

## Japan - The Demographic Challenge

A national crisis. That is how Prime Minister Abe recently described the ageing Japanese population, after it suffered another significant decline in 2018. With increasing life expectancy, low fertility rates and minimal immigration, the prospects for demographic improvement appear bleak in the short term. For the world's third largest economy, this could greatly affect the growth prospects of businesses, requiring an acceleration of innovation and a new understanding of the customer. Japan's ability to mitigate these effects and adjust to an elderly society is important not only to the international investor with eyes on East-Asia, but for all developed nations that appear earlier on the demographic decline. As we visited Japan, in search of potential investment candidates for the Evenlode Global Income fund, Ben Peters and I spoke in-depth to management teams about the effects of demographic shock and their strategic response.

The scale of the challenge facing Japan is severe. The population is already ageing fast, with a fifth already aged over 70 years old and a third over 60. The country's working-age population (between 15 and 64) is expected to decline by over 40% in the next half century. As society ages, the older population moves from net contributors to the economy (through tax generation and consumption) to a net expense, with higher social and healthcare costs. Coupled with a deflationary investment environment and the high popularity of defined benefit pensions, this has resulted in a pension funding gap of \$11 trillion. Experts estimate this could increase to \$50 trillion by 2050. Given these rather sobering figures, a reversal of the population decline has been made a key priority for the government. While offering free day-care services and preschool education may help low income households, this is not expected to sufficiently boost the fertility rate (1.43 births per woman) back towards the G7 average (1.69). Neither is immigration likely to solve the problem, with significant cultural and language barriers to integration. The UN reports Japan's immigrant population as only 1.8% of the total, comparing starkly with the developed nations average of 11.6%.

For companies, the effects of an ageing population are more nuanced. The most immediate concern highlighted by the companies that we met revolved around recruitment, with shortages particularly apparent in highly technical and physical disciplines. Japanese unemployment declined to 2.3% in February and the number of job vacancies per applicant increased to 1.6. This is being addressed in several different ways by companies. Trend Micro, a cyber-security company, has expanded the graduate hiring scheme to recruit those with less relevant IT experience, supporting graduates with extended in-house training and bearing a greater cost burden before staff become productive. Nomura Research Institute are seeking to make the company more attractive to potential hires through the offering of international training at US universities. Itochu Techno Solutions admitted that a major consideration for M&A is the ability to acquire an experienced workforce. These internal policies are being supplemented by increased outsourcing, as companies look to effectively share the cost of specialist employees. This provides companies like Meitec, a provider of R&D consultants, a growing market and strong demand through industrial cycles.





With a shortage in labour supply, Japanese companies have further responded by investing to improve the productivity of employees. A major beneficiary of this has been the technology industry. The Japanese government has announced a ¥4bn investment programme into Artificial Intelligence, in hope of reducing the costs and driving growth. A thriving start-up industry is also forming, with ¥34bn raised by AI companies and \$27bn raised by robotics companies in 2017 alone. Venture Capital investment has increased at a rate of 35% per year since the reforms by the Abe Administration in 2013. However, the source of funds for early stage investment differs in Japan, with companies (41%) and banks (16%) supplying the majority of capital rather than institutional investors, as happens in most developed countries. This fosters a close relationship between the R&D that is undertaken in start-ups and the operations (and future product requirements) of companies that invest.

The effect of this technology investment is reflected in the strategies of many of the companies that we met with. With the average Japanese farmer now 67 years old, traditional farming techniques have had to change. Industrial machinery supplier Kubota has developed AI systems that help farmers accomplish manual tasks (such as ploughing and harvesting) with increased efficiency and less physical hardship. This is the first step towards a fully automated, self-driving vehicle they believe will revolutionize the industry. Shimadzu, a provider of liquid chromatography mass spectrometers, are applying deep learning techniques to interpret the results of tests for users. This is expected to boost the R&D efficiency of their customers, reducing the dependence on highly trained (but increasingly hard to hire) staff and helping them develop better products and avoid costly dead-ends. Suntory Food & Beverages has installed wi-fi throughout their network of domestic vending machines; a truly massive undertaking given their near-omnipresence both in buildings and on the city streets. The cost however is outweighed by increased logistical efficiencies, as the company employs complex algorithms to help fewer people cover the restocking of more machines. All three of these examples demonstrate technology's ability to help address the labour market constraint imposed by demographic change and (potentially) further reduce the costs.

The demographic shift is also imposing dramatic changes in the demand for products and services. Some sectors have seen a decline in volumes. A reduced population has obvious implications for the required number of residential properties, with vacant properties a problem (13.6% of the housing stock!) and demand for construction waning. Healthcare is perhaps the most obvious beneficiary, with an ageing population not only more likely to suffer healthcare problems but more likely to suffer from co-morbidities. The nation's failing vision is an excellent example, with age-related macular degeneration increasing alongside (smartphone and computer-screen inflicted) vision impairments in the young. The lenses company, Hoya, is well positioned to benefit and is investing in production capacity and efficiency to meet the growing mass-market demand. A different approach to the ocular challenge has been adopted by Astellas Pharma, who are investing heavily in restorative cell-therapies that may help heal the damage from the effects of ageing. Similarly, in finance, consumers priorities are shifting. Japan





Exchange Group has seen a surge in the demand for information on pensions, with their recent seminars attracting upwards of 40,000 people. They are also promoting ETF products to give the elderly access to investments that may supplement their retirement savings. Companies that fail to adapt their products to the changing requirements may quickly find their customer base in decline.

The consequence of demographic change looms large for all Japan. However, Europe and America too must pay attention, as the developed world is also experiencing falling fertility rates and increased hostility to immigration. These trends could allow similar demographic pressures to build, possibly implying that the fate of Japan may be a harbinger for global progress over the next century. Japanese companies will test the ability of technology to boost a dwindling (but increasingly valuable) labour force. The Japanese consumer will provide valuable insights into the evolution in demand for products and services, the creation of new markets and the expected change in consumer preferences. Reassuringly, the companies we met are adapting to these changes well, taking up the gauntlet of the demographic challenge. For high quality companies, flexibility and innovation are invaluable attributes, investment in the future is a necessity, and oncoming market changes offer the opportunity for growth. For the investor, the value of doing detailed research into a company's strategic objectives, pricing power and risk management policies has never been higher.

