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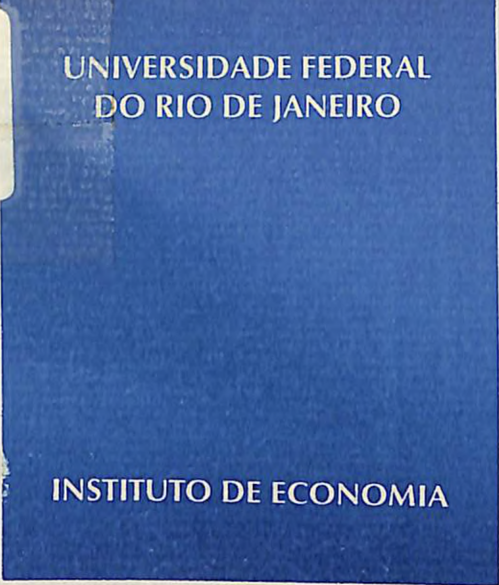

On Keynes's Concept of Revolving Fund of Finance

nº 387

Fernando J. Cardim de Carvalho*

Textos para Discussão

DIGITALIZADO PELA BIBLIOTECA EUGÊNIO GUDIN EM PARCERIA COM A DECANIA DO CCJE/UFRJ

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO
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Sumário

I. Introduction 5

II. The Two Meanings of Finance 6

III. The Finance Motive to Demand Money and the Revolving Fund of Finance 9

IV. Growing Investment 16

V. Summing Up 17

Notes 18

References 21

Últimos textos publicados 22

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I. Introduction

The revolving fund of finance was a key concept both in the debate which opposed Keynes to Ohlin and, in particular, Robertson, in the late thirties and in the lively exchange between Asimakopulos and Kregel, among others, in the late eighties. In fact, both Robertson, in the first round of debates, and Asimakopulos, in the latter, were incensed by Keynes's statement that the mere act of spending could replenish the "fund of finance" available to investment Keynes, on the other hand, insisted that, as long as the desired rate of investment did not increase, spending per se would restore the pool of finance necessary to support its actual realization.

It was also a characteristic of both rounds of debates that arguments were often made at cross purposes, not only because the authors involved entertained different views as to how the economy works, but also because they disagreed about the meaning of some of the main concepts they employed. Keynes seemed to be aware of this problem when he pointed out that part of the disagreements between him and Robertson were due to the different meanings the word "finance" evoked to each of them. Liquidity was also an ambiguous concept in this debate. Finance, and the related idea of finance-motive, meant completely different things for Keynes and Robertson, and, under these conditions, it should not be surprising that so much confusion should be created around the notion of a "revolving fund of finance".

In this short note, we believe some light can be shed on those debates by identifying the precise meaning and

implications of the concepts of finance and the revolving fund of finance used by Keynes. In section II, we try to contrast the two different meanings of the word "finance", adopted by Keynes and by Robertson, respectively. To do it, we also highlight their different definitions of the term "liquidity", in relation to which each one of them derives his own concept of finance. The following sections are devoted to decipher Keynes's novel ideas on this subject. Section III explores the definition of finance motive to demand money and the revolving fund of finance under stationary conditions. Section IV is dedicated to an examination of the changes Keynes's framework has to suffer to deal with growing investment. A summing up section closes the paper.

II. The Two Meanings of Finance

Among the many reviews, discussions and criticisms of *The General Theory* published in the late thirties, Ohlin's lengthy examination of the liquidity preference theory of interest rates and its relation to the theory of investment and saving certainly stands out, not least because it was one of the only two critical reviews that generated a direct reply by Keynes himself.[1] In his paper, published in two parts in *The Economic Journal* in 1937, Ohlin criticized Keynes's proposition of a purely monetary theory of the rate of interest. Ohlin agreed that the rate of interest could not be seen as being the price that equals investment to saving, since, as he believed Keynes had shown, investment is *always* equal to saving. Ohlin, however, interpreted Keynes as having stated that *realized* investment is always equal to *realized* saving. These are, in fact, definitionally identical. Ohlin argued, though, that the interest rate is *not* the price that equals the demand for *money* to the supply of *money*, but rather the demand for *credit* to the supply of *credit*. In addition, he contended that the demand for credit was ultimately dependent on *desired* investment, as much as the

supply of credit was ultimately determined by *desired* saving, contrarily to Keynes's view.

Ohlin's position was generally shared by Dennis Robertson, in England, as well as by other Swedish economists that viewed themselves as followers of Wicksell. The theory of the rate of interest as the regulator between the demand for and supply of credit, ultimately dependent on desired, or ex-ante, investment and saving, became known as the loanable funds theory of the interest rate, liquidity preference theory's main competitor as an explanation for that variable.

Keynes rejected Ohlin's approach, particularly the idea that somehow the loanable funds theory could be seen as an extension of, and an improvement on, his own liquidity preference theory. In his reply, however, Keynes conceded that he had overlooked the influence that planned investment could have on the *demand for money* and, thus, on the interest rate. An investor-to-be, since investment is nothing but the purchase of a certain category of goods, needs money as any other spender-to-be. The quantity of money necessary to actually perform the act of purchasing something was called by Keynes *finance*[2]. In order to invest, an individual has to get hold of cash (or something convertible on demand at fixed rates on cash), since to buy is to exchange money for a good. *To finance a purchase, for Keynes, means to get hold of the required amount of money to perform the operation.*

Finance, for Robertson, on the other hand, as well as for Asimakopulos later, meant something else. It referred to the act of issuing debt to acquire financial resources. To finance a purchase meant, thus, to accept a certain type of contractual obligation to be discharged in a future date. Until this date came, the individual who issued the debt would be constrained in his/her choices by the impending obligation to the creditor.

The difference between the two views may be subtle but they are very important to the ensuing analysis of the process of investment, its requirements and implications. In Keynes's view, to finance a purchase is to be able to withdraw a certain value from monetary circulation in anticipation of a given expenditure. A given amount of money, thus, is temporarily withdrawn from active circulation, to be kept as idle balances until the moment comes to make the intended purchase. When the spending is made, the amount of money that was held idle comes back into circulation, and *liquidity* in the Keynesian sense is restored.[3] It is, thus, obviously a problem of *money* supply and demand. For Robertson, to finance a purchase means to sell a debt to a bank in order to get the means to purchase a given item. It generates a lasting obligation for the debtor and reduces the spending capacity of the creditor. Only when this obligation is extinguished, by the settlement of the debt, *liquidity*, in the Robertsonian sense, is restored to its previous position.[4]

For Keynes, thus, the liquidity position of the economy was restored when money held idle returned to active circulation. For Robertson, in contrast, liquidity was restored when debts were settled. Naturally, the equilibrating processes conceived by each of them had to be different too. The diverse nature of the two concepts, and their role in causing so much debate among the participants of this exchange, was clearly observed by Keynes:

"A large part of the outstanding confusion is due, I think, to Mr. Robertson's thinking of 'finance' as consisting in bank loans; whereas in the article under discussion I introduced this term to mean the cash temporarily held by entrepreneurs to provide against the outgoings in respect of an impending new activity." (CWJMK 14, p. 229)

III. The Finance Motive to Demand Money and the Revolving Fund of Finance

For whatever reasons, Robertson's meaning of finance was accepted by perhaps the majority of economists. It is our contention that ignoring the special sense given by Keynes to the word has been responsible for much of the confusion created around the idea of *revolving fund of finance*, initiated in the debate Keynes/Robertson but that lasted up to the debate between Asimakopulos and his critics. In this section and in the next, we try to explore Keynes's original ideas, to dispel the conceptual confusion that surrounds them and to examine the analytical opportunities opened by his approach.

Keynes's admission of a new motive to demand money, related to planned investment expenditures, denominated *finance motive*, in addition to the three other motives listed in *The General Theory*, was received by many as an awkward and roundabout way of recognizing the inadequacy of liquidity preference theory.[5] For his critics, it amounted to accepting that, ultimately, productivity and thrift were the determinants of the interest rate, no matter how complicated and indirect could be the channels through which the former determined the latter. The distinction between money and credit was largely immaterial, since the creation of new bank credit is usually accomplished through the creation of bank deposits, which is an element of the money supply.

The story told by Keynes was, however, a different one. He insisted that his finance motive to demand money had the same nature as the transactions demand for money. Both of them refer to the need to get hold of money balances in anticipation of a planned act of expenditure.[6] The finance motive to demand money was destined to cover the interregnum "between the date when the entrepreneur arranges his *finance* and the date when he actually makes his investment" (Keynes, 1937b, p. 665, my emphasis).

We already saw that Keynes means by finance a given amount of *money*, not necessarily of *bank loans*. If we substitute the word *expenditure* for the word *investment* in the preceding quote, and the word *individual* for the word *entrepreneur*, this definition would exactly apply to the transaction motive. Keynes was at pains later to deny that there was anything essential opposing the finance motive to the other motives to hold money. The interest rate was determined by *total* money demand and *total* money supply:

"... the conception of the rate of interest as being determined by liquidity preference emphasises the fact that *all* demands for liquid funds compete on an equal basis for the available supply; whereas the conception of a *separate* pool of 'funds available for investment' suggests that the rate of interest is determined by the interaction of investment demand with a segregated supply of funds earmarked for that special purpose irrespective of other demands and other releases of funds." (Keynes, 1939, pp. 573/4, Keynes's emphases)[7]

Why, then, was it necessary to coin a fourth motive to demand money? The answer given by Keynes has to do with the special behavior he expected the finance demand for money would exhibit:

"Investment finance in this sense is, of course, only a special case of the finance required by any productive process; *but since it is subject to fluctuations of its own*, I should ... have done well to have emphasized it when I analysed the various sources of the demand for money." (Keynes, 1937a, p. 247, my emphasis)

While the transactionary demand for money would behave as regularly as overall planned expenditures, the finance demand for money would exhibit the fluctuating nature of planned investments. Thus, to understand Keynes's notion of a *revolving fund of finance* correctly, one cannot

lose sight of the fact that finance means money[8] in his arguments, as we argued above.

Finance, in Keynes's sense, can be obtained by an individual in two ways: 1. by selling a good or service; 2. by selling a debt. While in the Robertson/Asimakopulos approach only the latter way is considered, it is the former that is critical to understand the revolving nature of the fund of finance in Keynes's theory. In fact, all that is necessary is to recognize that, for a given income velocity of money, a certain number of transactions can be executed with a given quantity of money. The act of spending transfers money from the buyer of goods to the seller, allowing the latter to execute his/her own expenditure plans. If velocity is given and the total value of planned transactions per period of time remains constant, there is a *revolving fund of money in circulation*, as Keynes himself referred to the revolving fund of finance in at least one occasion[9], that supports these transactions:

"A given stock of cash provides a revolving fund for a steady flow of activity; but an increased rate of flow needs an increased stock to keep the channels filled." (CWJMK 14, p. 230)

In other words, if planned transactions do not change, each individual agent can execute his/her planned expenditures when he/she sells something to another agent, getting hold of money to be spent afterwards. There is a superposition of two concepts here: income and money, but it is the latter that matters directly for the determination of the interest rate. Each person's expenditure is the next person's income, but it is not income creation per se that matters for this discussion but the fact that *income creation* is accomplished through *money circulation*. That this is what Keynes had in mind is clear from the following concise but very telling statement, which relates the finance motive, the revolving fund of finance and income creation:

"The 'finance', or cash, which is tied up in the interval between planning and execution, is released in due course after it has been paid out in *the shape of income* ..."(CWJMK 14, p. 233, my emphasis)

If transactions are constant, which means, in the context of the Keynes/Robertson debate, if planned discretionary expenditures like investment do not change, each agent that plans to purchase an item has to withdraw money from active circulation in advance. For a given money supply, this represents a subtraction from the quantity of money available for the normal level of transactions a given community wants to execute. If, somehow, this additional demand for money is satisfied by the banking system, the finance motive to demand money can be satisfied without creating any pressure on the current interest rate. Once the time comes for the planned purchase to be performed, money that was being held idle returns to circulation, allowing the next agent in line to withdraw it again in anticipation of his/her own discretionary spending plans, and so on. The fund of finance, after it was originally created, needed no new creation of money to support new transactions. It is replenished every time idle balances become active, through the actual purchase of the desired commodity, just to become idle again, when the next spender-to-be withdraws it from active circulation.

It was the understanding that finance meant bank loans that led Robertson and Asimakopulos to object that spending was not enough to replenish the fund of finance. For them, only the repayment of debts could allow banks to make *new* loans, that is, to lend money to aspiring investors. In Keynes's model, in contrast, *no new loans are needed, because once money is created, all that is necessary to support new acts of expenditure is that it circulates in the economy*. As Kregel correctly insisted in his debate with Asimakopulos, the replenishment of the revolving fund of finance has absolutely nothing to do with the multiplier or

with desired savings. It is a purely monetary concept, having to do with money circulation, and with the transformation of active balances into idle balances and conversely. Keynes's own words, in this context, can be easily understood:

"If investment is proceeding at a steady rate, the finance (or the commitments to finance) required can be supplied from a revolving fund of a more or less constant amount, one entrepreneur having his finance replenished for the purpose of a projected investment as another exhausts his on paying for his completed investment." (Keynes, 1937a, p. 247)[10]

Robertson, in contrast, never accepted or understood the precise meaning the concepts of finance, finance motive and the revolving fund were given by Keynes, as it is made clear in the following quotation:

"I cannot see that any revolving fund is released, any willingness to undergo illiquidity set free for further employment, by the act of the borrowing entrepreneur in spending his loan. The bank has become a debtor to other entrepreneurs, workpeople etc. instead of to the borrowing entrepreneur, that is all. The borrowing entrepreneur remains a debtor to the bank: and the bank's assets have not been altered either in amount or in liquidity." (CWJMK 14, pp. 228/9)[11]

One can probe the proposed mechanism a little deeper. When an expenditure is made, and money (cash or a bank deposit) is transferred to the seller, the latter may use it basically in three ways: he/she can hold it for a while until the moment comes to effect a planned expenditure; one can use it to settle debts with other individuals or with the banking system; one can be hold it idle for precautionary or speculative reasons. Keynes's concept of revolving fund of finance evokes at once the first possibility: having got hold of money, the seller can now buy consumption goods (in which case, a transactions demand for money was being

met) or investment goods (case of the finance motive to demand money). In these two cases, we are talking about the active circulation of money[12]. Here, the "efficiency" of the revolving fund of finance in sustaining investment expenditures (or, rather, discretionary expenditure in general) does not depend on anybody's savings propensity or on the existence of Kaldorian speculators, or what else. It does depend, on the other hand, on the institutions that define the *payments systems* of the economy, how rapidly and safely (against disruptions) can they process payments and make money circulate. This is a very important subject, curiously overlooked by most economic theories, at least until recently. The "quicker" money circulates, the greater the value of expenditures that can be supported by a given amount of money. Knowing how the system of payments operates is critical to this discussion in at least two major respects: it defines the modalities of purchases that can be effected at least partially without the actual use of money[13]; it also has to do with the speed with which money reaches those individuals who do entertain a discretionary expenditure plan. By the latter we mean the situation in which the seller who receives money does not intend to effect any discretionary spending. The story told by Keynes about spending replenishing the fund of finance and allowing the next investor in line to implement his/her plans depends on money in circulation actually reaching that aspiring investor, which is not necessarily the case for a variable succession of acts of spending

If individuals use the money they received to pay debts, one of two situations may arise. Money is used to settle debts to other individuals. In this case, the preceding discussion applies in that we have to consider what the once-creditor will do with the money he/she received. This case is not restricted to transactions between individual persons, concerning also those transactions between firms or any other institutions that does not actually *create* money. It is also possible, however, that individuals use money to

settle debts to banks. Then, its immediate consequence, is the destruction of money.[14] But, debt settlement also restores the bank's previous capacity to lend, so an equal amount of money can be recreated, reinitiating the cycle.

The third possibility is potentially, but not necessarily, more destructive. If the individual who receives the sales revenues decides to hoard it, because of, say, an increase in his/her liquidity preference, money will be accumulated as idle balances for an indefinite period of time. In this case, getting it back into active circulation may require an increase in the interest rate, which may have a negative impact on planned investment. Alternatively, liquid assets may be created by financial intermediaries to replace money in those individuals' portfolios bringing it back to active circulation.[15] In this case, as in the preceding one, the actual institutional organization of the financial system may be important to define the efficiency of the revolving fund of finance in supporting a given rate of discretionary expenditures.

In sum, if the rate of investment is not changing, given the velocity of money, a revolving fund of finance can support a given flow of aggregate expenditures. Money flows out of active circulation in anticipation of planned expenditures and returns to it when the actual expenditures take place. It is in this sense that spending replenishes the fund of finance. Money circulates in the economy allowing each individual to execute his/her spending plans at a time. It obviously does not mean that banks restore their lending capacity when money is spent. But this is not a necessary condition for the replenishment of the pool of finance because new expenditure does not require new money to be created. All that it takes is that the deposits that were created in the beginning of the cycle keep changing hands, allowing each agent in line to use them to buy the goods one wants. The revolving fund of finance is actually the revolving fund of money in circulation.

IV. Growing Investment

The situation changes if investment is growing. In this case, a given stock of money could only support an increasing flow of aggregate expenditures if liquidity preferences were being reduced or velocity was increasing for other reasons. As Keynes stated:

" ... in general, the banks hold the key position in the transition from a lower to a higher scale of activity." (Keynes, 1937b, p. 668)

A revolving fund of finance is no longer sufficient to support an increasing rate of expenditures, if liquidity preferences remain unchanged, but the fundamental theory behind it does not change. The money stock has to grow to avoid pressures on the interest rate to rise. Increased savings are neither necessary nor sufficient to relieve the pressure on the interest rate because:

"[t]he ex-ante saver has no cash, but it is cash which the ex-ante investor requires ... For finance ... employs no savings." (Keynes, 1937b, pp. 665/6)[16]

Money is created when the monetary authority creates reserves for banks or when the liquidity preference of banks is reduced, leading them to supply more active balances even if the authority does not validate their decisions by increasing the supply of reserves. The concept of revolving fund of finance has a reduced relevance in this case, since one is no longer concerned with the reproduction of a given situation. The Keynesian monetary theory of the interest rate, however, is maintained.

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V. Summing Up

The main proposition made in this paper is that a critical concept in both rounds of debates between loanable funds and liquidity preference theorists was the revolving fund of finance. This concept was interpreted in drastically different ways by each school of thought, leading them to argue at cross purposes and making it impossible to arrive at any generally accepted conclusion. The goal of this note is not to assert the superiority of Keynes's ideas over his opponents or the converse, but to make clear the conceptual frameworks within which each approach is advanced.

Keynes employed the term *finance* to mean the amount of money held in anticipation of a given expenditure. The revolving fund of finance refers to the pool of money available in an economy at a given moment, from which agents withdraw balances to be held temporarily idle only to return them back into active circulation when spending is made. In this sense, this pool of money is replenished when spending is made.

Why so simple a point did generate so heated, messy and inconclusive debates? Our view is that the debate was messy because Keynes, in his attempt to defend his monetary theory of *the* interest rate was gradually drawn into an increasingly distinct argument centered on the features of what he later called "the process of capital formation". The latter subject is, obviously, very important, but it goes much beyond Keynes's original concerns and arguments. The liquidity preference theory of *the* interest rate does not dispose, per se, of the subject of the possible theoretical influence of saving on investment. It is also insufficient in itself to address the role of financial systems, markets and instruments. It is clear from Keynes's writings, however, that these are questions to be addressed in a different, or larger, theoretical framework.

Robertsonian concerns with the creation and settling of debts are valid and have to be addressed. Keynes advanced the idea that the entrepreneur had to expect that short-term debts could be funded into long-term obligations if investment plans were to be actually implemented. The consideration of short and long-term debt, however, is a related but different subject. Loanable funds theories and liquidity preference theories are alternative explanations of *the* interest rate, that is, a representative *index* of the basket of interest rates being charged in a given economy. The question of funding short-term debts into long-term liabilities has to do with the *structure* of interest rates, a different theoretical problem. Of course, a complete theory of investment finance has to deal with all those problems, but recognizing their differences and specificities may be a useful starting point[17].

Notes

1 The other being Jacob Viner's. The two rounds of debates, in the thirties and in the eighties, were examined by this author in Carvalho (1996a) and (1996b), where bibliographical references to the debates are given.

2 For example: "To avoid confusion with Professor Ohlin's sense of the word, *let us call the advance provision of cash the 'finance' required by the current decisions to invest.*" (Keynes, 1937a, p. 247, my emphases)

3 The Keynesian sense of liquidity employed in this discussion refers to the relation between aggregate supply of and demand for money.

4 Liquidity in the Robertsonian sense means to be free of debt obligations.

5 Cf, for instance, Tsiang (1956).

6 Replying to Robertson's comments in 1938, Keynes made clear his view about the similar nature of the transactions and finance motives to demand money: the first is the demand for money "due to the time lags between the receipt and the disposal of income by the public and also between the receipt by entrepreneurs of

their sale proceeds and the payment by them of wages, etc.; the finance motive is "due to the time lag between the inception and the execution of the entrepreneurs' decisions" (CWJMK 14, p. 230).

7 "The fact that *any* increase in employment tends to increase the demand for liquid resources, and hence, if other factors are kept unchanged, raises the rate of interest, has always played an important part in my theory. If this effect is to be offset, there must be an increase in the quantity of *money*." (CWJMK 14, p. 231, Keynes's emphases)

8 Keynes frequently uses the term *cash*, which is even more precise if unnecessarily restrictive.

9 Cf. CWJMK 14, p. 232: "It is Mr Robertson's incorrigible confusion between the *revolving fund of money in circulation* and the flow of new savings ..." (my emphases)

10 Keynes raised the possibility "that confusion has arisen between credit in the sense of 'finance', credit in the sense of 'bank loans' and credit in the sense of 'saving'. I have not attempted to deal here with the second. (...) If by 'credit' we mean 'finance', I have no objection at all to admitting the demand for finance as one of the factors influencing the rate of interest." (Keynes, 1937a, pp. 247/8). We should keep in mind how Keynes defined finance, as shown above.

11 While Robertson seemed to have thought that the problem was one of faulty logic on Keynes's part, Asimakopulos interpreted the idea of the revolving fund being replenished by spending as a special result of Keynes's (and Kalecki's) model: "Keynes is assuming implicitly that the full multiplier operates instantaneously, with a new situation of short-period equilibrium being attained as soon as the investment expenditure is made. Such a situation is a necessary, even though not a sufficient, condition for the *initial liquidity position* to be restored." (Asimakopulos, 1983, p. 227, my emphasis). According to Asimakopulos, the instantaneous multiplier was necessary to make sure that all saving was voluntarily held and used to buy the long-term liabilities issued by the investing firm so as to allow it to settle its debts with the bank. It is not the same story as Robertson's, but it shares the same concept of finance and liquidity.

12 Actually, the finance motive is considered by Keynes as a borderline case between active and idle balances. They are active balances because they are related to a definite expenditure plan in a definite date. They are also, in a sense, idle balances because they will be withdrawn from active circulation for typically longer periods than those considered in the active circulation.

13 For instance, through clearing arrangements where netting is accomplished.

14 "In our economy money is created as bankers acquire assets and is destroyed as debtors to banks fulfill their obligations." (Minsky, 1982, p. 17).

15 Also, Kaldorian speculators could be brought into this picture to help money to circulate toward aspiring investors.

16 Again, Keynes insisted all the time that the barrier to be overcome for investment expenditures to be made was the provision of money. See, for instance: "Increased investment will always be accompanied by increased savings, but it can never precede it. Dishoarding and credit expansion provides not an *alternative* to increased saving but a necessary preparation for it. It is the parent, not the twin of increased saving." (Keynes, 1939, p. 572, emphasis in the original). To put it more bluntly: "The investment market can become congested through the shortage of cash. it can never become congested through the shortage of saving. *This is the most fundamental of my conclusions within this field.*"(Keynes, 1937b, p. 669, my emphasis)

17 The author outlines such a theory in Carvalho (forthcoming).

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