

# The Future of Retirement: Aging in 2050

As populations age, we will see a radically different future for older workers and retirees.

Over the coming decades, aging will have a profound impact on societies worldwide. We explore how the confluence of longevity and technology will reshape old age through the eyes of a fictional Chinese senior citizen (see sidebar: **Meet Fang**), and discuss key implications for investors.

The United Nations (UN) projects that by 2050, people age 65 or older will represent 16% of the world's population, twice as much as children under five.<sup>1</sup> While these figures mask significant regional differences between, say, Europe and sub-Saharan Africa, the direction of travel is clear: Humanity is aging at a rapid pace with profound implications for the future of retirement. Catering to more longer-living citizens could be particularly challenging for middle-income economies such as Fang's home country, China, where 65+ year-olds could, according to UN projections, number 366 million by 2050. This echoes a wider trend in East and Southeast Asia, which is home to nine out of the 10 countries in the world with the fastest-growing share—in percentage points—of 65+ year-olds.<sup>2</sup>

In parallel, we see continued improvement in life expectancy across the region. For instance, in 2050, Singaporeans across both sexes are projected to live, on average, until 87. For Chinese citizens, life expectancy will be just shy of 82—still a significant advance relative to today's average of 77.<sup>3</sup> For Chinese living in the wealthier urban areas and with access to the medical advances and personalized care that Fang enjoys, average life expectancy will likely be much higher.

## Increasing Longevity Does Not Mean Reducing Economic Prosperity

An aging (and shrinking) workforce may be less of an issue for modern economies in which wealth creation is driven by multiple factors. Moreover, advances in artificial intelligence (AI) will automate many tasks currently undertaken by workers, making many jobs (partially) redundant. Many countries will nevertheless have to adjust labor practices to remain successful, including:

- Increasing participation rate among women;
- Encouraging retirement savings;
- Incentivizing people to defer their retirement through financial and lifestyle incentives; and
- Upgrading workers' skill sets for the new digitally enabled economy with lifelong learning.

This greater empowerment of older workers, combined with better healthcare, will likely keep many in the workforce into their 70s, as is the case for Fang.

Once these older workers leave the workforce, the key challenge for governments will be the financing of their retirement and healthcare costs. This is a particularly acute issue for middle-income countries such as China, which faces a projected rise in its social-security expenditure from 10% of GDP back in 2014 to 32% by 2050.<sup>4</sup>

## Insight from sub-adviser, Wellington Management



**Anita Killian, CFA**  
Global Industry Analyst

### Meet Fang

Fang Lee is an 80-year-old Chinese widower living in 2050. Fang retired from his cosmetic-designer job five years ago and now lives in a high-tech retirement community. Supported by a wide range of new technologies and services, he can look forward to another 15 years of good health. We chose a Chinese retiree to illustrate the future of retirement because, by 2050, China and the wider region are set for the largest-scale aging in human history. As Fang's story illustrates, this demographic shift comes with major new investment opportunities for investors, ranging from personalized healthcare and nutrition to new forms of virtual leisure and social activity.

## Key Points

- Humanity is aging at a rapid pace with profound implications for the future of retirement.
- Technology and data will likely enable a decisive shift toward personalized well-being and quality of life.
- For investors, an aging world creates opportunities not only in technology infrastructure, data provision, and security, but also healthcare and nutrition.

<sup>1</sup>World Population Prospects 2019, Department of Economic and Social Affairs, Population Division – United Nations. | <sup>2</sup>Population Ageing Highlights 2019, Department of Economic and Social Affairs, Population Division – United Nations. | <sup>3</sup>World Population Prospects 2019, Department of Economic and Social Affairs, Population Division – United Nations | OurWorldInData.org/future-population-growth/ | <sup>4</sup>Cai, Y., F. Wang, and K. Shen. 2018. Fiscal Implications of Population Aging and Welfare Expansion in China. Population and Development Review. 44 (4). p. 827 | Ronald Lee, Asian Development Bank (ADB) – November 2019 | Population Aging and Its Economic Consequences for the People's Republic of China (EAWP No. 17 pp.16 – 17) (adb.org). All rights reserved.

## Technology and Personalization to Underpin Future Retirement

AI-led technology will be ubiquitous in the lives of senior citizens such as Fang in 2050. New innovations will help protect their physical and mental health. This includes:

- Creating new forms of leisure and social activity ranging from virtual games to augmented reality experiences and AI-assisted dating apps; and
- Developing personalized services and care with the help of AI and robotics.

These new services reflect the transition from a mass-produced, cost-based economy to a lifestyle economic model focused on meeting the personal needs of consumers. Already, digital platforms allow us to watch more personalized content, leading to both higher personal satisfaction rates and more efficient monetization of content. In the coming decades, this trend will expand across the real economy, with healthcare and nutrition as perhaps the most tangible examples.

We will likely see the advent of scientifically tailored food and diets to meet personal nutritional requirements based on, for instance, genetics, metabolism, environment, and personal-wellness goals. Healthcare will equally become more aligned with individual needs. Fang benefits from AI-driven monitoring of his physical condition through daily, at-home blood testing. He is also encouraged to live a healthy lifestyle through a combination of personalized health insights, nutrition, and behavioral nudges.

This shift to a progressively more digital and virtual world will make digital assets increasingly valuable. Fang sells his personal data to help finance his retirement, while a wealthy friend of his is investing his excess retirement savings in various digital assets. All this will only be possible through exponential development in computing power—quantum computing—and the availability and sharing of ever-growing data sets, including individual DNA profiles.

In a world in which the likes of Fang are sharing their most intimate health details and genome information with the state, invasive government control may be a major consideration. Citizens in democratic governments are likely to push back and demand safeguards against governments and private interests abusing the insights gained from their data. Cybercrime, potentially state-sponsored, may become an ever-increasing threat. The transformation toward a digital lifestyle economy also entails significant risks from a diversity, equity, and inclusion perspective. Reduced public funding of retirement and the pace of digital transformation may leave certain sections of the population behind, meaning societies may have to work hard to limit inequality and ensure fair access to areas such as personalized healthcare and nutrition.

## Investment Implications

From an investment perspective, the potential ramifications are wide-ranging:

- **Cloud infrastructure providers** may offer near-term opportunities for investors.
- **Virtual leisure activities** may benefit from changing work-life patterns. In 2019, Adroit Research projected the value of the global virtual goods market (gaming) to increase from US\$50 billion to US\$190 billion by 2025. The COVID-19 pandemic will have significantly accelerated that trend.
- **Digital trading venues** are likely to expand significantly as digital assets gain in value and ultimately outstrip the value of most real assets.
- **Producers and distributors of meat substitutes, synthetic health foods, and supplements** may be major beneficiaries of the need to combat climate change and improve diets.
- **Testing and analytics technology companies** across nutrition and healthcare may play a pivotal role in enabling personalization.
- **Cybersecurity and privacy protection** sectors may enjoy growth.

## Bottom Line

As life spans lengthen and populations age, we may see a radically different future for older workers and retirees, with technology and data enabling a decisive shift toward personalized well-being and quality of life. The path toward this new paradigm is unlikely to be smooth as governments around the world grapple with the financial and social cost of aging and the need to re-skill large swaths of the population. Societies also face major ethical challenges and the rising threat of cybercriminality and warfare associated with those new technologies.

At the same time, we see enormous potential for positive change and significant opportunity for investors to start repositioning portfolios across not only technology infrastructure, data provision, and security, but also healthcare and nutrition.

## Additional Future Themes contributors

**Terry Tian, CFA**  
Equity Research Analyst

**Philip Fan CFA**  
Equity Research Analyst

**Junjie Tan**  
Research Associate

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