Global Asset Management

A demographic cliff and inflation: the economic implications

RBC European Equity team

History has demonstrated that humans are a race built on abundance: abundance of resources, of ideas, of capital, and of people. Environmental degradation and climate change is in some regards the first reckoning with a fundamental change in abundance. Capital ebbs and flows over time but natural resources, by and large, have remained plentiful. This reversal is stirring great changes in society.

But what if there was a change of equally seismic proportions, not of natural resource, but of human resource? After decades of received wisdom that the human population would grow in perpetuity, the last few years have seen a sudden reversal of this view. Evidence now suggests that for large parts of the world, populations will actually shrink by 2100, and in some areas this will happen significantly sooner.

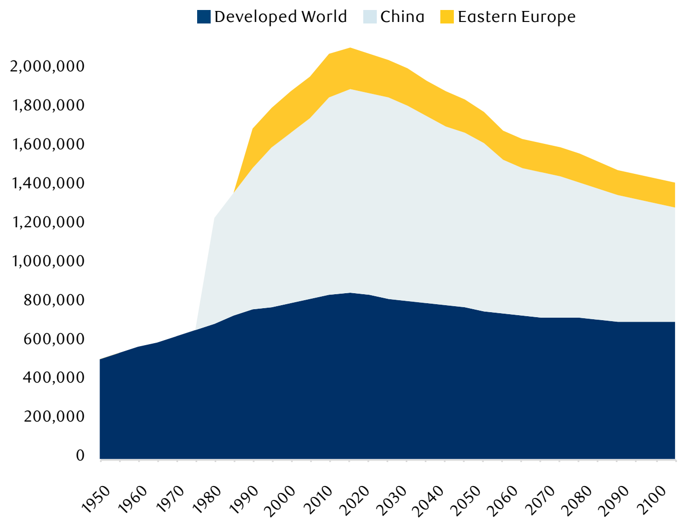
From an environmental perspective this may bring certain benefits by relieving some of the pressure on natural resources and the environment, but it has extraordinary implications for societies and economies. In this paper we look at what this change may mean for us as investors, savers and, indeed, members of society.

The history

Although perhaps not immediately apparent, the 1980s/90s saw the most substantial positive supply shock to the world's labour force in modern times (Exhibit 1). This was driven by two major events. The first was the collapse of the USSR, thereby releasing the Eastern Bloc to reintegrate into Europe and the capitalist labour market. The second event, which had a far bigger impact, was the rise of China and its integration into the global trading economy.

These two events, combined with a rise in the number of women in work, resulted in the world's effective labour force doubling between 1991 and 2018.[1] This produced a massive deflationary force when combined with accelerating globalisation, as well as serving to weaken the bargaining power of labour while driving down

Exhibit 1: World's effective labour force



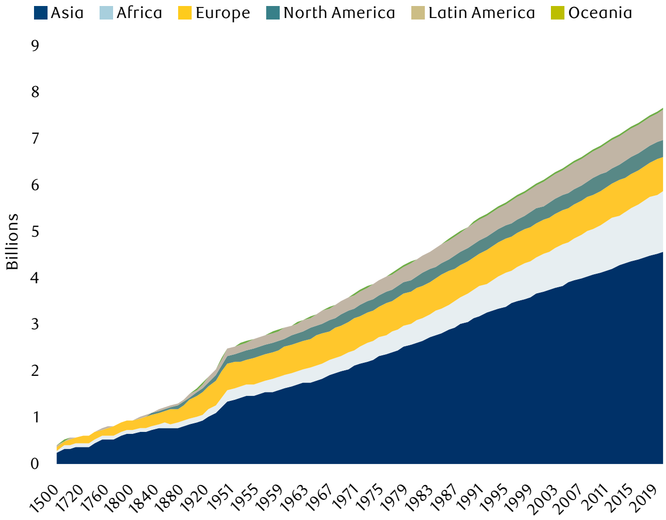
Source: UN Population Division, Bernstein, 2019.

real wages. Inflation and interest rates (both real and nominal) have been falling fairly steadily since the 1990s to extraordinarily low levels, and this was exacerbated by the financial crash in 2008/2009 and, more recently, the Covid-19 pandemic.

This increase in the available labour force was supported by benign demographics in most emerging economies and a number of advanced economies, as the dependency ratio (i.e. the ratio of dependent people (those not of working age) to those of working age) was relatively low.

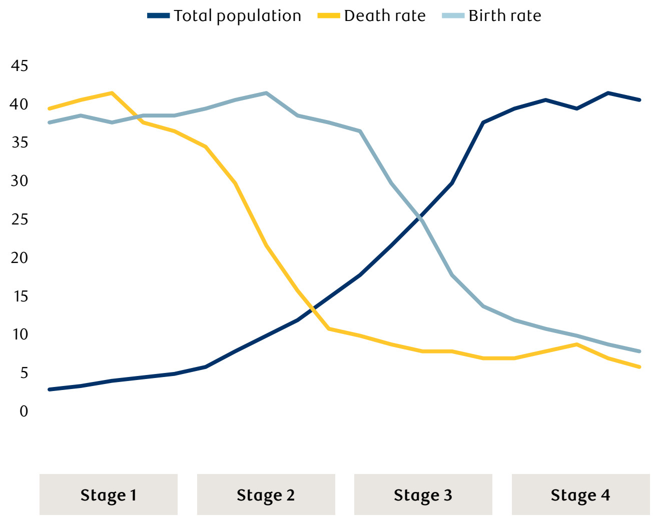
[1] *The Great Demographic Reversal*, Goodhart & Pradhan, 2020

Exhibit 2: World population by region



Source: UN Population Division, HYDE, 2020.

Exhibit 3: The demographic transition



Source: RBC Global Asset Management, 2021.

The future

With the deflationary force of 'excess' labour hanging over the world's economies for decades, it is easy to overlook it as a root cause, and to dismiss the scale of its effect. It is brought into sharp relief again, however, when we ask ourselves what will happen in the future.

This is because two significant events, one short term, one long term, are coalescing to possibly reverse the effects of the last three decades. The first is that the 'China effect' is coming to an end.

As China has grown and matured within the world's economic ecosystem and its excess capacity has been absorbed, so its deflationary impact has begun to wane. This is being exacerbated by a seeming reversal in globalisation, with increased nationalism and a reshoring of supply chains occuring in many western countries.

The second is that the extraordinary population growth of the last 150 years, in combination with the benign demographics of the last 50 years, is also coming to an end (Exhibit 2).

It is now acknowledged that much of the world's population is ageing, but it is perhaps misunderstood as to where and at what rate this is occuring.

The Total Fertility Rate (TFR) of many advanced economies has been below replacement rate (i.e. the rate at which a population is self-sustaining notwithstanding immigration and mortality rates) for a significant time. It may surprise some to learn that the U.K. has been below this rate since the early 1970s.[2]

"It is now acknowledged that much of the world's population is ageing, but it is perhaps misunderstood as to where and at what rate this is occuring"

Within the discipline of Demography, this change is referred to as the Demographic Transition (Exhibit 3). This transition can broadly be summarised as '*the continued fall in mortality and fertility rates, whereby countries move from high death and high birth rates, to low death and low birth rates.*'[3]

However, there is a potential fifth stage that many countries, both advanced and emerging, are entering or have already entered, where fertility rates continue to decline and, accordingly, population rates continue to fall.

Some may question why this should be problematic given the pressure that growing populations have on natural resources and habitats. But while this rather Malthusian proposition may hold water, it does not address the fact that it will bring about profound change in economic terms, something that is perhaps overlooked by economists. As Professor Sarah Harper notes: "*Economists typically believe that the demographic transition is something which follows on from economic growth; demographers believe it is a more complex process driven by socio-cultural, as well as economic factors*".[4]

[2] *How Population Change will Transform our World*, Professor Sarah Harper, 2016
[3] *Demography: A Very Short Introduction*, Professor Sarah Harper, 2018
[4] *Demography: A Very Short Introduction*, Professor Sarah Harper, 2018

As it stands, over half the countries in the world are at, or lower than, the replacement level of roughly 2.1 births per woman with an average TFR of 1.69 in advanced economies.[5] Historically this issue has been offset by immigration from a population perspective, or offshoring from an economic one. However, with Sub-Saharan Africa and India among the few remaining regions with predicted population growth to 2100, this will not be sufficient to offset the decline in countries such as China, Russia and several others in Asia that have already reached their inflection points. Some may point to efforts of direct fertility control from governments (such as Sweden or China); however effectiveness is heavily skewed towards population reduction, rather than promotion.

The economic consequences

There is much discussion of the looming spectre of significant inflation returning in the short to medium term in western economies. While most of the reasons given for this are necessarily focussed on the next few months or years, an interesting argument for a return of long-run inflation has been put forward by the economists Charles Goodhart and Manoj Pradhan.[6] In their book, the authors posit that people have tended to underestimate the impact of demographics on the progressive decline in both inflation and interest rates since the 1970s. Given the demographic changes already discussed, the authors suggest we are likely to see a reversal of this dynamic.

The real trends of most economies during the last half a century (namely continued real output growth coinciding with deflationary headwinds) is generally accepted to have been caused by a combination of demography and the broader effects of globalisation. One of the by-products of this has been that the real return to labour, barring perhaps highly skilled workers, has decreased, while the return to capital (in this case corporate profitability) has gone up.

"As demographic trends reverse, Goodhart and Pradhan suggest we may be about to see at least three decades of lower growth, faster rises in inflation, and with higher nominal interest rates than recently experienced, principally due to the reversal in demographics"

As a consequence, labour has increasingly been deprived of bargaining power, constantly under threat from both national and corporate offshoring, and trends in immigration. A brief look at the declining rates of unionisation across many developed economies is one such manifestation of this. What Goodhart and Pradhan point out, however, is that this consensus view often fails to ascribe sufficient causation to demographic changes than, say, central bank policy or national economic systems.

As demographic trends reverse, Goodhart and Pradhan suggest we may be about to see at least three decades of lower growth, faster rises in inflation, and with higher nominal interest rates than recently experienced, principally due to the reversal in demographics. As the disinflationary effect of more workers overwhelmed the inflationary impact of dependents (given that ageing tends to be inflationary) in its simplest terms, so the reverse may well prove the same. With dependency ratios rising, labour shortages are likely to occur, simultaneously producing a rise in bargaining power of labour relative to capital. This will in turn lift real wages and labour's share of national income, thereby producing inflationary pressure. An additional inflationary tailwind is that despite their less

Declining male fertility: a hidden catalyst?

The reasons for fertility decline during the transition are well documented by now (principally: education, access to contraception, and a reduction in infant mortality) but there is a newer entrant in to the debate which is worth mentioning.

Recent research shows that average male fecundity (which for our purposes we can simplify as sperm count) has halved in western countries since 1973.[7] What is equally concerning is that this momentum shows no sign of slowing down. There are numerous suggestions as to why this has occurred. Some of this can be explained by lifestyle factors, such as smoking or increased obesity, but this is only a partial explanation. Instead, there is increasing weight being given to the effects of endocrine-disrupting chemicals, ubiquitous in every day plastics and various cosmetics.

Significant research is still required in this area, but regardless of the underlying causes, this unprecedented event could serve as a catalyst to the demographic changes that have been underway for decades.

5 United Nations, *World Population Prospects, 2019. How Population Change will Transform our World,* Professor Sarah Harper, 2016.
6 *The Great Demographic Reversal*, Goodhart & Pradhan, 2020.
7 *Temporal trends in sperm count: a systematic review and meta-regression analysis*, Human Reproduction Update, Volume 23, Levine, Jorgensen, Swan et al, 2017.

economically dynamic influence and reduced rate of investment (which in turn may suppress real rates), the elderly population typically spends more than it saves, thereby also lifting inflation expectations. This is partly due to increased healthcare expenditure.

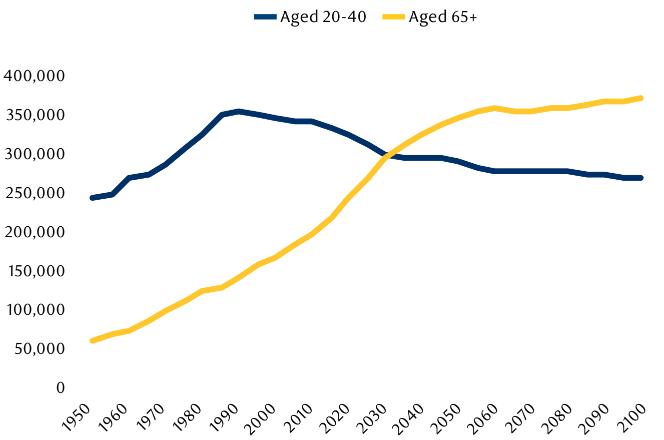
The reason this view may not be shared by more economists could be because economic forecasting, which usually focusses on the short to medium term, tends to use demographics as a constant in calculations; over the same time frame, the number of workers will still be greater than dependents. However forecasters will then erroneously allow this to bleed into longer-term forecasting as well, thereby explaining why perhaps fewer economic forecasts have come to the same conclusion.

There are a number of arguments posited by commentators and economists that attempt to counter this theory, not least of which is that policy makers will counteract the change in national dependency ratios by simply forcing more of the older workers back into the labour force. While this is a possibility, it is interesting to note that in aggregate, participation rates in older generations (especially in developed regions) have already risen significantly. Having raised the proverbial bar quite high, policy makers may find it difficult to raise it higher.

There is also the fact that the participation rate of older generations is a negative function of the generosity of the pension benefits within that particular country. Policy makers have noted this phenomenon and in certain instances have attempted to reduce pension benefits accordingly, but often with complex results. Protests in France and Russia in the last decade, in particular, against proposed changes to pension benefits have caused the proposals to be watered down or shelved completely.

Finally, a more direct political headwind is the ever-increasing voting power of older generations (Exhibit 4). Relative power has been rising since 1990 and looks set to overtake those aged 20-40 by the mid-2030s, thereby

Exhibit 4: Voters of retirement age vs under 40s



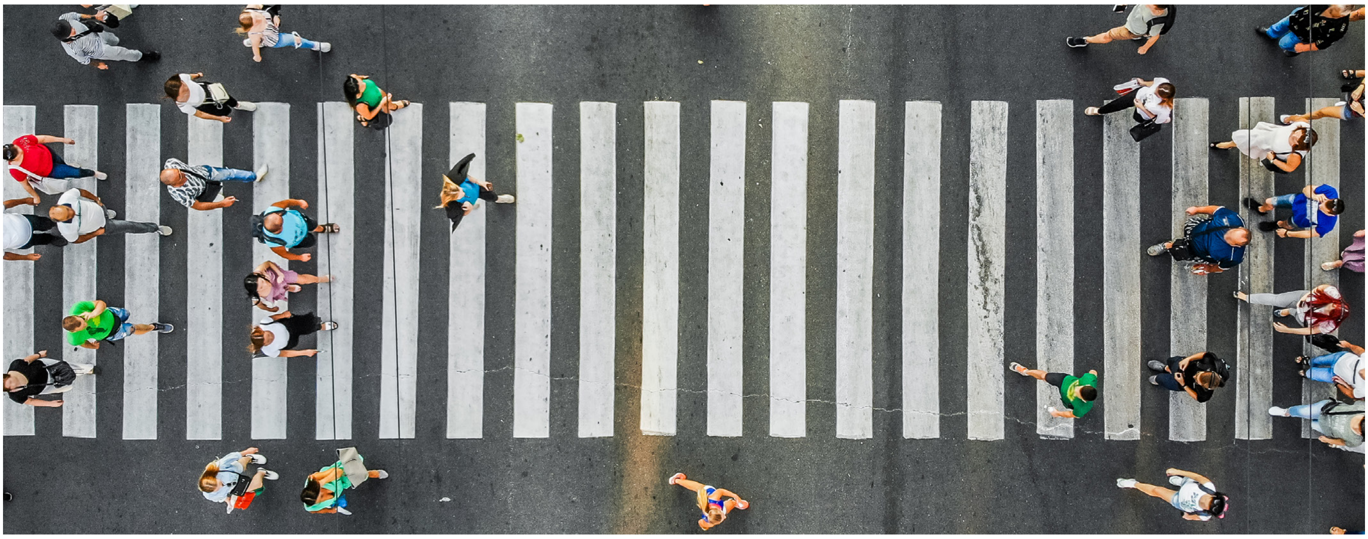
Source: UN Population Division, Bernstein, 2021.

creating further difficulties for policy makers to combat deteriorating dependency ratios.

If they fail to increase participation in existing populations, then policy makers are likely to have to turn to two other mechanisms.

The first of these is migration which, as already mentioned, is unlikely to re-occur at the same levels (notwithstanding any caused by extreme climate change) as those experienced since China and Eastern Europe entered the global workforce. India and Africa remain areas that may produce this effect but uncertainty remains over scale and timing.

The second, perhaps more pertinent, mechanism is that of automation. The issue with automation is that it can generally be seen as a global complement for labour in economic terms, and not a substitute. That is not to say that it does not serve an important purpose; indeed without it, the effects of demographic change may become far more serious. But automation, when it seeks to replace



> “In comparative terms, Europe is likely to see the slowest growth in its dependency ratio of any major economy for the first time in 35 years which could be supportive for relative economic growth and accordingly, more attractive to global investors.”

the role of labour in the production function, can only go so far. On balance, automation remains a hugely disruptive force which may go some way to protecting the domestic production function from the coming contraction of the labour force. But there are numerous arguments against simply extrapolating the effects of automation over numerous timeframes and sectors. Ironically, where automation may prove most helpful is in those areas of the world where, demographically at least, it is needed least: emerging economies.

Implications for Europe

While Europe has struggled historically under rising dependency ratios, the ageing phenomenon is now being experienced across much of the globe. Europe has often been cited as having disproportionate concerns in this regard as, since 1990, the region appeared to age around 20 years ahead of the trajectory in the U.S. and China. However more recent data suggests that this is no longer the case. In the next 10 years, Europe is likely to see parity with the U.S. in terms of an ageing population, and may even be in a better position than China.[8]

When viewed through the lens of relative change in dependency momentum rather than the absolute level, it is interesting to note that while Europe has been tackling this issue for over 10 years, the U.S. is now about to enter this phase. In comparative terms, Europe is likely to see the slowest growth in its dependency ratio of any major economy for the first time in 35 years which could be supportive for relative economic growth and accordingly, more attractive to global investors.

One of many potential problems for European policy-makers to address is that inflation arising from future demographic trends removes the need for ‘manufactured’ inflation. Indeed, they may find that they are exacerbating an underlying inflationary trend through existing fiscal and monetary support. For central banks, the already complex job of navigating the middle ground between the extremes of the inflationary spectrum may become a lot harder, with potential for policy error becoming more and more prevalent.

Implications for companies and investors

How companies will deal with these seismic changes is very difficult to predict. For the past few decades corporate investment for many economies has been sluggish due to an offshoring of investment combined with the decline in labour bargaining power mentioned above. The latter has resulted in a number of players in the corporate sector raising profits through the lowering of wages and, in many instances, not focussing on raising productivity through investment; significant forays into share buybacks only served to exacerbate the problem. How the reversal of any labour bargaining power will affect these companies remains to be seen, but it could be argued that it may, in turn, encourage domestic investment and productivity.

But this raises the question of which companies are best equipped to handle this changing environment?

This can be broken down into two groups: those companies that will be most resilient to inflationary pressure and demographic changes, and those that are likely to benefit from it, especially at a sector level.

For the first cohort, there are a number of elements which point to well-governed, quality companies with strong brands that will prove resistant to the negative side-effects of a rising inflationary environment. Companies with scale that are able to pass on rising input costs to consumers (such as those in the Consumer Staples sector) as well as being able to raise prices to offset inflation, will find margin protection where other companies may not. The natural moat created by strong brands will also provide stability to revenues during times of inflationary volatility. Meanwhile, those companies with a geographically diverse revenue model are likely to be able to make adjustments to their businesses to benefit from those regions with more demographically-benign circumstances, while simultaneously adapting to those with higher dependency ratios. Finally, those well-managed, capital-light businesses

[8] *Demographics: Gradually, Then Suddenly*, Morgan Stanley, 2021

that are not over-levered when interest rates rise may well prove more resilient: capital-light businesses are required to spend less on capital to grow or maintain their business. If prices are rising, that capital – such as machines or factories - will rise too. As a result, asset-intensive companies would have to spend more to stand still in inflationary terms.

The second cohort is both varied and subtle, spanning many different sectors. Health Care appears to be the most obvious sector set to benefit from rapidly-ageing populations. Older people are more likely to develop chronic late-life diseases including dementia, which now affects more than 50 million people worldwide. Alzheimer's, the most common form of dementia, accounts for 60%-70% of all cases.[9] While there has been little progress in the development of treatment for Alzheimer's and other conditions in the last half century, recent drug approvals may point the way to progress in this space. This is due in part to the significant R&D spending across the sector over the last 20 years that has been slowly progressing the insights scientists have into this disease.

Obesity and diabetes are both chronic conditions that, if treated earlier on in life can reduce the economic burden of healthcare in later life. In addition, both conditions can have a negative effect on fertility which is another motive for countries to encourage early-stage treatment. Novo Nordisk, for example, has spent decades at the forefront of diabetes treatment while more recently, treatments such as Wegovy – an anti-obesity medication – have shown to provide weight loss that can lead to significant improvements in fertility and morbidity in the future.

Financials is perhaps a less obvious area that may benefit from demographic changes, however an ageing population, forced to work for longer into their retirement age, requires significantly different financial assistance and planning. As pension ages will differ signifcantly across regions more bespoke services will be required and the banking and insurance sectors will have to adapt accordingly.

These are just glimpses into the numerous areas that are likely to be disrupted, and may benefit from, shifting demographic and inflationary environments. Given the timescales involved, it is extraordinarily difficult to predict how sectors will need to evolve, but it should not negate the need to keep abreast of these kinds of developments.

Conclusion

As noted, forecasting decades into the future is riddled with pitfalls, especially when based on trends that are themselves decades in the making. While the trends in demographic change appear to be well established, the potential impact on inflation, and the corresponding economic implications, are still essentially theorised. If demography has played more of a part in the long-standing deflationary environment than many have appreciated, then it would seem prudent to consider how this reversal will, in turn, alter this dynamic. The implications may be profound, and both corporates and investors will need to be prepared.

[9] WHO, Global Dementia Observatory, 2020

ABOUT THE AUTHOR

Freddie Fuller

Product Specialist,
RBC European Equity, RBC Global Asset Management (UK) Limited

Diploma in Investment Management (ESG) (2020); IMC (2013); BA (English Literature and Language) (2012), University of Leeds, UK.

Freddie is a Product Specialist on the RBC European Equity team at RBC GAM. Prior to joining the organization in 2018, Freddie was Head of Investment Oversight for the London local authorities' collective investment vehicle. In that role, he helped to oversee the pooling and management of up to £35 billion of pension strategy assets, with a focus on investment analysis, manager selection and oversight. He spent the preceding few years assisting with the creation of the underlying investment management company, guiding it from concept to launch. He also previously worked for a large British multinational investment bank in London.

Publication date: October, 2021

Global Asset
Management