What Would Keynes Do Now?

Monetary Policy and Economic Depression

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The remedy for the boom is not a higher rate of interest but a lower rate of interest. For that may enable the so-called boom to last. (CW VII, p. 322)

1. Introduction

Events in financial markets that began over a year ago on 9 August 2007 are now recognised as indicating a crisis unparalleled since the Great Depression. Extreme levels of government intervention in banking systems have become the norm. Yet monetary policy action, especially in the EU, has been slow in coming.

A number of perspectives on diagnosis and cure are emerging. Some have clung to existing doctrine, most notably Tim Besley of the Monetary Policy Committee. Some blame a too lax monetary policy, particularly at the start of the 21st century. Those responsible for that monetary policy, most obviously Alan Greenspan, seek to blame an inevitable irrational exuberance on the part of the public. Most make any arguments with the benefit of hindsight.

The Bank for International Settlements (BIS) is perhaps unique among major international organisations to have openly predicted the occurrence of the crisis (though not its extent) and to have attempted any explanation. As a result, its interpretation of the cause of the crisis is prominent, influential and merits serious consideration.

1 The author is writing in a personal capacity.
The main purpose of this paper is to present an alternative diagnosis of the current conjuncture, based on a theory of the economic cycle and macroeconomy that is owed in large part to Maynard Keynes. Contrary to subsequent interpretation, Keynes’s economics was concerned primarily with the cause and prevention of depression, rather than the cure to depression after it has occurred. And again, contrary to subsequent interpretation, the cause and prevention of crisis was a matter for monetary policy not fiscal policy. Moreover the monetary policy action that he prescribed ran contrary to those actions advocated most prominently over the past year. Keynes would put blame for the crisis on the liberal finance orthodoxy that has prevailed since 1970.

Keynes saw dear long-term interest rates as the cause of the Great Depression. His solution was a cheap money policy of low interest rates across the spectrum. In practical effect this meant great changes to domestic monetary and debt management policy, but also to great changes in the international field, not least capital control. While not precisely adhered to, the post-war consensus did preserve relatively low interest rates. Its abandonment led to the resumption of dear money that made today’s financial crisis entirely predictable, and deeply disturbing in terms of its future impact on the real economy, on jobs.

The paper is based on the fuller argument in my book, Keynes’s General Theory, the Rate of Interest and ‘Keynesian’ Economics, concerning the extent of the misinterpretation of Keynes’s theory and policy that has prevailed, mainly in the lecture theatre and in the textbooks, since Keynes’s death. I fear it is impossible to do justice to that argument in a paper of conventional length, but it is plainly necessary to try.

The theoretical discussion therefore concentrates on Keynes’s theory of the business cycle, which arises from his theory of investment. Interest rates – across the whole yield curve – are critical to this theory. The fundamental problem with high rates of interest is that they are more unlikely to be earned by businesses that borrow and therefore any financing more unlikely to be paid back. This perspective suggests and obvious extension to Keynes’s theory, which accords partly with the BIS interpretation, though originates with Hyman Minsky (to whom the BIS concede parts of their argument). A build-up of debt is a key feature of the upswing; recession is then a brutal process of de-leveraging.

This view that interest rates are under the authorities’ control is an equally important and largely unrecognised conclusion of Keynes’s theory. Considerations of space mean that the theory of liquidity preference cannot be elaborated here, though the reader is directed to Tily (2006), which could regarded as the monetary companion paper to this real one.

Theoretically this paper is not based on mainstream reasoning. The argument is not mathematical, with any equilibrium state of affairs not the solution to a set of simultaneous equations. Instead, expectations are a critical determinant of activity in a model that recognises the underlying monetary nature of the economic process. That said, investment expectations are set against
underlying yields that imply certain ‘real’ constraints to activity. It should also be pointed out that, outside the Besley perspective, the BIS and Greenspan arguments go a long way beyond mainstream reasoning in a manner that is less formalised than Keynes’s approach. The BIS are forced to resort to Minsky, who is very much not part of mainstream teaching.

But most importantly these perspectives are seriously defective. They are based largely on hindsight and a very selective interpretation of events, confining analysis to 2000 and beyond, to only the effects of low discount rates on the household sector. They neglect entirely the very real excessive expansions prior to this point and offer a faulty interpretation of interest rate environment. Ultimately the argument is that the BIS interpretation stands matters entirely on their head.

For the great part of more than a quarter of a century, interest rates have been exceptionally high, not low. The inability of consumers and businesses to repay such rates is responsible for the great build up of debt, and recognition of that fact is responsible for the triggering of the financial crisis. With an understanding of these processes, the crisis was predictable, as indeed I did in my book. It is also solvable. Keynes’s analysis is far more positive than the ultimately gloomy prognosis of the BIS.

The paper is set in three sections: theoretical, empirical and policy. In the first the BIS theory is set out before a more detailed exposition of Keynes’s theory of the cycle and its extension to debt. The two theories are linked using the work of Minsky. In section 3, the BIS claims about the level of the rate of interest are examined and then economic activity since WWI summarised. In section 4, the policy debate is addressed, contrasting the policymaker stance in the 1930s with the stance at present.

2. Theory

2.1 The BIS argument

The BIS set out their analysis in their 78th Annual Report. A process is outlined whereby lax monetary policies in a liberal financial environment permit excess credit and debt growth, which lead eventually to real crisis when liquidity dries up. The following constitutes an attempt to isolate and order the relevant steps in their argument, drawn mainly from the introduction and conclusion to the report.

1. A favourable economic and/or financial development leads to lower inflation. The BIS specifically identify “numerous positive and overlapping supply shocks arising from deregulation and technical progress, but perhaps

2 This perspective also owes something to Irving Fisher, especially his notion of a “debt starter” – see section 2.2.
even more ... the entry of major emerging economies into the global trading system” (BIS, 2007, p. 138).

2. Central banks mistakenly regard this as a permanent rather than a temporary supply shock:

   However, instead of temporarily allowing inflation to drift lower, analogously to the past treatment of negative supply shocks, policymakers interpreted this quiescence of inflation differently. They took it to mean that there was no good reason to raise interest rates when growth accelerated, and no impediment to lowering them when growth faltered. (ibid., p. 138)

As a consequence interest rates are too low:

   It is perhaps best to begin by noting that policy interest rates in the advanced industrial countries have latterly been unusually low by postwar standards. (ibid., p. 8)

   Finally, it cannot be denied that a still more traditional factor was also at work. Real interest rates – globally, and not just in a few advanced industrial economies – have been at unusually low levels for much of this decade. (ibid., p. 138)

3. The consequent low interest rate environment encourages rapid rates of credit growth, which are regarded as both imprudent and inflationary (ibid., p. 138).

4. The situation is exacerbated first by “changes in the financial system over the years”, including the development of “structured finance products” (ibid., p. 8); the BIS go as far as claiming an “inherent tendency to ‘procyclicality’ in liberalised financial systems” (ibid., p. 137).

5. Also regarded as important are unprecedented asset price inflations and irregular spending trends (on the part of households in the US and businesses in China). Both phenomena are seen as “consistent with a plentiful supply of cheap credit” (ibid., p. 9).

6. The outcome is debt: “In particular, we need to address directly the problem of bad debts and high debt service burdens built up over many years in some major economies” (ibid., p. 137). In general the BIS mention only household debt: “But consider ... as well the unprecedented reliance on household spending and debt accumulation in many countries during the last upturn; “the principal concern is that households facing heavy debt burdens, ... will seek to raise secularly low saving rates by cutting consumption quite sharply” (ibid., p. 140). 3

3 Of the corporate sector, the BIS offer only “While the corporate sector globally is hardly cash constrained, this cannot be said of many large firms that have recently been involved in leveraged buyouts” (ibid., p. 140).
The BIS see this process as underpinning the major episodes of “economic and financial turmoil” throughout much of economic history:

Historians would recall the long recession beginning in 1873, the global downturn that began in the late 1920s, and the Japanese and Asian crises of the early and late 1990s respectively. In each episode, a long period of strong credit growth coincided with an increasingly euphoric upturn in both the real economy and financial markets, followed by an unexpected crisis and extended downturn. In virtually every instance, some form of new economic discovery or new financial development provided a further “new era” justification for rapid credit expansion, and predictably became a focus for blame in the downturn. Against this background, even what has been identified as different, above, remains fundamentally the same. (ibid., pp. 4-5)

The argument sits very much at odds with more conventional notions of the optimality of the market, the hidden hand and the rationality of agents upon which much of economic theory is based. Policy error in the wake of positive developments fosters erroneous expectations which drive the economy forward to disaster. There is a very dim view of the operation of the market economy here. Moreover, from the perspective of policy, rather than the hard fought end of policy, low inflation is the means to policy error. It seems rather bizarre that the factor that since 1992 has been most closely associated with economic success is now equally prominently associated with disaster.

The theory then stands much of economics on its head. But it is hardly a comprehensive or watertight explanation of events. Most seriously its perspective is astonishingly narrow, confined to the period following the interest rate cuts of 2001 and neglecting almost entirely events that made the cuts necessary. This perspective leads to the almost exclusive emphasis on the household sector that has already been noted above.

2.2 The BIS and Hyman Minsky

Given the unorthodox nature of their explanation for the financial crisis, the BIS refer to two more unconventional sources. First, “Hyman Minsky’s work in the 1970s seems of particular relevance to current circumstances” (ibid., p. 7), and is characterised as follows:

He warned that a continuous worsening of credit standards over the years would eventually culminate in a moment of recognition and recoil (what others have since dubbed “a Minsky moment”), when market liquidity would dry up. For Minsky, however, the liquidity crisis was only a symptom of the underlying credit problem, reflecting the reality

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4 There is only a sideways glance on p. 139: “And on the policy side, the degree of sustained fiscal and monetary stimulus needed to ensure recovery after the slowdown of 2001 was also unprecedented”.

5 The BIS provide no references; an obvious place to start is his 1986 work Stabilizing an Unstable Economy, a new edition of which was published in 2008.
that market liquidity is always crucially dependent on the continued availability of funding liquidity. (ibid.)

Second, though not explicitly, the BIS refer to Irving Fisher’s (1933) ‘The debt-deflation theory of business cycles’: “Irving Fisher painted a similar picture of deteriorating credit standards in his famous research into the origins of the Great Depression” (BIS, 2008, p. 7). As noted, Fisher’s notion of a “debt starter” seems to correspond to the BIS perspective; yet Minsky’s relevance to the specific processes outlined by the BIS is less clear. In his own words:

... the stability of the economy depends upon the way investment and positions in capital assets are financed. It will be argued that instability is determined by mechanisms within the system, not outside it; our economy is not unstable because it is shocked by oil, war or monetary surprises, but because of its nature. (Minsky, 2008 [1986], p. 192)

Minsky was primarily concerned with processes affecting the business not the household sector. The BIS may use Minsky’s name, but they do not confront fully the substance of his position. Minsky was a post-Keynesian who categorically rejected mainstream analysis:

A theory that denies what is happening can happen, sees unfavourable events as the work of evil outside forces (such as the oil crisis) rather than as the result of the characteristics of the economic mechanism, may satisfy the politicians’ need for a villain or scapegoat, but such a theory offers no useful guide to a solution of the problem. (ibid., p. 5)

His work was rooted in Keynes:

John Maynard Keynes, *The General Theory of Employment, Interest and Money* (...) is the key work for understanding how a capitalist economy with sophisticated, complex and evolving financial institutions behaves. (ibid., p. 5)

His own ‘financial instability hypothesis’ was an extension of the *General Theory*, that developed the financial consequences of the excessive investment that Keynes saw as underpinning the economic cycle. Ultimately Minsky’s policy conclusions went way beyond the BIS: “Fundamental institutional changes similar in scope to the basic reforms of the first six years of the Roosevelt presidency are necessary if we are to recapture such relative tranquillity [of the 1950s and early 1960s]” (ibid., p. 6).

2.3 The *General Theory of the Trade Cycle*

With the conventional wisdom that Keynes was concerned mainly with actions to escape recession, Keynes’s theory of the cause of the trade cycle – and how to avoid recession – has been greatly neglected. In contradistinction to the BIS, Keynes understood the trade cycle as caused by high interest rates. He recognised this fact as soon as the great depression was underway.
This can be seen in the closing chapters of *A Treatise on Money*, which was published in October 1931 but the key passage on the rate of interest was explicitly referenced as written in 1930:

I am writing these concluding lines in the midst of the world-wide slump of 1930 ...

Thus I am lured on to the rash course of giving an opinion on contemporary events which are too near to be visible distinctly; namely, my view of the root causes of what has happened, which is as follows. The most striking change in the investment factors of the post-war world compared with the pre-war world is to be found in the high level of the market-rate of interest. (*CW VI*, p. 377)

In June 1931 he gave a lecture to the Harris Foundation in the United States:

We are today in the middle of the greatest economic catastrophe -the greatest catastrophe due almost entirely to economic causes - of the modern world. ... I see no reason to be in the slightest degree doubtful about the initiating causes of the slump. ... *The leading characteristic was an extraordinary willingness to borrow money for the purposes of new real investment at very high rates of interest - rates of interest which were extravagantly high on pre-war standards, rates of interest which have never in the history of the world been earned, I should say, over a period of years over the average of enterprise as a whole*. This was a phenomenon which was apparent not, indeed, over the whole world but over a very large part of it. (*CW XIII*, pp. 343-5, *my emphasis*)

In his *General Theory*, these statements were formalised through his theory of investment demand. Under this theory the amount of investment carried out by firms depends on the marginal efficiency of capital (MEC) schedule and the rate of interest that the same firms face in capital markets. The MEC schedule reflects entrepreneurs’ expectation of the returns on undertaking capital expenditure, defined in Chapter 11 of the *General Theory* as follows: “more precisely, I define the marginal efficiency of capital as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price” (*CW VII*, p. 135). At the start of any period, firms assess their likely returns due to various amounts of capital expenditure and will implement investment according to the interaction between this assessment (their MEC schedule) and the rate of interest.

The relevant rate of interest is the benchmark rate set in the market for long-term government debt adjusted for the perceived riskiness of the corporate sector at any specific point in time (‘the’ rate of interest). Aggregating across all firms in the economy leads to a macroeconomic MEC schedule that links each rate of interest to a unique level of investment. The theory defines an

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6 See also correspondence with Robert Brand during the course of the drafting of the Macmillan Report, dated 7 April 1931 (*CW XX*, pp. 272-3)
equilibrium in the sense that the MEC is a demand schedule for investment that is set against an endogenous supply of funds at ‘the’ rate of interest. In both classical and the General Theory, a lower rate of interest leads to a higher level of investment.

As with post-Keynesian economics, this interpretation discards IS–LM; it corresponds to Chick’s (1983) model. In reality, investment and the rate of interest should be regarded as the central components of Keynes’s theory that took the classical theory of interest as its point of departure from the classical theory (hence, too, the title of his book):

There is, I am convinced, a fatal flaw in that part of the orthodox reasoning which deals with the theory of what determines the level of effective demand and the volume of aggregate employment; the flaw being largely due to the failure of the classical doctrine to develop a satisfactory theory of the rate of interest. (The Listener, 21 November 1934, CW XIII, p. 489)

In the General Theory, the classical theory was deconstructed into two (normally) independent parts: first, the theory of liquidity preference and second, the theory of investment demand (Figure 1).\(^7\)

**Figure 1: The theories of interest (a) and investment (b)**

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\(^7\) Keynes scarcely used diagrams in any of his work; I consider this a great mistake, doubly so because the only one he did use in the General Theory was so terribly misleading.
The long-term rate of interest was set according to the schedule of liquidity preference (LP) and the supply of money (Figure 1.a). The theory explained how and why policymakers could manipulate expectations and use debt-management policy to set rates of interest across the spectrum. The exogeneity of interest was the key monetary conclusion of the General Theory. These considerations are explained in detail in Tily (2006).

The interest rate then determined the rate of investment according to the schedule of the MEC, via a notional supply schedule of finance, perfectly elastic at the prevailing rate of interest (Figure 1.b, the axes are reversed from the common presentation).8 Neither the LP and MEC schedules is fixed, as in the ‘Keynesian’ bastardisation, but shift according to changing expectations. Nonetheless, on a given MEC, there was a different level of investment for each exogenous rate of interest.

In the General Theory, as is well known, aggregate output and employment then depended on the multiplier, the marginal propensity to consume and the principle of effective demand. Ultimately the theory explained how a deficiency of demand would lead to unemployment equilibrium. The analysis is short-period in an analytical sense. Increased demand would go to employment or prices according to the conditions of supply, with capital fixed.

The economic cycle and associated sustainability issues follow from the role of expectations. As with market expectations of the future rate of interest, the yield on investment is uncertain, for it depends on estimates of future demand that cannot be known:

The considerations upon which expectations of prospective yields are based are partly existing facts which we can assume to be known more or less for certain, and partly future events which can only be forecasted with more or less confidence. (CW VII, p. 147)

The aggregate MEC schedule is hence dependent on the state of expectation about the uncertain future and shifts following changes in the state of expectation. As various post-Keynesians have argued, this notion of uncertainty is a fundamental distinction between Keynes’s theory on the one

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8 The whole of Keynes’s economics was underpinned by his recognition of credit creation. As he put it in the Treatise on Money:

This Act [Bank Act 1844] was compounded of one sound principle and one serious confusion. The sound principle consisted in the stress laid on the limitation of the quantity of the representative money as a means of ensuring the maintenance of the standard ['whatever that standard might be', p. 14]. The confusion lay in the futile attempt to ignore the existence of bank money and consequently the inter-relationships of money and bank credit, and to make representative money behave exactly as though it were commodity money. (CW V, p. 15)

The discussion here has Keynes taking the money supply as endogenous in the General Theory, or more specifically as generally responding to accommodate effective demand. Endogenous money is perhaps the defining characteristic of post-Keynesian economics. Yet, until very recently, many post-Keynesians have not attributed the notion to Keynes (see eg Chick, 2001 and Tily, 2007a, available on request).
hand and both ‘Keynesianism’ and the present neo-classical doctrine on the other. Keynes’s notion of ‘animal spirits’ then reflected the further insight that firms’ estimates of the yields of investment will be subject periodically to either excessive optimism or excessive pessimism.

There are, therefore, two potential causes of an increase in investment demand: a cut in the rate of interest (Figure 2a), or a change in expectations towards greater optimism of the yield on future investment represented by a shift in the MEC (Figure 2b).

**Figure 2: Keynes’s theory of investment**

![Figure 2](image)

In Figure 2a, investment increases to $I_1$ following a cut in the long-term rate of interest to $r_1$. In Figure 2b, investment increases to the same extent following a change in expectations represented by a shift in the $\text{MEC}_0$ to $\text{MEC}_1$. The distinction between the two mechanisms underpins not only Keynes’s theory of the economic cycle, but also his solution to the Economic Problem.

In Chapter 22, ‘Notes on the Trade Cycle’, Keynes outlined his theory of an economic cycle led by investment demand.

But I suggest that the essential character of the trade cycle and, especially, the regularity of time-sequence and of duration which justifies us in calling it a cycle, is mainly due to the way in which the marginal efficiency of capital fluctuates. The trade cycle is best regarded, I think, as being occasioned by a cyclical change in the marginal efficiency of capital, though complicated and often aggravated
by associated changes in other significant short-period variables of the economic system. (CW VII, p. 313)

I suggest that a more typical, and often the predominant, explanation of the crisis is, not primarily a rise in the rate of interest, but a sudden collapse in the marginal efficiency of capital. (ibid., p. 315)

These passages, however, do not address the role of the rate of interest: this is introduced shortly afterwards. Without emphasis, Keynes argued that for each rate of interest there is an amount of investment that is in some sense ‘correct’. This proposition is made most explicitly in the following elaboration of the business cycle process:

It is an essential characteristic of the boom that investments which will in fact yield, say, 2 per cent in conditions of full employment are made in the expectation of a yield of, say, 6 per cent, and are valued accordingly. When the disillusion comes, this expectation is replaced by a contrary ‘error of pessimism’, with the result that the investments, which would in fact yield 2 per cent in conditions of full employment, are expected to yield less than nothing. ...

The boom which is destined to end in a slump is caused, therefore, by the combination of a rate of interest, which in a correct state of expectation would be too high for full employment, with a misguided state of expectation which, so long as it lasts, prevents this rate of interest from being in fact deterrent. A boom is a situation in which over-optimism triumphs over a rate of interest which, in a cooler light, would be seen to be excessive. (CW VII, pp. 321-2, my emphasis)

Here Keynes compared ‘excessive’ expectations of the yield of investment with this ‘correct state of expectation’ as a baseline. In terms of the MEC, Keynes appears to be arguing that there is a ‘correct’ MEC schedule against which other schedules, assessed in uncertain circumstance and influenced by various degrees of optimism, can be compared.
On Figure 3a, the rate of interest, \( r_0 \), corresponds to a volume of investment, \( I_0 \), measured on MEC_{correct}, a notional ‘correct’ MEC schedule. The expansion phase of the business cycle is then illustrated by a shift to MEC*, the schedule reflecting firms’ excessively optimistic assessments of the yields on investment, leading to investment demand of \( I_1 \).

Eventually investment implemented under such conditions will go into reverse: the MEC shifts to the left. This leads to the contraction in investment that defines the ‘recession’ or ‘depression’ phase of the economic cycle. Keynes’s description goes little further. Instead he turns to his terribly straightforward solution:

...the remedy for the boom is not a higher rate of interest but a lower rate of interest. For that may enable the so-called boom to last. The right remedy for cycle is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom. (CW VII, p. 322)

The cheap-money solution to the economic cycle achieves a high level of investment by reducing the rate of interest rather than through shifts to the MEC that he regarded as only temporary. This alternative is illustrated in Figure 3b, where the higher level of investment (the ‘so-called boom’), \( I_1 \), is achieved with a reduction in the rate of interest from \( r_0 \) to \( r_1 \).
Two immediate shortcomings come to mind: first, what causes the MEC to shift into reverse, and second, why shouldn’t the process occur at a lower rate of interest? In my view, both are connected to the build up of and sustainability of repayments on debt.

### 2.4 Repaying debt

The fundamental concern with excess credit is inability to repay. In a sense Keynes’s theory merely recognises that an inability to repay is more likely at high rates of interest not low.

Keynes’s theory decisively rejected the notion that labour market considerations governed the underlying or long-run operation of an economy. It broke the equilibrium between investment, saving and the rate of interest. It broke too the additional classical notion that in a market economy the rate of interest adjusts to accommodate any changes in the yield on investment (sometimes known as the rate of profit). Therefore any classical sense of equilibrium is gone.

Yet I am concerned to emphasise that the cycle process is underpinned by something real: namely limits to the yields on investment. The notion that there are no limits to demand-driven expansion should be discarded. In Keynes’s theory the rate of interest is a monetary phenomenon, which sets an upper bound to investment profits according to their underlying yields. Nothing in the system ensures that the upper bound is in any sense optimal, in particular that it will correspond to full employment. In this way, the rate of interest defines some sort of an underlying equilibrium for the system.

The trade cycle discussion indicates that this upper bound is not ‘binding’ in terms of the day-to-day operation of a free market economy. Under the influence of optimistic animal spirits, and facilitated by endogenous credit creation, investment can exceed the upper bound. But the upper bound does exert an underlying force on the system. In particular dear money sets too high a threshold for the yield on investment to result in anything like full employment. The system can expand at an excessive rate; the fundamentals – fairly low unemployment, relatively high growth and low inflation – may appear sound, but Keynes’s theory predicts that it will be a temporary state of affairs, liable to abrupt reversal.

This reversal comes about through examining the possibilities of repayment of financing. The analysis follows Minsky, who saw that it was necessary to

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9 The majority of this discussion was written some time before the present financial market collapse (it was largely completed at the end of 2005). Specific developments in financial markets throughout the first years of the 2000s were incorporated as the theory was developed. I have not changed it greatly in the light of the current crisis, events are moving too fast and the paper is already too long. I have removed one footnote concerning the high likelihood that the authorities will be willing to intervene as the crisis develops. Writing this footnote in October 2008, plainly this is the case. The more important question of whether this intervention will precede the more substantial monetary reform that Keynes and Minsky saw as necessary is not addressed.
examine the financial outcomes of the cycle processes that Keynes had outlined. According to his ‘financial instability hypothesis’, an investment expansion based on excessive optimism is sustainable only when “profit flows must be sufficient to validate debts” (Minsky, 1985, p. 37).

Focus changes from the expectations that dominate when investment is put into place, to ‘outturn’ as revenue streams come in. These will either validate or invalidate original expectations. The key processes concern how companies and banks handle the failure of revenues to match expectations.10

At the start of an upswing there will be greatly increased investment. If the expansion follows a period of subdued activity with capacity idle (as is likely), the increased utilisation of this capacity is also likely to lead to rapid acceleration in profits. There will also be effects in the financial markets that may be critical to the development of the cycle. In particular, capital market inflation (CMI)11 will be a consequence of any credit-fuelled excessive expansion. The identity between saving and investment means that all new investment financed by credit will create an equal amount of saving. By definition, in an excessive expansion driven by investment, the pace of credit creation and, therefore, saving creation will be at least at the pace of investment. These newly created savings will seek the high returns apparently offered by financial investments. As a consequence, prices will be pushed up on various financial instruments, most obviously equities, but equally corporate bonds. The likely consequence is that the prices of financial instruments will grow at the pace of investment during the expansion. Indeed, as assets must equal liabilities, a theoretical aggregate measure of capital market inflation should grow at exactly this pace.12 In turn, CMI will widely (but erroneously) be interpreted as indicating investors factoring in the excessive growth in economic activity as permanent. CMI will, thus, serve further to affirm the validity and sustainability of the state of affairs to

10 Strictly, what might be called ‘validation by revenue’ processes can only be judged over the full duration of an investment. The outturn of the stream of revenues for any marginal investment will then either have met or failed to have met the cost of the finance for putting that investment into place. In practice, however, it is unlikely that businesses can wait until the end of the investment repayment process to appreciate that revenues will not meet costs. Firms’ cash flow calculations for the duration of an investment will have assumed a certain profile of returns over time. The extent to which excessive investment is revealed at an early stage will depend on this profile. At the extreme, if all returns are expected in the final period then firms will not know until this period. For most projects it might be reasonable to assume that returns are likely to be linear (with perhaps a positive gradient) across the investment. In these cases, the excessive nature of the investment will be revealed from fairly early on, and firms may encounter cash flow problems according to a similar timing. In the aggregate, it is likely that these types of projects will dominate. To reflect this, ‘outturn’ will not be used in the strict sense of the stream of revenues over the whole life of the investment, but more loosely to reflect a position where an investment has been put into place and is generating revenue. Jumping ahead, it may be that in some cases banks are willing to re-finance loans for as long as they believe that a company’s shortfall in revenues is due to incorrectly profiled revenues rather than a miscalculation of total revenues. In the limit, this would mean that re-financing would take place until very late in the life of any investment.

11 Toporowski (1999) coined this phrase.

12 Such measures do not exist; though an indication could be derived by looking at the growth of total assets and liabilities on the balance sheet for each institutional by sector.
investors and policymakers alike and no doubt will encourage even greater optimism.

As euphoria about the situation spreads, additional increases in optimism may lead the MEC to shift even further to the right. This period of accelerating investment will continue until there is either some reining-in of expectations or until a shortfall in firms' revenues begin to indicate the excessive optimism. At this point, firms will begin to have difficulty meeting the scheduled repayments on loans or debt instruments. Keynes's theory as depicted here is categorical about the aggregate amount of investment that will eventually face such problems. On Figure 3a, investment projects represented by the difference at the rate of interest, \( r_0 \), between investment demand and the correct investment, \( I_1 - I_0 \), will, by definition, be such that revenues fail to meet expectations. Essentially, the investments represented by \( I_1 - I_0 \) are excessive and are, from this perspective, 'bad' investments. In this way, the excessive expansion is unsustainable from the moment that investment demand exceeds the correct level, but this will take sometime to be recognised. If it is assumed that firms have no idle resources, then, as revenues fail to meet expectations, they will be faced with two choices: cost savings or additional borrowing. A number of cost-saving options will exist, most obviously cutting back future investment plans, seeking alternative sources of raw materials, raising prices or reducing quality. More painfully, firms could cut jobs.

However, for many firms, the easiest option will be further borrowing to finance the inevitable shortfall between expectations and actual revenue. This type of borrowing – which henceforth be referred to as distress borrowing – should be seen as distinct from borrowing to finance investment in the first place. In a monetary economy the process of distress borrowing can continue for a very long time. But, as a consequence of both the distress borrowing and the high borrowing to finance the excessive investment in the first place, an economy in an excessive-expansion phase will be underpinned by a steadily increasing level of corporate debt – a debt inflation. The sources of distress borrowing will vary, but the generic types are the generation of new credit and portfolio reallocation. New credit creation may be further subdivided between that which goes directly to companies and that which goes indirectly to companies through other financial institutions. An example of the latter will be banks granting loans to various ‘funds’, which then purchase newly issued corporate debt instruments. In the former case, then new credit goes directly from a bank to a firm, the operation is ‘merely’ a balance sheet operation. Existing bank assets are paradoxically ‘protected’ by increased extension of debt-financing loans, for the failure of a client company is not in the bank’s interest. Continuing support of troubled companies, no matter how apparently irrational, is behaviour that is endemic in the banking system. In addition, credit creation for debt financing will also contribute to CMI in exactly the way discussed earlier.

Distress borrowing will keep workers in jobs which would not exist if the economy was operating according to the correct MEC. Other money will come to companies through a reallocation of existing stocks of wealth, with
households (or financial corporations on their behalf) shifting from safer investments (including money) to equity and corporate bonds and from other operations such as debt-equity exchanges and rights issues. At the same time other developments in the course of an excessive expansion will also work towards generating increased demand for corporate borrowing instruments. For example, excessive expansion combined with ‘sound’ budgetary principles is likely to mean that the government will move into surplus. As a consequence it will issue fewer securities, and investors whose portfolios demand a certain proportion of long-term debt instruments will be directed towards the corporate sector just as firms’ demand for debt financing is increasing.

Particularly important considerations follow from wider profit opportunities created for financial institutions. These organisations will make substantial earnings through their role in arranging various issues such as initial public offerings, corporate bonds and debt-equity exchanges, as well as through their role in merger and acquisition activity which will also be an important feature of the credit cycle. Later in the excessive expansion, debt restructuring packages and innovative financial instruments will be offered in exchange for higher interest payments. It is the good fortune for many financial institutions that commission will be earned whether or not any of these transactions make any sense from the points of view of the parties brought together or of the economy as a whole.

A particularly important aspect of this type of finance is hedge fund operations, where high risk is taken-on for high reward. From 2000 there was massive use of credit-default swaps and the securitisation of debt, whereby financial organisations hoped to be able to sell on the risk of credit default. Essentially any such distress borrowing operations transferred the liabilities of the corporate sector into assets of other sectors – in particular the banking, financial and household sectors. Ultimately, because the primary origin of the instruments was debt financing, a large amount of the assets created are assets that reflect bad debts and are worthless. Because the predicament has been caused by excessive expectations, debt financing merely serves to put off the inevitable consequence of a level of investment greater than that permitted by the yield on capital. 13

On the face of it, however, the expansion will appear sustainable. Firms, optimistic for the restoration of financial health in the future, will find that their distress borrowing is willingly taken-up. Fundamental to this depiction of the economic cycle is that an excessive expansion can last for a long time – experience suggests for as many as 20 years – but cannot be sustained indefinitely.

13 Minsky sets out three financial ‘postures’ on the part of firms: ‘hedge’, ‘speculative’ and ‘Ponzi’. The latter is most closely related to the discussion here. “3. ‘Ponzi’ finance. The cash flows from assets in the near term fall short of cash payment commitments and the net income portion of the receipts falls short of the interest portion of the payments. A Ponzi finance unit must increase its outstanding debt in order to meet its financial obligations” (Minsky, 1985, p. 43). The economy described in the main text is one where Ponzi finance becomes endemic.
The boom can be prolonged for precisely as long as demand exists to take up corporate debt financing. The practical limitation to this process is, therefore, investors’ belief that new debt issued is sustainable – that is, firms’ future revenues will ensure that they are able to meet their obligations on that debt. However, eventually investors will realise that the additional debts they are being asked to take up, and those that they already hold, are bad debts. At this point there will be a deterioration or collapse of financial confidence. Evidence suggests that towards the end of a boom, the long-term interest rate on corporate debt will increase, and spreads between corporate debt and government debt will widen, reflecting an increased perception of risk on investors’ part. The precise transmission is unclear. In financial markets there will be two key events. Capital markets will begin to deflate, that is stock exchanges and bond markets will crash. There will be a credit crunch to the corporate sector – it may even be that this event triggers the capital market deflation (CMD), particularly if banks have a crucial role in debt financing. Keynes considered that these events happened with some force:

It is of the nature of organised investment markets, under the influence of purchasers largely ignorant of what they are buying and of speculators who are more concerned with forecasting the next shift of market sentiment than with a reasonable estimate of the future yield of capital-assets, that, when disillusion falls upon an over-optimistic and over-bought market, it should fall with sudden and even catastrophic force. (CW VII, pp. 315-16)

The ‘real’ events will happen in parallel. From the point at which firms can no longer re-finance debt, they will have to seek the only alternative ways to meet their costs: investment cuts (probably first, with implications for employment in the investment goods industries) and then direct employment cuts. The effect of CMD on firms’ balance sheets may also be important here. A sharp deterioration in the balance sheet is, in itself, likely to force cutbacks in investment. It may be that this is the primary transmission mechanism of the failing confidence, but this can only be a matter for conjecture.

In terms of Keynes’s theoretical analysis, there will be two key phenomena. As these financial developments occur, the MEC will be shifting towards a less optimistic position. Firms will know that their revenues from investments made during the expansion phase are failing to meet the expectations that led them to borrow in the first place. They will re-adjust the MEC to a more realistic position. At the same time the failure of confidence in financial markets will cause liquidity preference and risk premia to increase, leading to a sharp rise in the rate of interest. The combination of these effects will cause sharply reduced effective investment demand and hence reduced output and reduced employment.

In sum, the financial perspective characterises the economic cycle in two phases: an expansion that is accompanied by the corporate sector in steadily increasing indebtedness, and a contraction or recession that is the bursting of this debt inflation. The ‘force’ that brings an economy operating outside its correct level of investment back to reality is debt. The degree of indebtedness
is then a measure of the excess of the expansion and will equally serve to prevent the automatic recovery in the way predicted by classical economics.

The cause of the economic cycle is a rate of interest that is too high for a level of investment consistent with full employment, compounded by a monetary system that finances excessive investment for a prolonged period. Older terminology might be usefully resurrected: the economic cycle is caused by money which is easy – that is, readily available – but dear. As discussed, for Keynes, cheap money was the solution to the economic cycle.

However, as in my second question (at the end of section 2.3), while a cheap-money policy allows an economy to operate according to a higher level of investment, it does not immediately follow that that investment should be more stable than the equilibrium in the dear-money case. From a theoretical perspective, in a cheap-money economy it is not possible to rule out substantial shifts in the MEC leading again to debt inflations and financial collapse. Keynes did not address this issue in the General Theory. It might be plausible to argue that such conditions are more unlikely in the cheap-money than the dear money case. In particular, excessive expectations might be less likely in an economy already operating to high performance and one where expectations were not distorted through routine policy manipulation of the short-term interest rate. Similarly, the consequences of excessive expectations might not be so severe in a cheap-money economy because the cost of any associated debt would be less. However, the role of uncertainty and expectation in the economic process mean that no watertight conclusions can be drawn. What is certain, though, is that dear money does not prevent easy money, and dear-money policy will be likely to provoke excessive expansion followed by recession. Rejecting cheap money on the grounds that it may make money easy neglects this point that dear money does not prevent easy money and, at the very worst, amounts “...to refus[ing] to be cured because that will make it possible to become sick again” (Lerner, 1964, p. 222). We should also defer to the facts if experience that are the subject of the next section.

3. Empirical assessment

3.1 The level of interest rates

The past thirty years have been remarkable not for low interest rates, as the BIS claim, but for high rates.

From the point of view of aggregate economic activity, the rate of interest of most importance is the long-term rate that governs the cost of corporate borrowing for fixed capital investment. Figure 4 shows a derived long-run series, based on rates on US corporate bonds (according to Moody’s AA and AAA ratings). The effects of inflation are removed using the US GDP
deflator. It seems reasonable to argue that these rates are a guide – if not a lower bound – to interest rates facing firms across the world.

**Figure 4: inflation-adjusted interest rates on capital investment**

The figures indicate a fairly straightforward dynamic of interest rates throughout the twentieth century. After WWI interest rates were relatively high. Through the 1930s and into WWII interest rates became significantly cheaper, falling negative on several occasions. From the 1950s through to the 1970s, interest rates were more stable at a fairly low level. Between 1979 and 1981, interest rates rose sharply to a very high level, settling shortly afterwards and for a very prolonged period at a rate corresponding to that in the 1920s. Crudely, rates could be summed up as at 6 per cent in the 1920s, halving to 3 per cent from the 1950s-1970s and doubling back to 6 per cent for the 1980s and 1990s. Only at the start of the 21st century did these rates fall, and for only a brief period. This dynamic of inflation-adjusted interest rates is confirmed by various other analyses, which are summarised and discussed in an Annex.

Beyond these broad movements, the relative smoothness of this series (particularly since the 1950s), contrasts with the extensive and frequent changes made to discount rates.

As shown in the annex, there have been few attempts to articulate and explain these movements. The BIS present no serious empirical evidence to support their assertions of the lowness of interest, beyond showing a chart of real money market rates that goes back to 2004 (II.1, p. 11) and nominal

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14 Source: websites of the Federal Reserve and the Bureau of Economic Analysis; deflators prior to 1929 were taken from Friedman (1982).
government interest rates that go back only to 2000 (VI.13, p. 108). There is no substantial discussion about which interest rates have been low, and their relative importance. In terms of cause, they only have low rates following from low inflation. There is less interest in why and how these rates appear to have briefly impacted on longer rates, when previous reductions in discount rates have not had that effect. There is no interest in the longer run dynamic of long-term rates, and indeed their notion that rates are “unusually low by post-war standards” is plainly misleading.

Those who have tried have also tended to explain high real rates through inflation, usually in a throwaway manner, as if the issue is of only marginal interest. Explaining everything using inflation is to stretch a point, it sits uncomfortably with Fisher’s decomposition between real and nominal and neglects the fact that classical theory should explain real interest rates using saving and investment (which is scarcely mentioned).

In the *General Theory*, Keynes offered a wholly different explanation, with long-rates dictated by expectations and manipulable through policy mechanisms. Rates have been high because efforts and mechanisms to hold them low ceased and were discontinued, and capital markets were offered up to the financial sector (see section 4.3 and Tily, 2006).

### 3.2 The investment cycle and debt in the twentieth century

Keynes’s original explanation for the cause of the Great Depression, offered at the Harris Foundation (section 2.3), was wholly compatible with his characterisation of matters in the *General Theory*. We know too that bad debt was widespread, not least through common knowledge of the great extent of bank failings and Roosevelt’s bold remedial actions. Equally, Irving Fisher’s (1933) debt-deflation theory exemplifies the role of indebtedness during the Great Depression. The paper includes estimates debt set against wealth (Figure 5).  

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15 This was a terribly impressive achievement given National Accounts and hence denominators had only just begun to emerge.
Fisher's estimate of internal debt in 1929 is 193 per cent of the corresponding estimate of GDP (which was not available when the paper was published). As is well known, having fallen to historic lows in the 1920s, unemployment rose to an unprecedented extent as the debt deflation progressed. However, Roosevelt's policy actions of the early 1930s led matters swiftly to reverse (Figure 7).
According to this interpretation of the *General Theory*, the role of cheap money in the post-war golden age demands recognition. As is well known, over much of the world unemployment was low and growth high (and the income distribution improved). Fixed capital investment was strong and industrial activity vigorous; the expansion was certainly not due to government expenditure alone. Moreover, as Keynes argued, under cheap money, cyclical forces were subdued, and financial crises were remarkable by their not occurring. The era surely vindicated Keynes’s genius, and has been too easily neglected.

The same analysis should lead to grave concerns about the re-emergence of dear money in 1980. Until 2000, the stability of these high interest rates has been remarkable. This stability was in spite of changes in vogue for monetary policy, most notably the switch from monetarism to the so-called new consensus (and also, for some countries, fixing exchange rates).

The performance of the world economy has fallen substantially short of that during the golden age. Since 1980, unemployment has increased, growth slowed, and financial instability and the economic cycle become regular global economic phenomena. Moreover the period has been characterised – particularly for the US and UK – by almost relentless debt and asset inflations. In the light of the theory above, these should be regarded as symptomatic of excessive expansions.

According to the theory, during the golden age firms invested at rates of interest that were affordable (as in Figure 3b). Financial crises did not occur. Since 1980, firms have invested at rates of interest that – as in the 1920s – simply cannot be afforded (as in Figure 3a). And, over time, an increased burden of debt has been the consequence. Figure 8 shows US corporate debt as a percentage of GDP.
Figure 8: Total liabilities of US nonfinancial businesses, % GDP

Source: Federal Reserve, ‘Z’ tables, L.101

Figure 9: Demand growth in the US, per cent

Source: Bureau of Economic Analysis (BEA); the 1984 figure for business investment growth was 29.5 per cent.
On the ‘real’ side, investment expansion has been very erratic (Figure 9). Activity was severely curtailed in the wake of Volker’s discount rate increases in the early 1980s (the official data on GFCF are very volatile over this period). The – only modest – expansion of the late 1980s gave way to severe recession. Then the – more vigorous – expansion of the late 1990s came to an abrupt end as capital markets collapsed at the end of the twentieth century. Figure 10 shows how this event was a global phenomenon, with changes remarkably coincident.

Figure 10: GFCF growth, quarter on previous quarter

Source: OECD

The government and household growth figures show supplementary sources of demand (Figure 9). The Volker shock was of course counteracted by a very substantial expansion in government expenditure, as was the recession of the early 1990s. Household consumption has been relatively robust over almost the whole period.
Figure 11 shows measures of indebtedness for the two other (domestic/nonfinancial) sectors, and a total. These show the rapidly increasing liabilities of both sectors, with only a brief improvement in the government position during the expansion of the 1990s. Total liabilities in 2007 of 358.6 per cent of GDP are unparalleled in history, well above Fisher’s estimate for the Great Depression.16 17

3.4 ‘Cheap money’, 2001-04

The events of contemporary interest and importance are those since 2000. At this point the reduction in interest rates that so preoccupies the BIS was instigated, illustrated most strikingly by movements in the Federal Reserve Discount rate (Figure 12). These interest rate cuts were almost unanimously supported as the only way to prevent the business decline turning into full-blown recession.

16 This analysis must be regarded as only indicative, given the precise coverage of Fisher’s methodology is not known. In addition, few have attempted this kind of work, so such analyses are in their infancy. The figures above show higher indebtedness than my previous studies (Tily 2007, Appendix 11.1), which, because of some rather misleading headings in the ‘Z tables’, appear to have been based on only bank lending. Mention should be made of Steve Keen of the University of Western Sydney who has produced a good deal of analysis on Australia and the US. His long-run figures on private debt show a similar story to that above (eg Keen, 2007). Ann Pettifor (eg 2003 & 2006) of the New Economics Foundation has been alive to the dangers of the debt inflation for the past ten years.

17 Graham Turner (2008) has also pointed out how policymakers turned a blind eye to these debt inflations, often through appealing to parallel asset inflations regarded, in turn, as a consequence of perceived supply-side considerations. A striking example offered is Kate Barker’s review of UK housing (ibid., p. 29).
As noted above, these cuts to some extent fed through to longer rates. On Figure 4, rates fell in 2003 and hit a low of 2.8 in 2005, but by 2007 they had risen back up by 1 percentage point. These movements were initially a consequence of a shift from equity to debt, reflecting investors’ fear of recession. Whether they were also responding to discount rate cuts is not easy to establish, any relationship along the yield curve is complex and changes over time. But the critical point is that the cuts took place in a severely deregulated financial environment at a peak of debt and asset inflations with non-existent action (rather, neglect) on the part of regulators, financial authorities, including central banks.

As a result banks created credit on a vast scale. A significant share of the credit created went to highly-specialised financial institutions – hedge funds, private equity outfits and securities dealers as well as more traditional merchant banks. These institutions used the credit to facilitate:

- a vast acceleration in the creation of opaque financial instruments (not least collateralised debt obligations and credit default swaps, commonly understood to have grown from almost zero to around £60 trillion between 2001 and 2007);
- highly-leveraged take-overs of non-financial corporations; and
- the re-ignition of housing and commercial property inflations across the world.

Across the world, regulatory and looked away.

These asset inflations may have served temporarily to bolster both household and corporate balance sheets. Yet any real beneficial effects to businesses accrued increasingly to companies outside the US and Europe, not least to
China. Current account deficits in the UK and US, already large, deteriorated sharply, and the absence of capital control permitted a good share of the associated capital account surpluses to flow back to Western financial products in a spiral of debt inflation. Where domestic gross fixed capital formation did increase, it was in activities most closely associated with the property and financial expansions.

In addition, the main domestic beneficiaries of the low rates were financial corporations, not ordinary businesses and consumers. These financial institutions leveraged substantially and lent on. It is hardly likely that these mechanisms would have operated if they were not lending-on at higher interest. At the same time, other products such as ‘teaser’ loans (where high interest loans were disguised as low interest loans) and ‘liar’ loans (where a lack of scrutiny perhaps deliberately encouraged dishonesty about earnings) indicated a complete breakdown in financial supervision.

Finally, as is well known, any ‘low’ rates were temporary. Policy rates were increased from the middle of 2004, longer rates from 2006. As Figure 4 indicates, they had barely fallen to the level of the golden age when they abruptly reversed.

Returning to Figure 11, from 2000 household indebtedness has increased to an extent with no precedent in economic history. In parallel the terrorist attack on the World Trade Centre provided a pretext for a substantial increase in government expenditure in the United States (in the United Kingdom the Labour Government’s increased spending policies came on stream with propitious timing). Corporate investment was eventually also stimulated (not least from construction) (Figure 6). Finally, corporate indebtedness did not diminish, as is commonly understood, rather it deflated only briefly and slightly, and then expanded, again, to an unprecedented level.

The likelihood is that these expansions, let alone the associated extreme behaviour in the financial markets, have merely served to delay – and exacerbate – a long-overdue corporate recession. These events in the opening years of the twenty-first century, with which the BIS are solely preoccupied, were consequence not cause of economic decline. The extreme indebtedness is the most telling – even terrifying – symptom of close to forty years of dear money.

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18 It should be emphasised that these surpluses were consequence of expansionary western policies and the balance of payments arithmetic, not an independent decision to save more on the part of Chinese consumers. Martin Wolf is the most prominent advocate of this wholly erroneous view, relevant only to a world where credit does not exist. See for example the Financial Times 9 October 2008, under the banner: Asia’s revenge

Roots of the crisis The west’s traumas stem not just from cheap money, gung-ho bankers and lax regulation but from sustained capital inflows, writes Martin Wolf, author of a new book on global finance.

19 The debt figures do not include Bush’s initial fiscal stimulus: $170 billion would add 1.2% to debt as a share of GDP.
The ongoing financial market collapse reflects the final recognition of the unsustainability and absurdity of the situation. The increasingly common references to the Great Depression do not seem inappropriate given the unprecedented duration of the modern era of dear money. The authorities are finally recognising that the financial crisis is not one of liquidity but one of solvency. The process of de-leveraging – that defines recession – is underway.

The process was quite the reverse of Keynes’s intentions. His low interest policies were aimed at encouraging non-financial companies to extend capital investment and foster a revival in animal spirits. They were implemented in a highly regulated domestic and international financial environment, not least with capital control and a greatly diminished role for consumer credit. Moreover his policies were intended as permanent not temporary. The evidence of the golden age is that low rates of interest can be associated with prosperity and stability, not chaos.

4. Monetary Policy Controversy: the 1930s and the 2000s

4.1 BIS policy

The BIS analysis gave a causal role to low interest rates in the present crisis, and by association, surely, caution about their use in response. However, they did not argue entirely in this way, and conceded that the financial crisis demands reduced interest rates. But they were unwilling to go all the way, and instead pointed to the (now passed) global commodity inflation as inhibiting these rate reductions.  

Furthermore, in spite of the perceived role of monetary policy error in causing the present crisis as well as the inflation targeting rules standing in the way of action to resolve it, the monetary policy consensus is not greatly contested. In practical effect, the BIS’s “new macrofinancial stability framework” (ibid., p. 148) amounts to arguing that monetary policies have been too lax and should have been more vigilantly operated, with a view to asset prices:

To be more specific, monetary policy might be tightened even with projected inflation under control, given a sufficiently worrisome combination of rapid credit growth, rising asset prices and distorted spending or production patterns. In focusing on a combination of systemic indicators, this proposal is quite different from simply targeting asset prices. (ibid., p. 148)

Such policies would have reduced demand and hence activity, and quite probably would have served to bring the crisis forward (perhaps no bad thing,  

20 At the time of submission of this paper, policymakers have finally begun to appreciate that the inflation of 2007 and 2008 was a speculative phenomenon, underpinned by investors’ flight from paper assets to commodities.
but no solution). The only additional modification suggested is a modestly and vaguely increased degree of financial regulation.

More generally, the mantra is of the necessity of preserving the hard-won independence of central banks and preventing the interference by politicians in the conduct of monetary policy.

4.2 Keynes’s alternative

The argument that the economic cycle is at root an investment cycle fostered by dear money leads to the opposite conclusion. It focuses attention not on the low rates of recent years, but the unprecedented duration of the high interest rates that began in 1980. As seen, these wider movements in interest rates have been of scant interest to the BIS or the economics profession more generally.

They go well beyond the short period with which interest rate changes under inflation targeting are concerned, and originate in the policy debate with which Keynes was concerned. This debate was fundamentally concerned with the management of domestic and international monetary systems.

Keynes initial and basic policy insight was that the gold standard was an inappropriate mechanism for economies based on bank credit. The consequence would be interest rate policies inappropriate for domestic economic conditions. For many the Great Depression proved him right, and the gold standard was abandoned across the world. With countries adopting his own currency management techniques, Keynes then advocated large reductions in interest rates. His understanding that the whole spectrum of interest rates was under the authorities’ control would later be formalised in his theory of liquidity preference. In practice, this control was achieved through gradual but great changes to the management of money. The discount rate and debt-management policy were aimed at cheap money on all government instruments, and capital controls instigated to permit the necessary domestic autonomy. Ultimately the policies would enable the ‘three per cent war’, and the cheap money policy of the post-war Labour Government.

While many of the specific mechanisms he instigated were gradually abandoned, the more regulated international financial environment instigated at the end of WWII permitted interest rates to remain relatively low for the whole of the golden age. The modern age of dear money followed the fuller dismantling of these arrangements. With financial liberalisation, and the ‘Volker shock’, interest rates rose across the spectrum, and, as seen, stayed high for the next quarter of a century. The conclusion follows directly from the theory of liquidity preference, which has the level of interest rates as a social phenomenon, under the control of the authorities. I have come across no other credible explanation.

According to Keynes’s theory a corresponding reduction in interest rates across the yield curve is pre-requisite to any substantial recovery of the global
market economy. As in the 1930s, this reduction will require a great re-examination of domestic and international monetary systems, and changes that go way beyond those envisaged by the BIS. Keynes saw the necessity of capital controls, and ultimately his theory pointed to his International Clearing Union for international exchange. From a domestic point of view, just as Keynes saw interest rates having no role in the management of exchange rates, they should have no role in the management of inflation.\footnote{That is not to say that Keynes disregarded inflationary concerns. Policies to set long-term rates of interest meant accepting a large increase in the volume of floating debt (see Tily, 2006). Treasury Deposit Receipts (TDRs) were introduced, which had a six-month maturity and slightly higher interest rate than Treasury bills. These were not reservable against cash at the central bank, and so ensured that the increase in floating debt did not lead to a corresponding increase in credit creation. Moreover the whole fiscal strategy outlined in \textit{How to Pay for the War} was concerned with the avoidance of inflation in the wake of the great increase in government expenditure necessary for the conduct of war.}

5. Conclusion

The very real nature of the present economic crisis appears finally to have been recognised. Some are finally challenging the hopelessness of mainstream theory and modelling, and resorting to rather less-orthodox approaches such as Minsky’s. The argument of this paper is that the only full solution lies in an appreciation of Keynes’s theory and the historical events with which he was concerned throughout his life.

The BIS and others are quite naturally defending the \textit{status quo}, just as policymakers and leading economists, especially Lionel Robbins and Friedrich von Hayek, argued to restore the gold standard in Keynes’s time. The lesson from history is that Keynes was right and the authorities wrong.

The argument that central banks’ interest rate policy should be free from government interference is based on an incorrect theory of interest and macroeconomic activity. In practice liberal finance permits finance to set an inappropriate – indeed disastrous – interest rate for economic activity. It is government’s role to take interest rate under social control. They must do so again. And to do so they must restore the financial arrangements of the Roosevelt and post-WWII eras.

6. Bibliography


Annex

Other empirical analyses of the long-term rate of interest

The great rise in interest rates at the start of the 1980s did not go unnoticed, even if it is not widely understood let alone discussed. In 1984, the IMF addressed the movement of interest rates in the first half of the 1980s (their figures are reproduced on Table A1):

Perhaps the most striking and puzzling feature of monetary conditions in the major industrial countries over the past several years has been the persistence of high real interest rates, on both short-term and long-term financial instruments. These high real rates, which have no historical precedent outside periods of price decline during depressions, have persisted, despite lower inflation and the continued existence of a significant margin of economic slack. The phenomenon is quite widespread. Although real interest rates have differed across the major industrial countries, on the whole there has been less divergence of these rates, especially during 1982–84, than in previous periods.

These measures imply that real interest rates in the major industrial countries during the 1980s have been significantly higher than those that prevailed in the 1950s and early 1960s and even further above those of the 1970s. Real interest rates increased sharply during the period from 1980 to 1982 and then remained at relatively high levels in 1983 and 1984. ... The average real short-term interest rate in the major industrial countries in 1980–84 was 5.5 per cent per annum and the average real long-term interest rate was 5.8 per cent [see Table A1].

In contrast, average real long-term interest rates for the major industrial countries during the period 1952–65 ranged from roughly 1.5 to slightly over 3 per cent per annum. The contrast is even sharper with the experiences of the late 1970s. During 1976–79, for example, the average real long-term interest rate in the major industrial countries was 0.9 per cent per annum. (IMF, 1985, pp. 123, my emphasis)
Sidney Homer’s *A History of Interest Rates*, has been the definitive analysis of the subject since its first edition in 1967. He published a second edition ten years later. Homer died in 1983, and his pupil Richard Sylla was entrusted with the production of a third edition of his work. On the opening page, Sylla warned:

> The spectacular rise in interest rates during the 1970s and early 1980s pushed many long-term market rates on prime credits up to levels never before approached, much less reached, in modern history. A long view, provided by this history, shows that recent peak yields were far above the highest prime long-term rates reported in the United States since 1800, in England since 1700, or in Holland since 1600. In other words, since modern capital markets came into existence, there have never been such high long-term rates as we recently have had all over the world. (Homer and Sylla, 1991, p. 1)

Ciocca and Nardozzi (1993) built on this analysis, in particular de-bunking any neo-classical explanations for the great rise in interest rates. They observed that saving and investment were higher when interest rates were lower, in direct contradiction to the neo-classical theory of saving, investment and interest. Referring to Keynes’s interpretation of interest rates, they argued:
In the Keynesian conception the high price of money is a matter of economic policy. ... We are not condemned to the perpetuation of the high interest rates which the world economy handed on as a legacy from the past. (Ciocca and Nardozzi, 1993, pp. 117-8).

In 1997 Luigi Pasinetti reasserted Sylla’s warning and drew the following conclusion: “The Social burden of the high interest rates is thus upon us, and it is by no means light” (Pasinetti, 1997, p. 168).

At the end of the twentieth century, an edition of the *Oxford Review of Economic Policy* on ‘real interest rates’ set the long-term interest rate performance against measures of economic performance, in particular gross domestic product and inflation. A summary piece by Allsopp and Glyn (1999, pp. 3–4) assessed the figures reproduced here in Table A2 as follows:

There is a widespread impression that real interest rates have been very high since 1980 in comparison with post-Second-World-War experience. The data in [Table A2] confirm that this is indeed the case. Short-term real interest rates, averaging nearly 4 per cent, have been much higher and a little more stable than between 1950 and 1980. The general picture is confirmed by data on long rates as well.

Most of Allsopp and Glyn’s analysis focuses on short rates, though, as in the above quotation, they confirm the relation for long rates. Moreover, they do not consider explicitly the rate paid by firms for capital expenditure, except by association. They do, however, emphasise the international nature of the phenomenon under discussion:

So it would be wrong to think of ‘the world interest rate’ as much more than summarizing average experience. However, country experience has not been so diverse as to make such an average a misleading abstraction. (Allsopp and Glyn, 1999, p. 2)

### Table A2: Real interest rates since 1950 (average of USA, UK, Germany and France)

<table>
<thead>
<tr>
<th></th>
<th>Mean real short rate (%)</th>
<th>Standard deviation of real rate (%)</th>
<th>Inflation rate (% p.a.)</th>
<th>GDP growth (% p.a.)</th>
<th>Profit rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-68</td>
<td>0.7</td>
<td>2.6</td>
<td>3.2</td>
<td>4.5</td>
<td>15.0</td>
</tr>
<tr>
<td>1969-79</td>
<td>0.3</td>
<td>2.3</td>
<td>7.6</td>
<td>3.3</td>
<td>9.3</td>
</tr>
<tr>
<td>1980-97</td>
<td>3.8</td>
<td>1.9</td>
<td>3</td>
<td>2.1</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Source: Allsopp and Glyn (1999)

22 The authors celebrate the contributions of Fausto Vicarelli (eg 1985) to whom they dedicate their work “with a remembrance and an esteem that the passing of time from his sudden death does not diminish” (ibid., p. 121).
They observed:

The most remarkable feature ... is that during the ‘golden age’ of the 1950s and 1960s, short-term real interest rates averaging less than 1 per cent coincided with extremely high real profits rates, which were in turn associated with exceptional rates of growth of capital stock and output. Allsopp and Glyn (1999, p. 3)

The fact that inflation was low over the same period (shown also in Table A2) should also not be neglected by those who regard Keynes’s policies as inflationary almost by definition.

More recently the UK Pensions Commission has produced a detailed analysis of long-term rates of interest on both government bonds and equity, hence establishing the costs of capital for government and business alike. The Commission shows time series of returns on UK gilts, fixed-rate US Treasuries and UK and US equities held for various periods over time. Table A3 here summarises their figures for returns over 5 years. The Commission’s analysis contrasts the returns over the whole period studied with the significantly higher returns after 1977.

Table A3: Mean annualised real rate of return over 5 year period

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That the climate since the 1980s has been of high and not low interest rates is unambiguous from all analyses.

Few commentators have sought to explain any of these movements in interest rates, the best offered are vague references towards inflation. Having briefly exhausted all possibilities, the IMF concluded:

The preceding discussion does not suggest any very clear-cut answer to the question of why real interest rates have remained so high after the initial impact of the introduction of monetary restraint had worn off. ...

Two factors, however, suggest that it would perhaps be unwise to assume that nominal interest rates adjusted for current inflation will decline all the way back to the average levels of the 1960s and 1970s.
First, the gradual acceleration of inflation over the earlier period may have resulted in expected inflation being systematically below actual inflation, and thus in some downward bias in estimated real rates. Second, the possibility cannot be dismissed that new production techniques have increased the productivity of capital in a way that would justify higher real interest rates for an extended period. (IMF, 1985, p. 129)

The *Oxford Review* simply sees them as natural: “[w]e find that high real rates since 1980 seem to be a return to a long-run norm ...” (Chadha and Dimsdale, 1999, p. 17). The Pensions Commission (2004, p. 54) come to the opposite conclusion, with emphasis on inflation:

... periods of extremely attractive real return ... are concentrated in the 1980s and 1990s which saw a sustained deceleration of inflation.

... One conclusion can however be drawn from this historical data: the rates of return earned on nominal bonds in the 1980s and 1990s were exceptional, caused by an unanticipated decline in inflation, and cannot be expected to repeat in future

But it is to stretch a point to argue that inflation is permanently coming in lower than expected. Moreover, as table 1 shows, inflation outturns in the golden age and the modern dear money age were almost identical, it is surely more likely that expectations were apt to be disappointed in the earlier period (given Keynes’s alleged disregard for inflation) and therefore rates should have been higher. Then in the main text the BIS use recent low inflation outturns as an explanation for recent low interest rates. Economists need to recognise that there is a good deal more to economics than inflation.

**Bibliography to Annex**


