Journal of the History of Economic Thought,
Volume 40, Number 4, December 2018

KEYNES, PUBLIC DEBT, AND THE COMPLEX OF INTEREST RATES

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John Maynard Keynes consistently offered qualified endorsement of Abba Lerner's "functional finance" doctrine—the qualifications particularly turning on Keynes's attentiveness to policy management of the psychology of the debt market. This article examines Keynes's understanding of the possible influence of public debt on interest rates, from 1930 forward. With the multiplier a mechanism whereby debt-financed public investment generates matching private saving (net of private investment) plus public saving, it becomes possible for Keynes to conclude that increasing public debt need not place upward pressure on the level of interest rates, so long as policy can successfully manage the psychology of the debt market. This particularly concerns long interest rates and hence the term structure of rates. His theory of the term structure enables Keynes's conviction that policy can manage and shape long rates. The conclusion considers also whether Keynes's caution concerning public debt and interest rates retains relevance today.

> "Keynes on the rate of interest showed himself in a typical mood: revolutionary in thought and very cautious in policy."
> —James Meade, 26 February 1945 (Howson and Moggridge 1990, p. 46)

> "Words ought to be a little wild, for they are the assault of thoughts upon the unthinking. But when the seats of power and authority have been attained there should be no more poetic licence."
> —John Maynard Keynes, 19 April 1933 (Moggridge et al. 1971–1989, vol. XXI, p. 244)

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ISSN 1053-8372 print; ISSN 1469-9656 online/18/04000493-512
doi:10.1017/S1053837217000578

I. INTRODUCTION

The role of public debt in Keynes's economic policy thinking is a question of considerable interest—most obviously, because deficits and debt have always been a prominent and important motif of debates around Keynesian economics. There are a number of distinct dimensions to the public debt issue in Keynes's writings, but our interest here is in just one of them: the possible influence of debt trajectories on interest rates. More particularly, the focus is Keynes's thinking concerning the possible influence of debt trajectories on the term structure of interest rates. In the extant literature on Keynes and interest rates (whether or not in connection with public debt), there is very little concerning the *structure* of interest rates in general, or the term structure in particular.

There is probably no more systematic and thoughtful examination of Keynes on the term structure than Leijonhufvud (1968, pp. 149–157, 282–314), but without considering any connection to public debt trajectories. Fantacci et al. (2014, p. 1105), responding to Brillant (2014), go so far as to assert that "Keynes does not appear anywhere to assume that the long-term rate of interest is *systematically* greater than the short-term rate of interest" (original emphasis)—a claim that will be shown in what follows to be completely unwarranted. Neither discusses the possible influence of public debt on the structure of rates. Tily (2006, pp. 663–665, 667, 669) examines Keynes's 1940s views on debt management in relation to policy towards short and long interest rates, but without addressing Keynes's conception of the determinants of the term structure, or providing a thorough examination of his understanding of how debt trajectories and debt management might impact the yield curve. *The Cambridge Companion to Keynes* has one slight reference to the term structure, noting its connection with debt management (Backhouse and Bateman 2006, p. 104). Five potentially relevant entries in the *New Palgrave* contain no discussion at all of Keynes on the term structure and public debt (Eatwell et al. 1987); likewise, in the second edition (Durlauf and Blume 2008). Neither is there anything of relevance in the wide-ranging Harcourt and Riach (1997) collection of essays; similarly, in the also large collection edited by Hamouda and Smithin (1988), apart from a short essay by Susan Howson, summarizing an element of her 1993 book, *British Monetary Policy, 1945–51*.

Aspromourgos (2014b) examines Keynes's views on public debt via a comprehensive consideration of his responses to Abba Lerner's "functional finance," showing that Keynes consistently offered *qualified* endorsement of Lerner's doctrine—the qualifications particularly turning on Keynes's more nuanced view of the relationship between theory and policy, and his consequent attentiveness to policy management of the psychology of the debt market. One of the grounds for qualification is the possibility of debt growth's placing upward pressure on interest rates. But in particular relation to debt trajectories steepening the yield curve, this possibility was more asserted than argued (Aspromourgos 2014b, p. 428)—although some supporting citations were provided (in particular, from Moggridge et al. 1971–1989, vol. XXI; hereafter cited as *CW*, with relevant volume number). One supposes that the overwhelming concentration in the literature on "the" interest rate, singular, is based on a (generally tacit) rationale that, particularly for supposedly macroeconomic issues, the structure can safely be assumed as given. In relation to public debt trajectories, Keynes's treatment of the matter tells against that supposition.

Hence, what follows comprehensively examines Keynes's understanding of the possible influence of public debt trajectories on the term structure of interest rates. The focus is on his writings from the 1930s forward, thereby largely leaving aside the earlier, orthodox Keynes. Nevertheless we begin in section II with some aspects of the *Treatise on Money* (1930; hereafter, *TM*). Its fundamentally orthodox character does not necessarily mean that every element of it is rendered obsolete, in Keynes's mind, by the new theory of 1936—and unsurprisingly, some pertinent aspects of Keynes's thinking from 1930 forward are evident also earlier (Moggridge and Howson 1974, pp. 226–236). As a necessary preliminary to consideration of debt and the term structure, section III then revisits how the multiplier becomes a mechanism in which changes in debt-financed public investment generate matching changes in private saving plus tax revenues, via variations in aggregate activity levels and prices. As a consequence, it becomes possible for Keynes to conclude that increasing public debt *need not* place upward pressure on the level of interest rates, so long as policy can successfully manage the psychology of the debt market (section IV). This particularly concerns long interest rates, and hence the term structure and market expectations of the future course of interest rates (section V), leading to consideration of Keynes's theory of the term structure—a theory that enables his measured conviction that policy can manage and shape long rates (section VI). The conclusion addresses also the question of whether Keynes's caution concerning public debt and interest rates retains relevance today (section VII).

II. THE *TREATISE ON MONEY*

In fact, public debt is not much discussed in *TM*. Keynes likens "[w]ar-expenditure, not covered by taxation" to "a sudden increase of investment" (*TM* I, p. 283n; also II, p. 171). Since his analysis of saving/investment equilibration in the *Treatise* is in orthodox, marginalist terms (*TM* I, pp. 154–155, 185–220)—such that an exogenous increase in private investment *ceteris paribus* increases the "natural" (and sooner or later, the market) rate of interest—this implies that an increase in debt-financed government expenditure, at least of a substantial magnitude, raises interest rates. (Debt-financed war expenditure can be conceived of, alternatively, as an exogenous decrease in public saving: *TM* II, p. 167; also in Keynes 1936, p. 128n [hereafter, *GT*]; *CW* XIII, pp. 232, 458.) The significance of deflation and inflation for real public debt burdens is noted (*TM* II, pp. 181, 393), and the unorthodoxy of debt-financed public works (*TM* II, p. 170; cf. p. 376).[1]

The term structure has a more significant role in *TM*, particularly by way of Keynes arguing for the capacity of short rates to influence long rates, with a view to his overall purpose of providing a comprehensive account of the transmission mechanism.

[1]The pamphlet *Can Lloyd George Do It?* (1929), written by Keynes with H. D. Henderson, although accepting in principle that public investment can place upward pressure on interest rates (*CW* IX, p. 122), argues that loan-financed public investment will not do so under the prevailing slump conditions, due to the consequent presence of excess savings; but monetary policy must not *react* to the investment program with higher interest rates (*CW* IX, pp. 118–119). Keynes abandons the *TM* conceptualization of saving/investment imbalances in the 1930s.

In Keynes's 1930 theory the crucial element in explaining price-level behavior is the balance between aggregate investment and aggregate saving, that balance in turn being determinable by the level of market interest rates relative to "the natural rate of interest," where the latter concept is close to that of Knut Wicksell.[2] Hence, with saving behavior regarded as relatively passive, the capacity of policy to achieve price stability requires policy to be able to sufficiently influence the interest rates that are understood by Keynes to regulate investment, and, most importantly, investment in fixed capital (*TM* II, p. 348). The term structure enters the picture at this point because for fixed capital it is long rates that matter: "How can we be sure that the long-term rate of interest will respond to the wishes of a Currency Authority which will be exerting its direct influence, as it must [cf. *GT*, p. 203], mainly on the short-term rate?" (*TM* II, p. 352; also pp. 187–188, 195, 347).

The point of departure for linking short and long rates is the proposition that if the sequence of short (say, ninety-day) rates over the course of, say, the next twenty years was known by market participants with confidence, then the twenty-year interest rate would reflect that sequence of short rates—implicitly, due to arbitrage (*TM* II, pp. 352–353; the Bank of England discount rate, "bank-rate," applied to ninety-day bills: I, p. 200). That being so, a change in the current short rate, *in and of itself*, would exercise only slight influence on the long rate. Keynes argues that the influence is "much greater" than this for a number of reasons that need not detain us, except to note that they indeed include the capacity of current short rates to influence expectations of future short rates (*TM* II, pp. 353, 356–362).

In a further thread of argument pertinent to the yield curve, in the context of assessing "bank-rate policy" versus market operations, Keynes affirms the capacity of the latter to directly influence long rates (*TM* II, pp. 251–252; also pp. 231–232). And in the penultimate chapter of the book, there is a subsection on market operations "to the point of saturation": "extra-ordinary methods," "extreme measures," likely required only if "conditions of acute slump or boom have been allowed to develop"—although it is slumps rather than booms that are more likely to "defy all normal methods of control." What Keynes has in mind here is "taking measures which would have the effect of causing the total volume of bank-money [deposits] to depart widely from its normal volume, whether in excess or in defect," with a view to accommodating abnormal demand for liquidity or for securities (*TM* II, pp. 369–374; cf. pp. 386–387). But all this, it may be emphasized, for Keynes in 1930, pertains to extreme circumstances, not normal conditions.

It is worth finally noting from *TM* that the 1930 slump is first and foremost attributed to market rates of interest since the mid-1920s having been held above the natural rate, precipitating a cumulative downturn of both the price level and aggregate activity (*TM* II, pp. 377–382; echoed in newspaper articles the same year—*CW* IX, pp. 132–133, 321). Again, the detail of the argument may be left aside. What is of interest here is that by way of this interpretation, Keynes seeks to reconcile his conviction that too high market rates of interest are a fundamental cause of the slump, with

[2]For saving/investment balance and the price level, see *TM* (I, pp. 123–184); market rates relative to the natural rate, *TM* (I, pp. 201, 205–210, 217–220, 260, 273, 331–340, 345; II, pp. 362–363); and for Wicksell, *TM* (I, pp. 154–155, 196–199).

his then orthodox theoretical framework. His conclusions prefigure a persistent theme in his subsequent writings during the 1930s, that interest rates, short and long, are too high and are capable of being reduced by policy (but during those later years these views will break out of the orthodox straitjacket): the prospect for the next two decades is "a strong tendency for the natural-rate of interest to fall," unless delayed by "Central Banking Policy preventing the market-rate … from falling as fast as it should" (*TM* II, pp. 207–208); lasting economic recovery requires "a very great fall in the long-term market-rate," which needs to be "accelerated by deliberate policy" (*TM* II, p. 383); lenders have become "accustomed to high rates" because notions of "the normal and the permanent" are "mainly fixed by actual experience of the last fifteen years" (*TM* II, p. 384); for appropriate adjustment of rates, it might suffice "merely to produce a general belief in the long continuance of a very low rate of short-term interest" (*TM* II, p. 386).

III. THE MULTIPLIER AND DEBT FINANCING

The key theoretical elements in Keynes's transition to *GT* can be summarized as follows:

1. The fundamental breakthrough is the development of the multiplier mechanism and its application to the determination of aggregate activity levels. Movements in aggregate activity cease to be a subsidiary element in the dynamics of price-level disequilibrium, and are no longer a function of wage or price inflexibilities, as in *TM*, but rather are an expression of a theory of equilibrium aggregate activity in which full employment is a special (and unlikely) case.[3]
2. This mechanism entails the coordination of (planned) investment and saving via the former determining the latter through multiplied changes in (actual) aggregate activity, including possible price-level changes (*GT*, pp. 63–65, 82–85, 117, 375)—so that there is no unique level of interest rates, functionally required for saving-investment (or capital supply-and-demand) equilibrium.
3. This leads to Keynes's abandoning the notion of a natural rate of interest (although somewhat incompletely) and positing a monetary theory of interest, or the notion of the level of interest rates as a mere convention—a customary norm resulting from the interplay between central bank behavior and money market sentiment (Aspromourgos 2007, pp. 514–517).
4. Just as the new theory of aggregate activity levels and income fundamentally changes the financing issue with respect to private investment, since saving is no longer a *prerequisite* for investment, so it also changes it for the economics of debt-financed public spending. With public sector expenditure and income incorporated in the theory, the multiplier mechanism whereby investment determines saving becomes a mechanism in which private investment plus government expenditure generates an equal magnitude of private saving plus tax revenues.

[3]There is much appeal to "stickiness" in *TM* (e.g., I, pp. 165–166, 206–210; II, pp. 184, 203, 205, 351, 385); cf. *GT* (ch. 19).

The first three sets of propositions are posited here without argument; and international economic issues (e.g., external constraints on interest rate policy) are also put aside, in order to focus on the more general closed-system issues.

As indicated above, it is a continuous theme of Keynes's writings through the 1930s that policy-driven lower interest rates are desirable and feasible, with a view to economic recovery—and a theme often also connected with rolling over outstanding public debt at lower yields (e.g., *CW* XXI, pp. 79, 100, 106, 114–115, 240, 256, 319, 332, 454, 488, 582; these instances cover dates from 1932 to 1939). Open market operations to directly act upon long rates are a similarly consistent theme (e.g., *CW* XXIII, p. 366; XXI, pp. 200, 265, 271, 297, 327–328, 571; IX, p. 353; instances from 1931 to 1939). One may recall here also Keynes's *GT* "euthanasia of the rentier" doctrine, favoring a zero real riskless interest rate (Aspromourgos 2004; 2011, p. 641).

Keynes's conviction in favor of "cheap money" is bolstered by a more or less axiomatic belief that if the level of profitable aggregate investment is less than full-employment saving, the long rate *must be* too high—which is, after all, just a corollary of the notion of a well-defined and robust inverse relation between aggregate investment expenditure and the interest rate (a notion that persists in *GT*): "So long as there is serious all-round unemployment I consider this *proves* that the equilibrium rate of interest is lower than the ruling rate" (*CW* XXI, p. 345, emphasis added; also pp. 200–201). While lower rates are no longer rationalized, as in *TM*, in terms of bringing sticky market rates down towards a lower natural rate, and Keynes explicitly repudiates the natural rate concept in *GT*, the interest/expenditure functional relation implies the existence of a full-employment rate of interest—as he also makes explicit in *GT*—a ghost of the discarded natural rate concept, persisting in the new theory (*GT*, pp. 31, 183, 202, 220, 242–244, 267, 309). Of course, public investment is also, and increasingly, advocated throughout the 1930s, a fact so well known as to hardly require supporting documentation (Moggridge and Howson 1974, pp. 237–239; for examples, *CW* XXI, pp. 60, 394). The considerable criticism of the efficacy of monetary policy in *GT* (pp. 163–164, 202–208, 315–321) may also be recalled here.

Keynes's general position that lower interest rates are desirable and feasible then finds application in the further proposition that there is no intrinsic necessity for the general level of interest rates to rise in the face of economic recovery or expansion, whether due to increased private expenditures or expanded debt-financed public investment (e.g., *CW* XXI, pp. 314–315, 534–537). Certainly this is so for systems with excess production capacity—and even for systems without excess capacity, via recourse to policy instruments other than interest rates, notably, taxation (*CW* XXI, pp. 377–378, 536, 549, 557; Moggridge and Howson 1974, pp. 231, 243–244). Keynes's conviction that expansion based upon debt-financed public investment need not be accompanied by upward pressure on rates is greatly reinforced by the multiplier analysis developed by Richard Kahn, with important input from Meade (Kahn 1931, pp. 187–191). Skidelsky (1992, p. 451) reports an 18/12/31 Keynes letter (not published in *CW*) as the first known written recourse by Keynes to the multiplier mechanism. That letter certainly outlines the investment-determines-saving logic (King's College Keynes Papers, L/31/180–181; hereafter cited as JMK), including the associated inter-sectoral balance, discussed immediately below.

That logic is itself a corollary of the spending-determines-income logic of a demand-side theory of activity levels: "It is often said by wiseacres that we cannot

spend more than we earn. That is … true enough of the individual, but … misleading if … applied to the community as a whole. For the community as a whole it would be much truer to say that we cannot earn more than we spend" (*CW* XXI, p. 126, 20/7/32; also pp. 194–195, 26/4/33). In the March–April 1933 *Means to Prosperity* this multiplier mechanism is explicitly applied to both private and public spending (*CW* IX, p. 349).[4] Similarly, in a fragment of *GT* draft (tentatively dated 1933), Keynes argues that the "maxims of 'sound' public finance" are largely based on the supposition that saving causes investment, going on to sketch a version of the paradox of thrift and the underlying multiplier mechanism (*CW* XXIX, pp. 102–111; the paradox of thrift, also at XXI, pp. 287–288, 19/9/33; *GT*, pp. 84, 104–106, 110–112; XXVII, pp. 390–391, March 1945). As he sums up his contrary view: "It is … the act of investing which 'finds its way' into saving, rather than the other way round. On the other hand, individual acts of saving not only do not necessarily 'find their way' into investment, but are liable to have precisely the opposite effect" (*CW* XXIX, p. 106; also at p. 107, applied to war expenditure).

It is also a corollary of the demand-side multiplier logic that a debt-financed public expenditure, via the resulting new expenditure-income equilibrium, generates additional private saving plus tax revenues of equal magnitude. Thereby the notion that increased debt-financed public investment necessitates higher interest rates (in part, to supposedly induce additional saving) appears to be decisively undermined. This is made very clear in three documents of April, May, and July 1939 that essentially provide variants of the same argument. For a closed system, "the income of the community will be equal to what the Government spends plus what individuals spend. … Thus the excess of the community's aggregate income over what individuals spend, which is left over and available to pay taxes and loans to the Government, must be exactly equal to what the Government spends" (*CW* XXI, p. 515). Given a balance of aggregate expenditure and income, the public sector deficit will be matched by a private sector surplus of the same magnitude: "The savings will come into existence *pari passu* with the expenditure. The only question which arises is as to the ultimate form in which they are held—whether as balances at the Bank of England, in Treasury bills and bonds, or in longer-dated Government debt" (*CW* XXI, p. 516; also p. 523, and similarly, p. 398, from 1937).[5]

In the May 1939 document presenting a variant of the same argument, Keynes comments:

> If … an increase in output and income is physically possible, the stimulus to demand resulting from the increased loan expenditure will bring about an increase of output both directly and indirectly. In such circumstances, it is mainly out of the increased

[4]In the same place, Keynes supposes that tax-financed increases in public expenditure will have no net aggregate impact (*CW* IX, p. 349; similarly, XXI, p. 326, from 1934); that is to say, in latter-day language, the balanced-budget multiplier is assumed to be zero, implying that the multiplied impact of taxation and of spending are similar. Later, in 1940–41 documents, it is allowed that higher taxes will be partly paid for via lower saving, implying a positive balanced budget multiplier (*CW* IX, p. 415; XXII, pp. 205, 222, 272).
[5]It may be noted incidentally that elsewhere Keynes makes comments tacitly dismissive of Ricardian equivalence (*CW* XXII, pp. 45–46, 14/11/39).

> incomes corresponding to the increased output that the increase of saving will occur. Moreover the loan expenditure will only be physically possible if the Government is successful in attracting resources for its own use; which means that a sum equal to the incomes generated by the Government's expenditure is physically withdrawn from consumption and must therefore be saved. Thus the required amount of saving necessarily comes about, *irrespective of whether the rate of interest rises or falls*. (*CW* XXI, pp. 538–539; emphasis added)

The qualification that the saving will come "mainly" from "increased output" is tacitly allowing for some possible price-level change as well. The July 1939 document, a two-part article in the *Times*, is a revised version of this May memorandum, very similarly worded with respect to the above-quoted text (*CW* XXI, p. 556). The logic of aggregate expenditure-income balance and associated public/private inter-sectoral balance is subsequently systematically applied to war finance and, in particular, to the British public sector budgetary framework from 1941 forward—with the balance partly brought about by inflation in a near-full-employment economy, although Keynes is firmly opposed to using inflation as a policy instrument.[6]

IV. DEBT FINANCING AND THE LEVEL OF INTEREST RATES

There are two difficulties that can be raised with respect to the multiplier resolution of the coordination of saving and investment, difficulties that might stand in the way of dismissing a role for interest rates: the character of the disequilibrium path to re-equilibration when investment, private or public, increases; and the question of provision of a means of payment or medium of exchange to enable increased investment spending—finance that must be made available prior to, or at least simultaneous with, the investment spending.

The former issue seems to cause no problem: as Meade formalized the saving dimension of the multiplier process in 1930–31—in a manner allowing for time lags between investment and the consequent induced consumption and associated desired saving—there will be an excess of actual saving over planned saving during the temporal process, with that discrepancy diminishing and approaching zero as the process approaches completion (see Meade 1993; cf. *GT*, pp. 122–125; Chick 1997, pp. 166–169, 176–179). The financing issue is more significant; but here there is an asymmetry between private and public investment. We may leave aside the question of possible difficulties a means-of-payment constraint might pose for the autonomy of private investment. But with respect to public investment (or public recurrent expenditure for that matter), the state of course can issue means of payment itself, most notably, fiat currency.

Keynes is well aware of this difference. In a string of 1939 commentaries he makes the point, in relation to debt-financed public expenditure, that government

[6]See, for example, *CW* (IX, pp. 416–422 [from Keynes 1940]; XXII, pp. 105, 124–132, 204, 219–220, 289–294, 307–308, with 322–323, 353–354). The deferred pay element of the Keynes (1940) plan entailed the creation of a novel government liability, alternative to conventional debt, as an instrument of war finance (see JMK/HP/4/136–137).

can (and should) issue the debt *after* it has done the spending. In the *Times* article already quoted above:

> Loans must be raised after the expenditure has been incurred and not before. The savings come into existence *pari passu* with the expenditure, and owing to various time lags and transferences are not likely to be available for subscription to a loan until some time later. If an attempt is made to borrow them before they exist … a stringency in the money market must result, since, pending the expenditure, the liquid resources acquired by the Treasury, must be at the expense of the normal liquid resources of the banks and the public. (*CW* XXI, pp. 516–517)[7]

The prior funding mechanism Keynes has in mind here is partly monetary financing, as is clarified in a letter to the *Times* two weeks later:

> To begin with, the Treasury will finance itself by Treasury bills taken up to the extent of about 10 per cent by the Bank of England, and for the rest mainly by the joint stock banks.[8] … Meanwhile the deposits of the public with the banks will be correspondingly increased [from the multiplier process]. These deposits will be accumulated out of unspent income—that is to say, they represent savings and would normally be available to purchase Government stocks or other investments. (*CW* XXI, p. 524)[9]

Keynes goes on to argue that eventually such liquid savings will be redirected towards long-term securities, placing downward pressure on yields; "the Treasury should postpone the issue of new loans, other than Treasury bills, until this process is well advanced" (*CW* XXI, p. 525). It is worth noting that the context here is a crisis situation, with war only months away.

The same argument is presented in the previously mentioned 28/5/39 memorandum: "[W]ith modern representative money [see *TM* I, pp. 6–9] 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). Keynes allows that if "these 'book' entries … such as Treasury bills" (cf. *GT*, p. 167n) take "an unlimited scale," then this liquidity might prove "dangerous," in enabling a later "uncontrolled expansion of private enterprise." But he remains confident of a manageable process: "[I]f the Treasury is moderately patient, the weight of natural market forces will by themselves render a funding policy possible at a reasonable cost. It is simply a question of waiting and of making it clear that loans will only be available at a modest rate of interest" (*CW* XXI, p. 540). The argument is elaborated

[7]Discussing "increasing public works" in *GT* (p. 119), Keynes allows that the "method of financing" and associated increased demand for "working cash" might increase the interest rate "unless the monetary authority takes steps to the contrary."

[8]What follows here is a statement by Keynes to the effect that there will be an elastic demand for bills, for the *contingent* reason of there being, at that time, excess private sector liquidity due to the operation of the managed floating exchange rate system (cf. Sayers 1956, p. 219).

[9]To be clear, by "monetary financing" (here and below) I mean financing of government outlays by way of a net injection of outside money to the private sector, including the private banking sector. This of course does not, in and of itself, entail any implications for price-level behavior.

further, Keynes also making explicit the contrast on this issue between public and private debt financing (*CW* XXI, pp. 542–545).[10]

What Keynes evidently has in mind with this kind of process is that the initial financing, largely via issuing Treasury bills, will be partly monetary financing, to the extent that the bills are taken up by public sector agencies. This will involve injection of additional outside money into the private sector—although when the take-up of the securities is by public sector agencies other than the central bank, it is a sort of substitution from "idle balances," so to speak, held by one part of the public sector, to active balances expended by another part. During the 1930s public sector agencies other than the central bank were regularly purchasing parts of government securities issues, and then subsequently often selling the stock, gradually, to the private sector (Howson 1975, pp. 160–166; also Sayers 1956, chs. V, VII, more widely on the public financing methods employed through the 1930s and subsequent war years). But the private financial sector is also understood to be partly, perhaps substantially, absorbing the initial Treasury bill issue (cf. Keynes 1923, pp. 141–146, on the role of Treasury bills in banks' liquidity management). Probably Keynes is tacitly supposing that the private financial sector has a capacity to absorb the stock, up to some level, without adverse pressure being placed on the prices and yields of the stock, although the possibility of pressure on yields in the absence of accommodative monetary policy is explicitly acknowledged elsewhere (e.g., note 7 above), certainly in relation to longer-dated securities.

V. MANAGING THE TERM STRUCTURE

Keynes's notion of "waiting" before securing the longer-term debt finance for public spending is motivated by a concern about the term structure, a concern to avoid placing upward pressure on long rates. There is a very extensive set of extant commentaries evidencing Keynes's sensibility regarding managing the psychology of the market, with a view to keeping debt servicing costs as low as possible. We may present a range of these commentaries, to convey a sense of this sensibility and the issues involved, under four heads.

1. False Consciousness

In an echo of the problem of "false consciousness" that Keynes later raised with respect to functional finance (Aspromourgos 2014b, p. 419), he comments: "There are enormous psychological advantages in the *appearance* of economy. It … tends to lower the long-term rate of interest. … But that does not prevent economy from being deflationary and probably injurious to business profits" (*CW* XXI, p. 110; also pp. 107, 126, all 1932). *The Means to Prosperity* repeats this notion that the "financial confidence" from "budget policy approved by public opinion," for "psychological reasons," enables "the transition to a lower long-term rate of interest"; but this justifies only "temporary

[10]The parallel argument in the July *Times* article is at pp. 557–563. On not borrowing before spending, see also pp. 449, 453, 490, from 1938. In December 1933, in relation to the US, Keynes speaks of "expenditure of borrowed *or printed* money" (p. 292; emphasis added).

reduction of loan-expenditure," since "the whole object of the policy is to promote loan-expenditure" (*CW* IX, pp. 353–354). Discussing public works in *GT* (p. 120), Keynes notes: "With the confused psychology which often prevails, the Government programme may, through its effect on 'confidence', increase liquidity-preference or diminish the marginal efficiency of capital." Nearing the end of the war, he sees an element of a false consciousness in interest rate expectations: an "expectation of higher rate … after the war … based on the false belief that it will be necessary to stimulate and encourage saving and that cheap money during the war has been the result of controls" (*CW* XXVII, p. 391).[11]

2. *Psychology of the Market*

The capacity of policy to manage rates presupposes an element of indeterminacy, which in the *GT* is attributable to a degree of malleability of the psychology underpinning liquidity preference and conventional interest rate beliefs. This is evident in incipient form earlier: "there is a large conventional or psychological element in the market rate of interest which needs firm and skilful management" (*CW* XXI, pp. 116–117; also p. 123, both 1932). In 1934, advocating the feasibility of a low (and lower) long rate, Keynes nevertheless acknowledges, but rejects, "a grave doubt in the mind of the market as to whether the existing price of long-term securities will be maintained," based on "the evidence of past experience" of economic recovery, "the expectation that Consols will fall when trade recovers" (*CW* XXI, pp. 313–314). Discussing whether new debt-financed defence expenditure need place upward pressure on interest rates, Keynes emphasizes the importance of "the psychological atmosphere towards gilt-edged and other securities." It is "not a shortage of savings which will impair the position of gilt-edged securities, but a change in psychological expectations as to their future prospects." Hence the importance of policy "maintaining stability in the gilt-edged market"; recent "weakness" in the market is partly due to public debate "about future policy" (*CW* XXI, p. 399; also p. 392, both 1937).

In February 1936 Keynes bemoans that the Treasury conducts itself in a manner that can only encourage a lack of market confidence in low rates: "Short-term money today is extremely cheap. But it is confidence in the future of short-term rates which is required to bring down long-term rates" (*CW* XXI, p. 375). After noting that the Treasury has most recently issued five-year debt at 1.5% and twenty-five-year debt at 2.75%, partly to retire short-term debt costing 0.5%, Keynes comments: "There can be no rational explanation of the longer-dated issue except that they themselves have no

[11]Keynes seems to have been particularly intrigued by Lerner's argument that functional finance would be associated with pubic debt automatically stabilizing at a finite level (together with a balanced budget; growth is not considered). This is the aspect of Lerner (1943) that Keynes particularly drew attention to in a 25/4/43 letter to James Meade (*CW* XXVII, p. 320). There is an offprint of Lerner's article in the Keynes archive, containing no annotations except for a vertical penciled line alongside each of three blocks of text—one of which is the debt stabilization argument at pp. 42–43 (JMK/CO/4/262–270). And a small (rather illegible) one-page note by Keynes, attached to the offprint, is focused on that stabilization issue. There is also in the archive a typescript of Lerner (1943)—clearly copied from the published text—containing only one slight, illegible annotation, at the point where Lerner has recourse to a wealth effect to support the argument for debt stabilization (JMK/L/43/157; top of p. 49 of the 1943 published text). In correspondence of October 1943 Keynes is explicit that the debt stabilization argument is not sufficient to answer all objections to functional finance (Aspromourgos 2014b, p. 418).

confidence in the short-term rate of interest remaining low. Since they largely control the situation, it is natural that humbler folk should be influenced by what the Treasury seem to expect" (*CW* XXI, p. 376). Similarly in 1939, Keynes writes that policy must promote "a sense of confidence in what the future borrowing policy of the Treasury is going to be" (*CW* XXI, p. 559), and of the importance of

> the impression which the Treasury itself creates concerning its objective and future policy. If the Treasury gives an impression of defeatism or of asking the market to accept risks it is not prepared to accept itself, the preference for remaining liquid will, of course, be greatly stimulated. If … its own behaviour indicates an expectation that the market will get worse in course of time rather than better, confidence will be quickly destroyed. (*CW* XXI, p. 564)

3. Policy Gradualism

The need to manage—one could say, massage—market sentiment and expectations also points to the possible need for caution and gradualism. Writing of the Treasury and Bank of England, Keynes comments: "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, 1937, emphasis added; also p. 317, 1934; XXII, pp. 159–160, 1940).[12] Similar sentiments are expressed concerning the US (*CW* XXI, pp. 327–328, 1934). In early 1935 Keynes sees obstacles in the way of further long-rate reductions, the key problem being "the attitude of British institutional investors to the future of the rate of interest." In a degree of deference to the prevailing market psychology, Keynes recommends the monetary authorities "consolidate the [interest rate] position which has been won, rather than … aim at an immediate further advance"; adjustment of other rates that are lagging behind the decline in government yields is more important (*CW* XXI, pp. 350–351). Keynes sums up his position at this point in time: "I feel not less strongly than before [*CW* XXI, pp. 312–317] the importance of a declining long-term rate of interest, but a greater degree of confidence than now exists in the maintenance of the rates of interest we already have at a level not above their present figure is our most pressing need" (*CW* XXI, p. 351). The Treasury can contribute to that confidence by *itself* showing "confidence in the expectation of a declining rate of interest in the future," rather than thinking in terms of "trapping the investor, so to speak, into lending to them for an indefinite period on terms which he will subsequently regret" (*CW* XXI, p. 351; cf. pp. 25n, 106, 1931–32).

4. Spectrum of Maturities

To underpin the success of a cheap money policy, Keynes wants the authorities to accommodate the market's preferences with respect to maturities, ending the

[12]The content of the "within reason" constraint is not made explicit. In 1939 Keynes again speaks of the Treasury's having "the power within certain limits" to determine "reasonable" borrowing rates; but here also the limits are not made explicit, and "reasonable" is defined only as the general level of rates consistent with full employment (*CW* XXI, p. 558). Elsewhere he implies that the yield curve is normally positively sloped (*CW* XXI, pp. 403, 517). For the content of the constraints or limits, see section VI.

British practice of tending to offer the market too stark a choice between only either very short or very long (notably, perpetual) securities, which naturally tends to heighten long rates:

> For the future of the gilt-edged-market it is … important that long-dated securities should not be in oversupply relative to the demand… . The optimum arrangement from the point of view of the Treasury is to supply the different types of bonds in the proportions in which the public want them. [*CW* XXI, p. 112, 1932]
>
> …
>
> If a particular type of security, such as Government stocks having no fixed date of redemption, are in oversupply relatively to stocks with a definite maturity either of early or intermediate date, as measured by the relative strength of the demand for the two types, the former will tend to be a weak market, which will react unfavourably on long-term rates of interest generally. … [I]t must always be to the interest of the Treasury to supply the heterogeneous requirements of the market with securities of different types and maturities in the optimum proportions so as to minimise the aggregate cost of the national debt. (*CW* XXI, pp. 115–116, 1932; also pp. 351–352, 1935)

Keynes is still prosecuting the argument in 1937. The failure of the British authorities to offer a range of maturities is compared unfavorably with American practice; in Britain "the greater part of the debt … has no fixed date of repayment within the next 25 years," whereas the US has "notes or bonds falling due for repayment in almost every year," so that "every taste is suited." This "allows the American Treasury to borrow at a materially lower average rate." The British Treasury "should profit from the anxieties of the public and save interest by supplying them with the potential liquidity which they demand" (*CW* XXI, pp. 402–403; also pp. 517, 541, 544–545, 559, all from 1939)—where "liquidity" here includes shorter-dated debt (see section VI). The same view is pressed throughout the war (*CW* XXII, pp. 158, 410–420, documents from 1940–44), although by then the British authorities were issuing a wide range of maturities.

VI. THEORY OF THE TERM STRUCTURE AND INTEREST RATE POLICY

What, then, is Keynes's mature theory of the term structure, enabling his conviction that policy can manage and shape it? All of the above-documented Keynes commentaries concerning the role of expectations of future interest rates in determining current interest rates—and hence the desirability of policy managing expectations—are consistent with the *TM* point of departure for explaining the term structure, that current long rates are regulated by future short rates. For most of *GT* Keynes theorizes in terms of "the" rate of interest, although making explicit that this is serving as a proxy for "the complex of the various rates of interest current for different periods of time, *i.e.* for debts of different maturities" (*GT*, p. 167n). Nevertheless he does address the determination of the term structure, in the framework of his liquidity-preference theory of interest.

Keynes makes "the existence of *uncertainty* as to the future of the rate of interest, *i.e.* as to the complex of rates of interest for varying maturities which will rule at future dates," the "necessary condition" for liquidity preference. In doing so he essentially

repeats the logic of the *TM* point of departure on the term structure: if future short rates are known with certainty, then current long rates can be straightforwardly inferred from the zero-profitable-arbitrage condition.[13] With future rates uncertain, "if a need for liquid cash may conceivably arise before the expiry of *n* years, there is a risk of a loss being incurred in purchasing a long-term debt and subsequently turning it into cash, as compared with holding cash" (*GT*, pp. 168–169).[14] Hence also the following assertion of future rates anticipated and at least partially factored into current rates: "the expectations, which are held concerning the complex of rates of interest for various terms which will rule in the future, will be partially reflected in the complex of rates of interest that rule to-day" (*GT*, p. 143; also p. 145n).[15] Exposure to variability of bond prices gives a role to expectations of future *long* rates, as well as expectations of future short rates.

It follows from this understanding of the term structure that to succeed, a policy of persistent or permanent low(er) long rates must shift average market opinion as to the level of the normal (or "safe") rate of interest: the short rate is "easily controlled"; but the long 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." Hence the very same policy may fail if perceived as "experimental" or "easily liable to change," but "easily succeed" if seen as "reasonable … practicable … rooted in strong conviction, and promoted by an authority unlikely to be superseded." Keynes goes on to discuss the interest rate as a "highly conventional" phenomenon, concluding with cautious optimism that a monetary policy "of persistence and consistency of purpose" will be able to shift the conventional perception as to the safe or normal rate of interest towards lower levels (*GT*, pp. 201–204). He also endorses a policy of open market operations across the whole range of maturities, in the spirit of the "tap" system (more on this below), and something he'd been more or less advocating since *TM*, with a view to enhancing the influence of monetary policy across the yield curve (*GT*, pp. 205–206). This approach to the term structure is also evident in policy commentaries by Keynes over subsequent years (*CW* XIV, p. 153; XXII, pp. 63–64, 84; XXIX, p. 266; 1937 to 1939).

The term structure is again systematically addressed by Keynes as a consequence of his membership of a 1945 government in-house committee to consider postwar debt management, the National Debt Enquiry. His handwritten notes for the Enquiry restate the liquidity preference doctrine, that interest is the compensation for "depart[ing] from liquidity." For short versus long rates it then becomes a question of "[w]hat determines

[13]This equal profitability condition enables causation in only one direction: a sequence of given future short yields to maturity determines a unique long yield to maturity (the geometric average of the short yields), whereas a known current long rate is consistent with an infinite number of short-rate sequences.

[14]*GT* (p. 203) makes explicit that this risk exposure increases at longer maturities. Keynes's comment that, for the purposes of the liquidity-preference theory of interest, "we can draw the line between 'money' and 'debts' at whatever point is most convenient for handling a particular problem," also implies that liquidity preference can be applied to the structure of yields as well as their general level (*GT*, p. 167n).

[15]There is passing suggestion of a role for inflation expectations in yields at *TM* (II, p. 394); *CW* (XXI, p. 447, 1938). Elsewhere, considering the responsiveness of money wages to increasing prices, Keynes comments: "Everyone, including the trade unions, has become index-number conscious" (*CW* XXII, pp. 120–121, 1940).

the reward the individual requires to surrender his liquidity *for a long or short period*" (emphasis added), implying that holding a longer-dated security is more illiquid a position. But why, if both securities are equally tradeable from day to day? It is individuals' "expectation … or … uncertainty about the future *changes* in r. of i."; if they "just don't know" and seek to protect themselves "from possible loss in the event of … desiring liquidity, then the shorter are preferable and you need to earn a risk premium to lock yourself up longer." In other words, the greater risk exposure at longer maturities is due to greater asset price variability at the longer end, for any given percentage variation in yields, across the board—a result now well known, as the basis for a normally positive term spread (cf. *GT*, p. 203). Keynes goes on to argue that so long as the authorities have no "counter-liquidity preference"—i.e., they are "indifferent about [short versus long] funding"—then "they can make both the short and long-term [rates] *whatever they like*" (emphasis added), although this is qualified by considerations of "whatever they feel to be right" for "employment and other social reasons [e.g., 'how much reward to saving is socially desirable']" (*CW* XXVII, pp. 390–392; also XXI, pp. 544, 558, 563, all 1939).

With a view to this rate-setting objective he endorses the "tap" issuing system, whereby the authorities set the rates at which they will supply securities, across the range of maturities, and allow the private sector to choose the quantities of the various maturities that they wish, over time, to take up—and defends a 3% bond issue, partly on the basis that "the euthanasia of the rentier should not take place just yet." But it's also clear here that Keynes is happy to see securities *not* taken up, so that funding can occur via the private sector's holding idle money balances. The policy cautiousness of which Meade speaks (in our epigraph quotation) is evident here: "The essence of our interest policy should be to give a sufficient immediate reward to saving, so not to run prematurely against public psychology" (this is the month following Meade's comment). Keynes's subsequent 18/4/45 written summary of his views, for the benefit of the other Enquiry members, again endorses the tap system—whereby "the preferences of the public … determine the distribution of the debt between different terms"—but makes explicit that the rates set should be constrained by a variety of considerations, including responding to changing private sector preferences between maturities by altering the rates set. And there is that caution again: "continuity of policy and gradualness of changes should be ensured unless in exceptional circumstances and for grave cause" (*CW* XXVII, pp. 392–398; also p. 400).

Hence Keynes's above-quoted comment that the authorities can make short and long rates "whatever they like," in fact, is subject to rather substantial qualification. In the tap system the authorities set the rates they offer the market across new issues of maturities (in effect, exogenously fixing the term structure), and allow the market to determine the quantities taken up, with monetary financing making up any shortfall between the quantities of securities issued and the private sector take-up. Putting aside the self-imposed constraints that Keynes mentions (e.g., the above-mentioned "social reasons"), if the policymaker can set *any* rates and spreads, then, for example, why not offer 2% and 1% on short and long securities, respectively? There are limits to the authorities' capacity to set term spreads that, to take the most obvious consequence, make a negative term spread non-credible as a persistent or permanent policy. Hence the levels and spreads Keynes proposes could not have been other than with a view to constraints derived from the psychology of the market—even if with influence on

those constraints from policy (along the lines of *GT*, pp. 201–204)—that psychology, in turn, being determined by objective phenomena (e.g., relative liquidity, differential risk, objective factors shaping future short rates) and subjective factors (e.g., false consciousness, attitudes towards risk). All the rate structures proposed by Keynes in the 1930s and 1940s entail a positively sloped yield curve.

The notion of private lenders' liquidity preference requiring a risk premium in longer interest rates implies that a policy of shifting the composition of debt towards a longer average maturity—e.g., rolling ten-year debt over into twenty-year debt—will tend to steepen the yield curve, in order to induce the private sector to hold a larger proportion of longer-dated public debt. This possibility is consistent with Keynes's opposition to government "counter-liquidity preference": if the demand side of the debt market *ceteris paribus* prefers shorter securities (liquidity preference), a preference by the supply side of the market *ceteris paribus* to issue longer securities (counter-liquidity preference) must tend to make the yield curve steeper than it otherwise would be. Keynes wants the authorities to be more or less indifferent to maturity composition, and just aim to minimize the average cost of debt servicing (*CW* XXII, p. 418, 1943).[16]

If, at some point in time, Keynes's preferred "euthanasia" policy were to be implemented—a zero real riskless rate of interest as a permanent policy—then to the extent that this was associated with a permanently constant nominal short rate, term spreads should go to zero. (The same logic applies to setting a very low, rather than strictly zero, real rate, or, indeed, any constant level.) The zero-profitable-arbitrage condition would equalize longer rates with that constant short rate. At least this would be the case, so long as the policy was credible to the markets into the more or less distant future; and putting aside: (a) variability of the inflation rate or of risk premia, which, by leading to variability of nominal rates, could provide further grounds for positive term spreads; (b) any differential risk due to causes other than interest rate variability (e.g., default risk); and (c) random disturbances to nominal rates that could also provide still some slight reason for a positively sloped yield curve. *This would be the ultimate conquest of the term structure.* Of course, such a permanent policy would entail rejecting use of the interest rate as a short-run countercyclical or anti-inflation policy instrument, as Keynes indeed suggested in *GT* (e.g., pp. 320–329) and argued in the 1940s, against the views of Meade and others.[17] His opposition to discretionary

[16]At *CW* (XXVII, pp. 400, 403) Keynes indicates that in thinking about interest rate levels and aggregate debt servicing costs, he is also taking into account tax rates on interest income and on capital gains.

[17]This is well documented in Meade's diary (Howson and Moggridge 1990, pp. 48–49, 55–56, 59, 61, 65, 70, 73, 81). See also Howson (1993, pp. 18–29, 43–62, 88–90, 121–131, 149–152, 176–179, 305–330); and, for the introduction and conduct of cheap money policy in the 1930s, and its relation to debt management considerations, Howson (1975). It may be noted that bank-rate was held constant at 2% from 30 June 1932 to 7 November 1951, apart from a nine-week period in August–October 1939, these being the weeks around the declaration of war (Howson 1988, pp. 227, 249, 251). As early as June 1931 Keynes observes that "in the long run the banking system can affect the long-term rate by obstinately adhering to the correct policy in regard to the short-term rate" (*CW* XIII, pp. 365–366). At one point in the National Debt Enquiry deliberations Keynes makes a slight concession to the use of short rates as a short-run policy instrument (*CW* XXVII, pp. 397–398). The failure of the British policy of *cheaper* money, 1945 to 1947, may be read partly as a vindication of Keynes's caution concerning interest rate policy's getting ahead of market sentiment (Howson 1993, pp. 121–152, 166–176, 193–199).

monetary policy in this sense is precisely due to the consequent unsettling of interest rate expectations undermining the maintenance of low long rates:

> [I]f we allow the rate of interest to be affected [i.e., increased, in the context of economic recovery], we cannot easily reverse the trend. 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. It is not suitable to be used as a short-period weapon. (*CW* XXI, p. 389; also XIV, p. 162, both from 1937; XXVII, p. 377, 1944)

VII. CONCLUSION

Keynes's understanding of the possible influence on interest rates of public debt levels and the maturity composition of debt, as it is expressed in his 1930s and 1940s writings, is a fine balance between optimism and caution, a balance that turns upon the role of interest rate expectations in shaping long rates. The optimism is expressed in the conviction that if the authorities conduct measured policy, consistently pursued, conveying to the markets that they know what they're doing and are confident with regard to their purposes and conduct, then they can shape interest rate expectations to their objectives. The caution is due precisely to the possibility that the authorities could fail in that endeavor, whether due to their own conduct[18] or other factors. If public debt trajectories place upward pressure on interest rate expectations, management of debt-servicing costs could be compromised as well as other possible policy objectives (e.g., income distribution, aggregate activity levels). In the simultaneous pursuit of debt management and cheap money, what is to be avoided is anything that might engender market expectations that rates are unsustainably low. However, it would be antithetical to Keynes's policy sensibility to make possible adverse impacts of debt trajectories on the psychology of the market a justification for axiomatic debt conservatism—a kind of a priori aversion to substantial debt financing because of a supposed ever-present threat of upward pressure on interest rates (e.g., Rogoff 2013).

In terms of the larger theoretical context, Keynes's fundamental vision of the demand-side determination of activity levels was and remains sound; and in a world of inconvertible fiat currencies, public investment as a driver of aggregate demand faces little financial constraint. In the first instance, such a constraint would exist only to the extent that the suppliers of goods and services that government wishes to purchase are resistant to accepting payment in outside money or "cash" (including electronic or "book entry" outside money). But the willingness of private sector agents to accept payment in cash is one thing; their willingness to then *hold* money, as a desired asset, is another. If there results excess money balances for the private sector as a whole, then it is possible that the excess can be drained from the private sector via its purchasing

[18]For example, the authorities' acting to lengthen average maturity—say, in the context of initially low long rates—may itself cause the yield curve to steepen, by persuading the market that the authorities believe (and believe correctly) that long rates are currently abnormally (or otherwise only temporarily) low.

government securities of various maturities. One may note in this context that Keynes's idea of issuing debt *after* the government spending that the debt is to finance is unproblematic, today, for the validity of Keynes's view of public spending in a demand-side approach to activity levels. Under contemporary conditions, government expenditure via monetary financing—with bond issuance and rate-setting monetary policy (together with taxation) draining excess liquidity—is a well-understood and workable process, at least for deficit and debt trajectories within the bounds of normal experience.

But if, at prevailing yields on government securities, the private sector as a whole is unwilling to substitute government securities for the entirety of any such excess money balances (net of taxation), then that money will find its way into other channels (expenditure on other assets or on goods and services) until it ceases to be an excess—unless government yields become more attractive (Aspromourgos et al. 2010, pp. 442–446; Aspromourgos 2014a, pp. 582–585). Hence the question of interest rates can come into play and, with rate-setting monetary policy anchoring a short rate, the term structure. One may recall two quotations provided earlier. Explaining the logic whereby a public sector deficit is balanced by a private sector surplus, Keynes adds: "The only question which arises is as to *the ultimate form* in which they [the increased savings] are held" (emphasis added); and, discussing bank deposits of unspent income generated by the multiplier process, he comments that "they represent savings and would normally be available to purchase Government stocks *or other investments*" (emphasis added).

Keynes regularly concedes that full employment imposes a potential constraint upon a low interest rates policy—a consequence of his acceptance of a well-defined, inverse functional relation between aggregate investment expenditure and the level of interest rates, and hence a unique and well-defined full-employment rate of interest. But even dismissing such a functional relation, since interest rates can act upon inflation via other channels (Aspromourgos 2007, p. 525n9), there nevertheless may be an imperative to employ interest rate policy as an anti-inflation instrument, in the absence of any plausible alternatives.[19] In the period from the mid-1940s to the early 1950s, it was supposed imperatives of anti-inflation policy (together with balance of payments problems) that were used as the justification for abandonment of cheap money policy in Britain (Howson 1993; pp. 327–339 provide a summary account). Furthermore, however low a level of interest rates is desired—that is a distinct issue—it is questionable whether a policy of a *constant* nominal rate, or constant real rate, is feasible, without a plausible instrument for anti-inflation policy other than interest rates.

Lerner's claim that Keynes was timid, even inconsistent, in not wholeheartedly endorsing functional finance followed from Lerner's conviction that functional finance was the natural policy corollary of *GT* (Aspromourgos 2014b, p. 424).

[19]This is so whether inflation is due to excess demand or other causes: notably, incompatible distributional claims (sometimes characterized as "cost-push"). On Keynes and the issue of a policy instrument for targeting inflation, see Aspromourgos (2012, p. 156; 2011, pp. 642–647). It is clear from his war finance writings that if debt-financed government expenditure were pushing the economy up against a full-employment constraint, Keynes would favor switching from debt financing to taxation, rather than having recourse to higher interest rates.

Keynes's qualifying his endorsement is not inconsistent with *GT*; and his view that Lerner was not facing "the real difficulties," "all the practical problems," is rather an expression of Keynes's deep policy engagement with debt management and interest rate issues throughout the 1930s and 1940s, for a nation with high public debt liabilities relative to national income (Aspromourgos 2014b, pp. 418, 420, 425–429). He is right to regard the simultaneous pursuit of debt management and cheap money as a policy problem not capable of reduction to a straightforward application of simple theorems.[20] Thereby a theory/practice distinction becomes important for understanding Keynes's policy sensibility with respect to this issue. Opening chapter 12 of *GT*, Keynes emphasizes the importance of "confidence," which "economists have not analysed … carefully," adding a comment that points to that distinction and the associated limits of theory: "There is, however, not much to be said about the state of confidence *a priori*. Our conclusions must mainly depend upon the actual observation of markets and business psychology. This is the reason why the ensuing digression [i.e., ch. 12] is on a different level of abstraction from most of this book" (*GT*, pp. 148–149).

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[20]It may be emphasized that keeping term spreads within satisfactory bounds under a full-blooded functional finance policy would involve contemplating the outcomes under conditions in which the debt trajectory is treated as a mere policy-irrelevant side effect of the pursuit of other objectives: e.g., the results of a thoroughgoing full employment policy funded entirely by some combination of outside money and securities issuance. Jayadev and Mason (2015, pp. 103–111) provide a valuable Keynesian interpretation of actual US term spreads since the 1950s.

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