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## Expert Forum on Demographic Transitions: Impact on Longevity, Health and Economy

### Summary and key findings

*Demography may not be the only factor in destiny; but it is a key driver for the longer-term health and structure of our economies and society. Moreover, it has a direct impact on insurers' life business. Experts from around the world, under the auspices of the [World Demographic and Ageing Forum](#), gathered remotely, with a small core at the Centre for Global Dialogue, to consider latest trends and developments in demographics across the globe and how they may affect all our tomorrows.*



#### **Mortality trends by cause of death**

Torsten Kleinow, Professor of Actuarial and Economic Aspects of Longevity Risk, Amsterdam School of Economics

The Netherlands has been one of many West European countries making steady gains in longevity over recent decades. The underlying driver for longevity improvements has been the decline in cardiovascular disease (CVD)-related mortality. Better treatment of cardiac conditions has seen CVD fall from being the primary cause of death among Dutch men by some distance to now being second to cancer (for women this is not quite yet the case). Cancer is now the largest cause of death for males and second for females.

Comparisons with the UK show a striking feature – a clear kink in mortality rate curve around 2010 to become flatter. With no adjustment to curves, projecting outwards suggests that gains in UK life expectancy could be flat or even reversed in coming years. With gains from improved heart treatments now slowing - and progress against other conditions, such as cancer, less certain - some flattening in the Netherland's life expectancy gains curve can also be expected in coming years.



#### **Deep Dive: Japan:**

Noriko Tsuya, Distinguished Professor at Keio University in Tokyo, Japan

Japan has the oldest population of any developed economy; and this population is set to grow older. The key driver is the prolonged increases in life expectancy, which for women is expected to pass 90 in coming decades. This increase comes on the back of very low population-level birth rates. By 2040, 35% of the population will be over 65. Around 95% of the female population will survive until they are 65; a figure nearer 90% for males.

Among the elderly population, the leading cause of death is cancer, followed by heart disease. Senility became the third leading cause of death in 2020.

These dynamics have seen the population peak at 128 million in 2010; by 2040 it is expected to fall to 110 million. They have a further negative influence on old-age dependency ratios. The number of

over 65s as a percentage of the working population (20-64) will rise from 20% in 1990 to 70% in 2040.

Many eyes are watching Japan, seen as a forerunner not only for East Asia, an area with low rates of immigration, but for many developed economies. Entreaties and incentives to boost fertility can only have marginal returns; and measures implemented today will take decades to make a material difference.



### **Deep Dive: China**

Wang Feng, Professor of Demography University of California, Irvine, CA and Fudan University, Shanghai, China

China has undergone an economic transformation in recent decades which has directly affected its population. Improved nutrition has meant the average height of rural girls at the age of 7 was 8cm higher in 2012 over 1992, an extraordinary gain. Even more rapid has been the increase of the middle class – classified as an income range was between USD36 and USD120 per person per day, in 2013 prices – which has expanded by 500 million from 2002 to 2020.

As China became wealthier, the ageing population grew too. From around 5% of total population in 1985, the over 65s will reach 25% of total by 2040. China has also reached the tipping point of population decline, following Japan in 2010 and South Korea in 2020. At current trajectories – low birth rates combined with an ageing population – the East Asian population will shrink to [55%](#) of its current size by the end of the century. The median age of China, Japan and South Korea will all be over 50 in coming decades, with South Korea being over 60 by the 2050s.

These trajectories are baked in over the rest of this century and beyond. They will require significant adaptation from the three East Asian economies. Growth models can no longer be volume-and-labour driven, they will require greater productivity; a consequence of which have seen education levels across the region rise significantly. New health and care models will also be needed to adapt to the needs of an ageing population. Governments and businesses need to seize the new opportunities and to create more equitable and supportive social systems.



### **Financial Demography: A new way of strategic thinking**

Manuel Buchmann, Research Director, World Demographic & Ageing Forum (WDA Forum)

Five mega trends are currently moving financial markets: climate change; shift in economic power; rapid urbanisation; the rise of technology; and finally, though often overlooked, demographic change. The classical model of life cycle consumption is that individuals become net savers in their twenties continuing through their childbearing years and put down financial investments later in their career to draw on as they hit retirement. The numbers standing before retirement are now at their highpoint in developed economies (OECD + China). The share of retirees in those economies is moving upwards towards a little more than a quarter of the whole population.

This switch between net savers to net spenders will have consequences across the global economy. All else being equal, growth in many economies will decline, stock market and real estate returns can be expected to stagnate, while the impact on interest rates is less certain. The most obvious casualty will be pensions; pay-as-you-go pensions will likely be under pressure, but equally funded systems

may underperform if asset markets enter longer term decline. This model suggests capital transfers will be more common, as 'younger economies' – those with more favourable demographics – reap inward foreign investments.



### **Deep Dive Europe: Germany, Switzerland, Netherlands, France and United Kingdom**

Roland Rau, Professor of Demography, University of Rostock & Max-Planck-Institute for Demography

Longevity gains continue to be made in Western Europe. This is most clearly seen in life expectancy at 65 and at 80 in both genders, with France and Switzerland leading the trend. The UN continues to expect life expectancy in Europe to rise at a linear rate, albeit with a potentially slightly less steep curve than in previous decades. Future increases in life will be driven by gains of the over 65 year olds.

Most notable among causes of death has been the unprecedented reduction in cardiovascular mortality during recent decades. Other diseases, such as cancer, are increasing in relative potency, while dementia has risen to become the second leading cause of death in Germany. Life expectancy is expected to increase a little above the rate of healthy life expectancy. This will mean greater incidents of morbidity at older ages, including both diseases that may cause death, such as ischemic heart disease; and ailments causing discomfort, such as lower back pain.

The combination of low fertility rates in many countries, in conjunction with increased life expectancy will see a steep rise in old age dependency curves. This will be particularly felt in the labour replacement ratio - the ratio of those leaving and those entering the labour force by age. This may be a forewarning of potential future labour shortages to a mild extent in France and the UK; a moderate extent in the Netherlands and Switzerland; and a high extent in Germany. This will put pressure on pay-as-you-go pension services, and lead to difficulties in industries with large, relatively low qualified workforces.



### **Deep Dive: North America**

Nicholas Eberstadt, Henry-Wendt-Chair for Political Economy, American Enterprise Institute (AEI), Washington/DC

A clear gap in life expectancy at birth is opening up between the US and other comparable Anglosphere states. Moreover, the US curve is flattening. The main cause is differences in cardiovascular disease; although 'deaths of despair' are also a significant contributing factor.

However, the US health outlook is more nuanced than headline figures suggest. Asian-Americans, have better longevity prospects than any other racial group. In terms of the labour force, there is a striking shortfall in prime-aged men (25-64). The percent of men in this age without work (but not necessarily registering as unemployed) is around 16%, higher than at the end of the US Great Depression in 1940. This is partly compensated for by higher labour force participation of the over 65s than many other developed economies; although even this number took a hit under the COVID-19 pandemic and has yet to recover.

US per capita growth has stalled since the 2008 economic crash, struggling to recover as there has also been a slowdown in the rate of increase in time spent in education. This fall in productivity, combined with poor income distribution, has resulted in extremely low household wealth among the

lowest quintile of the population. This socioeconomic discrepancy will clearly have a negative impact on future retirement cohorts.



### **Mortality (Longevity): Contributing Factors in the Past and for Projections, and Implications for the Future**

Stephen Goss, Chief Actuary, Social Security Administration (SSA), Baltimore MD

COVID-19 was a mortality event, increasing the death rate in the US by 16% in 2020 and 18% in 2021, resulting in approximately 1 million American deaths. Among those who died from COVID-19, a disproportionate number of individuals had other comorbidities, with an overall elevation of non-COVID related deaths. The use of novel technologies to rapidly develop and deploy vaccines provided valuable protection. Any future pandemics will also push mortality rates above current trends.

After many years of impressive gains – aided by developments such as antibiotics, Medicare, and treatments for cardiac conditions – a deceleration of mortality reductions began to be seen in the US around 2010. This trend was not confined to the US, it could also be seen in other regions such as the UK.

Part of this slowdown might be expected. It will likely be harder to replicate the progress of prevention and treatments of cardiac diseases, towards conditions such as cancer and dementia. Furthermore, survival curves are not being pushed out as much as they are slowly becoming more rectangular. This suggests there are limits to longevity dictated by physiology.

Equally, societal and health conditions are developing that will impact mortality curves. Obesity is much more prevalent than in past decades; greater wealth and income inequality will contribute to poorer health outcomes and 'deaths of despair'; and increases in aggregate health spending must decelerate at a time when the population is ageing.

In summary, we should not think of mortality improvements in terms of a historical age gradient; and that in the future, we may look at mortality gains in the late 20<sup>th</sup> century as extraordinary. A deceleration of mortality improvements appears the most likely way forward.



### **Comment from Africa**

Gloria Langat, Senior Research Scientist, Ageing and Development Unit, African Population and Health Research Center, Nairobi

While the world's developed economies are facing inverting population pyramids, Africa still has a triangular population pyramid and looks set to retain it in coming decades. There are some countries with populations of over 60s in excess of 7% of the total population, located largely in the North and South of the continent.

Instead, Africa has a youth bulge, some 40% of the continent's population being under 15; and 70% of the population being below 35. The potential for the future is fascinating. Africa has the potential for a demographic dividend enjoyed by China over the last three decades.

That said, when ageing comes to many African states, it will come quickly. The number of elderly in Egypt will triple in absolute terms from 2000-2030. This reflects the gains that many African states are making in longevity. The challenge for the continent will be to ensure that as the numbers of

elderly steadily increase, particularly in wealthier states, morbidity can be compressed to older age contingents.

### Key Takeaways

- **Flattening mortality curves:** We are unlikely to replicate recent success in cardiac treatments with other leading diseases. This is combined with societal trends, including 'deaths by despair' and potential falls in preventative care resulting from stretched health care resources. The past is not necessarily a guide to the future; and in many states we should expect to see falls in the rate of life expectancy improvements within the general population. The insured population, however, may see a continued steady increase in the rate of life expectancy improvements.
- **Elderly societies:** Across industrial economies, median ages are rising. This will have significant effects on care spending in later life; healthcare spending; and the structure of working populations. In some economies, this shift will be dramatic. Countries with higher rates of immigration will have more cushioning; attempts to boost fertility will largely be insufficient.
- **Poorer health:** The good news is that healthy life expectancy is increasing; but not quite at the same rate as life expectancy. There will be an increase in morbidities in older age cohorts; and research to compress these morbidities into the last years or year of life will be considered a priority.
- **Labour force structures:** This could be time for progressive governments to increase labour market flexibility, creating structures making it easier for older cohorts to work longer; and potentially pathways to bring younger cohorts into the workforce earlier without sacrificing education.
- **Financial returns:** The bulk of the population moving from net savers to net spenders will have repercussions across asset markets. All else being equal, it suggests downwards pressure on equities and real estate. The direction of interest rates will be less certain; but government borrowing is likely to rise.
- **Opportunities of age:** Technology is already being employed in many states to help adapt to increasingly elderly societies. These include robotics, remote health care and monitoring technologies.
- **Opportunities of geography:** Many states – most notably in Africa – still have intact population pyramids and will enjoy demographic dividends over coming decades. Might we see new flows of direct and portfolio foreign investment into some of the world's poorest states?