The effectiveness and impact of post-2008 UK monetary policy

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Executive Summary

❖ We are advisers to a number of major companies and investors on the economic impact of demographic change. Our methodology enabled us to forecast the subprime crisis and since then we have argued that today's ageing population makes it impossible for monetary policy to return the economy to sustainable growth

❖ Andy Haldane of the Bank of England has recently noted that "*Demographics in mainstream economics has been under-emphasised for too long*", and kindly added that our work has been helpful in starting to change this dynamic

❖ In response to the Committee's invitation, we therefore enclose our evidence, demonstrating on the basis of official statistics that monetary policy is no longer effective, due to the demographic changes that have occurred in the UK and Western populations. We argue that it was clearly important until 2000, when the great majority of people were in the Wealth Creator 25 – 54 age group (which dominates consumption and therefore drives GDP growth). But its impact is now declining year by year as ever-increasing numbers of BabyBoomers move into the 55+ age group – when incomes and spending begin to decline quite rapidly

❖ Friedman's analysis of the effectiveness of monetary policy, when he argued that "inflation is always and everywhere a monetary phenomenon", is therefore no longer valid. Modigliani's "Life Cycle theory of consumption" is similarly out of date

❖ The issue is simply that both Friedman and Modigliani were working in an environment which assumed that people were born, educated, worked - and then died soon after reaching pension age. In these circumstance, their theories were perfectly valid and extremely useful for modelling the economy

❖ Today, however, the rapid increase in life expectancy, together with the collapse of UK fertility rates below replacement level, means that a paradigm shift has taken place, whereby people are now born, educated, work - and then continue to live for another 20 years after retirement, before dying

❖ The essential issue is that "you can't print babies". Monetary policy cannot solve the demographic challenges that now face the UK (and global) economy

❖ We therefore hope that the Committee will conclude that monetary policy should no longer be regarded as the major mechanism for sustaining UK growth

1. Introduction – the impact of demographic change on the economy

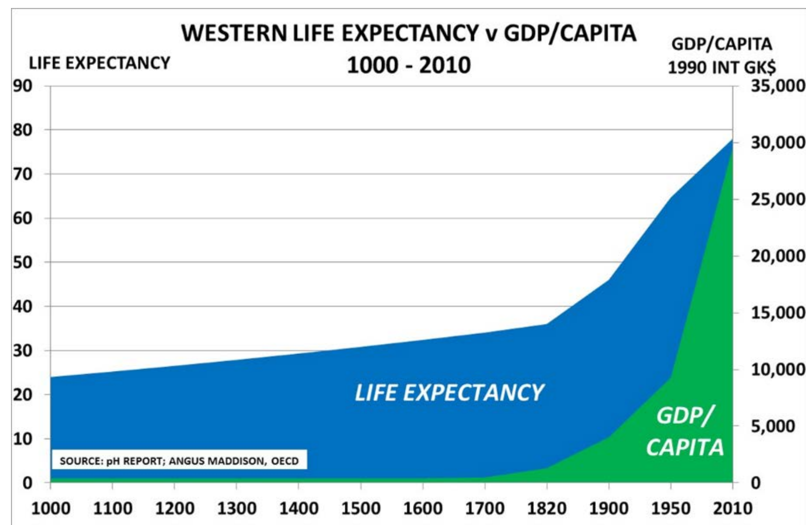

Chart 1: Increasing life expectancy led to a dramatic rise in GDP/capita

1.1. Chart 1 highlights the dramatic rise in Western GDP/capita that began in 1795, when Dr Edward Jenner introduced the first vaccine for smallpox - the major killer of the time. Until then, as Hobbes wrote in 'Leviathan' in 1651, life had been "solitary, poor, nasty, brutish and short". According to Angus Maddison of the OECD, Western life expectancy in 1820 (just after Jenner's discovery) averaged only 36 years – less than half of today's figure today. Essentially, people were born, worked and then died.

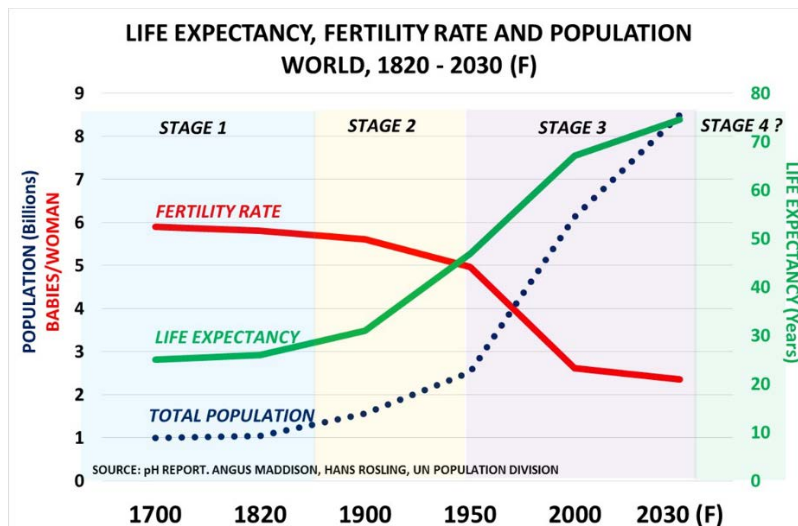

Chart 2: The world is moving towards Stage 4 of its demographic transition

1.2. Jenner's discovery launched the UK, and the world, into stage 2 of what is now known as the Demographic Transition, as chart 2 describes, by creating a dramatic increase in life expectancy. The UK population, which was just 10.5 million at the time of the first Census in 1801, began to surge. Increasing life expectancy also meant that childhood could become a period of education, with people now being born, *educated* and then working until they died. In turn, this powered rapid economic expansion, as knowledge could be passed from one generation to another.

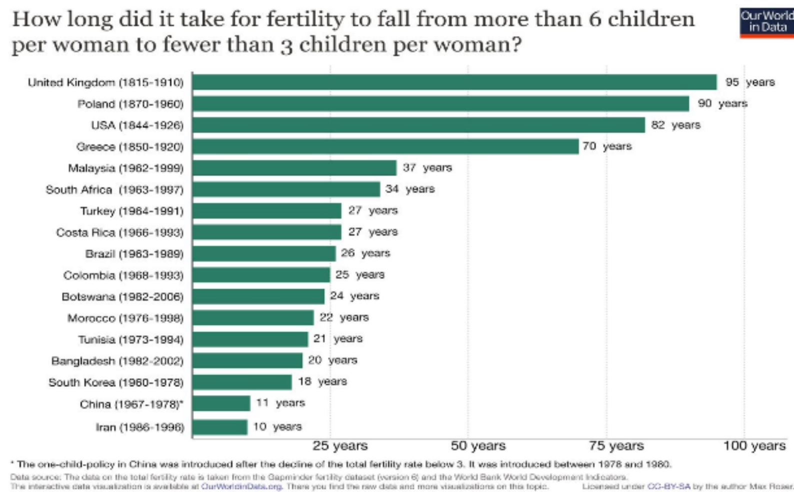

Chart 3: Gradually, the UK began to see a major decline in fertility rates

1.3. As chart 3 confirms, the UK became the first country to move into Stage 3 of the Transition as fertility rates began to drop. Women no longer needed to have children every year, in order to ensure that some would survive to look after them in old age. This process was reinforced when Lloyd George introduced the pension in 1909.

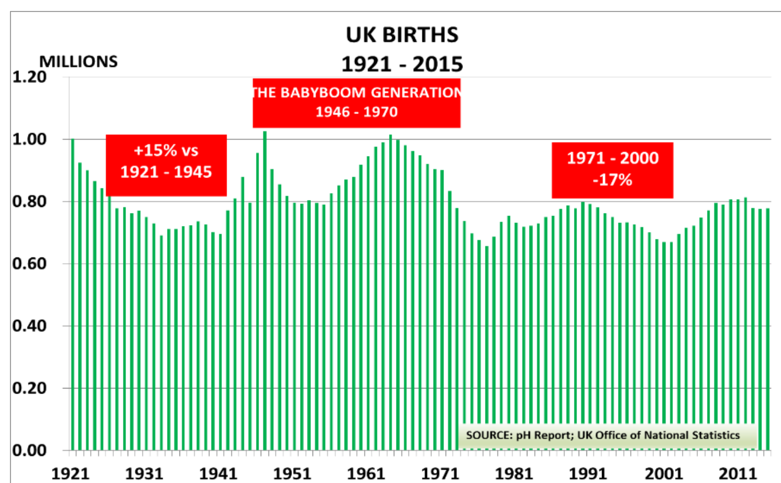

Chart 4: The 1946 – 1970 BabyBoom saw a major, but temporary, increase in UK births

1.4. The post-War BabyBoom between 1946 – 1970 temporarily led births to recover to the 1 million/year levels seen before World War 1, as chart 4 shows. But when the Boom ended, fertility rates fell below replacement level of 2.1 babies/woman. They averaged just 750,000 between 1971-2000.

1.5. The impact of this surge has largely been ignored from an economic viewpoint until recently. But with the benefit of hindsight, it is clear that the real cause of the inflation seen during the 1960s – 1970s was the dramatic rise in demand caused by the birth of all these Boomers. It would have been very difficult for supply to rise to meet their needs even if it had been able to operate at pre-War levels. With the UK (and Europe) having literally been "bombed-out", it was impossible. Inflation inevitably rose in response to the vast excess of demand over available supply.

1.6. Since reliable data on births and life expectancy hardly existed at the time, it is no surprise that Friedman saw the expansion of the monetary supply and the rise of inflation as representing causation, rather than just correlation. He couldn't possibly

know, when working in the 1960s, that the BabyBoom had taken place – or that it was coming to an end. Our own 1973 edition of the Oxford English Dictionary does not reference the word BabyBoom, and it seems probable that the phrase only began to come into general use sometime in the 1980s. But today, we can see that the BabyBoom created the perfect conditions for continuous growth in the economy, as the Boomers gradually moved into the Wealth Creator 25 – 54 generation, when people's needs and incomes continue to grow.

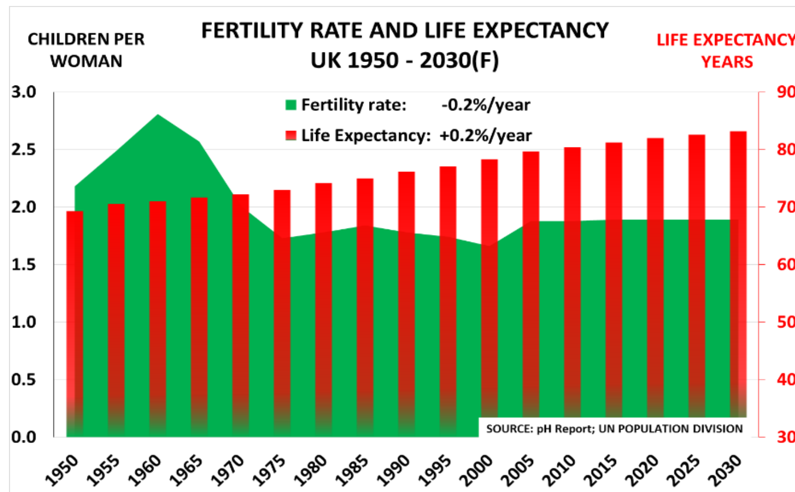

Chart 5: UK fertility rates fell below replacement level after 1970 as life expectancy rose

1.7. Even more important from today's perspective, as chart 5 confirms, is that life expectancy has been growing strongly in recent decades, whilst the fertility rate has declined below replacement level since 1970. This has two critical impacts. Firstly, it means that we now have a completely new generation of people in the 55+ age group for the first time in history. Secondly, we have a relatively smaller number of people in the critical Wealth Creator generation, as only those in the 45 – 54 age group still reflect the growth seen in the BabyBoom era.

2. The entry of women into the workforce since 1970

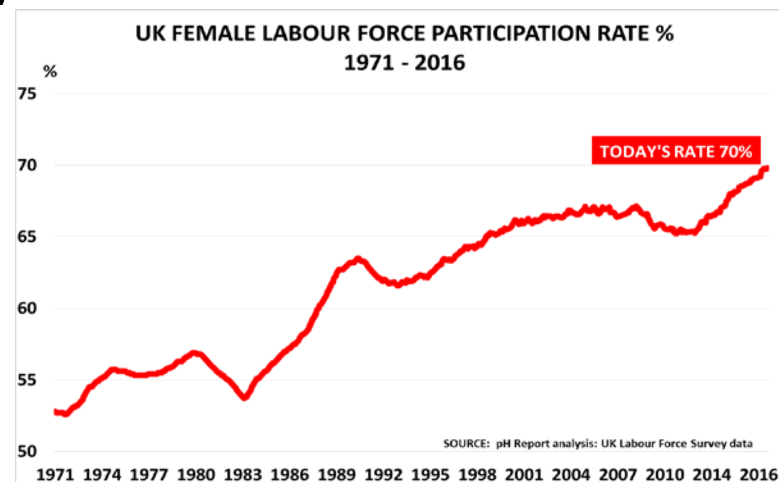

Chart 6: The decline in fertility rates freed women to remain in the workforce

2.1. The decline in fertility rates had one further critical impact on the economy, as chart 6 highlights. Women no longer needed to stay at home to have children every year, and

so they were free to return to the workforce after childbirth. Their participation rate therefore began to rise from 52% in 1970 (when data begins) to 70% today. Even more important from the economic viewpoint, was that their pay began to rise in relation to male earnings, as chart 7 confirms.

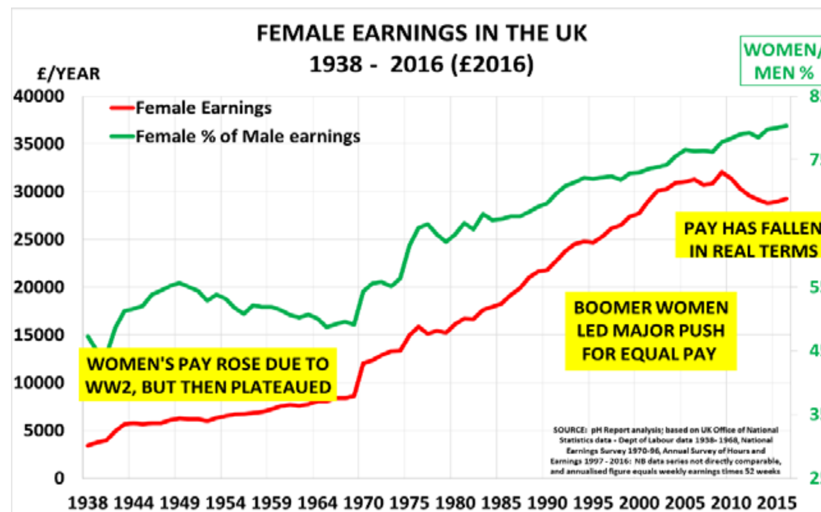

Chart 7: Female pay also began to rise as Boomer women pushed for equal pay

2.2. This development essentially turbocharged the economy. The cumulative impact of the 1970 Equal Pay Act, the 1975 Sex Discrimination Act and the Equal Opportunities Commission - and then the limited introduction of maternity leave from 1978 under the Employment Protection Act - meant that women's pay rose from 49% of men's pay in 1968 to 80% today. The arrival of more, and increasingly higher-paid, women in the workforce clearly made a major difference to economic growth. As a 2005 US National Bureau of Economic Research study noted, they were no longer:

"Perceived as secondary earners within the family… What was a comparatively rare event in the late 1940s - women working outside the home - had become the mode by the 1990s."

2.3. In turn, it also created a virtuous circle for growth in the economy:

- New markets opened up as working women with children needed – and could now afford – more labour-saving devices for the home
- The emergence of dual-income households meant bigger-ticket items such as cars and houses became more affordable, as well as other consumer products

This combination of the BabyBoom and increased female participation in the labour market effectively created an economic SuperCycle. The world's largest economy, the US, suffered only 18 months of recession in the 25 years between 1983 – 2007.

3. Monetary policy is ineffective with today's ageing population

3.1. Today, the world is moving towards Stage 4 of the Transition. The UK's ageing Boomers are no longer dying close to retirement age. Instead they are creating an entirely new generation – the lower-spending, lower-earning New Old 55+. As chart 8 confirms, there are now more households headed by someone aged over 50 than under it. As the House of Commons Library reported in 2008, on the centenary of the pension's introduction:

"Four in five people reach pension age and live, on average for a further 24 years".

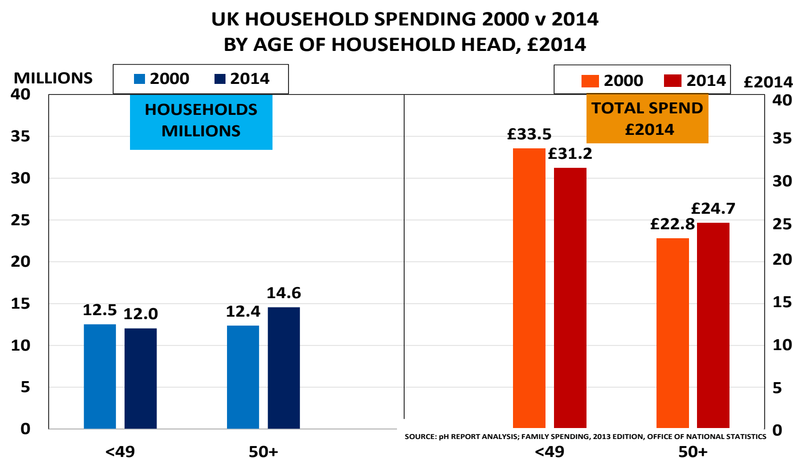

Chart 8: The UK now has more households headed by someone over 50, than under it

3.2. This is very bad news for monetary policy, as it means lower interest rates can no longer stimulate demand as in the past, when the Boomers were in their Wealth Creator years. The problem is that the concept of "pent-up demand" no longer exists, as the New Old already own most of what they need, and their incomes are declining as they enter retirement.

3.3 Monetary policy can't turn 55-year olds (or indeed, 65-year olds and 75-year olds), back into 25-year olds from an income and spending perspective. This, in a nutshell, is why today's ageing UK population is creating major changes in demand patterns. Household consumption is 65% of UK GDP according to the World Bank. Thus the arrival of a low-spending New Old 55+ generation, for the first time in history, is in turn creating a paradigm shift for policymakers.

3.4 This shift is made even more critical by the size of the post-War BabyBoom. After raising inflation to record levels, the Boomers then gradually joined the workforce and began to increase supply to more balanced levels. Inflation therefore came back to more normal levels. Critically, the average Boomer joined the Wealth Creator generation in 1983, and all the Boomers were in this age-group between 1995 – 2000, leading central bankers to believe the UK economy had entered the NICE nirvana of Non-Inflationary Constant Expansion.

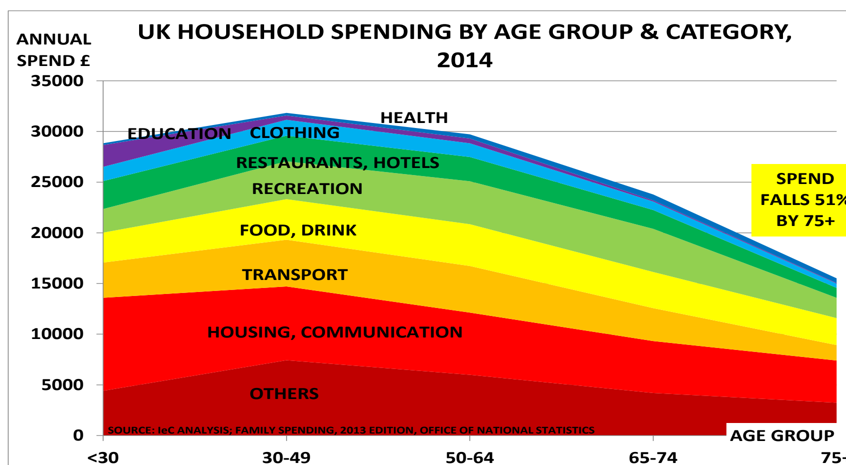

Chart 9: ONS data confirms the close correlation between spending and age

3.5. The oldest Boomer then left the Wealth Creators in 2001, and the average Boomer left in 2013 – inevitably meaning that monetary policy has become less and less

effective in generating demand. The criticality of age-range in determining spending can be seen very clearly in chart 9, based on latest ONS data:

- Spending declines by 7% from previous levels in the 50 – 64 age bracket
- It declines by 25% when people move into the 65 – 74 age group
- At 75 and over, spending is half the peak level

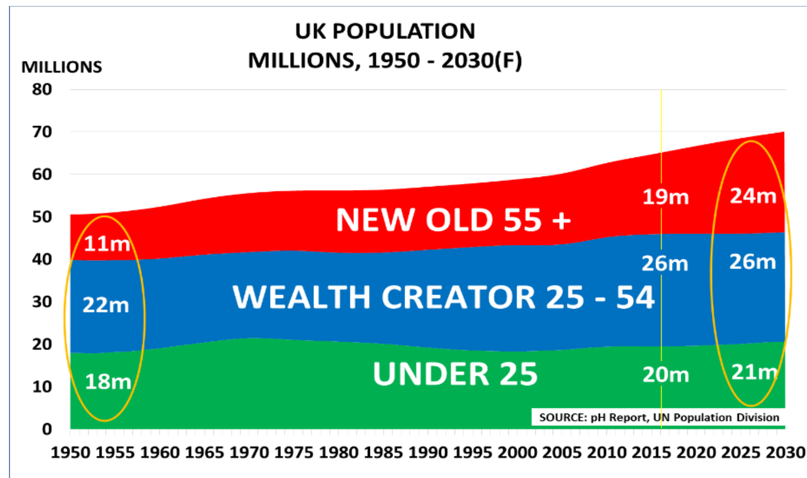

Chart 10: The number of Wealth Creators has plateaued, whilst the New Old are doubling

3.6. This combination of increased life expectancy and the collapse of fertility rates is completely changing the profile of the UK population, as chart 10 shows. In 1950, the UK had just 11 million New Olders, half the number of Wealth Creators. Today, there are already 19 million of them, and just 26 million Wealth Creators. By 2030, their numbers will be roughly equal at 24 million as the Wealth Creator numbers are now plateauing at 26 million.

4. The "Life Cycle" theory of consumption needs rethinking

4.1. Household consumption is between 60-70% of GDP in all Western economies. And in the past, it was possible to assume that correct policies would always deliver constant growth. The basis for this assumption was the life-cycle hypothesis set out by Franco Modigliani, for which he won the Nobel Prize in 1985:

"The life-cycle hypothesis implies that individuals both plan their consumption and savings behaviour over the long-term and intend to even out their consumption in the best possible manner over their entire lifetimes. The key assumption is that all individuals choose to maintain stable lifestyles. This implies that they usually don't save up a lot in one period to spend furiously in the next period, but keep their consumption levels approximately the same in every period."

4.2. When Modigliani developed this theory in the 1950s, it seemed to be a realistic assumption, as Wealth Creators then dominated the adult population. Even in the 1980s, the BabyBoom meant there were still relatively few people in the New Old. People's view of their likely lifetime earnings was also still based on an unduly pessimistic estimate of life expectancy, namely that they would retire and then die. Today, however, Modigliani's theory needs to be challenged, as ONS data on household spending confirms that it is, in fact, highly correlated with age.

5. Conclusion

5.1. Keynes would no doubt appreciate the irony of today's position, whereby his conclusion to 'The General Theory' has now itself become true of mainstream economics itself:

> *"Practical men who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist"*

5.2. It seems purely common sense to argue that demographics, not monetary policy, must drive demand. One could imagine an economy without a defined monetary policy, but one cannot imagine an economy existing without people. Friedman and Modigliani's theories appeared to make sense at the time they were being developed, but they clearly do not fit the facts today.

5.3. We therefore hope that the Committee will conclude that monetary policy should no longer be regarded as the key element of economic policy. This would then free policymakers to focus on the real demographic issues that will determine growth in the future – namely how to encourage people to retrain in their 50s and 60s to take advantage of the extra 20 years of life expectancy that we can all now hope to enjoy.

About The pH Report

The pH Report is a London-based strategy consultancy advising Fortune 500 and FTSE 100 companies, investment banks and fund managers.

Paul Hodges is a trusted adviser to major companies and the investment community, and has a proven track record of accurately identifying key trends in global marketplaces. He writes regularly for the Financial Times, and was widely recognised for forewarning of the 2008 global financial crisis.

Paul publishes The pH Report, and serves as a Global Expert with the World Economic Forum. He is a Member of the Energy Institute and a Freeman of the City of London. He is a graduate of the University of York, and subsequently studied with the IMD business school in Switzerland.