

G-20Y
Summit

We design **our world**



G-20Y Summit 2016

Final Perspectives

21-25 September 2016
St. Moritz, Switzerland

There are a few places in the world where the future is being built.

The G-20Y Summit is one of them.

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ABOUT G-20Y ASSOCIATION AND G-20Y SUMMITS

The 7th G-20Y Summit was held in St. Moritz, Switzerland, from September 21 to September 25, 2016.

The G-20Y Summit participants 2016 were individuals in corporate executive leadership positions from the most prestigious leading companies in the world and leading companies in their sectors and in G20 countries, owners of world's and national leading companies, or individuals in leading positions with governmental or public institutions.

One of the objectives of the G-20Y Summit is to assemble a set of perspectives from future business leaders on the most critical economic and geo-political issues that should be tackled by G20 leaders, policy makers, business leaders, industry bodies and the greater society.

The G-20Y business community adds value and contributes by raising fresh thinking and capturing the attention of the relevant institutions to identified questions in order to inspire those to develop relevant solutions and policies on those questions.

While the G-20Y remains entirely independent from the G20, the annual perspectives are disseminated across the world and shared, in particular, with the Heads of States and organizations such as IMF, World Bank, UN, OECD, European Commission or Basel Committee on Banking Supervision, International Association of Insurance Supervisors, International Organization of Employees, CGIAR Consortium, World Energy Forum and other associations to which the output of the respective G-20Y Summit Committees might have an impact and relevance.

Participants during the G-20Y Summits 2010-2016 have been representatives from, for example, HSBC Holdings, Mastercard, Statoil, Societe Generale Group, PepsiCo, Credit Suisse, ORIX Corporation, FedEx, KPMG, Nestle, ING Group, Eni, Rolls-Royce, Insurance Australia Group, Siemens, Prudential Financial, Total, Intesa Sanpaolo, Airbus, Standard Bank Group, E.ON, Bosch, Bayer AG, EDF, Zurich Insurance Group, PwC, Lufthansa, Enel Green Power, Philips, Deutsche Bank AG, Royal DSM, Swiss Re, Unilever, Munich Re, Lafarge, Nordea Bank, Mercedes-Benz AG, GDF Suez, Schneider Electric. The list of participants has also included senior official representatives of national and regional governmental organizations.

G-20Y Summits are organized by non-governmental G-20Y Association headquartered in Geneva, Switzerland.

G-20Y SUMMIT FINAL PERSPECTIVES 2016

1. We, the young business and financial leaders of the G20 countries, gathered in St. Moritz, Switzerland, for the seventh annual meeting of the G-20Y Summit on September 21 – 25, 2016, with an overall view to strengthen international cooperation between business and financial leaders and to find innovative ideas towards sustainable prosperity on a mid- to long-term perspective.
2. As a result of three days and five formal sessions of discussions, we, the young business and financial leaders of the G20 countries, have assembled a set of perspectives on the seven topics on the G-20Y agenda, namely:
 - I. Energy Markets Committee
 - II. Food Security and Nutrition Committee
 - III. Global Financial Industry Committee - Banking Subcommittee
 - IV. Global Financial Industry Committee - Insurance Subcommittee
 - V. Global Demographic Developments Committee
 - VI. Creating Jobs Committee
 - VII. Digital Innovation and Transformation Committee
3. The G-20Y business community adds value and contributes by raising fresh thinking and capturing the attention of the relevant institutions to identified questions in order to inspire those to develop relevant solutions and policies on those questions.

DISCLAIMER: THE PRESENT PERSPECTIVES ONLY REFLECT THE VIEWS AND RECOMMENDATIONS OF THE G-20Y SUMMIT PARTICIPANTS THEMSELVES, NOT THOSE OF THEIR COMPANIES OR EMPLOYERS.

THE VIEWS AND PERSPECTIVES ON THE SEVEN TOPICS ARE THOSE OF THE SEVEN COMMITTEES WORKING ON EACH OF THESE TOPICS. THEY DO NOT NECESSARILY REFLECT THE POSITION OF ALL OF THE G-20Y SUMMIT PARTICIPANTS.

I. ENERGY MARKETS

4. We, as a business community aim at capturing the attention of the relevant institutions to identified questions in order to inspire those institutions to the development of relevant solutions and policies on those questions and we aim at staying in constant dialogue and intellectual exchange with them.

Awareness of the Energy market in transition and the externalities of the energy industry

5. Due to the focus on climate change and subsequent technological developments, the energy market has become highly dynamic and is transitioning, however regulations have not caught up with the changes. There is an asymmetry of time horizons between investors in energy production projects and governments and regulators. Approaching energy as a discrete industry is leading us to miss opportunities for greater global good across multiple areas.
 - Energy market regulation is not fit for purpose to accommodate disruptive digital transformation.
 - Consumers do not see energy as a value add service and expect it as a public service.
 - By failing to look beyond energy as a discrete industry we are missing economic, environmental and health opportunities.
6. Regulators are not reacting in a timely way to changes with potential impact on the energy market environment. Such changes are becoming more frequent, addressing more stakeholders and affecting other market environments. Challenges for regulators are mainly represented by fast developing technologies, innovative business models or unprecedented stakeholder roles.
7. Energy is seen as a public service, which was the case when most energy providers were state owned. In the current market this perception is not reflective of the reality of the situation. We need to shift public perception of energy as a public service to a value added service. This will require a concerted effort by governments and suppliers.
8. Finally, there are externalities from improvements in the energy market which are not currently being leveraged. Opportunities for economic development, health and the environment are all available and with a less siloed approach to energy could be fully optimized. There are opportunities to link non-traditional players to the energy market which would benefit consumers and producers.

Developing energy market principles to allow the requisite balance of flexibility and sustainability

9. Current energy markets are based on antiquated models, sub-optimal energy mix and inefficient supply base. Historical investments in traditional energy sources are being challenged by new market dynamics which require increasing flexibility. Regulation and market structure are providing inefficient signals for investment in new technologies, discouraging divestment of stranded assets, and not considering complementary industries such as transport.
 - Inconsistent allocation of economic levers is stopping governments from achieving policy objectives of reducing carbon emissions and ensuring security of supply.
 - Pricing mechanisms do not reflect the true cost of energy generation which negatively influences consumer choice.
 - Despite the market shifting to providing a more integrated energy provision service, regulation is approached in a siloed manner (electricity, transport fuels and heat).

10. Clear, long term policies and consistent market principles are essential to encourage appropriate pricing mechanisms, capital investment and to attract financing in transition technologies and renewables. Market rules allowing energy sources to compete on a level playing field will result in efficient allocation of capital investment for long term assets and also achieving carbon reducing policy.
11. If we wish to harness consumer power to help shift the energy mix towards a lower carbon future we need energy pricing to reflect the true cost of generation and supply, this will allow people to make informed choices.
12. Coordinated approach to regulation across electricity, transport and heat will ensure a smooth managed transition from traditional investments to a wide range of integrated new technologies. For example, electric vehicles cut across transportation and electricity and joined-up regulation is needed to enable progress.

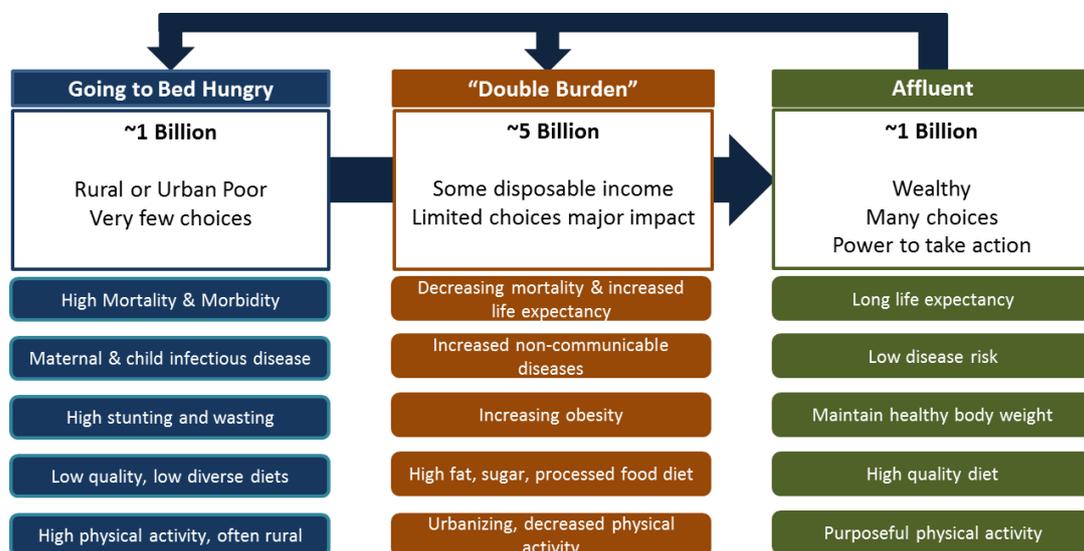
Access to cleaner, modern energy for basic residential use

13. Health and energy are interlinked and energy poverty is a reality for billions every day. 3 billion people rely on wood, kerosene or biomass for cooking and lighting. This causes 3.5 million premature deaths each year, more than HIV/AIDS, malaria and tuberculosis combined, which cause 3.1 million deaths annually.
 - There is no sense of urgency to deal with this situation. There is limited awareness and action taken to prevent people dying from indoor air pollution.
 - Affordable solutions to these problems are available and quick implementation can save lives.
 - Universal access to clean cooking could be achieved for just 10% of the \$25 billion annual funding toward Malaria, HIV Aids and Tuberculosis.
14. To address this health issue, a coordinated approach between governments, NGOs, and private enterprise is required. In many emerging economies, political risk and lack of regulatory environment makes independent private investment risky and unattractive. Given health is a social responsibility for governments, they have a role to play in working with private industry to realise this opportunity.
15. An established global NGO could be a strong advocate to link governments, local NGOs and local private enterprise, to develop solutions to regulatory, affordability, and sovereign risk issues, as well as sharing best practise between nations. This body can also raise awareness amongst the general public to gather global support.
16. Initial investments to set up infrastructure and regulation in local markets would allow local businesses to become established and in the future, operate sustainably.

II. FOOD SECURITY AND NUTRITION

17. **754 million** people do not have sufficient food (FAO 2016). **1 in 5** children are stunted due to chronic under-nutrition (Black et. al., 2013). **2.2 billion** adults are overweight or obese (Ng et. al., 2014). More so than communicable disease, tobacco or air pollution, dietary risk has become the **number 1** cause of mortality in the world (Forouzanfar et. al., 2015). Across global geographies there has been a convergence in under and over nutrition with poverty being the cause of both.
18. The aim of the work of the Food Security and Nutrition Committee of the G-20Y Summit is to establish perspectives on how to produce and give access to healthy and safe food in a sustainable manner to the rapidly growing world population.
19. In this paper, we will discuss the global food system, how populations are impacted from a food security and nutrition perspective. We, the Food Security and Nutrition Committee of G-20Y, will make recommendations to improve food security and nutrition and contribute to the achievement of Sustainable Development Goal Number 2 (SDG 2).
20. There are five drivers of the Food System that will impact food security and nutrition now and in the future including: climate change, urbanization, a growing and aging population, digitalization and policies / institutions.
21. When considering food systems and their drivers, three disparate populations, with distinct nutrition profiles and dietary needs, emerge (See Figure 1 Adapted from Popkin et. al., 2012). An estimated billion people are “Going to Bed Hungry”. They are poor, malnourished, living in rural or urban places that have very limited choices with what foods they have access to and what they can afford. Most of the world’s population is transitioning, living in peri-urban or urban places with more complex, often not healthy, food environments. They often suffer from a “Double Burden”: they are deficient in key nutrients and have an increased risk of obesity and non-communicable diseases. The other one billion are considered “Affluent”, having access to healthier diets and living long lives. In addition, the Affluent have the power to take bold actions to enact positive change throughout the food system, influencing those with fewer dietary choices.

Transitioning Populations (Figure 1 Adapted from et al., Popkin 2012)



To maximize the benefit for each of the populations mentioned above, we identified key strategies for improving each step of the food value chain.

22. **Production:** The implementation of Climate Smart Agricultural (CSA) practices, such as insurance and crop / livelihood diversification, is imperative for enhancing the food security of individual producers and building smallholder resilience. The adoption of CSA practices can be accelerated through increased investment in technology and by building partnerships between farmers and public / private sector groups. Last, steps need to be taken to trace, measure and monitor progress to demonstrate the economic benefit of taking these actions.
23. **Processing and Distribution:** In food processing, the fortification of staples and other foods for specific groups, such as women and young children, offers great opportunities to improve nutrition. Prevention and reduction of food loss particularly in developing countries during processing and distribution supports food security, while at the same time decreases the use of natural resources and the negative impact it has on climate change. The adoption of technologies for the improvement of cold chain storage and transport is needed to reduce the loss of perishable food. Strengthening of local processing capabilities and capacity contributes to food safety and access to quality foods for an increasingly urban population.
24. **Retail and Marketing:** Retailers have the ability to promote healthier foods and can be incentivized to provide more nutritious foods to underserved areas. In low income countries, informal markets and street vendors can become more competitive if they increase the affordability of nutritious foods for local populations. In high income countries, food is mainly wasted in the households (GloPan 2016). In addition, social entities, such as schools, hospitals, military and prisons, can be incentivized to procure healthier foods through their services.
25. **Consumption:** Improving consumption patterns will require various actions, such as: developing “smart” policies and ensuring adequate nutritional intake during the first 1000 days of life which is critical to allow children to develop to their full potential. In addition, drastic measures need to be taken to prevent rising levels of overweight / obesity, and promote healthy diets and lifestyles. These include national policies and standards that limit the sugar, salt, trans-fat and saturated fat content of processed foods and snacks, including sugary drink taxes, as well as provide incentives to encourage the consumption of healthier foods. Another focus area should be behavioural change and demand creation for healthy diets and lifestyles, through social marketing and public campaigns, as well as with commercial marketing and the active involvement of the private sector. In particular, the use of social media and other technological platforms have the potential to create a catalytic effect in behaviour change, considering that 2.3 bln. people are currently active on social media. Shifting consumers’ choices can also be ensured through improved awareness on the nutritional value of different foods through transparent label information, and diagnostics.
26. **Priority Actions:**
 - Implement Climate Smart Agriculture.
 - Improve production, distribution and access to nutritious foods (fruits, vegetables and animal sourced foods) in the global food system.
 - Incentivize the food and beverage industry to prioritize healthy nutrition.

- Use technology to provide more information to consumers and promote healthy choices.
- Promote nutrition in the first 1000 days of life, in particular strengthening value chains for nutritious foods for mothers and young children in developing countries.

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III. GLOBAL FINANCIAL INDUSTRY – BANKING

Role of Banks

27. A well-functioning and sustainable banking system is necessary to support economic growth and the prosperity of communities and society.
28. Today banks serve the real economy e.g. by assessing and allocating credit; facilitating payments related to the flow of goods and services; intermediating risk in the capital markets; and safeguarding assets. Banks are also instrumental in the execution of monetary policy through the money multiplier effect and their direct dealings with central banks.
29. Trust is fundamental to the effective functioning of the banking system and the viability of any individual bank. The global financial crisis and subsequent events undermined trust in the banking system. Governments and regulators have sought to restore this trust through the imposition of additional regulations.
30. Banks are attempting to regain this trust through various actions; however, lasting cultural change is required. Effecting this change will require banks to pursue a grander purpose that goes beyond shareholder return. For example, banks should play a more active role in driving financial inclusion. Helping the underserved to access banking services would help create a more integrated society, promote economic opportunity, and make financial crime more difficult.
31. The pursuit of such an aspirational purpose, better aligned to the needs of communities and society, would create sustainable long-term benefits for all stakeholders.
32. **There are multiple external and internal factors affecting banks' ability to achieve balance between shareholders and wider society. On top of struggling to navigate the muted economic recovery and the extraordinary negative-yield environment, banks are challenged by: (i) unfamiliar trends in digitisation and the emergence of digitally-native challengers; (ii) the importance of data, both as an asset to be protected from criminals and as a resource to be leveraged in business; (iii) increasing amounts of regulation, at times inconsistent and unequally applied.**

Technology

33. The increased affordability, availability, and capability of new technologies are transforming many industries, including banking. There is a growing expectation from customers that banking services will embrace new technology. In addition, demographic changes are creating new customer groups who are demanding new services that will require continuous innovation by banks.
34. New market entrants such as FinTechs, who leverage digital architecture coupled with best practice in user experience, design, and transparency have emerged to capitalise on these trends and demonstrated the potential to better serve the changing needs of customers through technology.
35. Incumbent banks have to invest in digital transformation programmes. FinTechs and banks have already started to cooperate through partnerships, investments, and acquisitions. We believe that banks' existing customer base and regulatory experience will favour this route; although some stand-alone FinTechs of

significant scale will endure. Banks that are unable to adapt sufficiently quickly may go out of business, at the risk of strain on the financial system.

36. Technology offers the opportunity to lower costs and improve customer experience whilst providing the opportunity to promote financial inclusion.
37. One example to improve the customer experience and make the financial system more inclusive, sound and stable is the industry-wide harmonisation of the KYC (Know Your Customer) process. We recommend to engage with market participants, regulators and policy makers to discuss ways to achieve that e.g. by setting-up a utility that efficiently manages the high amount of data to be handed and offer the service to the financial industry as well as its clients.

Cybersecurity and Data Privacy

38. Information on a person's finances is regarded as the second most private data set; after health history. Therefore banks have a particular need to invest in cybersecurity to ensure trust.
39. The monetisation of personal information, for example social networks using a history of 'likes' or a user's personal connections to select and charge for advertisements, is the proven economic model of the internet.
40. Many FinTechs, inspired by the business models of the internet companies, are incorporating these data opportunities into their model; both to personalise the customer experience and to reinvent the revenue model of financial services.
41. These data capabilities include analysing customer behaviour and spending patterns to better price risk, cross-sell internal or third-party products, design new products and services, or simply sell such data to a third-party. However, concerns have been raised as to whether the use of big data with alternative data sources may inadvertently recreate illegal biases based on race, gender, or sexual orientation because these traits are strongly correlated to other data points.
42. Banks are uncertain as to whether they too can adopt such a model given both legal constraints on data privacy and the potential reaction of customers to such a move. We recommend that there is an open dialogue between regulators, banks, FinTechs and consumer groups to examine the use of big data and the business models behind it.

Regulation

43. New regulations introduced after the financial crisis are intended to make banks safer and more reliable. However, this has also significantly increased the cost and complexity of operating a bank. International banks are particularly challenged by inconsistencies between multiple, overlapping, and sometimes conflicting regulations at different jurisdictional levels.
44. Harmonisation of regulation, application, reporting standards, and consequence management across the G20 is welcome in all instances. For example, recently introduced market abuse rules are more or less harmonised. Yet there is inconsistency in interpretation and data requests by different regulators which increases cost and complexity and may diminish the effectiveness of the regulation.



45. Regulators are demanding more granular and frequent analysis of transaction data to combat fraud and money laundering; to conduct liquidity analysis and capital stress tests; and to monitor compliance with conduct regulation. In response, banks are investing in big data capabilities and enhanced reporting. As an example of the need for harmonisation, in some countries banks cannot provide the regulator with the required data because of data protection rules and employee rights.
46. New entrants are participating in a variety of banking activities, often bringing innovative solutions to market. Promoting innovation and encouraging competition are worthy objectives, but there is the potential for the re-emergence of “Shadow Banking” that is less regulated than the banking sector.
47. We recommend that regulation focus on the activity rather than the institution in order to adequately protect customers and ensure the underlying safety of the financial system. Additionally, to support open access to banking infrastructure critical to the reputation of the banking system (such as payment systems), new entrants should be subjected to fit and proper assessment, and have the necessary capital to stand behind their obligations as members of such systems.
48. In encouraging innovation and new entrants there is an emerging trend toward initiatives (e.g. ‘sandboxes’) in which existing regulations are relaxed. However, we advocate for a ‘level playing field’ for all, including traditional banks who are exploring innovation as well. All activities, including those conducted in a sandbox, should be subject to minimum standards of consumer education and protection, regulatory disclosure and personal data security.

Towards a sustainable future

49. In order to create a sustainable future, banks will have to regain the trust of the communities and societies that they serve. Banks need to acknowledge the need for an on-going and fundamental cultural change and the impact of digitisation on the industry.
50. In order to succeed it is necessary to embrace a grander purpose better aligned to their customers. As a first step, banks should adopt industry-wide standards on culture and conduct. Positive examples of this include the Australian Bankers’ Association Six-Point Plan, the FX Global Code of Conduct, and the work of the Banking Standards Board.
51. Financial inclusion is an important social and economic objective that Banks should embed in their culture. Advances in technology make this more achievable than ever before.
52. Banks need to adjust their businesses models to accommodate changes in regulation and technology. Technology will allow them to become simpler, better, and faster, in turn benefitting customers through greater transparency and more efficiency, whilst improving financial system stability. Banks will need to constantly evaluate the evolution of the industry and benchmark their operations against best practice.
53. To achieve the G20 objectives of sustainable economic growth, financial stability, and inclusion, we encourage banks, regulators, and new entrants to work collaboratively to improve and protect the system for all. Above all else the trust of society cannot be compromised.

IV. GLOBAL FINANCIAL INDUSTRY – INSURANCE

Technology driven changes

I) Consumer driven opportunities:

54. The insurance industry has remained much the same for more than 100 years. However, we are beginning to see exciting new innovations disrupt traditional markets, led by InsurTech. A leading driver of this disruption is a **change in customer expectations** caused by widespread adoption of new consumer technologies. Customers are demanding more personalised insurance offerings, with clear transparency that enhances interaction, builds more trusted relationships and makes insurance more accessible.
55. A more **customer centric, data driven approach** will re-imagine distribution and claims management models, shifting towards more sophisticated digital servicing capabilities. The insurance industry (including regulators) will need to effectively collaborate with customers and the entrepreneur community to co-create new products and services that unbundle the insurance value chain, and increase the attractiveness of insurance to segments, specifically Millennials. This could include incentives to design more affordable solutions for younger generations, such as education grants linked to purchase of specific insurance products.
56. As the industry establishes a closer connection with the customer, we play an important role in **educating consumers** and making **insurance more accessible**. The recent tragedy in Italy as well as the Great East Japan Earthquake revealed that the industry needs to heighten awareness of risks among people and demonstrate the value of insurance. The growth in InsurTech can support this and the Insurance industry and policymakers should create public and privately-sponsored initiatives to improve financial literacy, education and affordable advice for younger generations.

II) Future business model opportunities:

57. The Internet of Things/ Big Data offer new opportunities for insurers and new entrants to substantially alter risk pools and possibly **reduce aggregate risk**. This will come through (1) more informed underwriting through new data-driven approaches leveraging more granular, real-time data; (2) improved risk mitigation through intelligent sensors (fire/ water leakage/ theft); and (3) changes in consumer behaviour due to the use of real-time monitoring devices (telematics, domotics, personal health devices). We encourage incumbent insurers and regulators to **embrace and support** the transition to these new types of risk profiles. At the same time we offer a cautionary note that improved stratification of risks may lead to an increase in insurance costs for certain marginalized elements of society, potentially increasing the under-insured population.
58. New players are emerging in the digital ecosystem that offer interesting opportunities for partnerships through which **new insurance-service propositions** could offer improved customer value, such as providing real-time visualization of road hazards on the dashboard of the driver, tracking of stolen cars and assisting with their recovery, providing health tips and cues based on activity levels, etc. These propositions may sit in a regulatory grey zone. Nonetheless, we encourage regulators to **embrace innovation** and use alternative, more nimble and fit for purpose regulatory models (e.g. specialist

support for regulator-business partnerships, regulatory "sandboxes") to support the evolution of the market.

59. The rapid emergence of the digital economy has brought with it heightened concerns about privacy and data protection. The insurance industry is not immune from these concerns, and wants to work with regulators to ensure we strive for a **balanced privacy and data protection regime**. This needs to balance the risks of data breaches with the consumer benefits of thoughtful use of rich customer data for improved product solutions.

Macroeconomic and regulatory trends

60. An increasing number of insurers are implementing global strategies to diversify business risk in order to maximize productivity, efficiency and optimize capital. From this point of view, one of the goals of globally-harmonized regulation is to set up **comprehensive risk based capital standards** that provide clearly understandable reporting of risks indicators by segment (contrast to just as a group total). IAIS and other regulatory bodies have advanced a number of key initiatives in this area, such as global International Capital Standards (ICS).
61. The industry needs to **embed these regulatory and accounting standards in core business** before tackling additional layers of regulation. Otherwise there is a risk of shifting the focus from managing and understanding risks to pure reporting exercises. The focus should shift from risk modelling to risk management and governance systems that have to be embedded in day-to-day business practice. We see Own Risk & Solvency Assessment (ORSA) as an increasingly accepted example of this. Further, this will mitigate resource issues in small and medium sized insurers and enable better comparability of risk based capital models in different continents.
62. Given the role of insurance companies and pension funds as institutional investors, regulators must consider the **combined effect of all regulations on market liquidity** (Solvency II, Basel III, and MiFID). This is especially important when designing new capital standards (e.g. ICS). While fair value measurement and risk sensitive models improve risk management practices, there is also a risk of creating pro-cyclicality and crowding-out effects in the case of market turbulence.
63. 10. Regulation should also take into account the interplay of challenging macroeconomic and financial conditions (low growth and low interest rates) and demographic and social trends (increasing life expectancy and income polarization). It is difficult for insurance companies to provide proper solutions for younger generations. This is due to a scarcity of long-dated investment opportunities with adequate risk/return profile, coupled with a structural ALM mismatch on legacy products. **Greater issuance of long-dated debt securities by governments** including PFI/PPP can help in this respect. Moreover, capital standards should facilitate investment into such long-term asset classes.

V. GLOBAL DEMOGRAPHIC DEVELOPMENTS

The decline of the workforce

64. The world's demographics are coming to an interesting turn. Historically, demographic discussions mainly focused on the explosion of population in developing nations, and the stress that it gives on food, water, energy, and other social infrastructure and resources. While the phenomenon still holds true, another angle is becoming simultaneously pronounced to complicate the matter – *the decline of the workforce*. The developed world's workforce is forecasted to peak out and start to decline as of next year - to shrinking by 5% by 2050.

Why declining workforce is an issue?

65. Slower GDP growth is among the biggest global issues we will face over the next 50 years. For G20 countries, the annual GDP growth is forecasted to shrink by 40% from 3.6% to 2.1%¹. Assuming that productivity remains flat at 1.8%, the 1.5% drop will be solely due to decrease in labour supply. Mitigating the decline of the workforce is a critical factor for the future of the global economy.
66. The other demographic trend that needs to be dealt with is that while life expectancy has dramatically increased over the last half century (by 22 years – a significant achievement for human beings!), the effective retirement age in key countries has stayed flat – or even declined. Life after retirement is now considered 30+ years, up from 5-10 years when many retirement ages were preliminarily defined. Public money will not be able to support this expanded retirement life. Forecasts show that 1 retiree will be supported by only 2.1 people in the workforce in the developed world by 2050².

How to mitigate?

67. There are two main approaches to mitigate the issue of the decline of workforce. The first is to compensate the decline by increasing productivity by effectively utilizing technology, as seen in Industry 4.0. The other approach is to increase the supply of workers through structural reforms, increasing fertility, or immigration. While we expect technology to narrow the gap, we do not want to rely on it, so we see the most imminent, feasible and sustainable way to tackle this is through structural reform in both the public sector and private sector.

Private Sector:

68. There are two areas that the private sector needs to focus on. The first is attracting and deploying a higher degree of female representation in the work force – as of 2014, female participation in labour force amounted to 40% vs. 77% for the male population³. The other area of focus should be on our elderly population. The 2014 average retirement age in the OECD was 65 for men and 63.5 for women. Despite significant increases in life expectancy across the globe, these numbers have remained relatively flat over the last 45 years.
69. ***In order to attract and make it feasible for more women to participate in the workforce we believe companies need to launch initiatives and concrete plans to:***

- Accommodate child care support to enable women and families to have work-life balance. This initiative would potentially also promote an increased fertility rate.

¹ The Conference Board Total Economy Database; United Nations Population Division; McKinsey Global Institute report

² United Nations; 2015 Revision of World Population Prospects (Medium Variant)

³ United Nations; 2015 Revision of World Population Prospects (Medium Variant)

- Encourage gender diversity and eliminate the gender wage disparity, which in the developed countries is approximately 25%.
- Consider broader implementation of flexible working schemes.

70. ***In order to increase the participation of our elderly in the workforce, we recommend the following:***

- General acknowledgement that people's productive years do not need to end at the age of 65. With a life expectancy of 80+, there are still many years of productive value to be had.
- Adoption of health and wellbeing programs. We believe subsidies in these areas would present high long term returns on minor investments.
- Targeted education and training programs, in combination with alternative career path planning, in order to facilitate redeployment of individuals in the organization as required based on age driven requirements.
- Investment in an ergonomic workplace with considerations of requirements driven by age.
- Consider broader implementation of flexible working schemes, including part-time considerations.

Public Sector

The public sector needs to focus on policies to redefine retirement to address increasing life expectancy, incentivize the private sector to increase participation in the work force, and work with the private sector to offer benefits to underrepresented groups.

71. ***We recommend the following policy changes to re-define retirement:***

- Re-definition of working age in statistical reports from 15-65 to 21-75 to better reflect the current reality that workers are able to contribute meaningfully past the age of 65.
- Incentivize individuals to continue work beyond "pensionable age" by offering tax incentives for staying in the workforce longer, and stricter penalties for withdrawing early.
- Delaying pension pay-outs by an increase in the statutory retirement age.

72. ***We recommend the following policies to incentivize the private sector to increase participation in the work force:***

- Tax incentives for private companies to offer affordable day care facilities for children.
- Cash incentives from governments for working mothers for support during birth.
- Encourage career security in addition to the existing job security following extended leaves for family care.
- Tax incentives for private companies to adopt health and wellness programs.

73. ***We recommend the public and private sector work together on offering benefits to underrepresented groups by:***

- Changing/reforming education policies to enable young people to enter the labour market at earlier stage with a focus on continued education throughout their careers.
- Establishing education programs and incentives for certificates and licenses to encourage life-long learning opportunities for all ages in the workforce so that there is equal opportunity to adapt to new environment and stay engaged.
- Introducing policies and regulations to stimulate the migration of highly skilled individuals and ease integration of existing immigrants to enable them to be a contributing taxpayer to society. This includes making it easier to grant work permits for targeted industries, seasonal, and childcare-eldercare workforce.

VI. CREATING JOBS

Preamble and Thesis

74. The world's population and economy continue to grow but with an **imbalance in the quantity, type, and location of jobs** – 7.5B population with nearly 4.5B people eligible to work – not counting the over-65 age group and several women segments which have traditionally not been included in employment statistics. **The immediate challenge** is the need to create ~1.7B new jobs (0.2B unemployed + 1.5B who have given up seeking jobs), ensure job security for another ~1B (70% of the 1.5B self-employed who are vulnerable), sustain the existing “stable” 2.2B jobs (1.7B in companies + 0.5B self-employed who are not vulnerable), enhance inclusiveness of women in the workforce, and create new jobs for the 25 M additional job seekers every year.ⁱ
75. **There is also a fundamental shift in the nature of work.** *First*, with the evolution of our social and economic structures, the definition of a job itself is changing, with the evolving notion being of creating a fulfilling work life (“full” employment) which is more about creating satisfying and productive roles and careers (see *Appendix I*). This changes over the course of a person's life, and may mean that not everyone works the standard 40 hours a week – we see more and more part-time and free-lance workers, women willing to work, volunteers, and flexible work schedules, to name a fewⁱⁱ. *Second*, technology breakthroughs – traditional technologies as well as today's smart machines, global connectivity, and new media – are having a profound impact on the future of work itself.

Key Issues and Themes

76. For this year, we have focused on 3 key topics – empowering women, unleashing entrepreneurship and intrapreneurship, and preparing for the dramatic changes resulting from today and tomorrow's technologies.

Women's Empowerment

77. After many years of proposed action on gender equality, little progress is being made; “globally, around 55% of women are part of the labour force, compared with 82% of men, and the gap between men and women has not changed significantly since 1995.”ⁱⁱⁱ
78. Economically, the lack of participation of women in the global economy is leading to a **loss of potential global growth of 12-trillion dollars.**^{iv}
79. The drivers of the systemic devaluing of women to actively join and lead in the workforce and to enable them to gain income equality is based on the social stereotypes of women, the absence of an inclusive political system which steers clear of broad equality based legislation and the lack of access to education and skills that promote current and future economic growth (i.e. technology; STEM).

Entrepreneurship & Intrapreneurship

80. There is a myth that small medium companies create always more jobs than large companies. This is not true if you control for age, that is, for same tenure, job creation is independent on size- what matters thus is to have more and more younger companies, that is entrepreneurship.

81. Two-thirds of adults globally believe that entrepreneurship is a good job choice (Global Entrepreneurship Monitor). Why? The micro-economy starts from the local communities, if there is creativity, passion, and innovation in place and there is a desire to make things better for the community. These actions look to fill the white space and enable risk taking in a way that unleashes extraordinary potential for both strategic and financial impact.
82. **Entrepreneurship has the potential to revitalize** cities and communities by driving economic growth:
- 7 million of the 10.9 million new jobs added over the course of the past five years were created by start-ups and small enterprises (Small Business Administration).
 - For example, within the US alone: 330 out of 100,000 adults started new businesses each month, which translates to just over half a million (550,000) new business owners a month (2016 Kauffman Index).
83. Barriers for more people to enter into an entrepreneurship career include - an antiquated education system that teaches transactions vs. transformation as the basis for skill development; lack of access to financing; need for exposure to concept of entrepreneurship; enabling an environment for entrepreneurship; and archaic regulations.

Structural Changes Caused by Technology

84. **Technology breakthroughs will transform the way people work** over the next 5-10 years.
- There are at least 10 ways technology will change the current work orthodoxies^v. Among others:
 - Some of the workforce does not need to be in the same location as the work due to technology, thus allowing telecommuters, free-lancers, and offshore tasks.
 - 45% of all activities – perhaps 78% for routine and repetitive tasks – will be automated or enabled by artificial intelligence and the like, which will especially affect “mid-level” jobs, though tasks that involve expertise and interpersonal interactions are less likely to be automated.^{vi} Thus, technology is making many current activities obsolete, and creating the need for rebundling tasks into new jobs.
 - There is a shift in the type and balance of future skills needed – both hard skills as well as newer soft skills.
 - Further, there continue to be differences in how these impacts vary across the globe, especially developed versus developing countries.^{vii}

85. **Recommendations**

Among our many recommendations, we'd like to focus in the final document on the following priorities:

- Executives and entrepreneurs must **invest in human capital** as a part of any long-term strategy for producing skills for the future – including technology and other skills:
 - **Soft integrated system** - Borrowing from the Institute for the Future, we highlight the need for the following skills: sense making, social intelligence, novel and adaptive thinking, cross cultural competencies, computational thinking, new media literacy, transdisciplinary, design mind set, cognitive load management, virtual collaboration, initiative, crowd sourcing, and so on.
 - **Teacher training** – Reskilling tomorrow's teachers in schools, community colleges, etc.ⁱⁱ
 - **Education system** - Needs to recognize the mix of typical university education, coupled with vocational training, as well as specific training for different segments – lifetime learning, entrepreneurship skills, and women's education.

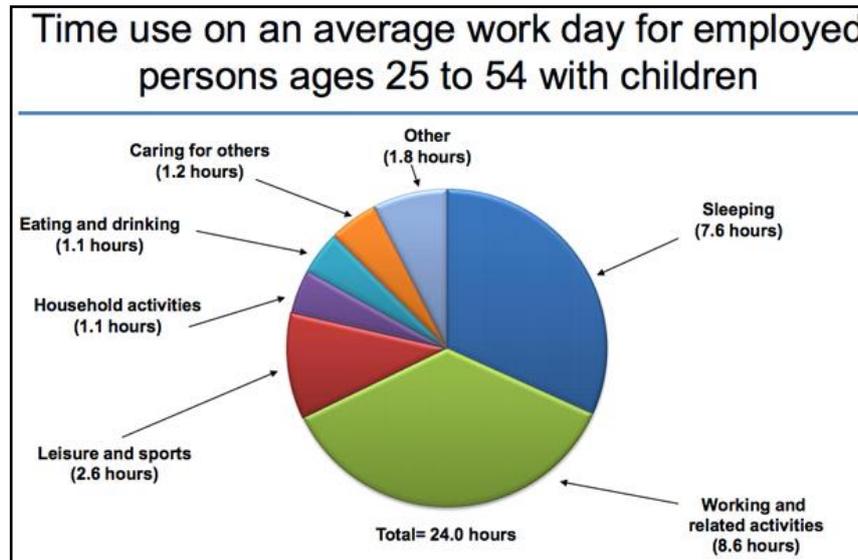


- **Skills** - Employers influence for the needed skills and utilizing own capacity for reskilling.
 - **Millennials and ageing population segment** - To attract and retain.
- **Create partnership between public/private/non-profit** in tackling major overhaul of the education system – delivery, accountability, etc. – and update OECD’s recommendation on education.
 - **Reorient global impact organizations** - such as UN, ILO to assess the impact of technology and future education needs.
 - **Regulations** - Local policy makers need to change regulations to encourage (and regulate) new business models of the digital and gig economy (and also, not protect dying industries), and further self-regulation models.
 - **Build and enhance entrepreneurship networks and ecosystems** – celebrate failure (failure forward awards), encourage entrepreneurship, create the infrastructure for risk and design thinking (coding schools, prototyping labs, university labs and alliances, etc.).
 - **Maximize interaction** with industry-specific institutions as they may be more powerful agents of change than slow-moving global organizations.
 - **Advocacy** – at the personal, professional, and societal levels - is imperative. Therefore, we recommend all participants at G-20Y Summit commit to the **creation of a G-20Y pledge**:
 - Women’s empowerment - champion gender equality and to make a personal commitment to drive change in our own sphere of influence. In addition, we call on men to advocate gender equality in all aspects of society and the workplace. Advocacy actions in the workplace include quotas/targets, mentoring, succession planning and recruitment practices.
 - Enabling entrepreneurship – focus on creating and enabling the environment for entrepreneurs and intrapreneurs.
 - Solving the education needs for the future – recruiting and training for future skill requirements and advocating for the education industry to adapt.

APPENDIX 1

86. We, as a human race, that work to live (not live to work), do a mix of work (manual labour such as working on things; white collar labour which includes collecting and analysing data and related actions; provide services such as at hospitals and airports; do creative and intellectual tasks such as teaching, science research, art; and others); spend leisure time that we use to do interesting things with others; do household chores; take care of family and others; eat and drink; and of course, also sleep.
87. In order to create a high quality of life for everyone, while working with existing economic systems (capitalistic or socialistic), it is important to have the right balance of jobs and employment. A few major shifts have been happening in recent years, and expected to continue into the future, and could potentially pose challenges to how we think about jobs and employment.

See graphic below based on a 2012 survey of Americans from The Atlantic (2012).



Source: The Atlantic, 2012 (How Americans Spend Our Time)

88. In order to create a high quality of life for everyone, while working with existing economic systems (capitalistic or socialistic), it is important to have the right balance of jobs and employment.

ⁱ Recent data suggest there are nearly 4.5 B working age people, of which ~1.2B do not have the opportunity to work due to structural inefficiencies, ~0.2B are unemployed, ~1.7B work in corporations, and 1.5B are self-employed or work in family businesses (70% of these work in developing countries – a majority are women – and are generally vulnerable). On a different note, there are 40M open high skilled jobs, and 80 M excess low skilled jobs in advanced economies.

ⁱⁱ Manyika, J., Lund, S., Bughin, J., Robinson, K., & Mahajan, D. (2016). Independent work: Choice, necessity, and the gig economy. McKinsey Global Institute, October.

ⁱⁱⁱ The Full Participation Report, No Ceilings, Bill & Melinda Gates Foundation 2015.

^{iv} <http://www.mckinsey.com/global-themes/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth>

^v Bughin, J., S. Lund, and J. Remes, (2016), Ten new orthodoxies for the second machine age, Global Talent Competitiveness Index report, INSEAD, Chapt 4., Davos forthcoming

^{vi} Technical feasibility alone does not determine adoption; factors such as – the cost to automation, availability of labour (as a result of the balance of supply and demand), automation benefits such as quality and reliability, social, environmental, and regulatory acceptance – all shape the adoption of automation and other technologies (Brynjolfsson and McAfee, 2014; Where Machines Could Replace Humans, McKinsey 2016).

^{vii} While ICT penetration is increasing worldwide, many developing countries, and even some segments in developed countries – representing about 60% of the world – are largely excluded from the benefits of the digital economy, mainly due to a lack of access, education, digital skills, and the pending needs for “analogue skills” (regulations, institutions, competition, soft skills).

^{viii} 65% of today’s school children will be doing jobs that do not exist today.

VII. DIGITAL INNOVATION AND TRANSFORMATION

89. Digital Transformation is pivotal in designing a better world. Harnessing our digital potential will enable us to drive greater innovation, inclusiveness, economic growth and net good. We believe we can make access to digital connectivity ubiquitous and that we can create a truly digitally enabled world. This will be powered by stretching digital access targets, demand driven enablement goals, supportive agile regulation and comprehensive education programmes to enhance literacy and digital inclusion.
90. Our digital **vision** is to enable all industry sectors, governments and citizens with the access to information, innovation and the platforms to enable sustainable development.
91. Digital **integration** has the potential to unleash economic and social good. Regulators and governments need to challenge themselves to be more agile, learn by doing and support digital adoption by setting bold goals and enabling industry, institutions and citizens to achieve them.
92. Digital **openness** and democratization is critical. We need to protect net neutrality, promote security and enable open access to digital connectivity, technology and services.
93. Digital **inclusiveness** and developing our digital skillset is vital. It is a huge opportunity as more than 60% of the world's population are not digitally enabled. Digitally enabling people can provide them a platform to make them more liberal, autonomous and productive.
94. It is the view of the Committee that a comprehensive digital transformation framework encapsulates: a clear digital vision, demand driven goals, digital infrastructure, digital safety, digital skills enablement, the right digital ecosystem alliance, digital standards, and the right enabling government policy and agile regulation.
95. The Perspectives are focused on elements of the framework which require immediate attention.
96. A ubiquitous digital infrastructure is a pre-requisite to digital enablement. Currently 3.2bn people access the internet with 2bn in developing economies but there is a huge digital divide with only 9% of the 890 million people in least developed countries having access to the internet. This creates a need for core connectivity to power digital enablement.
97. National and regional governments should mandate universal service coverage of mobile and fixed infrastructure. An enabling regulatory and funding mechanism is required to ensure coverage beyond the usual limits of commercial feasibility.
98. Spectrum auctions and national licenses to operate should mandate coverage, speed and usage targets to equip all citizens with a means of digital connectivity and actual enablement across mobile and fixed technologies.
99. We recommend national and regional targets for mobile and fixed broadband coverage jointly set by governments, regulators and commercial entities. A more ambitious target of 90% coverage is needed to accelerate current projected level of 71% of mobile coverage by 2019 and in home broadband coverage of 48%.

100. Many citizens do not have access to broadband or smart phones. We recommend addressing this through provision of public internet terminals and services.
101. Digital safety establishes and protects your digital identity. It is paramount to a safe and scalable digital world. We recommend:
- A unique digital identity, facilitated by the government, to enable secure personal authentication.
 - National awareness of safe digital working practices.
 - Data ownership, storage and usage standards require greater discussion and policy guidelines.
 - Critical infrastructure protection and industrial cyber security require further investigation as automation, machine learning and connected devices proliferate.
102. We believe that digital transformation will have significant positive impacts on society by appropriate digital skill enablement. Workforce reallocation is inevitable and should be dealt with proactively. We recommend:
- Government and corporations need to educate people to accept new digital services. It is expected that new services will be mobile and digitally enabled from inception, but access will be maintained for the digitally excluded.
 - The impact of digital transformation on the labour markets needs to be fully examined. This could include job creation to enable the infrastructural investment in digital connectivity, e.g. the deployment of mobile and broadband networks.
 - Many tasks within existing roles will be automated; access to digital skills will aid people who are 'digitally displaced' to be reallocated to existing and evolving roles. This will need to involve an examination of how digital knowledge is created and effectively disseminated.
103. The advent of Digital Enablement has the potential to disrupt existing corporations who may have followed a more linear developmental pathway. Governments and regulators have a role to play in helping enable innovation for new entrants and established players. We recommend:
- A level playing field needs to be created to encourage greater digital capability by encouraging knowledge sharing, alliances, and partnerships.
 - Evaluating a range of financial and non-financial incentives to encourage enhanced collaboration and skills development to accelerate digital ecosystems and innovation.
104. We believe that traditional models of regulation are being challenged by digital transformation as traditional sector boundaries are becoming blurred. This evolution needs government policies and agile methodologies. We recommend:
- Evaluating more functionally based regulations which can work by services across sectors, such as common digital signatures used for all authentication.
 - Regulations be more agile with regulators taking an evolutionary approach by working with organizations and commercial entities.
 - Government organizations create a comprehensive digital strategy and roadmap.
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