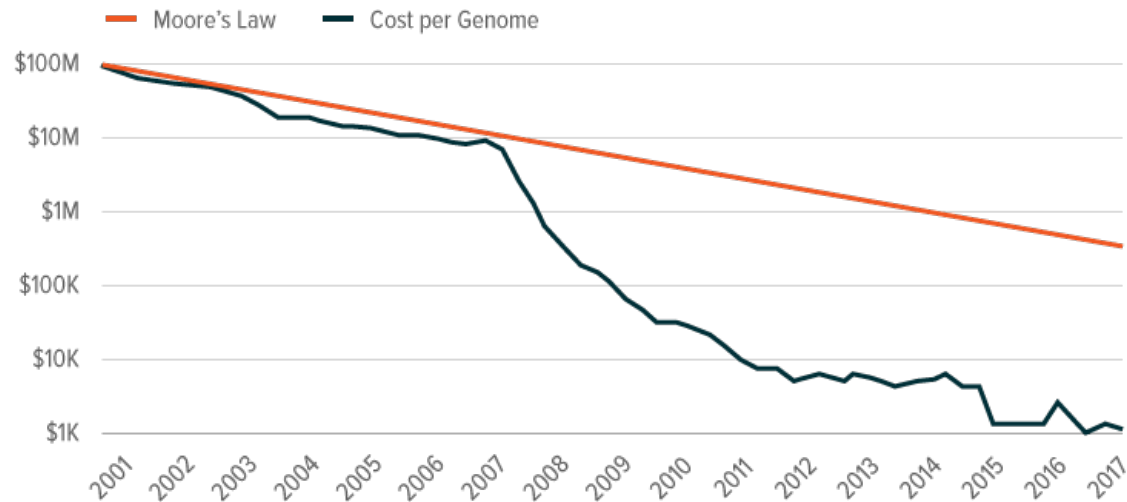


Genomics

How Fast are Genomic Sequencing Costs Falling?

FIGURE: FALLING COSTS OF HUMAN GENOME SEQUENCING (2001-2017)

Source: NIH, National Human Genome Research Institute, Apr 25, 2018



What is Driving the Growth of Genomics?

- **Rapidly falling costs** for genomic sequencing and genetic testing
- **Curing previously incurable diseases** with innovative therapies and treatments
- **Rise of precision medicine** to personalize health care and improve patient outcomes
- **More data** acts as a positive feedback mechanism for R&D and identifying new treatment pathways



Genomics: Innovative treatments for genetic disorders

The genomics industry includes several subsectors that are helping diagnose and treat many genetic disorders with innovative methods.

TABLE: EXAMPLES OF MENDELIAN (SINGLE-GENE) DISEASES

Disease	Type of Inheritance	Estimated Afflicted Globally
Cystic Fibrosis	Autosomal recessive	70,000 ⁵
Duchenne Muscular Dystrophy	X-linked recessive	300,000 ⁶
Hemophilia A	X-linked recessive	140,000 ⁺⁷
Huntington's Disease	Autosomal dominant	30,000 ⁺⁸ (US only)
Rett Syndrome	X-linked dominant	373,000 ⁹
Sickle-cell Anemia	Autosomal recessive	120,000,000 ¹⁰

Approximately 50,000 diseases are caused by a single-gene mutation



Understanding the genomics industry

Genomics sequencing is the process of determining the exact order of one's DNA.

Computational genomics uses computational and statistical analysis to decipher insights from genome sequences and data.

Gene therapies seek to detect, cure or treat diseases by identifying and/or modifying an organism's gene expression or functioning.

Gene editing inserts, deletes or replaces DNA at a specific site in the genome of an organism.

Sources: 5. Cystic Fibrosis Foundation 2019 6. Cure Duchenne 2018 7. World Hemophilia Federation 2015 8. NIH 2018 9. NIH 2019 10. WHO 2018



Genomics: The rise of precision medicine

Precision medicine, also commonly referred to as personalized medicine, uses a patient's genetic information to select the most suitable treatment option for illness.

PRECISION MEDICINE: MORE PERSONALIZED DIAGNOSTICS

Source: CrownBio



- Patients with the same illness often experience different treatment-related symptoms.
- Precision medicine seeks to narrow divergent outcomes by leveraging a better understanding of one's genes to explain why some treatment approaches are better or worse than others for any individual.
- Genomic sequencing and computation, coupled with innovative treatments like gene therapy and editing, **should** help fuel the rise of precision medicine.

Market Size¹

Genomics sequencing: \$25.5 billion in 2025, up from \$6.2 billion in 2017, with a compound annual growth rate (CAGR) of 19.0%.

Computational biology: \$6.8 billion in 2024, up from \$2.3 billion today, with a CAGR of 19.5%

Gene therapy: \$4.4 billion in 2023, up from just \$584 million in 2016, with a CAGR of 33.3%.

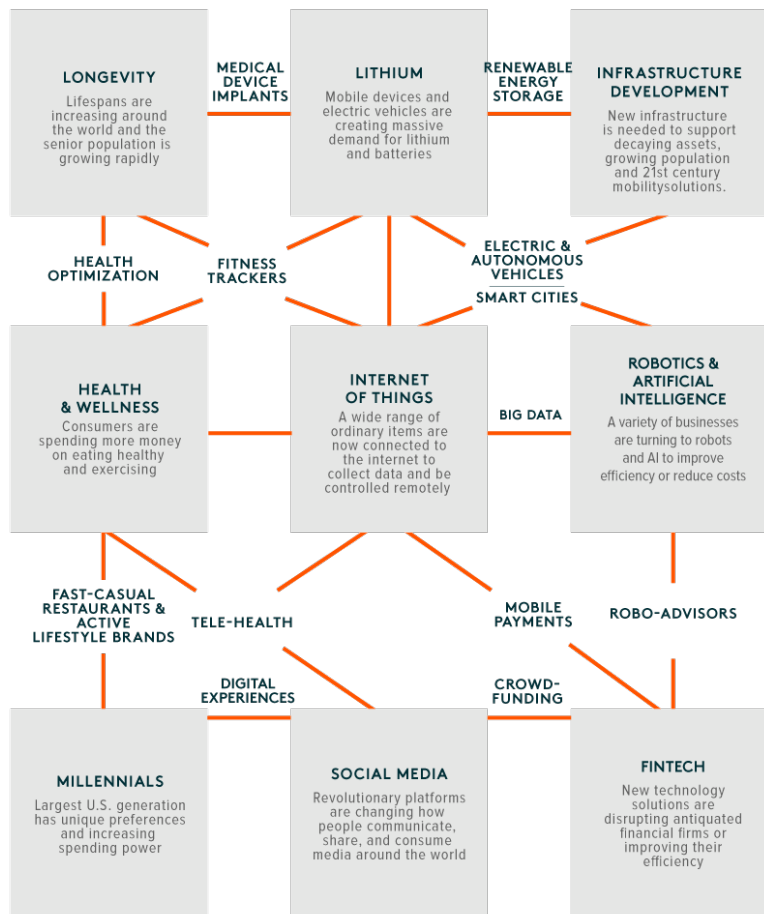
Gene editing: \$7.5 billion by 2024, up from \$3.0 billion in 2017, with a CAGR of 14.5%.

1. Sources: Allied Market Research, Mordor Intelligence, Global Market Insights



When Themes Converge

McKinsey: “In our experience, the most attractive opportunities are found when **multiple themes converge** and reinforce one another...”¹



Quote

“It’s no coincidence that **consumers are becoming more focused on health and wellness, while at the same time people are living longer around the world.** Nor is it happenstance that social media firms are reporting record revenues, just as Millennials are beginning to see their earnings and consumption power accelerate. As investors vet various themes for possible inclusion in a portfolio, they may be well-served by targeting similarly interconnected ideas.”

-Global X Research, “Chart: What Happens When Themes Converge,” April 13, 2017

¹From Indexes to Insights: The Rise of Thematic Investing’, McKinsey 2014.



Where Does Thematic Investing Fit in a Portfolio?

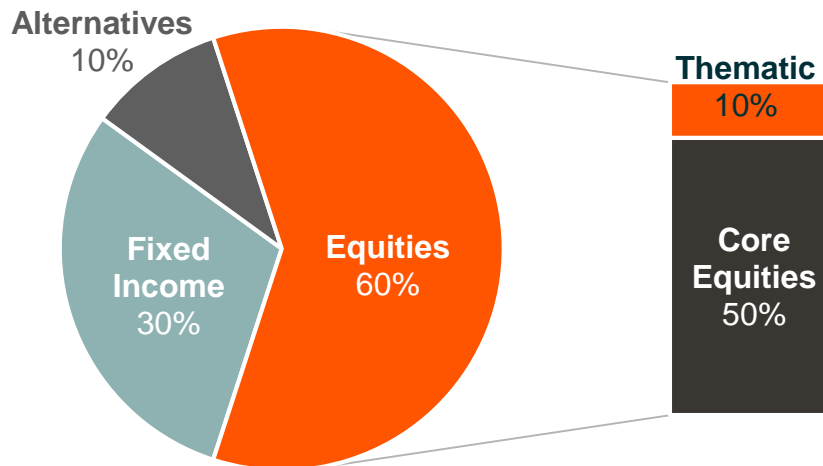
Thematic investing is typically a satellite position or an equity sleeve in a growth-oriented portfolio

Thematic investing tends to:

- Be alpha-seeking
- Have a long time horizon (>5 years)
- Be growth-oriented
- Equity-based

Thematic strategies may fit best in a portfolio when:

- The portfolio is growth-oriented
- The investor has a longer time horizon
- It replaces a portion of core or growth equity exposure, keeping asset allocation generally the same





Global X's Thematic Growth Suite of ETFs

Global X has 14 ETFs designed to target disruptive structural changes¹

Targets companies that may benefit from structural changes in people and demographics, technology and innovation, the availability of resources.

Global X Thematic ETFs

Technology

Social Media ETF (SOCL)

Lithium & Battery Tech ETF (LIT)

FinTech ETF (FINX)

Internet of Things ETF (SNSR)

Robotics & Artificial Intelligence ETF (BOTZ)

Autonomous & Electric Vehicles ETF (DRIV)

Future Analytics Tech ETF (AIQ)

Cloud Computing ETF (CLOU)

Genomics & Biotechnology ETF (GNOM)

People

Millennials Thematic ETF (MILN)

Longevity Thematic ETF (LNGR)

Health & Wellness Thematic ETF (BFIT)

E-commerce ETF (EBIZ)

Infrastructure

U.S. Infrastructure Development ETF (PAVE)

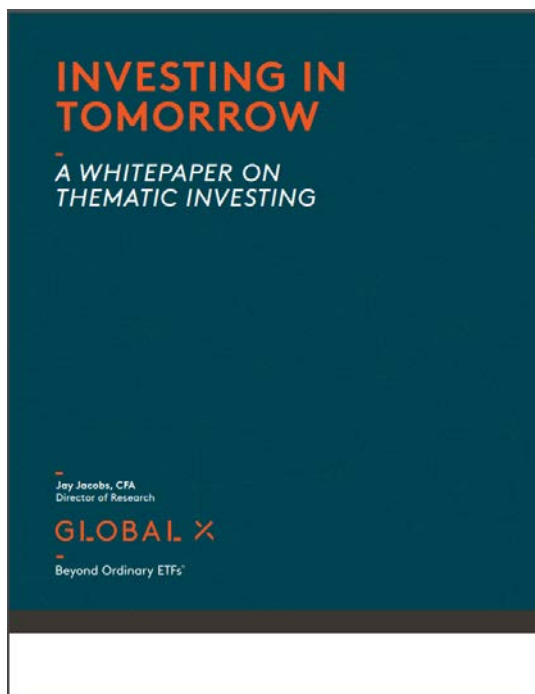
¹As of 4.16.2019.



Thank You!

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What's Driving FinTech's Growth?

FinTech is emerging as a powerful theme in 2018, driven by the rapid adoption of cutting edge technologies across the financial services industry, such as digital payments and money transfers, financial software and automation, and alternative lending and funding platforms. In this piece, we look at the major trends that are propelling FinTech's growth, including:

- The digitalization of financial services
- The rising number of payment options at retailers
- Tapping into the emerging markets' middle class
- The expansion of FinTech beyond traditional financial services

Digitalization of Financial Services

Digitalization has changed how financial services firms interact with their customers and conduct their back-end operations. Historically, customers consolidated much of their financial needs at a single financial firm's local branch where they worked with the bank's staff to conduct deposits, loans, mortgages, and investments. With digitalization, customers now frequently access automated versions of these services online, allowing for more convenient and seamless experiences. According to a survey by PWC, 49% of consumers now conduct their banking primarily on their desktop or smartphone.¹ At the same time, the number of bank branches in the US has already shrunk by about 8% from their peak, and some analysts expect the number to fall by another 20% through 2027.²

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Disclosures continued



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