From global trends to local gains: Finance's role in a shifting world

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Today's agenda

1

Global mega trends

2

Emerging tech trends

3

Convergence & impact for finance

4

Transforming to finance of the future



"To improve is to change; to be perfect is to change often."

— Winston Churchill

"Change is the law of life. And those who look only to the past or present are certain to miss the future."

Change is great, until in happens to you! — John F. Kennedy

"The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking."

— Albert Einstein

Megatrends



Megatrends



Megatrend one: Climate change



Megatrend four: Demographic shifts



Megatrend two: Healthcare transformation



Megatrend five: Technological disruption



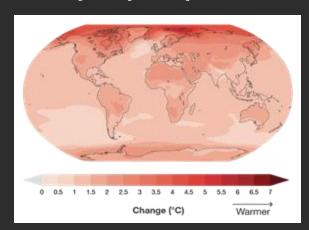
Megatrend three: Social instability

Climate change



Temperatures in some regions will rise much faster than in others

Annual mean temperature change (°C) relative to 1850-1900 Simulated change at 1.5°C global warming



Source: Figure SPM.5, Panel (b) from PCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I b the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Masson-Delmdte, V., P. Zhai, A. Pirari, S.L. Comors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Lettzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3–32, doi:10.1017/9781099157896.001.

Rising sea levels endanger major cities and countries

Cities expected to be at least partially submerged by 2030, if no coastal defences are employed

- · Amsterdam, Netherlands
- Ho Chi Minh City, Vietnam
- Bangkok, Thailand
- New Orleans, USA
- Basra, Iraq
 Venice, Italy

Land projected to be below tideline in 2030 (orange)

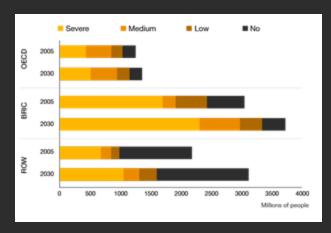


Source: Climate Central, Coastal Risk Screening Tool

By 2030, nearly half of the world's population will live under conditions of severe water stress

Populations living in areas of water stress

2005 vs. 2030



Note: OECD = Organisation for Economic Co-operation and Development; BRIC = Brazil, Russia, India, China: ROW = Rest of World

Source: UNEP (2015) Options for decoupling economic growth from water use and water pollution. Report of the International

Resource Panel Working Group on Sustainable Water Management

Healthcare transformation



With increasing acknowledgement of mental health, worsening global conditions are being revealed

Mental Health Quotient (MHQ) scores across countries, 2021



Alternative care models outside of institutions, such as care to community, are being recognized

Figure A: Institutionalization vs home care funding (as % of GDP)

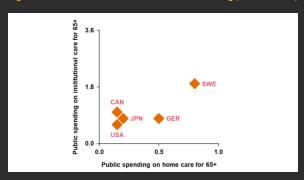
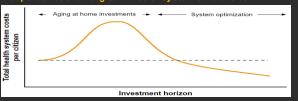


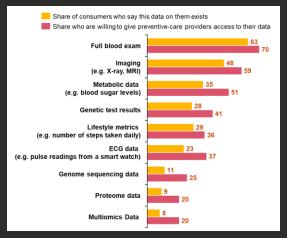
Figure B: Investing in aging at home program for patient independence and long-term health system efficiencies



Source: Taking care to community: Increasing the use of community care providers, PwC

Citizens are open to data sharing if it means better healthcare results

Availability and sharing of personal diagnostic data among consumers



Note: Percentages represent change in % compared to 2020 Source: Mental State of the World 2021, Sapien Labs

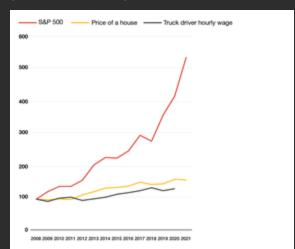
Source: PwC survey of 1,500 consumers in France, Germany, Italy, Spain, the UK and the US $\,$

Social instability



With labour wages stagnating and returns on assets exploding, wealth will increasingly concentrate in fewer and older people

Truck driver hourly wage vs. price of a house vs. S&P 500 (US, 2008-2021, 2008=100)



Source: Data from Statista, https://www.statista.com/statistics/916107/freight-trucking-driverwages-per-hour-us/; U.S. Census Bureau and U.S. Department of Housing and Urban Development, Median Sales Price of Houses Sold for the United States [MSPUS], retrieved from FRED, Federal Reserve Bark of St. Louis, https://fred.stous/sed.org/series/MSPUS, September 9, 2022; S&P 500 annual return data from Macrotrends, https://www.macrotrends.net/2526/sp-500-hisbin/cal-annual-return. Countries with low median age find it increasingly difficult to create enough jobs for their growing youth population

Unemployment among youth 2021



Note: Youth is defined as the world's labor force aged 15-24
Source: ILO estimates, Global Employment Trends for Youth 2020: Technology and the future of jobs, International Labour Organization, 2020.

The general population's trust in institutions remains at a low level

Average trust in institutions (government, business, NGO, and media)

2022, index



Source: 2022 Edelman Trust Barometer

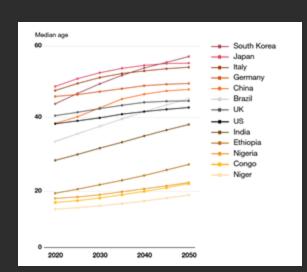
Demographic shifts



Median age in all countries around the globe is increasing, but at different rates and from a different starting position

Median age of population

2020-2050, select countries

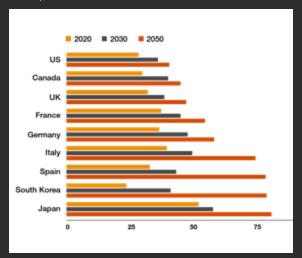


Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, custom data acquired via website; PwC analysis

In countries with high median age, the oldage dependency ratio is increasing quickly, putting massive strain on social welfare systems

Old-age dependency ratio

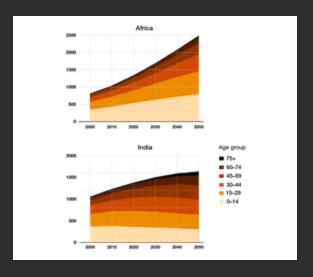
Number of people aged 65+ per 100 people of working age (aged 20-64), select countries



Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, custom data acquired via website; PwC analysis.

In countries with low median age, the number of people ready to enter the workforce will grow massively

Number of people by age group (million)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, custom data acquired via website; PwC analysis.

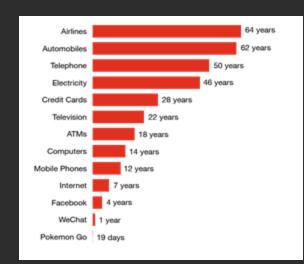
Technological disruption



The pace of technological innovation is increasing

Time it took to hit 50 million users

select products and technologies

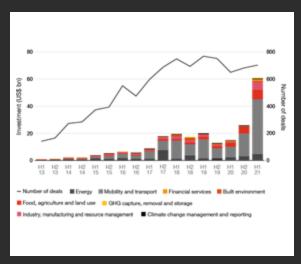


Source: Visual Capitalist

¹Medical News Today, What to know about social media and mental health

Technology is a prerequisite for addressing the challenges caused by the Megatrends, for instance climate change

Investment into climate tech start-ups and number of deals 2013-2021

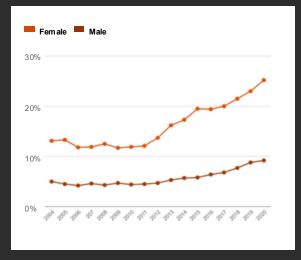


Source: PwC State of Climate Tech 2021

Technology has serious unintended consequences; social media, for example, is widely recognised¹ to be a driver of mental health issues, especially among youth

Percentage of US youth with a major depressive episode in the past year

2004-2020



Source: Substance Abuse and Mental Health Data Archive (SAMHDA)

Emerging technology trends



THE ESSENTIAL EIGHT

Augmented Reality • Drones • Virtual Reality • 3D Printing • IoT • Robotics • Quantum Computing • AI

We continuously analyze emerging technologies and have identified **eight** that are having the biggest business impact right now.



Augmented reality

Augmented reality (AR) is a data or information "overlay" on the physical world that uses contextualized digital information to augment the user's real-world view.

Data Visualization

Transportation Safety

Customer Experience

Manufacturing Operations



Virtual reality

Virtual Reality (VR) is a simulation of a 3-D image or complete environment where a user can interact in a seemingly realistic way.

Marketing

Virtual Tours

Training

Prototyping and Design



Drones

Drones are devices that fly or move without the presence of a pilot and can be used to collect a wide range of data or execute tasks remotely.

Maintain Infrastructure

Remote Delivery

Provide Security

Capture Video



3-D printing

3-D Printing is the process of creating a three-dimensional object by successively printing layers of materials on one another until an object is formed.

Spare Parts

Rapid Prototyping

Architectural Models

Complex Manufacturing



Internet of things

The Internet of things (IoT) extends network connectivity and enables a diverse range of devices to collect, process, and send back data.

Asset Tracking

Smart Metering

Fleet Management

Smart Agriculture



Artificial intelligence

Al is an umbrella term for "smart" technologies that are aware of and can learn from their environments to assist or augment human decision making.

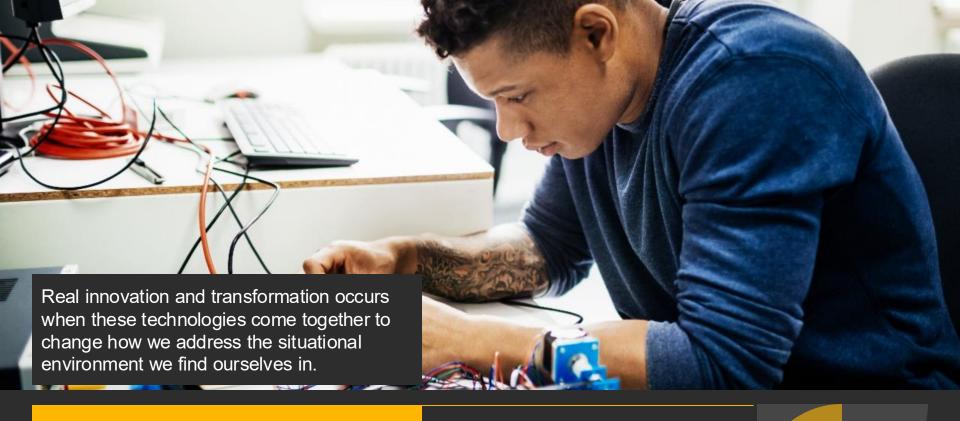
Machine Learning

Recommendation Engines

Chatbots

Image Recognition





CONVERGENCE

Change is Constant, but our future is bright

"Every body continues in a state of rest or of uniform motion in a straight line unless it is compelled to change that state by forces impressed upon it".

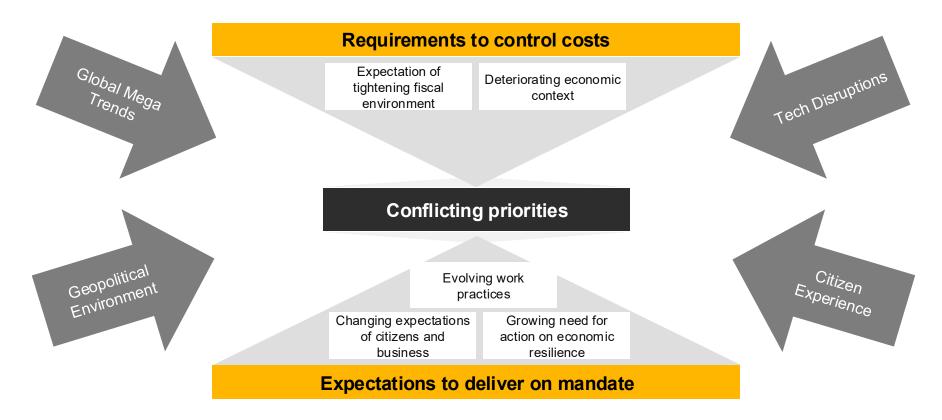
- Sir Issac Newton



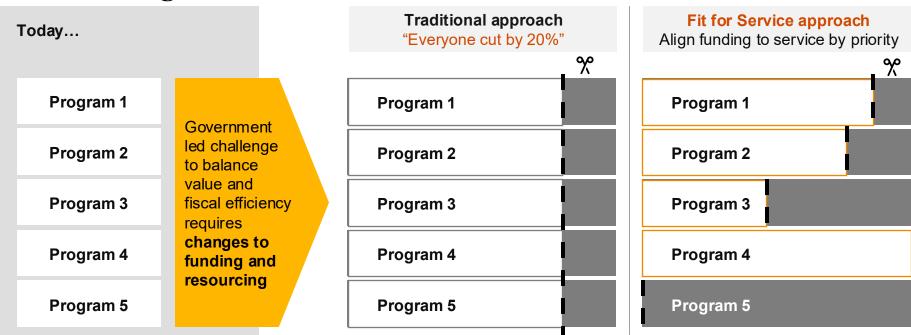
The tariff 'crisis' presents an opportunity for Government and Political Leaders to accelerate long term planning for our economy

Short-term planning Long-term planning Relative economic impact of interventions Limit the damage caused by tariffs Build long-term economic potential, taking into account various scenarios for how the economy could evolve · Protect the solvency of firms and households through financial assistance Establishing sovereign value chains in traditional sectors (i.e., subsidies, grants, tax relief Diversifying sectors, particularly into high IP areas incentives) or creditor protection · Upskilling and attracting talent for future growth Government response · Attracting capital for investment in innovation ecosystems Further reducing red-tape within and across government · Increasing the effectiveness of government with finite resources

An unfavourable macro environment will create pressures to deliver on our mandate with less resources

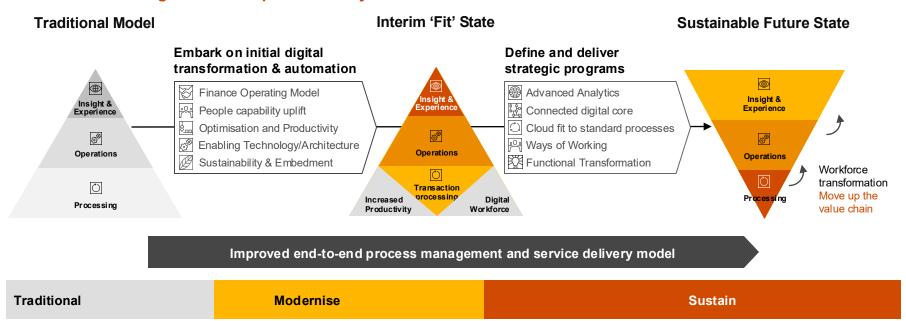


A 'Fit-for-Service' government provides an opportunity for **Finance Leaders** to be **strategic partners in our cost management and investments** to build a **stronger foundation** for the future



Future of Finance 'Fit-for-Service' priorities will drive efficiency, effectiveness and value creation...

The 3 horizons of high-level enterprise maturity



The Takeaway: Strategic Partners in Transformation

With the ever-evolving environment around us, we have an opportunity to take a proactive approach in addressing the challenges we're facing and to set the stage for the Future Finance Workforce









Define your transformational ambition

Build organizational capability to transform

Understand your workforce and build a future-fit people strategy

Embrace transformative leadership as a catalyst for fiscal change

Thank you



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