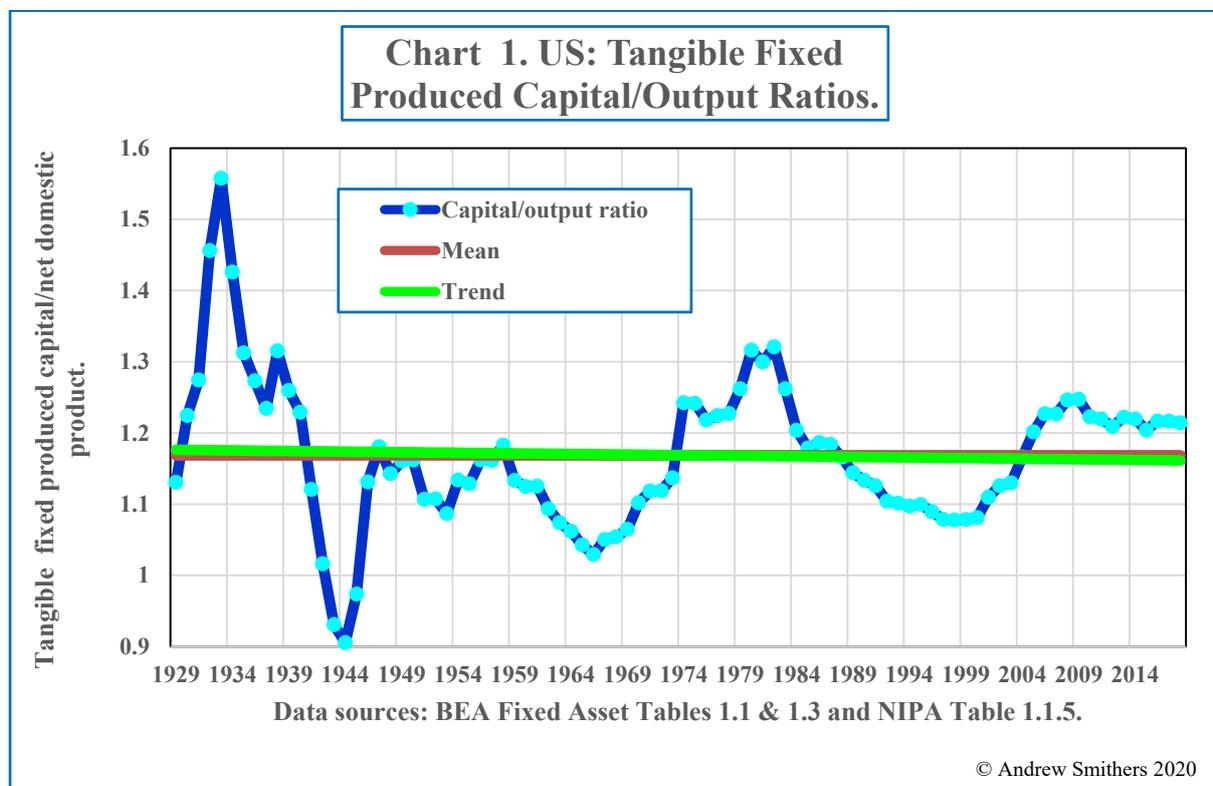


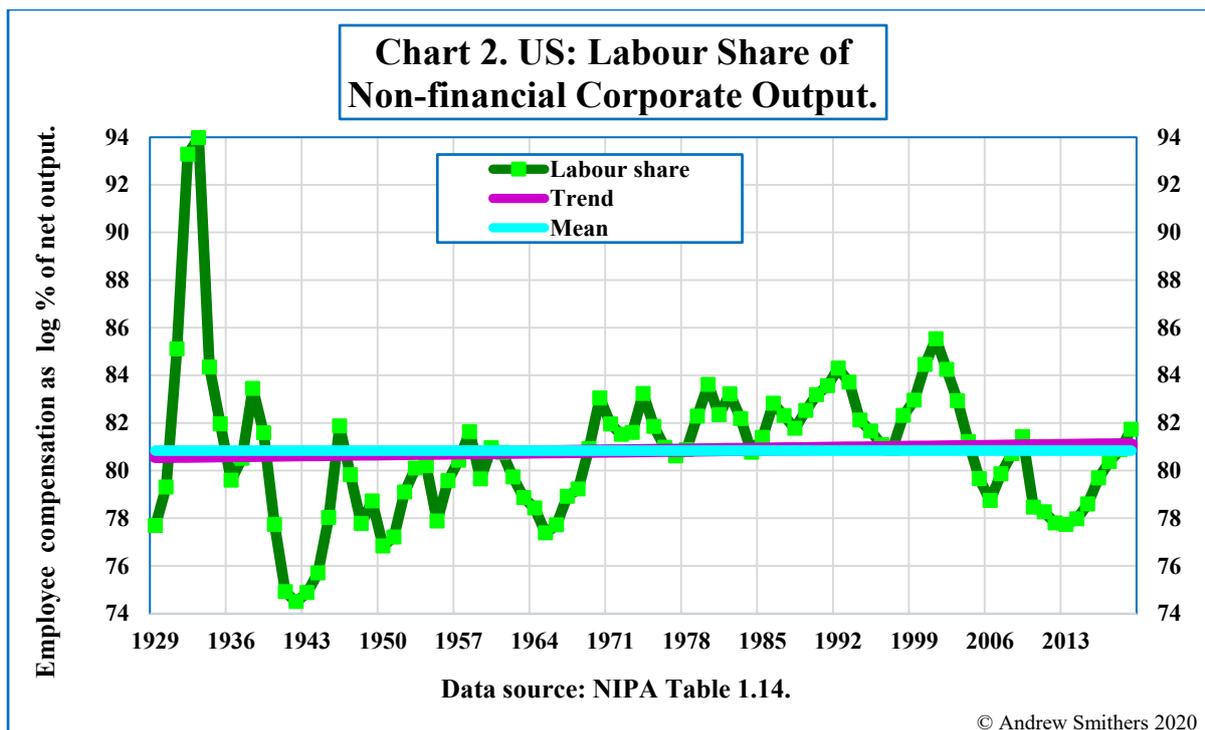
Investment and Unemployment.

The future is unknown, but we should not count on being improbably lucky. Covid-19 has increased the need for a large increase in business tangible investment. This was necessary before the pandemic and has because essential to prevent a large rise in unemployment. Both Covid-19 and Brexit will lower the value of the UK's stock of capital. We are seeing large changes in spending patterns, some of which are likely to be permanent. Those who supply goods and services whose demand has declined will produce less and the value of their invested capital will fall. Both the pandemic and Brexit will lead to changes in supply chains, which will lower the output and value of existing capital.



The ratio between capital and output wobbles with swings in demand around a stable average (Chart 1).¹ A fall in the value of capital will therefore reduce output potential by the same proportion. When operating at full capacity profit margins are also stable, so if the value of capital falls real income per employee will fall (Chart 2).

¹ The stability of the average (its stationarity) is shown by the closeness of the trend to the mean. I use US data to illustrate this as UK data are not available. The theoretical explanation is set out in *Building a New Testable Model for Total Factor Productivity* by Andrew Smithers World Economics Vol. 18 No. 2 April–June 2017. US data confirm the validity of the theory and it is therefore likely that if the UK data were available they would show the same pattern.

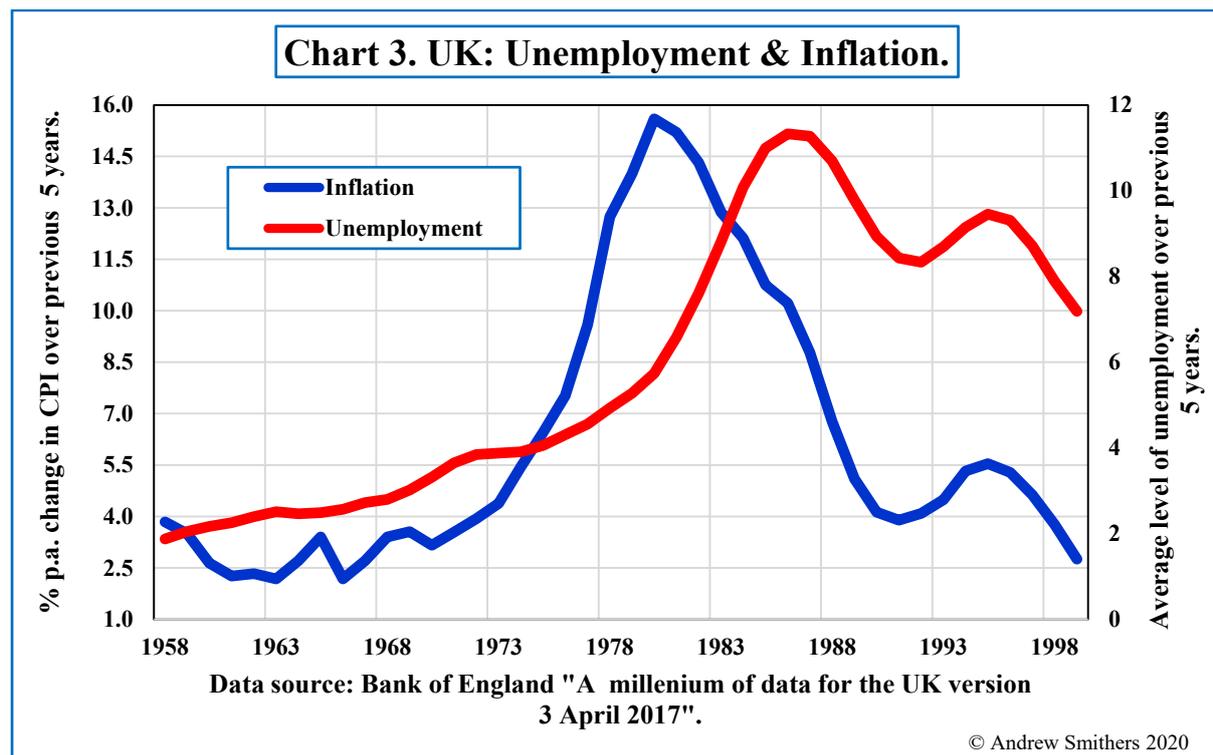


Unless nominal wages decline, a painful process which takes time, real wages per employee will only fall if inflation rises. Inflation will then pick up unless there is a rise in unemployment. In more technical language there will be a rise in the non-accelerating inflationary level of unemployment (“NAIRU”). This has also been considered as a possibility by the Chief Economist of the Bank of England using a different approach. “The possibility of labour market mismatches, whether by sector or skill, increases the chances of high unemployment proving persistent, with scarring effects on the economy’s supply potential. Put differently, labour market mismatches raise the economy’s NAIRU – the level of unemployment at which supply bottlenecks and wage pressures re-emerge.”²

We don’t know by how much the value of the capital stock is going to fall nor how fast nominal wages will decline, but past experience indicates that the former is likely to be large and the latter slow. The oil crises in the 1970s and the Eurozone experience provide illuminating and disturbing examples. When oil prices shot up real incomes fell, demand shifted in response to the change in relative prices and the value of UK exports fell relative to imports. Inflation was not kept in check as expectations for its future rose. At the time it was generally thought that unemployment did not rise with inflation but could be kept in check or even lowered by allowing it to rise. But experience showed that the benefit was short-lived as the acceleration of inflationary expectations had to be slowed to prevent ever rising inflation. The cost of any short-

² *The Second Quarter* speech by Andrew G. Haldane 30th June, 2020.

term advantage was soon paid for by sustained high levels of unemployment, which averaged 11.3% over the five years from 1981 to 1986 and remained stubbornly high for the next decade (Chart 3). For the Bank of England to succeed in its mandate to keep inflation stable, a rise in the NAIRU will require a tightening of monetary policy so that demand weakens and unemployment increases. If it fails, the rise in unemployment, while possibly delayed for a short time, will then be greater and more prolonged. Judging from our experience after the oil crisis, the level will be high and sustained for many years (Chart 3).

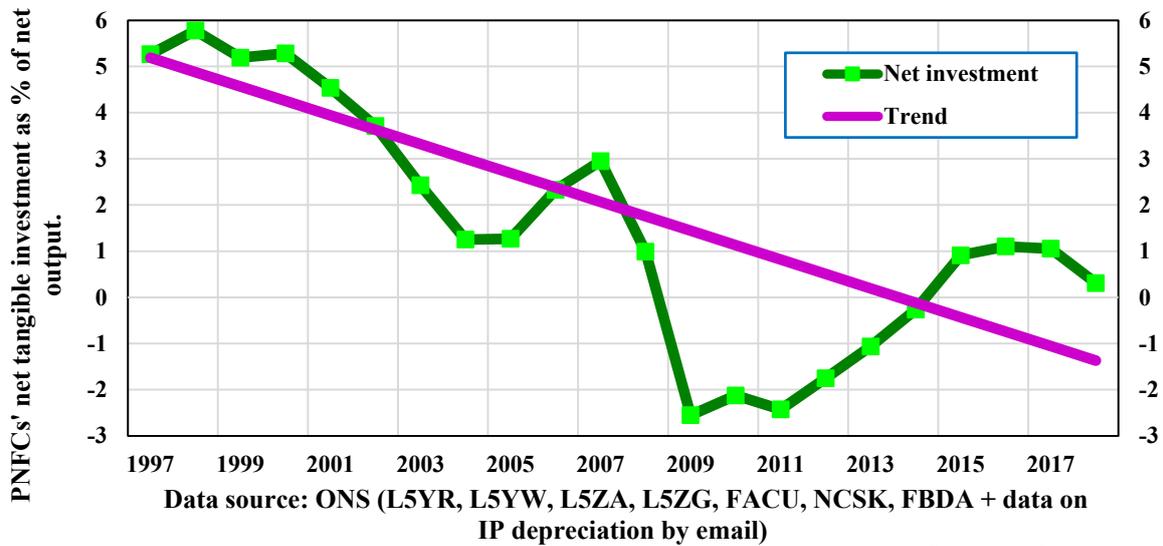


The Eurozone started on 1st January 1999. Previously interest rates in Greece, Italy and Spain had been much higher than those of other member states to reflect the likelihood of devaluations due to their overvalued currencies and above average rates of inflation. When it became likely that these countries would join the zone their interest rates fell. In 1996 Italian 10 year bonds yielded 6% more than German ones and the gap fell to under 0.2% by the end of 1998. Unfortunately, the ability to borrow cheaply resulted in higher consumption rather than high investment and the excessive level of wages in the Mediterranean countries relative to other member countries became even more pronounced. Their trade and fiscal deficits rose and with the arrival of the 2008 recession the risks of debt default became apparent even to bond markets, so the spreads between the yields on their debt and those of Germany exploded. The three countries chose high levels of unemployment rather than leaving the Eurozone, and these have remained high: in April 2020 they were 15.5%, 11.1%, and 13.9% respectively in Greece, Italy, and Spain.

Unemployment in the weaker members of the Eurozone reflected their high wage costs, which could be reduced either by devaluation or declines in nominal wages. Within the Eurozone devaluation was impossible, so their experience illustrates how difficult it is to reduce pay by actual reductions, rather than through inflation. The speed at which nominal pay must decline will depend on the fall in the value of the capital stock and the speed at which it subsequently rises. If the NAIRU is stable when inflation is 2% p.a., the fall in the value of the capital stock is 6%, nominal wages can fall by 1% p.a., then a rise in the value of the capital stock of 3% p.a. is needed to avoid unemployment rising. These figures are merely illustrative as we do not know by how much the value of the capital stock will fall, how fast nominal wages can adjust or the level of the NAIRU. Nonetheless they show that the faster the value of the capital stock grows the easier it will be to contain the post Covid-19 rise in unemployment.

Additions to the value of the capital stock depend on new investment minus depreciation. Because intangible capital depreciates much more rapidly than tangible capital, the growth of the capital stock depends almost entirely on the level of tangible investment which has fallen sharply since 2000 and particularly so in the business sector (Chart 4). The most recent data available are for 2018 and these (Chart 4) show that net investment amounted to 0.3% of net output. With a stable capital/output ratio the growth potential for private non-financial business output is, without a rise in investment, only 0.3% p.a. It is unlikely that the UK's output can grow significantly faster than that of business, which provides more than half of total production, and it is almost certain that the sector's tangible investment has fallen since 2018. Unless depreciation is being seriously overestimated in the national accounts, it is thus probable that the UK economy has a current trend growth rate of no more than zero. A fall in the value of the capital stock, if not certain, is extremely probable and without growth this means falling real wages and, without a decline in nominal ones, inflation will rise.

**Chart 4. UK: Non-financial Business' (PNFC's)
Net Tangible Investment as % of Net Output.**



The extent to which the value of the UK's capital stock will decline due to Brexit and the pandemic is unknown. Nonetheless it would be absurdly foolish to base policy on the assumption that the impact will be negligible or that our ability to lower nominal wages will be far superior to that shown in Mediterranean countries. A policy that fails to encourage a large rise in private sector business investment is to condemn the UK to slow growth combined with a sustained level of high unemployment. This is a miserable prospect for the UK and would make the re-election of the present government unlikely.

Andrew Smithers
July 2020.