

# Keynes's monetary theory of interest

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## Abstract

Now there is no part of our economic system which works so badly as our monetary and credit arrangements; none where the results of bad working are so disastrous socially; and none where it is easier to propose a scientific solution.

(J M Keynes: speech to the Liberal Party, December 1923, *The Collected Writings of John Maynard Keynes* XIX, Vol I, pp 158–9)

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## 1. Introduction

This paper examines the evolution of Keynes's monetary theory of interest and associated policy mechanisms. The discussion draws heavily on and develops the approach of Tily (2010 [2007]), which details what are regarded as fundamental and grave misunderstandings of both his analytical approach and his policy approach. From a practical perspective, Keynes's primary concern was the arrangement of domestic and international monetary systems to permit the full and stable utilisation of resources, and to prevent crisis, rather than the use of fiscal policy in the event of crisis.

The theory of liquidity preference and practical policy to set the rate of interest across the spectrum are central to the discussion. But while these are the core of the discussion, it is positioned in a broader view of Keynes's economic theory and policy. This strategy follows from Keynes's understanding of the monetary nature of the world economy. Taken as a whole, Keynes's schemes reflected the gradual development of his theoretical and technical understanding of the operation of monetary systems. Ultimately, his work encompasses policy measures for national economies based on credit or bank-money systems, and the means to their operation within a wider economic system of a "world between nations".

His case should be set against the existing theoretical and practical schemes that are founded on international capital (ie savings), with banks viewed only as intermediaries rather than creators of money. The paper does not examine the consequences of operating the world economy according to a theory of a system that does not exist (and probably has never existed). This is the fuller purpose of Tily (2007), though the outcome is now [at the start of 2012] obvious.

The central discussion on the liquidity preference theory of interest (section 3) is preceded by a discussion on the theoretical and policy background before the publication of the *General Theory* (section 2). The developments in policy around the time of the publication of the *General Theory* are then examined (section 4) as further backdrop to a full theoretical and practical assessment of his debt management policies that enabled control of the spectrum of interest rates (section 5). Shorter sections then address the relation between his monetary theory and fiscal policies (section 6) and his policies for the international arrangement of monetary systems (section 7). Last, the outcome of these policies are then examined, through an assessment of interest rates over the 20th century to the present, and this leads to a brief discussion of the revival of Keynes's monetary policies in recent contributions to the literature (section 8).

Central to the historical presentation is the idea that Keynes's thought developed in two distinct stages. In the first, his theories concerned money as a means of exchange but were still classical in nature. *A Treatise on Money* was the culmination and fullest statement of this analysis, but it also marks the point of departure to the second stage. With the *General Theory*, a theory of money as a store of value provided the fundamental break with classical analysis, and was genuinely a revolution in economic thought.

## 2. Keynes's theory and policy before the *General Theory*

### Cambridge

Keynes was, from his first contributions, a monetary economist. His later celebrations of Alfred Marshall's contributions to the development of monetary theory show that Keynes considered his work to be in direct succession to Marshall's own.

Having attended Marshall's lectures on money in 1905, in 1908–09 Keynes was lecturing on "Money, Credit and Prices". While his full lecture notes have not been published, the available material is sufficient to conclude that Keynes's understanding of credit creation was

substantial.<sup>2</sup> Some years later, Keynes colourfully summed up his perspective in a rejoinder to Edwin Cannan (1924), the LSE economist:<sup>3</sup>

Professor Cannan is unsympathetic with nearly everything worth reading – as it seems to me – which has been written on monetary theory in the last ten years. Yet the almost revolutionary improvement in our understanding of the mechanism of money and credit and of the analysis of the trade cycle, recently effected by the united efforts of many thinkers,<sup>4</sup> may prove to be one of the most important advances in economic thought ever made. The ideas are new. They are only just beginning to be capable of complete or clear expression. It is natural that middle-aged bankers should feel shy. But it is not natural that Professor Cannan should write as though none of all this existed, as though his own subject were incapable of development and progress, and as though the last word had been said years ago in elementary text-books. (*Collected Writings* XI, p 419)

## India

Equally, from the very beginning, Keynes's work was aimed at practical ends. The dominant economic policy issue of the day was the monetary developments in India in the wake of the bimetallic controversy. In 1893, India had suspended its silver standard and adopted an innovative exchange policy that Keynes saw as the first manifestation of *exchange or currency management systems*. His choosing to begin his Civil Service career in the India Office was no coincidence.

Keynes successfully championed these systems for the greater part of his life. He held that central banks should preserve exchange parities through purchases and sales in the currency market, rather than through interest rate action. Under these systems in India, the rupee was not convertible to gold internally but was convertible into other currencies at a fixed exchange rate in terms of gold. Fundamentally, these arrangements did not involve the manipulation of the discount rate, which was then freed to be aimed at internal rather than external considerations.

Keynes's contributions to the economics literature, therefore, began on this theme. His first major *Economic Journal* (*EJ*) article was published in March 1909, under the title "Recent Economic Events in India" (*CW* XI, pp 1–22). In May 1910, he gave a series of six lectures to the London School of Economics (LSE) that would become his first book: *Indian Currency and Finance*.

Even at this early stage, Keynes was regarded as an expert in these matters. In 1913, just as he was finalising his book for publication, he was invited to be the Secretary of the Royal Commission on Indian Currency and Finance. Elizabeth Johnson, the editor of the early volumes of Keynes's *Collected Writings* (*CW*), sums up the final report as follows: "The

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<sup>2</sup> That Keynes is not even associated with monetary analysis is one of many severe distortions of the mainstream account (one that was ruthlessly exploited by the "monetarists"). This distortion has survived even into some post-Keynesian literature.

<sup>3</sup> Skidelsky (1992, p 163) offers a biographical sketch: "... Cannan had done his economics at Oxford, not Cambridge, and was equally suspicious of Marshall, mathematics and monetary reform. He was ... a 'Johnsonian debunker' of all new-fangled theories, who 'oversimplified and probably ridiculed too much'. Cannan was both a socialist and an orthodox economist, a quite usual combination at the Fabian-inspired LSE of the 1920s ... Both his economics and his socialism made him suspicious of Keynes's monetary theory. ... The central point of his monetary theory was his denial that banks can create credit".

<sup>4</sup> Keynes's footnote: "Mr Bellerby has lately assembled in his *Control of Credit*, published by Messrs P S King (3s.) for the International Association on Unemployment, an impressive collection of opinions from many sources".

report was a vindication of the gold-exchange standard system; it left no doubt that in the minds of the commissioners the much-urged adoption of a gold currency would not serve the best interests of India” (CW XV, p 269). Although this was no small triumph for the 30-year-old Keynes, it was short-lived. “The war of 1914–18 put to one side all the Commission’s recommendations” (CW XV, p 151).

### **The Collected Writings of John Maynard Keynes**

Unless otherwise indicated, the references to Keynes in this article are to the 30-volume edition of his *Collected Writings* (CW) published by Macmillan/Cambridge University Press for the Royal Economic Society.

- (IV) *A Tract on Monetary Reform* [1923]
- (V) *A Treatise on Money*, vol 1: *The Pure Theory of Money* [1930]
- (VI) *A Treatise on Money*, vol 2: *The Applied Theory of Money* [1930]
- (VII) *The General Theory of Employment, Interest and Money* [1936]
- (IX) *Essays in Persuasion* [1931]
- (XV) *Activities 1906–14: India and Cambridge*
- (XII) *Economic Articles and Correspondence: Investment and Editorial*
- (XIV) *The General Theory and After*, part 2: *Defence and Development*
- (XI) *Economic Articles and Correspondence: Academic*
- (XIX) *Activities 1922–9: The Return to Gold and Industrial Policy*, 2 vols
- (XX) *Activities 1929–31: Rethinking Employment Unemployment Policies*
- (XXI) *Activities 1931–9: World Crises and Policies in Britain and America*
- (XXIII) *Activities 1940–3: External War Finance*
- (XXV) *Activities 1940–44: Shaping the Post-War World: The Clearing Union*
- (XXVII) *Activities 1940–46: Shaping the Post-War World: Employment and Commodities*
- (XXVIII) *Social, Political and Literary Writings*
- (XXIX) *The General Theory and After: A Supplement* (to vols XIII and XIV)

### **From the First World War to Versailles**

While the First World War brought monetary progress in India to an abrupt halt, it led to developments in British monetary policy in accord with Keynes’s views. As a senior civil servant in HM Treasury, Keynes was personally involved in these developments. Britain (as well as other countries) modified its internal gold standard, and the foreign exchange policy turned to exchange management. From 1915, J P Morgan was instructed to buy and sell sterling in order to preserve an exchange rate of \$4.76.<sup>5</sup> The J P Morgan arrangements meant that the short-term rate of interest was freed from its role in preserving the exchange parity and could, in theory at least, be operated more in accord with the requirements of domestic wartime policy. He witnessed, for the first time, conflicting views between HM Treasury and the Bank of England about exactly what that policy should be.

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<sup>5</sup> Despite his interest in exchange *mechanisms*, Keynes attached immense importance to the preservation of the sterling-dollar exchange *rate* as the cornerstone of allied finance for the duration of the war.

At the end of the war, Keynes was put in charge of financial business at the Versailles Conference. These responsibilities appear to have left him in the background when the British authorities unpegged the dollar exchange value of sterling and introduced an embargo on gold exports (on 20 March and 1 April 1919 respectively). And of course his official involvement in *any* policy ended with his resignation at the end of the peace conference in June 1919.

Throughout history, financial policy has been prominent in post-war policy debate. The Versailles Conference foreshadowed conferences at Brussels and Genoa, which set in motion a return to a global gold standard. In Britain, the 1918 Cunliffe Committee had already recommended that the UK return to gold at the pre-war parity of \$4.86.

### ***A Tract on Monetary Reform and A Treatise on Money***

Published on 11 December 1923, Keynes's *A Tract on Monetary Reform* was his polemic against the gold standard and the boldest statement to date of his case for domestic and international monetary reform.

In truth, the gold standard is already a barbarous relic. All of us, from the Governor of the Bank of England downwards, are now primarily interested in preserving the stability of business, prices, and employment, and are not likely, when the choice is forced on us, deliberately to sacrifice these to the outworn dogma, which had its value once, of £3 17s ½d per ounce. Advocates of the ancient standard do not observe how remote it now is from the spirit and the requirements of the age. A regulated non-metallic standard has slipped in unnoticed. It exists. Whilst the economists dozed, the academic dream of a hundred years, doffing its cap and gown, clad in paper rags, has crept into the real world by means of bad fairies – always so much more potent than the good – the wicked ministers of finance. (CW IV, pp 137–8)

For internal policy, Keynes recommended that the discount rate should be aimed at *credit control*: “Thus the tendency of today – rightly I think – is to watch and to control the creation of credit and to let the creation of currency follow suit, rather than, as formerly, to watch and to control the creation of currency and to let the creation of credit follow suit” (CW IV, p 146). The domestic money supply would, as a consequence, be disengaged from gold. Note also that Keynes's case was not centred on the desirability of one or other exchange *parity*, but rejection of the gold standard as a *system* for the regulation of an economy based on bank money.

From the theoretical perspective, however, the *Tract* took the existence of credit and the credit cycle as given or commonly known. In the (1930) *Treatise* he then took a step back and sought to explain and formalise these processes. The first book contained a detailed and still profoundly valuable analysis of the evolution and nature of money. He recognised that classical economics was the economics of a commodity money economy; a new theory was necessary for a credit or bank-money economy. Yet while his work was a clear departure from existing theories, especially with the macroeconomic approach of the “fundamental equations”, it remained underpinned by classical doctrine. Economic fluctuations arose as market rates of interest departed from natural rates of interest, a classical idea that he attributed to Wickseil. Nonetheless the work brought the long-term rate of interest to centre stage for the first time, with Keynes wrapping up:

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)

Even as the book was published, in terms of both theory and policy, matters began to move very fast.

### **The collapse of the gold standard and the beginning of currency management**

As he was completing the *Treatise*, Keynes had regained the access to policymaking circles that he had lost after the First World War. He had been brought into the new Economic Advisory Council and various associated sub-Committees. He was also taking a leading role in the (Macmillan) Committee on Finance and Industry. As a member, key witness and in the lead for drafting, Keynes had a profound influence on the Report. A single sentence sums up the underlying perspective:

[In] the case of our financial, as in the case of our political and social, institutions we may well have reached the stage when an era of conscious and deliberate management must succeed the era of undirected natural evolution. (Cmd 3897, p 5, para 9)

The rate of interest, however, was not afforded a central role, as Keynes recognised in deliberations while preparing the Report for publication.<sup>6</sup>

This memorandum brings home to me what I was beginning to forget, namely that I have nowhere introduced into my draft chapters in any clear or emphatic form what I believe to be the fundamental explanation of the present position. My fundamental explanation is, of course, that the rate of interest is too high, – meaning by the ‘rate of interest’ the complex of interest rates for all kinds of borrowing, long and short, safe and risky. A good many of Brand’s factors I should accept as part of the explanation why interest rates are high, eg effects of the War, post-war instability, reparations, return to gold, mal-distribution of gold, want of confidence in debtor countries etc, etc.

Next comes the question of how far central banks can remedy this. In ordinary times the equilibrium rate of interest does not change quickly, so long as slump and boom conditions can be prevented from developing; and I see no insuperable difficulty in central banks controlling the position ... The drastic reduction of the whole complex of market-rates of interest presents central banks with a problem which I do not expect them to solve unless they are prepared to employ drastic and even direct methods of influencing long-term investments which, I agree with Brand, they had better leave alone in more normal times. ...

But I should not be surprised if five years were to pass by before hard experience teaches us to get hold of the right end of the stick. (CWXX, pp 272–3)<sup>7</sup>

Only a few weeks after the publication of the Report, the financial crisis that had begun in continental Europe hit the financial markets in London. The subsequent political and economic chaos led to the replacing of the Labour-led coalition Government with the

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<sup>6</sup> In correspondence dated 7 April 1931 to fellow committee member Robert Brand, at the time a managing director of Lazards merchant bank and a leading figure in economic debate over the 1930s and long into the post-war period.

<sup>7</sup> He made almost exactly the same points two months later at the Harris Foundation Lectures (CW XIII, pp 343–5). In December 1931, an *Economic Journal* article by H Somerville hailed the *Treatise* as “a vindication of the Canonist attitude to interest and usury!”, and asserted that “interest is the villain of the economic piece” (Somerville, 1931, p 647). The paper prompted a symposium on “Savings and Usury” in the following issue (March 1932). Keynes’s own contribution concluded: “Personally I have come to believe that interest – or, rather, too high a rate of interest – is the ‘villain of the piece’ in a more far-reaching sense than appears from the above. But to justify this belief would lead me into a longer story than would be appropriate in this place” (CWXXIX, p 16).

“National Government”, and on 21 September 1931 Britain suspended membership of the gold standard.

The suspension was the starting point for an era of monetary reform that reached across the globe. Only a few weeks later, in the Preface to his *Essays in Persuasion* (dated October 1931), Keynes wrote:

We are standing at a point of transition. It is called a national crisis. But that is not correct – for Great Britain the main crisis is over. There is a lull in our affairs. We are, in the autumn of 1931, resting ourselves in a quiet pool between two waterfalls. (CWIX, p xix)

While the initial reaction of the authorities was to raise the discount rate, Keynes argued that sterling’s strength would come from a strong economy. And a strong economy depended on a *low* rate of interest. On 18 February 1932, a cut of Bank rate to 5 from 6 per cent marked the start of what would be called the cheap-money policy. Then, in the April 1932 Budget, the Government instigated the Exchange Equalisation Account (EEA) which put into effect currency management. A “supplementary fund” of £150 million (4 per cent of 1931 GDP; £60 billion today) was put at the disposal of the Bank of England for intervention in the foreign exchange market. This permitted further Bank rate cuts, which rapidly followed.

Keynes had also supported operations on the long-term rate of interest. On 30 June 1932, the great conversion of the war debt from 5 to 3½ per cent was announced in the House of Commons. It was accompanied by the final cut of Bank rate to 2 per cent and by the introduction of an embargo on overseas loans, ie by capital control. The operation was a success: the authorities had started to bring the long-term rate of interest under control.

Keynes prepared a commentary,<sup>8</sup> containing ideas that were owed to his emerging theory of liquidity preference. He emphasised the importance of “psychological factors” and looked to changes to debt management policy: “It is important that the market should be supplied with securities of different types and maturities in the proportions in which it prefers them” (CWXXI, p 115).

### Worldwide monetary reform

Other countries began to follow London’s lead, not least the British Empire. But from the global perspective the most significant moment was Roosevelt’s taking the US off gold in April 1933. The action was seemingly a shot across the bows of the World Economic Conference scheduled for June 1933, and mainly served to stiffen to resolve of the European “gold bloc” countries. But, over the next three years, the system disintegrated. After Belgium’s exit, Keynes spoke at a July 1935 conference in Antwerp:

Belgian example great impression on world  
Calmness, moderation and skill of Belgian transition  
Not surprising  
Currency changes much easier than usually supposed  
Indian example  
Effect on gold bloc  
Stupid and obstinate old gentlemen at the Banks of Netherlands and France crucifying their countries in a struggle which is certain to prove futile. (CW XXI, p 356)

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<sup>8</sup> First in July 1932 for the Committee of Economic Information; it was reproduced in the September 1932 issue of the *Economic Journal* (with only minor changes, apart from updated empirical information).

The final chapter of the international gold standard began with the election of Leon Blum's Popular Front government in France. On 26 September 1936 his government announced that it planned to devalue the franc and establish an Exchange Equalisation Fund of 10,000 million francs. The action was supported by an act of international co-operation of great significance, with the US and British governments agreeing to support the exchanges in the meantime. These announcements have become known as the *Tripartite Agreement* and marked a significant step in a move to a new international financial order. The British Statement was as follows:

His Majesty's Government, after consultation with the United States Government and French Government, join with them in affirming a common desire to foster those conditions which will safeguard peace and will best contribute to the restoration of order in international economic relations, and to pursue a policy which will tend to promote prosperity in the world and to improve the standard of living ... His Majesty's Government ... declare their intentions to continue to use the appropriate available resources so as to avoid as far as possible any disturbance of the basis of international exchanges resulting from the proposed readjustment ... [they] desire and invite the co-operation of other nations to realise the policy laid down in the present declaration. (Reproduced in *The Economist*, 3 October 1936)

With the gold bloc leaderless, its total collapse was then inevitable. On 26 September the Swiss Federal Council declared that a decision had been taken in favour of devaluation. On 28 September, Dr Colijn from the Bank of the Netherlands announced the establishment of a managed currency and an equalisation fund, and devalued the guilder by 15–20 per cent. Similarly, the Greek, Latvian and Turkish Governments announced that they had decided to devalue and link their currencies to sterling. Germany chose not to follow; Schacht, the President of the Reichsbank, announced that he did not intend to devalue the German currency nor join the tripartite arrangement.

Nonetheless, the collapse of the gold standard was complete; Britain and the United States were at the centre of a new managed exchange and monetary policy system that was subservient to government and aimed primarily at domestic employment policy. The *General Theory* was published only half a year before the Tripartite Agreement; already Keynes's insights and analysis were reverberating around the world to a most significant extent.

### **3. The *General Theory* and the theory of liquidity preference**

#### **Preamble**

While the *General Theory* was a full statement of a theory of a credit money economy, it is in some ways disconcerting that the central innovation was a theory of interest that followed from an analysis primarily of money as a store of value.<sup>9</sup> Keynes's analysis led him not only to the theoretical treatment of uncertainty and expectation, but also to practical conclusions of the most profound importance. Ultimately, the theory turned classical analysis on its head. The rate of interest was the cause, not the passive consequence, of the level of economic activity. Moreover, as a quantity that depended on expectation, the authorities – if they so desired – had full control of the rate of interest that prevailed in a national economy. Keynes

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<sup>9</sup> Keynes warned in the Preface: "... whilst it is found that money enters into the economic scheme in an essential and peculiar manner, technical monetary detail falls into the background" (CW VII, p xxii).

came to see that this control was dependent on greatly changed monetary, debt management and international financial policies, as indicated by the previous discussion.

The classical theory of interest might be rejected on two – related – grounds. First, there can be no constraint on the availability of money or finance, given that it is created at the will of banks. Second, in such a system, aggregate saving is determined by aggregate investment, and the macroeconomic relation is an identity, not an equilibrium.<sup>10</sup>

$S = I$  at all rates of investment.  $Y$  either definable as  $C+S$  or as  $C+I$ .  $S$  and  $I$  were opposite facets of the same phenomenon they did not need a rate of interest to bring them into equilibrium for they were at all times and in all conditions in equilibrium. (CW XXVII, pp 388–9)

[A] relationship is set up between aggregate savings and aggregate investment which can be very easily shown, beyond any possibility of reasonable dispute, to be one of exact and necessary equality. Rightly regarded this is a banale [*sic*] conclusion. But it sets in motion a train of thought from which more substantial matters follow. (Preface to the French Edition, CW VII, p xxxiii)

These “substantial matters” included the liquidity preference theory of interest (LPT). For Keynes, the determination of the rate of interest did not concern saving, but matters after the decision to save has been made:

But this decision having been made, there is a further decision which awaits him, namely, in *what* form he will hold the command over future consumption which he has reserved, whether out of his current income or from previous savings. Does he want to hold it in the form of immediate, liquid command (ie in money or its equivalent)? Or is he prepared to part with immediate command for a specified or indefinite period, leaving it to future market conditions to determine on what terms he can, if necessary, convert deferred command over specific goods into immediate command over goods in general? In other words, what is the degree of his *liquidity-preference* – ... (CW VII, p 166, italics in original)

Liquidity preference is the decision about the degree of liquidity at which savings should be held. Furthermore, it is a decision concerning the stock of savings – wealth – at any point in time, rather than any new flow of saving alone. The rate of interest is hence not determined by the supply of and demand for (flows of) saving, but by the supply of and demand for assets into which holdings of (stocks of) wealth can be placed. In the theory of money as a store of value, money is one of these assets.

The current rate of interest depends, as we have seen, not on the strength of the desire to hold wealth, but on the strengths of the desire to hold it in liquid and illiquid forms respectively, coupled with the amount of the supply of wealth in the one form relatively to the supply of it in the other. (CW VII, p 213)

It is important to understand liquidity preference in these broad terms, rather than as concerned solely with the demand for money (which follows from Keynes’s familiar three motives). The theory of liquidity preference is concerned with the demand for assets of various degrees of liquidity, and the rate of interest depends on both the demand for and supplies of assets across the whole of this spectrum. “Money”, however, does have a particularly crucial role; while it is obvious that illiquid assets offer holders a reward in the form of interest, the reward for holding money is the essence of liquidity itself. Furthermore, when Keynes wrote, it was a shortage of “money” that followed from the gold standard that most stood in the way of the interest rate policies that he had in mind.

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<sup>10</sup> The relevant theory is detailed in Tily (2010, Chapter 6).

## Liquidity preference and uncertainty

With the nature of money understood, the central theoretical innovation of the LPT was the role of uncertainty. In the context of this theory, Keynes introduced uncertainty to resolve a paradox: "... why should anyone prefer to hold his wealth in a form which yields little or no interest to holding it in a form which yields interest ...?" (CW VII, p 168). He was more emphatic and colourful in his 1937 *Quarterly Journal of Economics* (QJE) paper:<sup>11</sup>

Money, it is well known, serves two principal purposes. By acting as a money of account it facilitates exchanges without its being necessary that it should ever itself come into the picture as a substantive object. In this respect it is a convenience which is devoid of significance or real influence. In the second place, it is a store of wealth. So we are told, without a smile on the face. But in the world of the classical economy, what an insane use to which to put it! For it is a recognised characteristic of money as a store of wealth that it is barren; whereas practically every other form of storing wealth yields some interest or profit. Why should anyone outside a lunatic asylum wish to use money as a store of wealth? (CW XIV, pp 115–16)

In the *General Theory*, the paradox was resolved as follows:

A full explanation is complex and must wait for chapter 15. There is, however, a necessary condition failing which the existence of a liquidity preference for money as a means of holding wealth could not exist. This necessary condition is the existence of *uncertainty* as to the future rate of interest, ie as to the complex of rates of interest for varying maturities which will rule at future dates. (CW VII, p 168, Keynes's emphasis)

Keynes argued that the necessary condition for liquid holdings of savings was the fact that people did not know what the future rate of interest would be: it was *uncertain*.

For post-Keynesians, and increasingly more widely, the definition and treatment of uncertainty is understood as a critical component of Keynes's theoretical scheme. His QJE definition is often cited and worth repeating:

By 'uncertain' knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty; nor is the prospect of a Victory bond being drawn. Or, again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention, or the position of private wealth owners in the social system in 1970. About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know. (CW XIV, pp 113–14)

Keynes saw that this uncertainty meant that economic activity was at least partly dictated by the expectations – and "animal spirits" – of economic actors. But the idea was not deployed arbitrarily, as is common in recent contributions, but as a feature of very specific components of his theory: the liquidity preference and marginal efficiency of capital schedules, and the production decision in the context of the theory of effective demand.

So much for the preamble, but the subsequent detail of the theory of liquidity preference is not straightforward. The theoretical complexities follow in part from the handling of means of exchange considerations alongside a theory of money as a store of value. Published

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<sup>11</sup> From which many post-Keynesians draw their inspiration.

correspondence shows Keynes wrestling with this, and at one point deploying a distinction between “active” and “inactive” balances. The practical complexities arise from Keynes seemingly assuming the reader is familiar with his policy conclusions – fine in 1936, but not now – and their emerging in the book only as examples in the course of the development of the theoretical argument.

In the *General Theory* Keynes comes at the matter from the point of view of motives for holding money instead of assets. But in doing so, the fundamental motive for holding assets instead of money is left only implicit: the desire for a return on wealth. The fundamental motivation for a theory of money as a store of value is that households want to keep safe and earn a return on accumulated income into the future.<sup>12</sup> Moreover Keynes’s motives explicitly included means of exchange considerations through the “transactions” and the (later) “finance” motives.<sup>13</sup> While the gold standard was already gone when his book was published, no doubt the idea of a monetary system underpinned by a physical commodity with quantity restrictions on the supply of money, and the flaws of this thinking revealed over the 1930s, must have made a very powerful impression on Keynes’s mind. Under this system, the quantity of gold was relevant to both means of exchange and store of value considerations – even if this relevance was indirect and complex, given the role of credit. While with the end of gold, the ultimate nature of the supply of money as a store of value is initially less clear cut, it becomes more so through the policy initiatives that were actually deployed over the course of Keynes’s life.

In my view it is most useful to approach the theory of liquidity preference directly as a theory of money as a store of value, a distinction that is hard and fast. This essential distinction allows the separation from a theory of money as a means of exchange, founded on a theory of bank money, with the role of private banks, central banks and the sovereign authority understood. Under such conditions, money is normally supplied endogenously, according to the rate of interest, the wider demands of the various institutional sectors, and any restraints within the system.

The theory of money as a store of value concerns matters that occur *after* the creation of bank money, and belongs sequentially after that theory. This follows from the work of Victoria Chick and Sheila Dow, who argue that for liquidity preference theory the quantity of bank money should be taken as “given”.<sup>14</sup> Following this, the quantity of income should be taken as given also.

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<sup>12</sup> “The whole object of the accumulation of wealth is to produce results, or potential results, at a comparatively distant, and sometimes indefinitely distant, date. Thus the fact that our knowledge of the future is fluctuating, vague and uncertain, renders wealth a peculiarly unsuitable subject for the methods of the classical economic theory. This theory might work very well in a world in which economic goods were necessarily consumed within a short interval of their being produced. But it requires, I suggest, considerable amendment if it is to be applied in a world in which the accumulation of wealth for an indefinitely postponed future is an important factor; ...” (CW VII, p 113).

<sup>13</sup> Keynes introduced the finance motive during the 1937–8 “alternative theories of the rate of interest” dialogue in the *Economic Journal*: “There has, therefore, to be a technique to bridge the gap between the time when the decision to invest is taken and the time when the correlative investment and saving actually occur ... To avoid confusion with Professor Ohlin’s sense of the word, let us call this advance provision of cash the ‘finance’ required by the current decisions to invest” (CW XIV, p 208).

<sup>14</sup> For example: Chick (1983, p 184; 2001, p 9) and Dow (1997). More recently Dow has connected the confusion between “given” and “exogenous” with closed-system thinking. Note also the distinction can later be relaxed, and liquidity preference deployed to aid understanding of the banking system and means of exchange considerations.

## Supply and demand

In most general terms, the theory of liquidity preference is simply an application of supply and demand analysis. The demand for liquidity reflects the desired balance between illiquid and liquid assets; it is set against the supply of liquid assets. The equilibrium determines the rate of interest on illiquid assets.

As with any supply and demand analysis, both movements along and shifts in schedules are of importance.<sup>15</sup> Before these matters are examined, it is necessary to clarify and make some simplifying assumptions about the “liquidity” in practice. The essence of liquidity preference is the balance between liquid and illiquid assets; in terms of Keynes’s schemes for debt management policy (see below), this most commonly corresponds to the balance between government bonds and bills. Keynes’s discussion was quite abstract, with the key statement limited to a footnote:

[W]e can draw the line between ‘money’ and ‘debts’ at whatever point is most convenient for handling a particular problem. For example, we can treat as *money* any command over general purchasing power which the owner has not parted with for a period in excess of three months, and as *debt* what cannot be recovered for a longer period than this; ... (CW VII, p 167, n 1)<sup>16</sup>

In practice, interest is still earned on money/liquid assets held as a store of value, and the reward for illiquidity can alternatively be seen as a premium on liquidity. The supply and demand analysis therefore sets the demand for interest-bearing bills against the supply of bills to determine the rate of interest on bonds. These rates then underpin the wider structure of lending costs throughout the economy.<sup>17</sup> *But the most essential feature of the theory is that the position of the demand schedule depends entirely on expectations of the future rate of interest.*

In Keynes, the demand for liquidity was represented by the liquidity preference schedule. The schedule incorporates his analysis of the “speculative” and “precautionary” motives for holding money. Speculators move between bonds and money according to their expectations about the future rate of interest. Those that expect a rise in the rate of interest and hence a fall in the price of bonds will hold all wealth that they use for speculation as money. Those that expect the rate of interest to fall will hold speculative wealth as bonds. The shape of the liquidity preference schedule follows according to the *distribution* of these opinions.<sup>18</sup>

In the *General Theory*, Keynes first and most usefully describes the precautionary motive in general terms: “[T]he desire for security as to the future cash equivalent of a certain proportion of total resources; ...” (CW VII, p 170). These cash holdings are earmarked “to provide for contingencies requiring sudden expenditure and for unforeseen opportunities of advantageous purchases, and also to hold an asset of which the value is fixed in terms of money to meet a subsequent liability fixed in terms of money, ...” (*ibid*, p 196). These go further than the standard notion of reserving money for unexpected expenditure opportunities (eg a bargain home-entertainment system) or necessities (eg repairing a leaking roof). The *general* form of the precautionary motive is then the desire to hold money through fear of capital loss on selling a long-term bond before maturity. Understood in this way, the two

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<sup>15</sup> The greatest defect of “Keynesianism” is that such shifts are not considered, unless mechanically following from a change in output.

<sup>16</sup> However the passage ends: “money is co-extensive with bank deposits”; for me, this is an example of the confusion between the means of exchange and store of value perspectives.

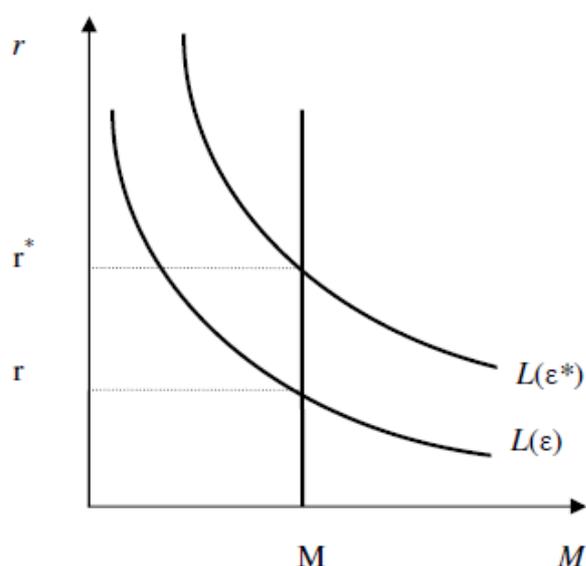
<sup>17</sup> Note also that the choice described is not a choice usually made by individuals; it is made by institutions on their behalf, reflecting revealed preferences according to household demand for shop-front financial products.

<sup>18</sup> The operation of the speculative motive is examined in detail by Chick (1983, Chapter 10).

motives are closely related: precautionary actions seek to avoid capital loss, while speculative actions aim to make capital gain (and equally to avoid loss from *adverse* changes in the future rate of interest rather than to attempt to profit from expected favourable changes in the future rate of interest). Kahn (1984, p 18) rightly described the distinction between the speculative and precautionary motives as “very blurred”.

This blurring leads me to regard liquidity preference in more general terms. Under a given state of expectations,  $\epsilon$ , with a quantity of liquid assets,  $M$ , a rate of interest,  $r$ , prevails. The position is an equilibrium, where the marginal unit of money is exchanged for bonds at  $r$  per cent. The schedule shifts according to any change of opinion about the future rate of interest, ie to a change in the state of expectation to  $\epsilon^*$ .

Figure 1  
Liquidity preference in theory



Keynes does not re-state the general determinants of the state of expectation in his chapters on the theory of liquidity preference. Instead, he looks back to the discussion in the context of the theory of investment demand.<sup>19</sup> In Chapter 12, “The State of Long-Term Expectation”, he emphasises the role of the “existing situation” as a guide to the future:

It would be foolish, in forming our expectations, to attach great weight to matters which are very uncertain. It is reasonable, therefore, to be guided to a considerable degree by the facts about which we feel somewhat confident, even though they may be less decisively relevant to the issue than other facts about which our knowledge is vague and scanty. For this reason the facts of the existing situation enter, in a sense disproportionately, into the formation of our long-term expectations; our usual practice being to take the existing situation and to project it into the future, modified only to the extent that we have more or less definite reasons for expecting a change. (CW VII, p 148)

<sup>19</sup> This follows his decision to treat the theory of effective demand before liquidity preference in the *General Theory*.

In the context of liquidity preference he elaborates:

Just as we found that the marginal efficiency of capital is fixed, not by the ‘best’ opinion, but by the market valuation as determined by mass psychology, so also expectations as to the future of the rate of interest as fixed by mass psychology have their reactions on liquidity preference. (CW VII, p 170)

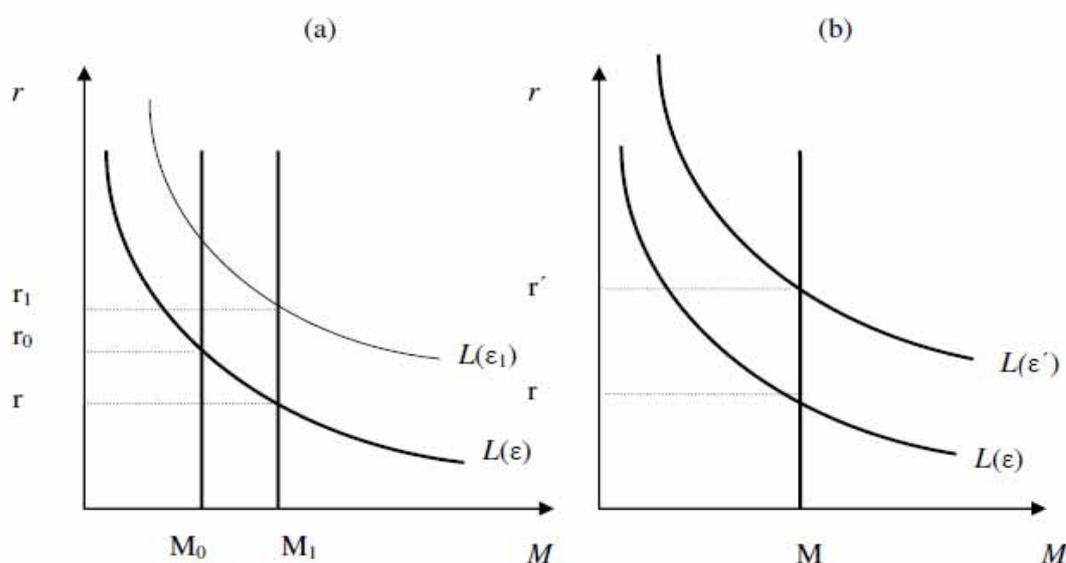
### Expectations and policy

Keynes then turns straight to the properties of expectations in the context of policy. His analysis builds to his conclusion that as a “psychological phenomenon”, the rate of interest can be brought under control by the management of expectations and a changed debt management policy. The approach is a little oblique, developing theory and policy at the same time, with the specific and yet fundamental policy recommendations given in almost throwaway style.

The central discussion contrasts, within the framework of liquidity preference, the traditional means to reducing the rate of interest through open-market operations (OMOs) with his alternative “expectational” approach. The discussion can usefully be illustrated on the contrasting Figures 2(a) and (b).

Figure 2

#### Liquidity preference in practice: open-market operation



In the context of OMOs, Keynes first warns “... if we are to control the activity of the economic system by changing the quantity of money, it is important that opinions should differ” (CW VII, p 172), amounting to the schedule not being horizontal. Given this, Keynes then turned to the second problem:

If, however, we are tempted to assert that money is the drink which stimulates the system to activity, we must remind ourselves that there may be several slips between the cup and the lip. For whilst an increase in the quantity of money may be expected, *cet par*, to reduce the rate of interest, this will not happen if the liquidity preferences of the public are increasing more than the quantity of money; ... (CW VII, p 173)

So, in Figure 2 (a), a change in the money supply from  $M_0$  to  $M_1$  does not reduce the rate of interest from  $r_0$  to  $r$  if expectations change from  $\varepsilon$  to  $\varepsilon_1$ ; instead, the rate of interest increases from  $r_0$  to  $r_1$ .<sup>20</sup>

At this point in the *General Theory*, Keynes then left his own theory in order to address the classical theory of interest (Chapter 14). He returns to the contrast between the two approaches in Chapter 15 after detailing the three motives for liquidity, first setting OMOs in the context of the speculative motive:

But it is by playing on the speculative-motive that monetary management (or, in the absence of management, chance changes in the quantity of money) is brought to bear on the economic system. ...

... In dealing with the speculative-motive it is, however, important to distinguish between the changes in the rate of interest which are due to changes in the supply of money available to satisfy the speculative motive, without there having been any change in the liquidity function, and those which are primarily due to changes in expectation affecting the liquidity function itself. Open-market operations may, indeed, influence the rate of interest through both channels; since they may not only change the volume of money, but may also give rise to changed expectations concerning the future policy of the central bank or of the government. Changes in the liquidity function itself, due to a change in the news which causes revision of expectations, will often be discontinuous, and will, therefore, give rise to a corresponding discontinuity of change in the rate of interest. (CW VII, pp 196–8)

From this point on, Keynes switches attention from OMOs to his “expectational” approach, through his conception of “changes in the news”.

If the change in the news affects the judgement and the requirements of everyone in precisely the same way, the rate of interest (as indicated by prices of bonds and debts) will be adjusted forthwith to the new situation without any market transactions being necessary. Thus, in the simplest case, where everyone is similar and similarly placed, a change in circumstances or expectations will not be capable of causing any displacement of money whatever; ... (CW VII, p 198)

So, on Figure 2(b), if a “change in the news” shifts expectations and hence the liquidity preference schedule from  $L(\varepsilon')$  to  $L(\varepsilon)$ , the rate of interest will fall from  $r'$  to  $r$  without any movement in the supply of money,  $M$ .

This is then the central theoretical representation of Keynes’s approach to manipulating the long-term rate of interest. Towards the end of the chapter, he stated his fundamental conclusions about the role of expectations and of the monetary authority in managing those expectations (the italics are Keynes’s emphasis):

It is evident, then, that the rate of interest is a highly psychological phenomenon. ... But at a level *above* the rate which corresponds to full employment the long-term market-rate of interest will depend, not only on the current policy of the monetary authority, but also on market expectations concerning its future policy. The short-term rate of interest is easily controlled ... But the long-term rate may be more recalcitrant when once it has fallen to a level which, on the basis of past experience and present expectations of *future* monetary policy, is considered ‘unsafe’ by representative opinion. ...

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<sup>20</sup> Note that Keynes assumes the reader is familiar with open-market operations (OMOs). They might involve the central bank exchanging certain assets or creating new deposits (cf quantitative easing) in exchange for bonds and *vice-versa*.

Thus, a monetary policy which strikes public opinion as being experimental in character or easily liable to change may fail in its objective of greatly reducing the long-term rate of interest, ...

It might be more accurate, perhaps, to say that the rate of interest is a highly conventional, rather than a highly psychological, phenomenon. For its actual value is largely governed by the prevailing view as to what its value is expected to be. *Any* level of interest which is accepted with sufficient conviction as *likely* to be durable *will* be durable; subject, of course, in a changing society to fluctuations for all kinds of reasons round the expected normal. ...

... Public opinion can be fairly rapidly accustomed to a modest fall in the rate of interest and the conventional expectation of the future may be modified accordingly; thus preparing the way for a further movement – up to a point. (CW VII, pp 202–4)

Keynes then brought practical experience of British policy in the 1930s to bear:

The fall in the long-term rate of interest in Great Britain after her departure from the gold standard provides an interesting example of this; – the major movements were effected by a series of discontinuous jumps, as the liquidity function of the public, having become accustomed to each successive reduction, became ready to respond to some new incentive in the news or in the policy of the authorities. (*ibid*, p 204)

In the penultimate section of the chapter, Keynes looked beyond the theoretical analysis to a glimpse of the specific debt management policy that his theory pointed to:

If the monetary authority were prepared to deal both ways on specified terms in debts of all maturities, and even more so if it were prepared to deal in debts of varying degree of risk, the relationship between the complex of rates of interest and the quantity of money would be direct ... Perhaps a complex offer by the central bank to buy and sell at stated prices gilt-edged bonds of all maturities, in place of the single bank rate for short-term bills, is the most important practical improvement which can be made in the technique of monetary management. (*ibid*, pp 205–6)

While he bemoaned the authorities' existing policies with regard to dealing with debts across a narrow field, he saw positive signs: "In Great Britain the field of deliberate control appears to be widening" (*ibid*, p 206). The final paragraphs stood back and addressed wider "limitations on the ability of the monetary authority to establish any given complex of rates of interest for debts of different terms and risks" (*ibid*, p 207). While set in the negative, this seems a fairly categorical statement of the policy that Keynes has in mind.

#### **4. Policy after the *General Theory***

Apart from a commentary on international exchange developments, Keynes's key public interventions on domestic monetary policy in the second half of the 1930s were through his annual speeches as Chairman of National Mutual Life Assurance, and then in a 1937 series of articles in *The Times* that then formed the basis of a Committee of Economic Information report.

The necessity for further consolidation of cheap money was the central message of many of Keynes's National Mutual speeches. In February 1934 he had observed:

There is, surely, overwhelming evidence that even the present reduced rate of 3½ per cent on long-term gilt-edged stocks is far above the equilibrium level – meaning by 'equilibrium' the rate which is compatible with the full employment of

our resources of men and equipment. It is often forgotten that 3½ per cent is much in excess of the average yield of Consols, which ruled over the 40 years previous to the war – namely, just under 3 per cent – or even the average yield which ruled over the 80 years from 1835 to 1914 – namely, just over 3 per cent.

No one can foretell at what point the rate of interest will reach its equilibrium level until we actually approach it. But it is highly probable that the equilibrium rate is not above 2½ per cent for long-term gilt-edged investment, and may be appreciably less. (CW XII, pp 206–7)<sup>21</sup>

He built on his calls in the *General Theory* for the authorities to operate across a wider field. For example, in both 1936 and 1937 he argued that the authorities should issue shorter-term bonds:

### ***Treasury and short-term rates***

Short-term money to-day is extremely cheap. But it is confidence in the future of short-term rates which is required to bring down long-term rates. Now the policy of the Treasury is not calculated to promote such confidence. They seem reluctant to issue bonds of from five to 10 years' maturity and anxious to reduce the short-term debt, in spite of the extraordinary cheapness with which it can be carried. (19 February 1936, CW XXI, p 375)

In his *Times* series (published between 12 and 14 January 1937), "How to avoid a slump", Keynes confronted the potential challenge of restraining demand given the scale of the rearmament programme,<sup>22</sup> but doing so in the context of the revised monetary arrangements that he had brought about.<sup>23</sup> He was adamant that any actions should not involve an increase in interest rates:

Unquestionably in past experience dear money has accompanied recovery; and has also heralded a slump. If we play with dear money on the ground that it is 'healthy' or 'natural', then, I have no doubt, the inevitable slump will ensue. We must avoid it, therefore, as we would hell-fire. ... A low enough long-term rate of interest cannot be achieved if we allow it to be believed that better terms will be obtainable from time to time by those who keep their resources liquid. The long-term rate of interest must be kept continuously as near as possible to what we believe to be the long-term optimum. (CW XXI, p 389)

While Keynes looked to fiscal actions to restrain expansion if necessary (see section 6), he celebrated and continued to promote action on the long rate:

The Bank of England and the Treasury had a great success at the time of the conversion of the War Loan. But it is possible that they still underrate the extent

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<sup>21</sup> Keynes's use of equilibrium is confusing: taken at face value he appears to suggest that the system is only in equilibrium at full employment, and hence unemployment is a disequilibrium phenomenon. But the whole purpose of his theory was to show that the system could be in equilibrium at any position short of full employment.

<sup>22</sup> A five-year programme of about £80 million a year was announced in 1936 after Hitler had occupied the Rhineland.

<sup>23</sup> The piece is noteworthy also for refuting the charge that he was ignorant or neglectful of inflation; as soon as the programme was announced, Keynes was confronting the possible inflationary consequences. The Committee of Economic Information report, below, offers the following definition of a "pressing danger of a serious rise in prices": "This we should define as a state in which it was plain that rises in wages were being demanded, and granted, on the ground that prices had risen, and rises in prices were occurring because wages had risen" (Howson and Winch, 1977, p 352). See also n 33.

of their powers. With the existing control over the exchanges which has revolutionised the technical position, and with the vast resources at the disposal of the authorities through the Bank of England, the Exchange Equalisation Fund, and other funds under the control of the Treasury, it lies within their power, by the exercise of the moderation, the gradualness, and the discreet handling of the market of which they have shown themselves to be masters, to make the long-term rate of interest what they choose within reason. (CW XXI, p 395)

Behind the scenes Keynes had access to the authorities through his membership of the Committee of Economic Information. Moggridge (1992, p 605) notes that the recommendations in his *Times* article then went on to “serve as the basis for the Committee of Economic Information’s 22nd report of February 1937, ‘Employment policy and the maintenance of trade activity’”.

At the end of the Report was a fuller discussion of monetary considerations. The Report tentatively approved the idea that the short-term rate of interest was subservient to wider considerations of cheap money and debt management:

24. ... We attach far greater importance to the effect of credit policy on long-term interest rates, as expressed by the yield on Government securities ... (Howson and Winch, 1977, p 352)

Recommendations on the control of credit were also tentative, but still fundamental, looking to “quantitative regulation of the basis of credit”:

22. ... [I]t may be much more possible and desirable for the financial authorities to exercise adequate control over the supply of credit without recourse to the manipulations of short-term rates which are traditionally associated with this objective ... (*ibid*)

Overall, the report left open the question of manipulation of the short-term rate, limiting the discussion to avoid “determin[ing] the extent to which the short-term rate of interest may be obsolete, or weakened, as an essential means of control – a question upon which, in such an untried area, opinions must certainly differ in degree” (*ibid*).

Sir Richard Hopkins, the Permanent Secretary to the Treasury, added the following handwritten observation to the front of a minute concerning this Report by another Treasury official: “It is interesting to see how profoundly the EAC committee diffused among themselves Mr Keynes’s thesis that the Treasury can continue to govern the general state of interest at its will”.<sup>24</sup>

Shortly after the completion of this report, in May 1937, Keynes had the first of his heart attacks, and his official and public policy interventions were greatly curtailed (although by no means did they cease). On 23 February 1938, one of his first resumed public appearances was for what would be his final speech as the Chairman of the National Mutual.<sup>25</sup> He focused on the rise in long-term rates that had seemingly occurred while he was indisposed. His philosophy of action that closed the speech is of much importance:

A great deal is at stake. We are engaged in defending the freedom of economic life in circumstances which are far from favourable. We have to show that a free system can be made to work. To favour what is known as planning and management does not mean a falling away from the moral principles of liberty which could formerly be embodied in a simpler system. On the contrary, we have

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<sup>24</sup> Source: PRO file T 177/38, dated 13/3/1937.

<sup>25</sup> He resigned over disagreements about the firm’s retreat from US investments, in the wake of the brief recession. (History shows Keynes was right to expect recovery.)

learnt that freedom of economic life is more bound up than we previously knew with the deeper freedoms – freedom of person, of thought, and of faith. (CW XXI, p 446)

But it took war rather than freedom finally to have Keynes's ideas in the driving seat. Keynes fixed his attention on the financial and economic policies necessary to support the anticipated great increases in public expenditure. In April 1939 he wrote two articles for *The Times* arguing that the Chancellor should not borrow at a rate of interest in excess of 2½ per cent and should be willing to accept a large increase in the share of floating debt. At the end of May 1939, he sent a developed version of the argument to the Chancellor and the Governor of the Bank of England; although at this stage he was advocating 3 per cent (CW XXI, pp 533–46). In July 1939, he published two more articles in *The Times* outlining the debt management techniques that would be necessary to effect the setting of rates (CW XXI, pp 551–64).

With the end of the “phoney war”, Keynes returned to the Treasury for the first time since the Versailles Conference and became directly involved with the policy that he had advocated (the agreed rate was 3 per cent). Over the next years, the authorities developed the specific instruments, arrangements and policies that permitted the full control that Keynes had first championed in 1933.

## 5. The theory and practice of debt management policy

The conduct of policy in the Second World War set the background to Keynes's most substantial formalisation of his domestic monetary and debt management policies. In April/May 1945 the National Debt Enquiry (NDE) was convened as the Coalition Government began to look to economic policy after the war, but also, more specifically, to contest certain remarks about monetary policy that were included in the famous *Employment White Paper*.

[The Permanent Secretary] Hopkins was soon persuaded that there was a case for an early inquiry by a committee of officials and economists, which would also consider the future of the cheap money policy. On the last subject, Hopkins noted, ‘Lord Keynes has promised to produce ... some far-reaching proposals’. (Howson, 1993, p 45)

At these meetings, Keynes outlined a complete framework of practical debt and money management measures, based on the mechanisms developed in the war. His notes, the Report of the meeting and the associated minutes, constitute a full account of the theory and practice of debt management policy. At this point, a year before his death, he was justified in his statement that “The monetary authorities can have any rate of interest they like” (CW XXVII, p 390). The Report of the Enquiry by Sir Richard Hopkins endorsed this conclusion.<sup>26</sup>

It is worth reproducing and discussing the central passage from Keynes's notes as an exercise in the theory of liquidity preference:

Now the authorities are only fettered in their policy if they themselves have a counter-liquidity preference. If they are indifferent about funding they can make both the short and long-term whatever they like, or rather whatever they feel to be right having regard to possibilities of under and over-employment and other social reasons.

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<sup>26</sup> The Report is reproduced in Tily (2007, Appendix 3.1).

If, however, they are not indifferent their motivation comes into play.

Historically the authorities have always determined the rate at their own sweet will and have been influenced almost entirely by balance of trade reasons and their own counter-liquidity preference. ...

Authorities make rate what they like by allowing the public to be as liquid as they wish.

Suppose Tr[easury]<sup>y</sup> say half the debt must be more than 25 years off or floating debt must not exceed £xmn then it is the public which set the rate of interest. If they require a great inducement to become so illiquid, then rates have to be higher. However it is a vicious circle, dear money provokes expectation of dearer money.

It is the technique of the *tap* issue that has done the trick.

Thus, it is only if the Tr<sup>y</sup> get rid of the Funding Complex that cheaper money is possible.

The Funding Complex originated in a situation

- (a) when there was a fixed fiduciary issue,
- (b) Bank rate was the means of preserving the balance of payments,
- (c) the rate of interest was used as an instrument of deflation.

With the abandonment of both<sup>27</sup> it becomes completely meaningless. I am not aware of *any* argument in its favour.

On the contrary it is expensive

it is inconsistent with the avowed policy of cheap money

(as Hoppy [Hopkins] pointed out) it means losing control of the rate of interest.

(CW XXVII, pp 391–3)

Here Keynes contrasts the desired position with the “funding complex”, the conventional debt management policy. Longer-dated debt was known as the “funds”; the authorities’ preference for funding, and hence their restricting the supply of shorter-dated debt, constituted a “counter-liquidity preference”.

According to the theory of liquidity preference, the problem with funding was that if the public’s preference for illiquidity was not as strong as the government’s preference for long borrowing then rates on longer-term debt would have to be higher in order to encourage the public to accept the longer-term issues. Under such circumstances “it is the public which sets the rate of interest” – and it was not possible for the authorities to bring the rate of interest under control. His specific example illustrated this point. He also observed that there was a vicious circle whereby increases to the long-term rate of interest to encourage illiquidity would generate further expectations of high rates into the future.

As cheap-money policy meant abandoning the “funding complex”, Keynes examined its original justification. The first two of (a), (b) and (c) were explicitly linked to the existence of the gold standard, and therefore were no longer valid. The third consideration was invalidated by Keynes’s wider theory. First, the mechanism through which deflationary monetary policy operated was to reduce demand and hence employment. Second, as

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<sup>27</sup> (c) was added at a later stage of drafting.

Hopkins observed, the use of Bank rate was inconsistent with cheap money (discussed further below).

Given the rejection of the “funding complex”, the practical issue was to devise a debt management technique which facilitated keeping the public as liquid as they would like. Keynes argued that the technique of the “tap issue” provided such a policy: “it is the technique of the *tap* issue that has done the trick”.<sup>28</sup> Under the tap system, the Government announced the price and maturity of the bond being issued, but set no limits to the cash amount of that issue. The “tap” of the bond issue was held open so individuals and institutions could purchase when and whatever quantities they desired.<sup>29</sup> The system, therefore, enabled the public to choose the quantity of debt issued at each degree of liquidity, at the price set by the Government.

The second aspect of Keynes’s debt management policy was to extend the degrees of liquidity available by issuing a wider range of securities. Before the gradual development of Keynes’s techniques, the authorities tended to offer only very long-term securities and a limited amount of Treasury bills. At the NDE, and again following wartime experience, Keynes argued that the Government should offer two fixed maturity bonds of five and ten years, as well as a perpetuity:

- (c) ... 5-year Exchequer Bonds at 11/2 per cent and 10-year Bonds at 2 per cent on tap, a new series to be started annually;
- (d) 3 per cent Savings Bonds on tap, a new series to be started annually, with an option to the Treasury to repay after 10 years and with, preferably, no final maturity (or, if necessary, a fixed latest date of repayment 35 years hence). (*CW XXVII*, p 399)

The purpose of these arrangements was to cater for medium-term as well as longer-term savings requirements. The offer of extended facilities further relieved pressure arising from the desire for precautionary holdings of wealth as money and served to create a more balanced portfolio of asset holdings.

Keynes argued that for the longer-term debt “the option of early redemption safeguards a future liberty of action” (*CW XXVII*, p 400). This reflected his views on (perhaps very) long-term trends in interest rates. From the macroeconomic perspective, the notion of diminishing returns to capital means that the yield on aggregate capital expenditure will fall over time. With the rate of interest governing the volume of capital expenditure, a monetary policy aimed at stable and high employment would, therefore, have to be managed at not only low but also falling rates of interest. From the debt management perspective, this meant that terms on any long bond issued should not be superseded by terms on a later issue. It was therefore desirable to avoid, to as great an extent as possible, the situation where previous higher-interest bonds remained in the market as new lower-interest bonds were issued. Overall, his minute of recommendations looked to mechanisms that preserved “the maximum degree of flexibility and freedom for future policy” (*CW XXVIII*, p 397).

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<sup>28</sup> Attention should be drawn to the differing meanings of “tap issue” as used by Keynes and later by R S Sayers, the UK banking historian. In the 1967 edition of his *Modern Banking*, Sayers (p 55) means by “tap issue” a mechanism whereby the authorities issued Treasury bills to Government departments that had funds in hand, and to certain overseas monetary authorities: “the rates of discount at which the bills are issued through the tap is unknown and is irrelevant to the discount market”. With the widespread acceptance of Sayers’s terminology, it seems that the original notion of the tap – which is of course very different and much more important – has been lost.

<sup>29</sup> An example issue notice stated “subscriptions will be received on Tuesday, 25th June, 1940, and thereafter until further notice ...” (*The Economist*, 29 June 1940, p 1119). The approach was first introduced for the June 1940 wartime issue of 2½ per cent medium-term bonds (known as National War Bonds), and then for the next issue of 3 per cent long-term bonds (known as Savings Bonds).

Last, the notion of diminishing returns to capital also provided a component of the apparatus for cheap-money policy that was likely to be important from the perspective of expectations. With recognition that the long-term rate of interest would move in line with the yield on capital, the public would come to appreciate that movements to the long-term rate of interest would only be in the downward direction. Establishing a shared understanding that terms on present long-term issues would not be superseded by terms on later issues was very fundamental.

On monetary policy, Keynes continued to argue at the NDE that Bank rate was obsolete as an instrument of macroeconomic policy management, and preferred the “quantitative regulation of the basis of credit” (see the 1937 recommendations above). The issue was the most controversial in subsequent debate,<sup>30</sup> and his minute of recommendations left the door (only slightly) ajar:

Changes in the complex of interest rates, with a view to controlling the trade cycle and to offset inflationary or deflationary trends, should not be precluded, but should affect the shorter-term rather than the longer-term, issues, and should, as a rule be regarded as secondary to the technique of rationing the volume, rather than altering the terms of credit by the machinery of, eg the Capital Issues Committee by influencing the volume of bank advances.

He went on to the following explicit proposal: “(a) Bank rate to be reduced to 1 per cent and to govern the rate payable on overseas money in the hands of the Bank of England, so that this rate would remain unchanged” (CW XXVII, p 399).<sup>31</sup>

The most substantial innovation in terms of quantitative control was the Treasury Deposit Receipt, but this was equally important in terms of fiscal policy and provides the point of departure for a brief discussion of these matters.

## 6. Monetary expansion and fiscal policy

This is not the place for a full discussion of Keynes’s approach to fiscal policy. However certain aspects merit emphasis, as the theory and practice bring together monetary and debt management policy on one hand and government (or private) expenditures on the other.

Financial considerations were central to Keynes’s case for any expansion of public works expenditures. According to the (full) multiplier theory, government expenditure would increase national income and employment, hence raising taxation revenues and reducing benefit expenditures. He consistently maintained that expenditures would be self-financing:

... we see that it is a complete mistake to believe that there is a dilemma between schemes for increasing employment and schemes for balancing the Budget, – that we must go slowly and cautiously with the former for fear of injuring the latter. Quite the contrary. There is no possibility of balancing the Budget except by increasing the national income, which is much the same thing as increasing employment. (CW IX, p 347)

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<sup>30</sup> Notably James Meade and Lionel Robbins contested Keynes’s view.

<sup>31</sup> This may have been with an eye to the wartime position: while the official Bank rate remained at 2 per cent, Sayers notes that the discounting procedure of the Bank of England had been formalised as the “open back door”, “to which the discount houses could resort ... [and] turn Treasury Bills into cash at the fixed discount rate of 1 per cent” (Sayers, 1956, p 223).

The essential task of policymakers was to bridge the gap between the initial expenditures and the increased future income. His most categorical statement of the required approach was central to his recommendations for the financial conduct of the Second World War that he put to the Chancellor of the Exchequer in May 1939:

But with modern representative money and a modern banking system, we know that the necessary 'finance' can be created by a series of 'book' or 'paper' transactions. The Treasury can 'pay' in effect by 'book' entries and the book entries can be transformed into a regular loan at a much later date. (CW XXI, p 540)<sup>32</sup>

A new instrument – the Treasury deposit receipt (TDR) – was devised to support the creation of these book transactions. The instrument brought together debt management policy, that followed from store of value considerations, and an extension to the system to support means of exchange considerations, in this case government expenditure.

Under the TDR system, retail banks were obliged to lend to government, and hence create credit – alternatively: create a “deposit” for the “Treasury”, in exchange for a “receipt” – to finance directly government expenditure. These instruments were added to Treasury bills as part of the floating debt. The new instrument was required because of the traditional role of Treasury bills, which was that they could be discounted at the Bank of England to support an expansion of credit. So an expansion of Treasury bills to support government expenditure could then lead to a further expansion of credit to the private sector. TDRs were therefore not marketable and could not be reserved at the Bank of England against further credit creation. They were issued on a term of six months and, as a less liquid asset, paid a slightly higher interest rate (1 1/8 per cent) than a Treasury bill (1 per cent).<sup>33</sup> At the NDE, Keynes suggested reducing the interest rate on both TDRs and Treasury bills by ½ per cent.

His systems had addressed concerns about “monetising” government debt, and potentially causing inflation, by breaking the direct link between floating debt and credit creation. Outside banking mechanisms, any substantial increases to the floating debt as a result of accommodating liquidity preference for shorter-term instruments were due to savings not spending considerations and therefore were also not inflationary.

The dangerous character of this type of debt [floating debt] disappears if there are adequate understandings with the financial world (including, it may be, appropriate regulations for continuing into the future the system of Treasury Deposit Receipts) to ensure the continuous holding of a large, and even increasing, floating debt in all circumstances. (NDE Report, paragraph 23)

During the war, the control of credit was also aided by other aspects of economic policy. Most importantly, aggregate demand was dominated by government expenditure, which should have been more easily regulated than other sources of demand. In addition, consumer demand was implicitly controlled by higher and well-thought-out taxation policies,

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<sup>32</sup> Jens Warming (1932, p 215) was the first to state clearly this bridging role of credit: “If a bank promises credit for an investment it really disposes of something belonging to the future: the coming saving”.

<sup>33</sup> Susan Howson (1988, pp 252–3), the economic historian of debt management and monetary policy, describes TDRs as follows: “The introduction in July 1940 of Treasury Deposit Receipts (TDRs), by which the major banks were obliged to lend directly to government, added a new instrument to the floating debt, enabling the authorities to borrow on short term without either increasing the Treasury bill issue or having recourse to Ways and Means Advances. Of longer maturity (six months) than three-month Treasury bills and non-marketable, TDRs were less liquid than Treasury bills and carried a slightly higher interest rate (1/8%). This wartime expedient [This is misleading: the NDE report recommends their continued use into the post-War period.] was, as Sayers put it, ‘concocted . . . [so as] not to disturb the customary relationship [between banks, discount houses, and the Bank of England] and customary “ratios” of the peacetime [banking] system’, but it was nonetheless seen as a revolution in fiscal policy, at least in Labour Party circles ...”.

and (as above) investment was potentially controlled by the Capital Issues Committee's management of the new issues market.

All of these initiatives were indicative of Keynes's preference for the quantitative means for regulating the creation of credit. Moreover they exemplify his anti-inflationary credentials that, in reality, were second to none.<sup>34</sup>

Means of exchange considerations overlapped with store of value considerations – and hence the theory of liquidity preference – in that they were both partly dependent on a supply of liquid assets that was controlled by the authorities. But the former demanded a wider view of quantitative control and of the means to control more directly banks' ability to create credit. The same liquidity constraints are then relevant to a private sector expansion of credit. The central bank is able to set the rate of interest if two conditions are satisfied: first, that banks are supplied with cash according to demand; and second, that there is no shortage of eligible assets to discount at the central bank in exchange for that cash. Both conditions are liquidity preference conditions: there should be an adequate supply of liquidity in the form of both cash and bills to support the supply of bank money. Examining matters in this way abstracts from the transactions and finance demands that Keynes identified and focuses on a broader demand for bank money/active money as a whole.

To reiterate: a supply of bills that is under the control of the authorities is vital to both the practical management of money as a means of exchange and as a store of value. At this point Keynes's simplification through treating inactive and active demands together is seen as justifiable. For me there is no logical reason to see *a priori* reasons why the two theories should be incompatible, according to the ideas of liquidity preference as a theory of money as a store of value and the theory of bank money as a theory of money as a means of exchange. However, the substance of the discussion suggests that Keynes's own treatment was an oversimplification and that it may have been better to elaborate the two processes more fully. This treatment has led to an immense literature, particularly within post-Keynesian economics. I present the above discussion as a provisional attempt at an alternative approach.

## 7. The international dimension

Finally, from both the theoretical and practical perspectives, is the role of the international financial architecture. As discussed, devising and implementing a system alternative to the gold standard was Keynes's central preoccupation for much of his life. From the most general and fullest perspective, Keynes saw that systems based on international capital should be replaced by systems that utilised domestic banking systems as a bridge to domestically generated savings. Bank money meant that international capital was not necessary for the expansion of domestic activity. But the international system should instead focus on the means to finance international trade and hence the provision of an international means of exchange. Keynes made his fullest contribution to a system in accordance with

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<sup>34</sup> Beyond his approach to the rearmament programme, his greatest and most long-standing contributions to any fight against inflation came in the wake of his *How to Pay for the War* (CW IX, pp 367–439). He championed a system of deferred taxation, so that private expenditure was restricted during the war and then released after the war, to balance the system as a whole over time. The same contribution utilised extensively and led to further developments of the emerging national accounts information with which he had been closely involved (see Tily, 2009). Through his efforts the accounts were put on a statutory footing for the first time in 1941. Last, but not least, with the accounts in place he devised the macroeconomic approach to annual budget statements that remains in force to this day.

these principles – and perhaps therefore his most profound contribution to the world – in the wartime discussions that led up to the Bretton Woods Agreement.

These discussions first led to a formalisation of the policy on capital control, which had been evolving over the course of his life. At the end of the First World War, an “embargo on overseas loans” was in place in the UK, which was repealed six months after the return to gold. The embargo was then re-imposed to support the 1932 conversion of the War Loan and remained in place from then on. Keynes’s perspective is clear: he regarded capital controls as essential to his domestic monetary policies for the post-war world:

You overlook the most fundamental long-run theoretical reason. Freedom of capital movements is an essential part of the old *laissez-faire* system and assumes that it is right and desirable to have an equalisation of interest rates in all parts of the world. It assumes, that is to say, that if the rate of interest which promotes full employment in Great Britain is lower than the appropriate rate in Australia, there is no reason why this should not be allowed to lead to a situation in which the whole of British savings are invested in Australia, subject only to different estimations of risk, until the equilibrium rate in Australia has been brought down to the British rate. In my view the whole management of the domestic economy depends upon being free to have the appropriate rate of interest without reference to the rates prevailing elsewhere in the world. Capital control is a corollary to this. Both for this reason and for the political reasons given above, my own belief is that the Americans will be wise in their own interest to accept this conception, even though its immediate applicability in their case is not so clear. (CW XXV, p 149)

Turning to international exchange policy, on the one hand the Second World War had interrupted the development of the currency management approach. But, on the other, it seemingly offered the opportunity to start from first principles. In 1941, in the course of international summits relating to post-war economic policy, President Roosevelt offered Keynes the opportunity to develop a financial architecture for the world “that excluded nothing in advance”.<sup>35</sup> A few weeks later, Keynes described his plans to the head of the British Civil Service, Sir Horace Wilson:

I have been spending some time since I came back in elaborating a truly international plan ... we should do well to start from some such proposal as that which I have prepared or a variant of it, even though we may feel that it is probably too international and too Utopian to take form just in that shape in the real world. (19 September 1941, CW XXIII, p 209)

The basic mechanics of his “International Clearing Union” were outlined in a letter to the Governor of the Bank of England:

The *essence* of the scheme is very simple indeed. It is the extension to the international field of the essential principles of *banking* by which, when one chap wants to leave his resources idle, those resources are not therefore withdrawn from circulation but are made available to another chap who is prepared to use them – and to make this possible without the former losing his liquidity and his right to employ his own resources as soon as he chooses to do so. Just as the domestic situation was transmogrified in the eighteenth and nineteenth centuries by the discovery and adoption of the principles of local banking, so (I believe) it is only by extending these same principles to the international field that we can cure the manifest evils of the international economy as it existed between the two

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<sup>35</sup> Roosevelt’s words, cited by Moggridge in CW XXIII, p 228.

wars, after London had lost the position which had allowed her before 1914 to do much the same thing off her own bat. (CW XXV, pp 98–9)

As he suspected, his proposals were too Utopian for the real world. While the Clearing Union was put forward as the official position of the British Government, the primary “inspiration” for the Bretton Woods Agreement was the rival US Treasury proposals for a “stabilisation fund”. Keynes’s leading role in the negotiations did mean that the final agreement offered economies a degree of autonomy and flexibility for the post-war era; in particular, Article VI of the Agreement permitted member countries to put into place, or keep in place, capital controls. But Bretton Woods was not the Clearing Union.

The Clearing Union was the culmination of Keynes’s work: it applied his *General Theory* and associated practical experience in the widest possible context. These proposals may have been rejected on political grounds; they were *never* rejected or disputed on economic grounds. Indeed the comments on his scheme showed a unanimity of support entirely denied to the *General Theory* – as illustrated by comments from Dennis Robertson (his most truculent and relentless critic) and Lord Catto (later Governor of the Bank of England):

I sat up late last night reading your revised ‘proposals’ with great excitement – and a growing hope that the spirit of Burke and Adam Smith is on earth again to prevent the affairs of a Great Empire from being settled by the little minds of a gang of bank-clerks who have tasted blood (yes, I know this is unfair!). (Robertson to Keynes, 27 November 1941, CW XXIII, p 67)

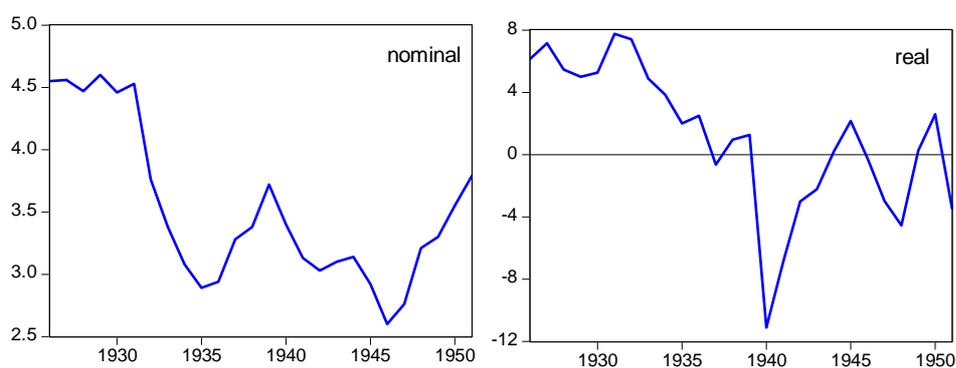
Now that it has been published, I want to congratulate you on your Clearing Union. I have avoided adding myself to the critics. I felt sure your basic principles were sound and unalterable. I was content to let others, with greater theoretical knowledge than I have, do the criticising. As I expected, the final document does not differ at all in essentials (nor much even in detail) from your very early drafts which I was privileged to see and, if I may say so, to encourage. (Catto to Keynes, 30 April 1943, CW XXIII, p 236)

## 8. Some outcomes

With no recognition of the fundamental policy conclusion of Keynes’s theory of liquidity preference, the evidence of its practical application has not been brought to bear to judge its validity. Such evidence is compelling. Liquidity preference theory predicts that deliberate action on the part of the monetary authorities will reduce (or increase) the long-term rate of interest. Mainstream theories of interest either have very little to say on this ability or are underpinned by a natural rate of interest impervious to policy manipulation, except perhaps in a short run. Figure 3 shows that both real and nominal long-term rates declined almost continuously throughout the period when Keynes’s monetary prescription was dominant. The main exception was between 1936 and 1939 when Keynes was indisposed. His final address to the National Mutual is indicative of his alarm.

Figure 3

**UK Government long rates, 1925–51**



Source: Friedman and Schwartz (1982, Table 4.9)

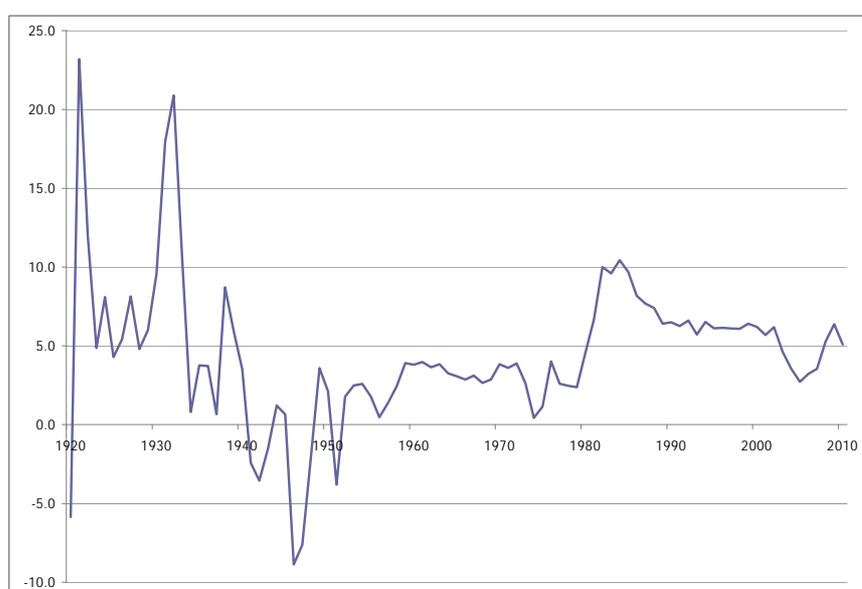
After the war, cheap money was a central goal of the Labour Government. They were successful in driving rates to a historic low (in 1946, the year Keynes died), but were unable to hold them there. Hugh Dalton, the Chancellor and driving force behind the Government's monetary strategy, later reflected:

The forces against me, in the City and elsewhere, were very powerful and determined, ... I felt I could not count on a good chance of victory. I was not well armed. So I retreated. (Dalton, 1954, p 239)

In many ways, events have now run full circle. Figure 4 shows a full history of US interest rates from the 1920s to 2010; importantly, they are adjusted for the effects of inflation. (The US rate is used because it is the only long-run series that is readily available.)

Figure 4

**US long-term real interest rates<sup>1</sup>**



<sup>1</sup> These are based on US corporate bond yields, adjusted for inflation. UK rates are not available on this basis. It seems reasonable to assume that these rates are a guide to (and set a lower bound to) such rates across the world. The data are based on Moody's BAA ratings; inflation is removed using the US GDP deflator. Sources: websites of the Federal Reserve and the Bureau of Economic Analysis and (for deflators before 1929) Friedman and Schwartz (1982).

The chart shows the high rates of the 1920s on which Keynes's attention was fixed. From the 1930s on, real rates were low for almost 50 years. While the Labour Government had retreated from its most substantial efforts to hold the government bond yield very low, long-term rates were still low across the world for the whole of the golden age.

But from 1980 onwards, rates rose very rapidly and remained at a high level for the rest of the 20th century. This interpretation of the *General Theory* leads to the conclusion that this dear money had its origins in the dismantling of the international and domestic monetary regimes that Keynes had put in place, no matter how imperfect their implementation.

In the UK financial liberalisation began in the late 1960s, with the dismantling of quantitative restrictions on credit control;<sup>36</sup> these actions came in parallel to the rise of the Eurobond market, and were followed soon after by the termination of the Bretton Woods Agreement. Finally, at the turn of the 1980s, all capital and exchange controls were removed and dear money was deployed to fight inflation. Smithin (1996, p 23) concentrates on discount rate policies and identifies three "symbolic harbingers of the political revolution that was to come during the crucial year of 1979".

One such was the much-publicised change in the operating procedures of the US Fed, after the appointment of a new chair, Paul Volcker, who was very much the candidate of the financial markets ... There ensued a three-year effort to bring inflation down via monetary tightness and high real rates of interest. Also in 1979, the most famous adherent of monetarism among politicians, Margaret Thatcher, was elected to her first term as British Prime Minister, and in the next year her government began a similarly draconian disinflation policy, the so-called 'medium term financial strategy' (MTFS). Finally, perhaps less-remarked at the time than the first two events, but of equal significance in hindsight, the year 1979 also saw the inauguration of the European Monetary System (EMS), and the associated exchange rate mechanism (ERM) ... In the future, this would ensure that pan-European monetary policy would be determined essentially by the German Bundesbank, which, because of previous history, was an institution traditionally committed to the type of hardline anti-inflationary policy which became very much the order of the day in the 1980s and 1990s. (Smithin, 1996, p 23)

He concludes "... the new regime clearly did succeed in restoring the value of financial capital and in raising the real rate of return earned on that capital" (Smithin, 1996, p 24). The high real rate of interest has endured to the present day.

Paradoxically, however, more attention is paid to a briefer period of lower interest rates in more recent years. In my view these follow in the first instance from the severe extent of financial instability since around the turn of the 21st century: first there were the South East Asian and Russian crises; these were followed shortly afterwards by the collapse of Western stock exchanges as the "new economy" expansion in the corporate sector came to an abrupt halt. The result of these was a retreat to the safety of government debt. As Figure 4 shows, initially, corporate borrowing rates remained at a high level even while the more commonly discussed rates on longer-term government debt began their gradual descent. The second impetus to lower rates followed the steep reduction in discount rates that followed in the wake of the collapse of the corporate expansion. The severely deregulated financial environment that prevailed at that point permitted the parallel creation of a vast array of complex financial products; the combined effect was a vast extension of the money supply and various asset inflations across the world (not least in residential and commercial property). Any lower rates on long-rated instruments were surely primarily a side-effect of this freak monetary expansion: liquidity preference is perfectly clear on this point. Moreover, as

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<sup>36</sup> Most importantly with "Competition and Credit Control" in 1971.

we now know, this impact was short-lived (Figure 4 again). This disastrous episode could not be further from Keynes's own approach. Certain rates of interest may have been "cheap", but there was certainly no idea of the quantitative regulation of the basis of credit.

Yet with the advent of the financial crisis, the circle is completed and there has been renewed attention on the policies of the 1930s. Economists are examining again monetary arrangements that have been too long neglected. Most notable is Philip Turner's (2011a) recognition of the importance of the long-term rate of interest to Keynes's theoretical scheme. He has asked: "Is the long-term interest rate a policy victim, a policy variable or a policy lodestar?". The answer seems to me different according to what point in history is being examined.

But in other recent contributions there is an apparent desire to restore this monetary tradition in opposition to any fiscal tradition. Notably Basile *et al* (2009) (rightly) reject the idea that the present situation constitutes a liquidity trap. They argue that Keynes did not think that point had been reached in the 1930s, and, by association, it has not been reached now.

Now it may be that there is a great deal of scope for monetary action to press down on the long-term rate, especially outside of the US and UK (though the authors do not address the role of capital control). However Basile *et al*'s position does not serve to clarify Keynes's perspective. Keynes's theory led to the conclusion that a monetary authority could set whatever long-term rate it chose, given the necessary domestic and international arrangements. The fact that there may be a lower bound to this process should not detract from this fundamental conclusion. The emphasis on the liquidity trap was largely the preoccupation of others, not least Dennis Robertson. The existence or otherwise of the liquidity trap has little bearing on Keynes's initiatives, nor does it have much bearing on the necessity or otherwise of fiscal policy.<sup>37</sup>

Keynes's support for fiscal policy did not follow primarily from any lower bound to this process but from recognition that a low long-term rate of interest might not be sufficient for recovery. A low long-term rate of interest was necessary to prevent recession, but it might not be sufficient to effect recovery from recession, especially given the extent of private indebtedness that was the defining financial characteristic of the 1930s (Fisher, 1933), just as it is today.

This conclusion followed from his wider theory of economic activity, which is outside the scope of the present paper. However, one point must be made. Keynes rejected the classical theory of interest and with it the idea that the rate of interest was somehow an automatic regulator of the economic system. *His monetary theory of interest led to a monetary theory of real activity*. He devised a full statement of the interaction between the long-term rate of interest and the real economy: hence *The General Theory of **Employment, Interest and Money***. In this theory the natural rate of interest is an invention that does not exist in the real world (or rather, the monetary world). The system is simply founded on the monetary rate of interest that is permitted to prevail by the financial and/or political authorities.

The essential practical conclusion of his "real" theory was that economic crisis had a root monetary cause. As he saw as early as 1930, the cause of the Great Depression was dear money. He was adamant that society's best interest was served if the policymaker took deliberate charge of the rate of interest and aimed to keep money cheap. I feel sure that the same diagnosis applies today, and that the roots of the present crisis lie in the policies of financial liberalisation that have led to an even more intense and prolonged period of dear

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<sup>37</sup> See Tily (2010, Chapter 4) on Robertson's approach, his relentless hostility to Keynes's analysis and policy prescription, and the relation of this work to "Keynesian" economics. Krugman is true to his "Keynesian" heritage in his rebranded "economics of the zero bound", and the argument is justly attacked by Basile *et al*. But this does not refute Keynes's arguments for fiscal policy.

money than in the 1920s. If a high interest rate could not be earned by corporations in the first quarter of the 20th century, surely it could not be earned in the last? Restoration of the system to health must depend on a wholesale restoration of the monetary initiatives that were finally taken in the 1930s and 1940s.

## 9. Conclusion

The higher are a people's intelligence and moral strength, the lower will be the rate of interest.

(Eugene Von Böhm-Bawerk (1851–1914), cited in Homer, 1963, p 200)

We are not condemned to the perpetuation of the high rates of interest which the world economy handed on as a legacy of its past.

(Ciocca and Nardozi, 1996, p 118)

Philip Turner has argued that the debate on the long-term rate of interest is “an old and controversial issue” (2011b, p 42). This may be true, but the debate has been of little interest to macroeconomists over at least the past fifty years. Moreover, mainstream economists have entirely neglected Keynes's fundamental contribution to this debate. While some of Keynes's true followers protested, especially at the Radcliffe Committee, their words ultimately fell on deaf ears (*ibid*, pp 25–7).

Keynes regarded a low long-term rate of interest as a precondition to economic prosperity and social advance. While the scope of his activities was breathtaking, his greatest contribution to the world was the development of the theoretical means to this conclusion and the associated practical means to its implementation.

Somehow, to our deeply profound peril, we have allowed this to be lost. Many economists continue to confront the greatest crisis of the world economy since the Great Depression with essentially the same theory that Keynes saw as at its root cause. In spite of the revival of his name, it remains my firm belief that the economic profession as a whole is continuing to refuse to re-assess Keynes's theory in a genuine and impartial manner. Given the increasingly obvious high stakes, this cannot be acceptable.

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