

The Future of Money and of Monetary Policy

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Introduction

It has been a great honour to be asked by Vitor Constancio, whom I greatly admire, to prepare a paper on this subject. But my credentials for this role are thin. At my age, the past looms larger than the future. Moreover, my forecasting skills are weak. In my forecast world, Hillary Clinton would have been President, and the UK would still be a member of the EU. Beyond that, much in the future will depend on technological change, particularly within the digital and electronic fields; but I am one of the last of the pre-electronic world. When I went to Cambridge University in the 1950s, there was only one computer in the whole of the University, housed in an extremely large room with thousands of valves connected by a spaghetti-junction of wires. When dealing with a new electronic gadget, I have to ask my grandchildren how to work it.

Recent Developments

Nevertheless, let me set the scene. Underlying trends have been favourable for Central Banks and their operational independence in recent decades. Interest rates, both nominal and real, have trended down over the last thirty years. As a result, although debt ratios for most countries and most sectors have been rising, with the exception of banks since 2009 and Germany, debt service ratios have remained low and steady, as shown in Figures 1 and 2.

Figure 1

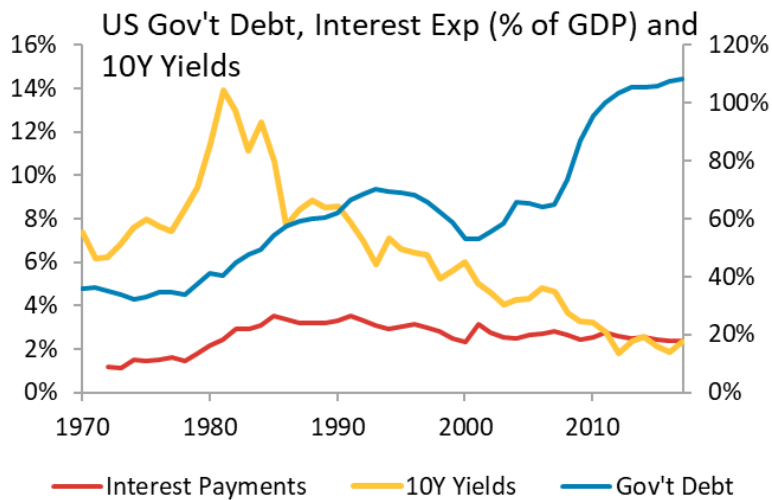
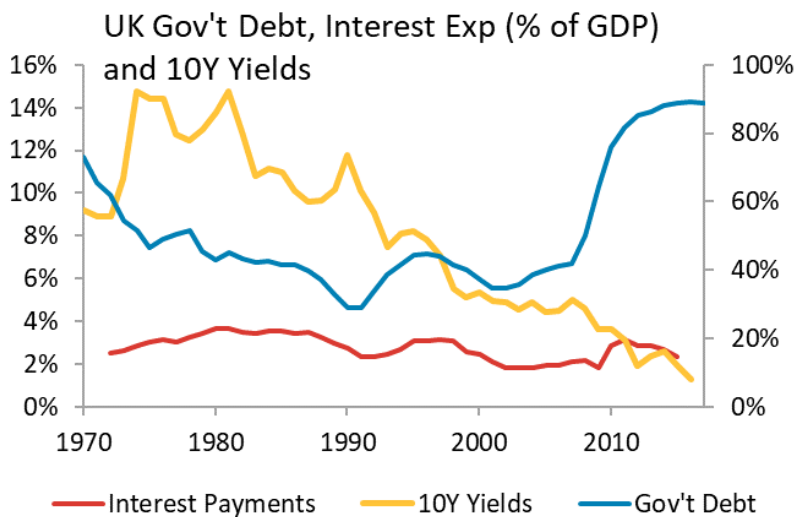


Figure 2



Source: National sources, IMF, WB

While these two figures show data for the US and the UK, much the same has been the case for other developed economies, notably in Europe.

Borrowers, especially public sectors and non-financial corporates, have gained. Those already holding assets, notably the old and the rich, have benefited. The losers have been savers who do not

have initial assets, in particular the young and the poor, but these have tended to blame governments for their disadvantages, not so much Central Banks.

The basic reason for the declining interest rates have been strong deflationary headwinds. These have been largely due to a combination of demographic factors and the entry into the global trading system of China and Eastern Europe, the latter after the breakup of the Soviet Union. The demographic factors include the passage of the post-war baby boom through the labour market, moving towards retirement. This led both to an increase in the labour supply and a temporary sharp improvement in the dependency ratio, as the proportion of young within the population declined faster than the rise in the number of aged retirees.

The effective labour supply more than doubled since about 1990, the greatest positive labour supply shock ever recorded. The effect of this on the returns to the various factors of production were natural and straightforward. The return to unskilled labour within each country declined quite sharply, whereas the return to management, capital and highly-skilled labour increased sharply. Amidst the twin pincers of potential offshoring and competitive immigration, labour market power declined drastically. John Muellbauer, in his accompany paper, reported the steady decline in trade union density. Why did this occur? Because in this context of globalisation and plentiful labour, management had the whip hand.

Future Reversal of Trends

But such demographic trends are likely to reverse sharply, as the growth of the labour force slows, and in many countries, including many in Europe, such as Germany, actually declines. Moreover, China has reached the Lewes point, when the potential source of additional labour via migration from the inland western provinces to eastern coast manufacturing draws to a close. Indeed, China's labour force having risen sharply, is now set to decline, as rapidly as that in Japan. Not surprisingly, Chinese workers have been saving voraciously. Although a communist company, China does not have much of a welfare safety net. The one-child policy has meant that four grandparents share one grandchild, so the family safety net has also collapsed; and their expectation of life has risen sharply.

No wonder the Chinese savings ratio has been so high. While this is, perhaps, an extreme example, much the same has been going on in many other similar countries, both developed and emerging.

One of the most fundamental questions facing the world is whether the Indian sub-continent and Africa, where the demographic outlook is quite different, can take China's place, as the future workshops of the world. This latter, however, is too large, too difficult and general subject for me to address in this short space.

But the macroeconomic headwinds of recent decades not only come from a 'savings glut' from the personal sector, but also from the fact that non-financial corporate investment has been remarkably low. Indeed, the corporate sector has shifted dramatically from its historical role as a net deficit sector to having a net surplus. With both the corporate and personal sectors piling up large surpluses, the counterpart in the world has had to be an increase in public sector deficits. Though the balance between countries is, of course, dependent on their current account balance.

What determines this net surplus of the corporate sector? One of the reasons has been the overall slow growth of output and demand itself. But in the context of extraordinarily low interest rates, and high profitability, one might nevertheless have expected much more corporate investment. There are several reasons that have been put forward to explain such weakness in investment; far from being mutually exclusive, all of the following factors may have played some role in this development, though how one may weight their respective influences, is too difficult for me to ascertain.

Technology

Perhaps the best known is the claim by Robert Gordon that all the easiest and simplest technical inventions have already been exploited. Besides his well-known book on *The Rise and Fall of American Growth*, (2016), I have recently read his latest excellent NBER Working Paper on 'Why has economic growth slowed when innovation appears to be accelerating?', (2018). It may also be true that the new kind of innovation in electronic/digital technology involves more reliance on human capital, and less expenditure on 'real' resources than in the past.

Monopoly

A second reason that has been put forward involves a suggestion that production has become concentrated among a smaller number of monopolistic firms. Again, in his earlier paper, John Muellbauer referred to the concept to an increasing concentration ratio.

Managerial incentives

Yet another line of argument is that the incentives of managers of public companies has become increasingly distorted towards raising short-term equity returns, both for shareholders in general and for themselves via the bonus culture in particular. In a world of exceptionally cheap debt, the easiest way to do this is to borrow and use the funds to buy back equity, thereby raising the leverage ratio, and shifting risk from themselves and their shareholders to creditors and other stakeholders more widely. My friend Andrew Smithers has written persuasively on this subject, See Smithers (2013).

Cheap labour

My own preferred explanation, however, reverts to the positive labour supply shock, making labour so extraordinarily plentiful and cheap. If labour is so cheap, there is no need for investment, or managerial effort, to raise competitiveness and productivity, in order to maintain profitability. Why undertake risky and tiresome exercises at a time when profitability remains so easy to attain?

But, as noted earlier, this latter effect is now starting to reverse in many, perhaps most, countries, and will do so increasingly. As the availability of labour (except in India and Africa) becomes increasingly tight, the pressures driving down inflation will reverse at some stage. Labour power has been so bashed by the context of the last few decades, that the natural rate of unemployment has likely declined. But there is a limit to that, and eventually the Phillips curve will come into its own again. As inflation increases, monetary policy will normalise.

Central Banks will no longer be the best friends of borrowers, notably amongst those Ministers of Finance. How will politicians react, especially populist politicians, as Central Banks start to become more restrictive, rather than the only expansionary 'game in town'. In view of the increasing claims on the public purse of the growing army of the aged, with their needs for medical help, the fiscal outlook looks grim. If populist politicians allow fiscal expansion, how will they react to Central Banks stepping on the brakes of a 'people's car' which they want to accelerate faster? There are reasons to believe that the glory years of Central Bank independence are in the past, not the future.

And how will Central Banks handle the insolvencies in corporates, and some over-levered households, as interest rates start to rise back up. The figures for debt ratios are so extreme that it is difficult to believe that Central Banks could apply either a rapid, or any extensive, rise in nominal interest rates without running into the danger of insolvency crises.

Have Central Bankers got themselves into a 'debt trap'? Given the context of the Great Financial Crisis (GFC), it was both right and inevitable that Central Banks would continue to lower interest to the Zero Lower Bound and hold them there. But this had the effect, indeed the intended effect, of encouraging further expansions of debt. Although the GFC was perceived as a financial crisis due to excessive leverage, especially in banks, the medication applied has had the effect of encouraging debt ratios, aside from banks, to rise sharply thereafter. We may have reached a point where debt ratios are so high that interest rates have to be kept at historically extremely low levels, thereby encouraging even more accumulation of further debt.

How can we get out of this debt trap?

Growth

Unfortunately the demographic forces outlined earlier will prevent this, even if productivity should recover. The growth of labour forces in many of our countries will start to decline. In Japan, the labour force over the last decade has been declining at about 1% per annum; but real growth has been rising at about 1% also. So output per worker has been growing at a rate of about 2% per year. This latter is far better than in most other developed economies. We will be very fortunate if we can

match the experience of Japan in future decades. Demography probably means that we cannot expect real growth to be more than about 1.5% per annum over future decades.

Cancel debt

It so happened that the conference when this paper was presented occurred at the same time as the two Italian parties, the Northern League and the Five Star Movement, were trying to agree a program. Initially one of their proposals was that the Italian debt now held by the European Central Bank be cancelled. Indeed, quite a number of voices have argued that, since we owe the debt largely to ourselves, why do we not just cancel it? Indeed, that did take place in some of the earliest historical societies, such as in Babylonia and Sumeria. I had considerable pleasure in joining up with an economic historian specialising in such early antiquarian history, Michael Hudson, to prepare a paper outlining how the early Debt Jubilees worked, whereby the debt owed largely to the royal family by the working peasant population was cancelled; and then to explain why, in my view, a similar exercise could not be undertaken under the changed societal structure that we have today, but that other alternative mechanisms might be found to reach the same objective. It would take far too long to explain all this again now, but it can be found in our joint 2018 paper on Debt Jubilees.

Inflation

For the reasons already set out, in my view, the underlying fundamental forces tending towards deflation, will be replaced by similar forces leading to more inflationary pressures. Also see Juselius and Takats (2018). And the rise of populism, whose appeal has been largely based on the dismal returns to the bottom 50% of our working population, will spur that on further. There are already comments to be heard differentiating between 'good inflation' and 'bad inflation'.

The call to raise the inflation target in recent years was always seemed odd, given that Central Banks have had such difficulty in hitting even the lower 2% target, and the loss of credibility that such a change in targetry would entail. But as inflationary pressures recur again, perhaps the simplest way out for politicians, at least in those cases where the legislature can control the Central Bank (not the ECB), would be simply to raise the target in line with such enhanced pressures. Only in the case of

the ECB is Central Bank independence protected by treaty. Elsewhere the popular 'will of the people' may prevail, rightly or wrongly.

Default

Of course, unforeseen inflation is a form of default. Only in such cases where foreigners hold a large proportion of debt is default likely. Let us hope that it does not become too common.

Debt restructuring

Otherwise known as 'extend and pretend', this is likely to be increasingly employed, but it is a palliative, and limited in effect.

Switch to equity finance

This would be my preferred solution. It would involve manifold legal and structural changes, notably to eliminate or even reverse, the fiscal advantages of debt over equity finance, it would probably entail an accompanying series of reforms to corporate governance and to the way that corporate information is now publicly provided, i.e. the auditing process. But, again, this is too large a subject to be addressed here, though I hope to expand on it in future work.

Money, Debt and Information

Why do we use debt as the basis of money creation? In particular, debt has important informational advantages. There is no need to know the details of the borrower's condition, as long as payment is regularly made. Moreover, debt repayment is supported by the surrender of collateral and bankruptcy penalties. This contrasts with the relative opacity of equity control over the residual profitability of an enterprise. However, debt finance has numerous disadvantages. Taking a constant flow of payments, irrespective of the underlying conditions and context of the borrower, is hardly ethical. All the great religions of the world have preferred equity sharing as a financing mechanism, rather than straight debt finance. Moreover, the widespread introduction of corporate

limited liability has led to massive moral hazard, as the upside is retained by the shareholders, while the downside gets shifted to fixed-interest creditors and other stakeholders. The present system leads to excessive corporate debt, non-linearities and crises.

Could the explosion of big data, and perhaps changes in accountancy conventions, enable a shift to equity finance via participation, for example in the form of Islamic Banking. There is the well-known story of entrepreneurs having three sets of books, one for the taxman, one for the other shareholders, and the true one for managerial insiders. At the moment, managerial insiders have a massive informational advantage over everyone else, except perhaps institutional holders of very large blocks of shares. Only if technological advantages allow information to be more commonly shared and widely available, could one expect a major shift towards equity finance.

Money as an Informational System

The need for money is closely related to informational problems. If people do not know whether X will repay her debt, a claim on X cannot be used to pay for purchases from Y. So, what one needs in order to obtain a means of payment is to replace the uncertain-value claim on X with a claim on Z, with the latter being a much stronger debtor, in most cases the head of state, (or an asset, such as gold, whose value has been guaranteed by Z). Note that high-value metals, such as gold and silver, are extremely difficult to use as a medium of exchange, unless their metallurgical content has been guaranteed by the stamp of authority, i.e. a coin. Recall the difficulty that Charlie Chaplin had in using gold dust to buy drinks in a pub in the Yukon, in the film *The Gold Rush*. In order to use precious metals as a means of payment, their fineness has to be somehow attested.

So, we can think of money as an information system. But monetary systems can be organised to incorporate more or less information on counterparties to a transaction.

Some forms of money involve little information on counterparties. These include currency and, by construction, cryptocurrencies. Problems with both of these are that the lack of counterparty information makes them particularly attractive for anti-social uses in the grey/black economies. And

currency also has the feature that it limits the ability to allow the authorities to introduce negative interest rates. This latter constraint is probably exaggerated, in the sense that the main objection to negative interest rates will always be political. The suggestion that the authorities want to make your savings worth less period by period is never likely to be a political selling point.

On the other hand, certain monetary systems involve considerable information about counterparties, in particular centralised ledger systems. The problem with such high information systems is that they can be used for authoritarian purposes, especially by governments.

Essentially the question for societies is how much information do we want others to have on our financial transactions, and then perhaps to use to their own advantages?

It may be most efficient for the government, perhaps in the guise of its Central Bank, to be in a position to know all our financial transactions. But, even if we were entirely upright citizens, and very few of us are fully such, are we confident that the government, and with it the Central Bank, may not fall into the hands of authoritarian, dictatorial and corrupt hands?

How about the tech companies? But their business model is to finance the provision of services to individual users by selling information to third parties, whose use of such information most of us are barely aware of. The recent example of Facebook's use of our information must act as a warning about whether we want our financial information to become subject to uses outside of our control.

In many ways commercial banks have been well behaved in using the information that their command over the majority of our monetary system has given them. While there have been a few cases of such misuse, they have been rare. It would, in my view, be dangerous to pursue efficiency at the expense of privacy.

Central Bank E-money

There is considerable interest in whether Central Banks might issue digital currency, e-money, to a much wider range of agents in the economy, perhaps to everyone. It should, however, be noted that this would sharply reverse the concordat that became implicitly agreed between commercial banks and Central Banks at the beginning of the 20th century. This was that the commercial banks on their part would accept overall monetary control and increasing supervisory oversight by the Central Bank, whereas in return the Central Bank would abstain from direct commercial competition with the commercial banks. Unless carefully managed, the issue of digital currency by Central Banks might bring them directly into competition with the commercial banks.

What can Central Banks offer on this front that commercial banks cannot? See, for example, the excellent BIS report, by Bech and Garratt (2017). One of both the main advantages, and disadvantages, of Central Bank money, is that it would involve significantly less credit risk than claims on commercial banks. In normal times, the interest rate offered by commercial banks, and their other services, notably access to credit, would probably make most clients prefer to hold their monetary balances with commercial banks. But in potential crises, this could change in the flash of an eye. In his accompanying paper, Brunnermeier refers to financial practices where micro prudence may lead to macro disaster. This could be the case were Central Banks to offer available accounts to all-comers. The switch out of commercial banks into the safety of the Central Bank could provide 'the mother of all runs'. Moreover, if there should be a major shift of monetary financing out of commercial banks into the Central Bank, what would be the counterpart assets that the Central Bank would hold? If they hold only public sector debt, the public sector will benefit, but the private sector will equivalently lose access to credit, or find it only available on significantly worse terms. For a Central Bank to hold large volumes of private sector debt is problematical, for obvious political reasons. The way that the present monetary system has been set up involves significant, partly hidden, subsidies and advantages to private sector borrowers. They would be loath to lose these.

There are, indeed, possible efficiency benefits from the issue of Central Bank digital money; for example, there may be lower transaction costs than relying on currency; the Riksbank seems to think so. Perhaps more important, cross-currency financial transactions are currently expensive and

inefficiently done. Think of the spread on exchanging currencies. Could digital currencies improve international monetary transmission?

Nevertheless, my own assessment would be that the dangers involved in having Central Banks move to widespread provision of digital currencies to all potential clients still outweighs their potential advantages.

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