

GLOBAL DEMOGRAPHICS WHY SHOULD WE CARE?

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Global Demographics - Why Should We Care?

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Key Takeaways

Population growth per say is not important; what's important from an investment point of view is:

- Ageing and growth in the middle-income population.
- The point of economic gravity is returning to a dynamic Asia driven by the growth in middle-income consumers
- Robotics, automation and AI are secular winning investment areas.
- Europe is in secular relative economic decline, and the demographically induced Brexit amplifies Europe's decline.
- Japan is an example of "beautiful ageing" and gives some hope that a continent like Europe can mitigate some of the demographic headwinds over the coming decades.
- China will age very rapidly, but before headwinds become too significant, demographic trends are very supportive for insurance, luxury goods and digital business models.
- India has the world's best positioned large economy because structural reforms are right at the point, when the demographic dividend kicks in.

An unprecedented ageing process is unfolding across the world. The share of the population over 65 has gone from 8 pct. in 1950 to almost 20 pct. in 2015 in industrialized countries and is projected to keep rising towards 30 pct. for many countries by 2030. This has significant investment implications.

The geographical and sectorial investment implications from demographic change are most often only relevant in the very long term and are quite obvious. Our focus is where we see the most underappreciated substantial changes with investment implications within our investment horizon. These are:

- Wealthy kids and high intensity luxury goods consumption.
- Asian boomers and the digital natives.

- India the jewel in any long-term portfolio.
- Automation and lessons from Japan.
- The old continent and the political economy of demographic change: Brexit as an example.

Furthermore, and as a foundation for all investments, demographic changes over the last 35 years or so have been a key factor in the decline in real interest rates, and therefore a continuous elevation in asset valuations. Can we safely assume that this will not reverse driven by the continued ageing of our societies? This is a very complex, yet important subject to which we have devoted a separate White Paper.

Demographics is an almost all-encompassing subject and we acknowledge that being so specific on what we view as important we most likely overlook other important areas that will influence returns in the future. However, being a good stock picker is all about being right more often than not and accepting that one cannot get everything right all the time. The above is our framework for thinking about how we as investors should navigate in a world impacted by big demographic changes, a framework that we will be expand on in the coming years as the demographic picture evolves.

Demographics 101

For thousands of years, the world population grew slowly. 200 years ago there were less than one billion people on earth. Then between 1900 and 2000 the world population increased from 1.6 to 6.1 billion. We currently add around 84 million people to the global population every year and have reached a population of around 7.5 billion people today.

For a long time, the world population grew at an increasing rate. However, this is no longer the case, as the annual rate of population growth has been declining over the last 55 years. 1962 saw the growth rate peak at 2.1 pct. annually, and it has since fallen to almost half. The population growth rate is falling and will likely continue to fall, leading to an end of population growth towards the end of this century, according to the UN – see figure 1:



And although some claims state that the demographic future already has been determined there is, surprisingly, disagreement around the eventual peak size of the global population. The renowned International Institute for Applied Systems Analysis (IIASA) in their medium projection for population growth stands in stark contrast to the UN projections. While the average scenario of the UN projection sees the world population growing continuously throughout the 21st century to above 11 billion people, the IIASA medium scenario sees the world population increase to 9.4 billion in 2070, and then begin a slow decline to reach below 9 billion by the end of the century. An important feature of the IIASA projection is that it takes into account how educated a given population is. There is a strong link between education and fertility - more educated women have fewer children. This link is factored into IIASA's model and contributes to their projection of a much smaller total world population over the course of the 21st century, primarily driven by an optimistic view on economic development in Africa, where we currently have the highest fertility rates globally.

Looking at demographic trends a bit more granularly it becomes obvious that there are very big variations between different countries/regions, as exemplified on the following page – figure 3.

Parts of the world have for too long had fertility rates insufficient to maintain their population size and will therefore face declining populations in the decades ahead. Whereas the population of under-15s in the US has been essentially flat over the last 55 years, it has fallen by 30-40 pct. in Japan, Italy and Germany since peaking in the 1970s/80s. Increasing life expectancy and falling fertility rates are leading initially to ageing, but ultimately to shrinking populations. Europe, apart from France and the UK, exemplified Scandinavia, below by Germany, is expected to age rapidly, resulting in declining populations. Eastern Europe - not shown - will be particularly badly hit, with the 10 largest population falls globally by country to 2050 – all expected to take place in the region. Bulgaria as an example is expected to see a population decline of 40 pct. from peak population around 1990 to 2050.

Higher fertility rates will allow France, UK and the US to age more slowly and the populations to continue to expand. China looks particularly challenging: due to the one-child policy introduced in the late 1970s, it is set to replicate the demographic changes in Japan with a 25-year lag – figure 2:

Figure 2







Total Population

Source: UN, Department of Economic and Sociale Affairs (2017)

Wealthy kids and luxury goods comsumption

As they say, demographics is destiny, and not even the abandonment of the one-child policy will change this. China's National Bureau of Statistics recently released figures for births in 2017 and the data showed that 17.23 million children were born, 630.000 fewer than 2016. For the first time, more than half of newborns were not first children. Since the two-child policy was fully implemented in 2016, policymakers and academics had predicted that the population born in 2017 would be over 20 million. China will have fewer females at childbearing age for years, so the number of newborns will fall each year. For more than three decades, China has had a one-child policy in its cities, and today its total fertility rate is 1.5 to 1.6 children per family, below the replacement rate (which is 2.2 per family). As long as China maintains its current fertility rate, each generation will be nearly 25 pct. smaller than the preceding one. And even if China can restore fertility to replacement levels within 10 years after the country reaches its population peak in 2026, the population will still exhibit a decline nearly half a century long. This will result in a net population loss of over 200 million, if not more, according to Feng Wang, a professor at the University of California at Irvine.

Since 1960 Chinese life expectancy has risen from 45 years to 75 years currently, and the country is starting to grapple with what has been dubbed the "four-two-one" phenomenon: four grandparents, two parents, and one child. The longer-term consequences of this extreme family structure are obviously not good, since that one child has the responsibility for supporting all those elderlies. However, in the short to medium term before the effects become too dire we believe it is actually a strong investment theme, in that intergenerational wealth transfer from the old to the young as well as very high income inequality means that the younger urban generations have a lot of discretionary consumption firepower. We believe that we are at the start of an acceleration in the adoption of premium brands in China. Chinese consumers are the biggest buyers of premium autos and luxury goods in the world. Macau is the world's largest gaming destination as measured by gross gaming revenue. According to research, much of this activity is supported by a surprisingly small segment of approximately 5 million high-intensity consumers with another approx 60 million consumers who will consume premium goods occasionally.

These high-intensity premium customers "only" have on average a household income of USD 58.000 but they are somehow able to uphold a consumption pattern that more resembles millionaires in the west. This is because the older generation typically sponsors the younger generation with housing, education, insurance, car et cetera, which leaves the younger household with fewer fixed costs and a huge discretionary purchasing power. It is expected that this group of high-intensity premium consumers will expand at a 22 pct. rate annually between now and 2026, to over 30 million. Furthermore, premium consumption in China is entering a demographic sweet spot that will complement the favorable intergenerational income transfer dynamics described above. The 30-40-year-old segment in China accounts for 47 pct. of all premium consumption in China - and the population of 30-40-year-olds is forecast to grow 8.5 times faster than the overall population over the next five years (3.4 pct. CAGR vs 0.4 pct.), supporting robust growth in demand for premium brands.



Billion RMB (Global market evolution) 3,000 2,500 2.000 1500 1.000 500 0 2008 2012 2016 2020E 2025E Other consumers worldwide Chinese consumers Source: McKinsey&Company, Aug. 2017

Premium consumption and luxury goods

According to figure 4, in 2008 when China hosted the Olympics in Beijing, Chinese consumers accounted for only 12 pct. of global luxury spending. In the eight years that

followed, more than 75 percent of the total growth in global luxury spending, over \$65 billion, could be attributed to purchases made by Chinese consumers, either at home or abroad. By 2025,

Chinese consumers will be responsible for global luxury sales that are equivalent to the size in 2016 of the French, Italian, Japanese, UK, and US markets combined, and will account for 44 percent of the total global market.

We expect this to support sustained demand growth for premium brands, and we would specifically expect owners of differentiated European luxury brands as well as Macau gaming companies to do well.

Booming asian middle class

Over recent years and increasingly out to 2030 the world will be transformed by the shift of the center of economic gravity eastwards. This is first and foremost a result of the growth of the middle class in Asia.





It is estimated that more than 3.3 billion people had entered the global middle class by the end of 2017, and the group is growing by at least 140 m. annually for the foreseeable future according to Brookings. Amazingly, 88 pct. of the next 1 billion people in the middel-income class will live in Asia. It is also estimated that by 2030, Asia will account for well over half the total global middle-class consumption market.

Figure 6:

Spending by the global middle class



In the period 1950-80 during the rise of middle class in the U.S., Europe, and Japan there was significant government support for the middle class. Government policy improved urban conditions, built out transportation infrastructure, supported state-funded mass education, and provided affordable housing and other social assistance programs such as health care and pensions. Until very recently, emerging economies like China and India have provided very little of these services to their populations. However, as the middle class grows there will be an increasing focus on these areas of public service, for example, as represented by the increased focus on provision of social housing for the less wealthy, at the same time as individuals will continue to allocate a larger part of their incomes to education, life- and private healthcare insurance, areas which we find very attractive long-term.

The insurance industry in most Asian markets is still at an emerging stage, with population coverage and premium relative to GDP penetration still low by international standards. Insurance is, however, increasingly on governments' agendas in Asia, and several countries have set explicit targets for the development of the insurance industry, such as 5 pct. insurance premium penetration to GDP by 2020 in China, and 75 pct. population coverage in Malaysia.

While still a small segment within financial markets, the insurance industry has been growing rapidly in the Asian countries. China has been one of the fastest-growing insurance markets with total insurance assets recording 20 pct. annual growth over the past five years versus 13 pct. for the region. It is our belief that secular demographic changes provide a solid foundation for attractive long-term investments in dominant insurance providers in Asia.

The digital natives

It is very easy to build a bullish outlook for continued strong growth of private consumption in emerging markets. However, it is not just that the emerging markets middle class is growing quickly; it is also a different type of middle class. Younger and more technology savvy, where the growth in consumption will be manifested much more on-line and much less off-line. It is the growth of the digital natives. A digital native is a person above 16 with secondary education living in countries with more than 50 pct. internet penetrations.

Figure 7:



We believe, the 5-fold increase in digital natives in the world from around 500 million in 2016 to almost 2.5 billion in 2030 and more than 5 billion by 2050 is one of the most important and

fastest demographic shifts ever to occur. It will have vast implications for the economy and politics worldwide. We have already seen the early effects of the acceleration as extremely large businesses like Google, Facebook, Alibaba, Amazon, Baidu, Tencent, etc., have been created over a very short time span as a result of the rise of the digital natives. However, what we have seen so far is nothing compared to what we will experience over the coming 10-15 years, as the digital natives becomes a bigger part of the population and the rise of digital technologies will change the way we consume and interact with each other socially.

Many of the winners have probably already been identified, because techdriven consumption business models tend to be platforms, where "winner takes all" logic prevails, because of the positive network effects. For example, it is said that 54 pct. of the time Chinese spend on the smartphone is done on TenCent's different apps. For comparison, Americans spend around 20 pct. of their mobile time on Facebook.

The aforementioned statistics on Tencent and Facebook tells both a story of much deeper development of services on Tencents WeChat-app and at the same time also a much higher degree of advancement of digital services in the Chinese economy compared to the US. We believe many other emerging market economies will leapfrog the traditional development stages that western economies have gone through and advance very fast to an on-line based digital society since no legacy infrastructures exist to slow down the transition speed. According to CLSA, ePayments in China was 16 times that of the US in 2016 driven by high smartphone adoption and payment services like Alipay and Tenpay. It is highly likely the same adoption patterns will be seen in other South East Asian countries. This is where Chinese internet companies today invest for future growth.

India – the jewel in any long term portfolio

The largest demographic dividend the world will see in the coming century will be in India. However, due to a centralized build out of financial infrastructure the most likely winners here will be domestic financial service providers. Before 2009, half of all Indians did not have any form of identification, not even a birth certificate. Without a form of identification, citizens couldn't access services like banking, insurance, or even obtain a driver's license. They were basically left in the shadow of the Indian economy. As such, many opportunities like starting a formal business were not available to them. Then in 2009, India launched Aadhaar. Aadhaar is a biometric database based on a 12-digit digital identity, authenticated by finger prints and retina scans. Today, 1.3 billion people or most of the population has a digital proof of identity. In 2016, India added another component to its digitized system called India Stack. India Stack is a series of secured and connected systems that allow people to store and share personal data such as addresses, bank statements, employment records, and tax filings. This is all accessed, and can be shared, via Aadhaar.

According to analysts, around 90 pct. of all payments in volume are currently made through cash in India. However, with increased penetration of high-speed Internet and smartphones, coupled with the effects of Aadhaar, digital payments can now become mainstream. Boston Consulting Group and Google expect cashless transactions in the consumer payments segment to grow to 40 pct. over the next three years.

If the transition to a digital society can happen in India, where just 2 pct. of transactions were non-cash a few years ago, it can happen in any country with good governance. Systems like India Stack could fast-track the move to digital payment systems across the developing world and mark the end of cash use.

From a macro point of view the Indian state is an obvious winner in that social security and tax systems becomes much more effective, and corruption becomes much more cumbersome in a digitalized system. Transaction costs collapse, and the banking system is liquified by an inflow of deposits. Therefore we like financials since they are at the center of this transition, however, all of society will benefit from financial end economic inclusion of many millions of people in the coming years.

To harvest the demographic dividend from a growing labour pool a society needs good governance and strong institutions, which can create job growth and economic prosperity. We believe this is where India differentiates itself both from the past and also from another continent with big demographic potential, namely Africa. We are convinced that global investors need to allocate significant capital to Indian assets in the years ahead, while uncertainty prevails over whether Africa will see a demographic dividend or disaster, as this will depend on the successful development of strong governance and institutions and reduced corruption.

Automation and lessons from Japan

We think the most dominant demographic development is not population growth per se but ageing, and this is in a glacier-like fashion changing our economies permanently. Japan is both a case in point and a harbinger for what will happen in many western societies over the coming decades. The Japanese Cabinet Office has projected that Japan's working population aged between 15 and 64 will have shrunk to 38 million by 2060 from 66 million in 2013. Based on a 2011 simulation by the Health, Labor and Welfare Ministry, it is estimated that future demand for nursing and medical workers might constitute as much as 25 percent of the labour force in the 2050s. Japan is already today feeling the pressure on its labour market: in april 2018, the ratio of job offers to job seekers rose to 2.41 - the highest since January 1974 - partly because of population shrinkage. The ratio in the nursing industry was particularly high at 4, meaning there were four job openings for every person seeking work in the sector.

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All this gloomy news about a demographic disaster, however, might not be as big of a problem as feared, since an ageing population does not necessarily lead to slower growth per capita.

As real GDP has risen by only about 15 pct. since 2000, or less than 1 pct. per year, Japan easily seems the least dynamic of the world's major economies. But given Japan's demographics – the country's working-age population has been shrinking by almost 1 pct. per annum since the start of this century – this result is remarkable. In fact, Japan's growth rate per working-age person was close to 2 pct. – much higher than in the US or in Europe. Although the US economy has grown by more than 35 pct. since 2000, its working-age population has also grown markedly, leaving the annual growth rate per working-age person at only about 1 pct.









So, given its rapidly declining workforce, Japan has been successful at working its potential workforce much harder. Unemployment today is at a record low of less than 3 pct., and almost 80 pct. of those who are able to work have a job, compared to about 70 pct. for Europe and the US. Of people above 65 years of age, 23 pct. work in Japan, a share that has been rising since 2010. The similar number for Italy and France is 3-4 pct. Female labour force participation has also been rising strongly and is now at 68 pct. higher than the OECD average of 64 pct. France is today at 68 pct. while Italy is at a very low 55 pct.

Adjusted for demographic headwinds the Japanese economy has been an outperformer and a future role model for many European countries.

One area that might further explain Japan's relative success is automation. According to research, since the early 1990s, the period commonly viewed as the beginning of the adverse effects of aging in much of the advanced world, there is no negative association between ageing and lower GDP per capita. It is concluded that this could be due to the increased adoption of technology in countries undergoing more pronounced demographic changes.

This is supported by the fact that countries like Germany, Korea and Japan are at the forefront of both demographic decline and robotic use, having some of the highest number of industrial robots per thousand employees in the world.

As demographic pressures increase across the world in the years ahead and service sectors and industry struggle to obtain qualified labour, there will be a natural tendency to focus on activating larger parts of the potential labour market by attracting women into the labour force as well as by delaying the effective retirement age and increasingly applying technology to get the job done.

Japan has picked much of the low-hanging fruit, when it comes to expanding the labour force. Many European countries still have a long way to go, and this gives reasons for optimism, when it comes to the task of reducing the negative effects of ageing and demographic decline. Furthermore, this gives rise to the debate about whether technology causes unemployment or boosts employment, one which has raged since the Luddites smashed textile machines 200 years ago. Many fear that "this time is different", with an oft-cited paper from two Oxford academics (Carl Frey and Michael Osborne) suggesting that 47 pct. of all Americans work in jobs susceptible to automation over the next 20 years. Subsequent research from the Centre for European Economic Research found that only 9 pct. of jobs, not 47 pct., are at risk of automation as most jobs are bundles of tasks, some of which machines cannot easily handle. Or as the Financial Times' Alphaville column recently quipped, "You can worry that robots will put us all out of a job or you can worry about future 'labour shortages' implied by demographic projections – but it's illogical to worry about both". No matter who wins the argument in the future, companies exposed to automation are winners. They have performed strongly in the past and will see even better tailwinds in the years ahead as the world grows older.

The old continent and the political economy of demographic change: Brexit as an example

Every investor is aware that western societies are ageing. In Europe, the age dependency ratio is projected to climb rapidly from this decade through the next 40 years, most notably in eastern and southern Europe and Germany. However, it appears that few investors are cognizant of the extraordinary demographic divergences that are emerging within the European region, because of different fertility rates and large-scale migration from the East to the West driven by the European citizenship.

Free movement of people is one of the founding principles of the EU and is seen as a cornerstone of the concept of "European citizenship", which was created under the Maastricht Treaty of 1992. It gives the right to everyone in all EU members states plus Norway, Iceland, Liechtenstein and Switzerland, to live and work in any other country in the group. This – for the EU sacred construct – collided with what has been termed the UK's "population exceptionalism", the fact that the UK has a very different demographic profile than the rest of the EU and was a crucial factor leading to Brexit in 2016.

The UK's Office of National Statistics estimates that immigration into Britain in the year up to Brexit was a record 650.000 people of which net migration accounted for 335.000 and in the eleven years to 2016, the UK's population rose on average by 482.000 per year and by over 5 million in total, as much as that recorded in the previous 35 years. A large part of the immigration originated from eastern European countries as people took advantage of the European citizenship.

> The inability to control net migration on the scale that the UK has experienced undermines the legitimacy of the political system.

The total population of the UK is projected to reach 73.3 million by 2037 and to be larger than Germany by 2060. Economic migrants are attracted by societies in which there is law, order and economic opportunity. The UK's labour market is the most fluid and dynamic of Europe's larger economies. Add to this English being the "world language" and London the "world capital", and it becomes obvious why UK acts as such a strong magnet for young people from other parts of Europe affected by mass unemployment in the aftermath of the GFC. However, this East-West mass migration is socially disruptive for both the East as well as the West. Since 2004, over 8 million people - mostly young - have migrated from eastern to western Europe, accelerating the demographic decline of the East and thereby reduced this region's economic potential. Vast areas of Romania, Bulgaria and the Baltics are being depopulated. Within a nation state there would be structures in the form of transfers that could reduce the social effects, but not in the EU without a fiscal union.

As for the UK, one fact that separates it from the rest of the western parts of Europe is that the UK is an overcrowded island. The population density of England of 411 people per square kilometer is twice that of Germany and 3.5 times that of France. The post-2000 rate of population growth in the UK, in England notably, has major implications for land use, housing, infrastructure and the provision of social services. For many years, surveys have indicated that the post-2000 rates of increase of net migration and population are unacceptable to a majority of British citizens. The inability to control net migration on the scale that the UK has experienced undermines the legitimacy of the political system. A Sovereign that does not control its own borders cannot be considered a sovereign, and this is what the British reacted to with Brexit. The legitimacy of a democratic nation state requires a minimum degree of control of its borders, a principle that will doubtless be verified by other European nations sooner or later.

Britain's Brexit decade promises to be difficult. Still, for a consumer-service economy that enjoys the natural advantage of the English language and good demographics there is huge potential for the expansion of commerce in the world and beyond a region that will soon be entering a demographic decline. Brexit is first and foremost a loss to the EU, since the UK is clearly today and, in the future one of the most vibrant economies in Europe.

Sometime in the not too distant future Europe's projected demographic decline will mean that the population will be less than 6 pct. of the global population. Europe's neighbors, the populations of Africa and the wider Middle East, including Turkey, is expected by the UN to rise from 280 million in 1950 to 2.9 billion in 2050 (see chart) and add in a total 3.9 billion people over the 21st century, so that almost half of the world's population will live in these regions. From 1950 to 2050 the population of the current EU countries is projected to rise from 0.4 billion to 0.5 billion people. In 1950, the European population was 40 pct. larger than Africa and Middle East: in a little more than 30 years the European population will be less than 20 pct. of the African and Middle East population. It is not difficult to understand why the dilemmas of immigration and assimilation are just beginning for Europe. A minimum degree of control of the borders of the South and the East will be imperative. However, Europe so far has failed to rise to this challenge.

Figure 10:



Elections will be won and lost on this subject in the years ahead, and there are no easy answers to the challenges of poverty induced massmigration from the Middle East and Africa to Europe. Secure borders are the least European populations should demand, but obviously not a longterm solution, which can only be stronger institutions and better economic development in the countries from where the massmigration originates. The ongoing population explosion in Africa and Middle East gives little hope for this within a normal investment horizon. In fact, it could be another reason to be skeptical about the relative position of Europe in the world going forward. European policy agendas risks being inwardly and defensively focused on mitigating immigration flows and defending the existing welfare privileges of the people instead of a more optimistic and offensive policy agenda of taking advantage of the extraordinary growth opportunities an expanding global middle income population provides - also for Europe.

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