Integrating Money in Capital Theory: A Legal Perspective (Islamic Finance)

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Abstract: The purpose of this paper is to shed some light on the legal aspects of money and capital. For many years there has been much emphasis on the technicalities of the production function, resulting in a neglect of its legalities, while the latter not only precedes the former but also transforms money into actual capital. Conventionally, money and capital markets (both considered to be of a loan character) are distinguished on the basis of the duration of their loan period. Failure to distinguish the legal difference(s) of money and capital has become the source of many essential confusions and misunderstandings. As a result, Islamic banks are rightly alleged of operating on usurious activities. Unlike the way the conventional and Islamic banks operate today, the supply of money and the emerging institution become endogenous to economic structure as a result of the elimination of money markets; hence guaranteed stable Islamic system.

Keywords: Money, Capital, Production function, Transformation, Institution, Endogenous, Legal and Financial.

1-Background

> *…the production function has been a powerful instrument of miseducation. The student of economic theory…is instructed to assume all workers alike... and then he is hurried on to the next question, in the hope that he will forget to ask in what units [a quantity of capital] is measured. Before ever he does ask, he has become a professor, and so sloppy habits of thought are handed on from one generation to the next.*
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> *Professor Joan Robinson (1979; p.76)*

> *…as Joan Robinson has stressed again and again, the argument has not really anything to do with the problem of measuring and valuing "capital," as opposed to the meaning of "capital,"*
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> *Professor G. C. Harcourt (1982; p.355)*

The legal aspect of money and capital will help us fang their proper theoretical place. This would fill the existing gap in textbooks where they put an undue concentration on

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the technicalities of the production function, a corresponding neglect of the legal aspect of a firm and the environment in which it produces. This in turn will make the production function a meaningful concept.

The students of economics are traditionally and rightly exposed and taught different areas related to economics such as accounting, business law, management and organization, etc. However, they seldom get a chance to appreciate the direct relevance and importance of these subjects in better understanding economics. Such missing links originate from economic textbooks, in general, whose main concerns are the technicalities of economic theory. I might dare to say that no one single microeconomic textbook ever treats the theory of the firm in a legal environment. The legal aspects of a firm are totally absent from such textbooks. For a theoretical or practical idea to exist in the real world it has to be both legally defined and its role and function(s) explained and recognized by the public. To name just a few examples: cellophane, electronic signature, virtual teaching, e-banking, e-government, etc. among others. Specific formal laws and regulations are a basis for the behavior of every single economic agent in human societies. Social contracts are supplements to these laws and regulations, for that matter. Billions of transactions take place everyday based on social contracts. This is mandatory for economists to give proper attention to this long-neglected important point. There is a remarkable lack of any clear account of the matter in question. By far the most controversy has centered on the meaning of capital as a reflection of such contract.

The boundary between money (potential capital, M) and actual capital (K) is often neglected. After interest and profits are properly defined the distinction between money and capital are made possible.

Interest rate and expectations about its future trend adversely affect the behavior of economic life, which in turn disrupts rational calculations of the outcome. Movements in interest rates color speculators' estimation of the future course of gains.

Both interest and money are artificial social conventions. Most school of economic thought takes the latter as necessity and one of the many high-valued inventions of humankind, but the former is a debatable social convention. Any attempt to analytically prove, or even disprove for that matter, interest is futile and useless. Given that interest is return to money, Bohm-Bawerk's analysis to introduce three elements, put together, in determining interest have everything to do with capital but not to money. In his analysis, capital has been misplaced to show the necessity and realness of interest. His endeavor shows, once more, that capital is productive, with no relevance to money.

Some economists are in firm belief that time preference alone is sufficient to prove the necessity of interest. Taken this position for granted, according to Professor J. Schumpeter interest would not exist in the evenly rotating economy consisting of overlapping generations. Furthermore, as I understand, while Islam endorses "time preference", yet rejects interest, presumably on grounds of them being independent issues. Rate of profit, determined in the real sector, and capital both are such real phenomena that every school of economic thought has to take them seriously and incorporate them into economic analysis. Denial of either one of these two fundamental concepts brings about collapse of the economic system. These concepts are very important in Islamic economic system. The importance of the rate of profit is such that, unlike in the capitalistic system, which centers on interest, it is pivotal to Islamic economic system and, more importantly, equilibrium in three markets (i.e., labor, capital, and commodity) could simultaneously be determined.

It is further claimed by many economists that the rate of profit would equal rate of interest in the end. Ample historical evidences prove that real rate of interest and real rate of profits over a long period of time for Group-7, quite contrary to the often position taken by these economists, have never been the same.

Keynes drew a clear distinction (which was confused in the old orthodoxy) between interest as reward to money loan and profit. This was the return that a businessperson hoped to get. This distinction, which is between money and capital, is a necessary foundation of sound and healthy economy. Now the question is whether the artificial social convention of interest is necessary for the proper function of an economic system. Serious doubts have recently been cast on their necessities, which prove the legacy of Islamic injunction on interest.

Treating monetary sector independently from the real sector, seems to me, is responsible to produced "some objectionable features" for capitalism, using Keynes' language. If business cycles believed by some western economists to be as old as capitalism are a historical fact, it should lead us to find a correct path devoid of such features. It seems, though, that interest and its derivatives give us clues.

In a capitalistic system that centers on the rate of interest, discretionary monetary policy affects the economy in a notorious way that leads to instability. Both of them promote grounds for speculation. A sound economic system is the one with relatively more stable fundamental factors and, more importantly, endogenously determined money supply.

Traditional (capitalistic) economic system has developed volumes of literature in different areas of economics many of which are admirable in their own right. However, there are still many unanswered questions. One such area is the lack of link that has ever existed between money and capital. Professor Joan Robinson has aptly put this problem.

When Robinson[2] calls both capital and net receipts of a business "a sum of money" and that the two never co-exist in time, she altogether forgets the legality of an established firm. Legal processes have to be undertaken before "a sum of money" transforms into actual capital. As soon as these processes have taken place, under some simplifying assumptions, both will co-exist in time. It would be quite unfair to assume that such a brilliant authority was unaware of the legal aspects of things. She rightly criticizes Keynes for creating confusion by describing a purchase of shares on the Stock Exchange

[2] See her Contributions to Modern Economics; 1979; p.117.

as an act of investment. She quite consciously distinguishes between shares and loans on legal and philosophical grounds[3].

It seems, though that Joan Robinson by asking the question[4]: “How can finance be treated as a factor of production?” has come very close to solving the long lasting unanswered question but she has failed to push the problem a step forward.

The distinct types of model developed particularly in the United States in order to determine the meaning of capital did not satisfy her. She seems to have become disappointed and thus given up by calling the controversy on capital “a great waste of mental energy,”[5] .

These are some of the deep disappointment about finding the ideal answer to the question she raised. She even ignores what Keynes had to tell us about it when he rightly proposed the likely treatment of capital.

Capital in existence at any moment may be treated simply as “part of the environment in which labour works,” using Keynes’ own words[6]. This intellectual clue, but more elaborated with some terminologies borrowed from other disciplines related to economics, brings us very close to our model in sections that will follow.

Financial system is undoubtedly part of the general functioning of the system, but monetary system is independent from the real sector as often dealt with. As it stands, the legality of money loan exemplifies the individualistic behavior in a system in that the lender does not tale part in the outcome of the borrowed money wherever it is used, as is customarily manifested in bonds. This contradicts with PLS contract whose only manifestation is stock. In this case, the stockholder takes on the responsibility of the outcome of the “capital” invested.

Interest being the reward to speculative demand for money does not necessarily rule out the possibility of borrowed money at interest from being used for investment. In such a case, a surcharge levies on the “capital” used as a factor of production as opposed to Profit and Loss Sharing (PLS) in which no such burden exists.

There are unanswered questions Muslim scholars have to deal with in the case of the abolition of interest. One such problem, probably the most important one, is the place of capital and money in an Islamic theory.

Although “a new business sets out with a sum of money whether owned by the proprietors or borrowed at interest” as put forward by Professor Joan Robinson, but she is not clear as to the process by which “a sum of money” is put in business. In an article published in 1953, she tried to revive the old question and asked whether the quantity of

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[3] Op.cit., foonote on page 37.
[4] Op.cit, p.116.
[5] Op.cit., p.125.
[6] The General Theory;1964,p.214.

capital, was supposed to be a sum of money or a list of "machines." It should be clear that in order to set out a business, there is a need for "a sum of money." This sum of money represents the market value of "something." The next section in this paper deals with this "something."

The purpose of this paper is to address some of the questions raised by her. However, the present writer does not claim, by any means, to have arrived at a conclusive answer. His claim is that it is an attempt to push the question a step further to reach a satisfactory answer.

2-Basic Model: Money and Capital Reconsidered

There are four inter-related pivotal concepts in economic science; namely money, capital, interest and profits. To have a rather clear idea about them we need, on the outset, to ask one important nonetheless simple question: What is a "firm"?

If laws and regulations are primarily provided to keep order in a society their secondary tasks are to produce legal entities, given specifying their rights and responsibilities, in order to supply numerous kinds of goods and services a community wants. These entities are sometimes related to real things, called human-beings, and to socially-produced beings, some other time. Our concern, here, is restricted to the commonly-known firm as an "institution". The goal of a firm, to be specific, of stockholders, is to earn profits. Every essential component of a firm, i.e. factors of production, is supposed to receive its own share. In capitalism, labor, capital, and land would receive wages, profits, and rent, respectively. These entitlements are made possible only in the framework of the institution of the firm. The institution of "firm" is so important that millions of people having billions of dollars but failing to go through the legal process of establishing it can not expect to earn even a penny. Loan, a social contract, is another institution for which two parties is needed to sign the contract. This contract, although conventionally made for over a period of time is not of the kind the lender, sometimes bond-holder, should expect any share on its working even if used in the institution of a firm. Having a share in the working of "money" is possible only when the possessor of money decides to go through the legal process and instead of becoming the lender becomes stockholder of the firm. This is the only way the bond-holder can claim a share in the profits of the firm. This is another distinction that has to be made between the institution of loan and institution of a firm. This distinction is central to our discussion. The failure to distinguish between these two institutions has been the source of much confusion the economic literature has rarely, if any, accounted for.

Providing money to a firm, via loan, is not the same as supplying capital. Although the bond-holders, or lenders, do not have any right, whatsoever, over the workings of the firm even if it is used to buy asset items, however, they are given the prerogative to claim for the principal plus interest charges, even in case of bankruptcy. This would preserve the balance between their rights and responsibilities which means that they are not given any right to vote in the firm or claim any share in the profits but are entitled to get their loans back. On the other hand, the rights of the stock holders have also been made in balance. They are the owner of the firm and all the profits earned by the firm are theirs. Furthermore, they are the only ones who have the right to vote in the firm and hence have all claims over the profits. Another distinction that has to be made is about the risk taking. The lenders to a firm hedge against any risk but stockholders are the real risk takers. All rights of the lenders and of the stockholders and preservation of the balances between the rights and responsibilities of the two different financiers are conventionally taken care of in Business Laws. Stocks and bonds are basically two different legal documents with fundamentally different impact on economic activity. Again, the key to distinguish money from capital is to bring in the "institution" of a firm into the analysis. To separate money from capital market on the basis of the length of money loan, as is quite often defined, is naive.

In an attempt to produce a hypothetical balance sheet for a country, we can take from the liability side of the balance sheet of the central bank "Currency Held by Public" and use it as the liability of such hypothetical statement. In the next step we take the value of all goods and services produced by firms in the country and put it as Assets of the proposed balance sheet. The values of both sides of this statement have to be equal, as an identity, at any moment in time and for every chosen economy, leading to the primary form of the Quantity Theory of Money. It can also be used as a powerful tool to justify the drawing of the aggregate supply function as a 45 degree line for which satisfactory answer has rarely been provided. The importance of such a hypothetical balance sheet has yet to be explored. In brief, it can be used to show why "money is not wealth". If accountants are allowed to add liabilities of a firm with its assets to make the asset values twice as much, we, as economists, likewise, can add stock of money with other country's assets to double the wealth of a nation.

Above analysis shall make it clear that money is not capital. In brief, money has to undergo a legal process for becoming capital which makes it inevitable to take risk in order to be eligible for profits. This legal process changes the nature of money, making money, now capital, part of an institution. This institution has to employ other factors cooperating with capital. No return to money/capital is possible without this process.

Capital itself, as it stands now, is not able to produce profit, it has to be incorporated with other factors of production. The same is true with land and/or labor. These three primary factors of production are complements before they could be substitutes. Their interdependencies produce a synergy without which it can hardly be imagined. In a fair economic system, as Islamic is believed to be one; profit is to be shared with other factors cooperating with capital. Such interdependencies, however essential and indispensable, might make it difficult to produce a well-defined general equilibrium analysis. Though it might seem beyond belief, but is not beyond reach.

Any attempt, unintentionally or otherwise, which brings about money market which, in turn, produces interest (rate) is to be strictly avoided. Money need not go in such market in order to become, indirectly, one of the factors of production. There is a short-cut to make this even easier, which is to have it to undergo the afore-mentioned legal process. Islamic economics, by abolishing interest, clears the fog in one stroke. Those interested to directly finance an investment project the only safe option they are faced with is to finance, devoid of interest, as owners of the firm and ask for their own share of profits. Such finance can hinge only on profit that must originate in the real sector of the economy. This option which integrates the real and financial sectors leaves no room for the money market and its chief activity, speculation.

Let us go back to the question raised above. A Firm by definition is a legal entity. Its legality makes it possible to transform inputs to output(s). Its legal entity precedes its technicality. Business laws and other related regulations prevent the physical establishment of a firm to come into existence before the formalities of the legal processes finish. The long neglected legal aspect of a firm has become a source of many misconceptions and confusions. One can rarely find the legal aspects of money transformed into capital and being analyzed by western economists in the literature, even when they are directly related to the subject matter[7]. In his Capital, Karl Marx addresses to The Transformation of Money and Capital and gives The General Formula for Capital using exchange cycle of M-C-M', where M'>M and the increment provides value and surplus value which, according to him[8], originates from labor power. In such a treatment his main concern is circulating capital which is far beyond the concept we intend to address in this paper. Had there been satisfactory answer provided to the legal aspect of the firm, Professor Robinson would have never stated her dissatisfaction about the subject matter. I cannot name one single textbook in which the legalities of a firm incorporated into the theory of the behavior of firms. Economic students are in darkness by ignoring such an important point. Many useful implications derive from this issue. The least that is said is to define capital and its association with "a sum of money." This may partially provide answers to the long lasting question put forward by Robinson as to the "*meaning*" of capital rather than its measurement. Professor Ronald Coase[9] approaches the problem from an aspect different from ours in this paper. A very brief answer to this question from another standpoint is that a firm is a real compound just like the natural compounds. Although, this is a synthesis of wills and wishes the synthesis is made possible by laws and regulations. The wills and wishes of shareholders enter into a new institution called the "firm." This legal synthesis itself is unique in that it affects the society and the society affects it. It acquires a new personality, customarily termed Legal Personality. Its identity is not only exhibited physically but also new compound New Institutional economists call "Institution of Firm." The multiplicity of (shareholders) constituents' desires and wishes dissolves and transforms into the unity of the compound. Even though an actual synthesis takes place the common goals' of the constituents attain a new form and identity—the plurality of shareholders does not convert into a unity. They still preserve other legal and real aspects of their own. Firm conceived of in this form as a physical entity is given new entity called "legal." This, as said earlier, is often ignored in almost all microeconomic textbooks dealing with the theory of the firm. In this

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[7] See, for example for the record, P.J. Drake: Money, Finance, and Development; Oxford (1982); R. Coghlan: Money, Credit, and the Economy; London (1981); J. Tobin: "Monetary Theory: New and Old Looks (Money, Capital, and Other Stores of Value); American Economic Review, May (1961); pp.26-37; J. Gurley an E.S. Shaw: Money in a Theory of Finance; Brookings Institution,(1990); and R.I. McKinnon: Money and Capital in Economic Development; Brookings Institution, (1973).

[8] Volume One Part 2, Chapter 4, (1957).

[9] The Nature of the Firm,(1937).

sense, it not only is the effect of reduction and dissolution but also the cause of transformation of money into capital. Now, the question is how money changes in to capital.

In order to present our model, we need to make some preliminary remarks. These remarks may seem simple but are of important consequences. We start with a table illustrating factor shares of income traditionally used in textbooks. An amended version of such a table is below. Amendment is made on grounds that interest is return to money, specifically debt, whether used for investment or not. Nevertheless, traditional treatment is of the form that interest is return to capital. This has, probably, been one reason some economists like Cassel[10] assert that "capital produces the interest". It is not hard to realize that owners of capital receive profits and owners of money interest. It seems that the original table of the distribution of national income is on logical grounds to bring about equality between income share of factors of production and GNP.

Table 1: Amended Shares of Factors of Production in Capitalism

Factor of Production	**Share**
1- Labor + Entrepreneur	Wage
2- Capital	Profit
3- Land	Rent
4- Money?	Interest
Total	**GNP**

Surprisingly enough, in the amended table of the distribution of income, money not only has to be considered as one "factor" of production, in order to make the picture completed, but also it stands in the same level as other factors of production. To bring, superficially, factor shares into equality with GNP is a fallacy. Nowhere in economic theory can one find any legitimate justification for considering money as capital. The proper distinction between money and capital is central to any economic system. This distinction is real and determinant in that the development of an economy gears with the quantity as well as the quality of capital not with money. No single evidence shows otherwise. To fail to make this distinction produces a fallacy as it has in capitalism. Above simple logic, which led us to construct the amended table, if fully appreciated, proves that "interest" does not have any conceivable place in a coherent and sound economic system and represents what I wish, if I may, to call "prime fallacy." Even if we deny money market, there still exists a fallacy in the analysis. Interest is, undoubtedly, an artificial social convention, which has overloaded the money to perform its own universally accepted functions. Additionally, if all factors of production, including "qualified" labor, land, and capital, are considered as wealth of a nation but money is not; as aptly put forward by Adam Smith.

[10] The Nature and Necessity of Interest;(1957;p.49.

From accounting principles' standpoint, any sum of money entering into a (legal) firm should have proper heading, sales, loan, equity-capital, gift, etc. The origin of such transactions goes back to the original capital invested in the firm. Such transactions are taking place in monetary terms. There are many other aspects of accounting concepts that economists have to be acquainted with and learn from accountants. This brings us to another aspect of this paper; rarely given proper importance by economists. Another goal of this paper, however not as important as other topics, is to reconcile and bring some important economic terminologies as close as possible to those of accounting. To keep away from accounting terms and developing new terms alien to those in accounting profession has not brought any real good for economists. To my surprise, economists have developed several terminologies, which are different in connotation from accounting counterparts, but at the same time base their analyses on the statements that accountants produce with the commonly used terminologies in accounting. Cost and capital are the two obvious ones. In profit and loss statements prepared by accountants, all costs are of historical nature, however, due to prevalence of inflation all over the world, accountants have taken into consideration this universal disequilibrium phenomenon and have re-assessed some items in the balance sheet and sometimes few items in profit and loss statements. Economists emphasize on the opportunity (or, replacement) costs instead of the historical costs. No need to mention that "cost" here has different meanings for accountants and economists. In important cases, economists, unlike accountants, make up terminologies far beyond reality. The problem is that, if economists are right in making their own terminologies, they have to amend these statements according to their terminologies and produce an "economic" balance sheet, an "economic" profit and loss statement, and the like.

Ironically, evidences show that they have never ever attempted to make such amendments but have used the same statements produced by accountants, intact, and has made their policy recommendations based on these statements. Another important issue is the fact that corporate taxes are based and received on accounting, rather than on economics, principles. Let us ask one of the most important questions in this respect: is economy evolved around accounting or economics principles? Thousands of managers owning their stores ignore the rent that had to be paid if rented. They do not customarily add the opportunity cost of their stores on top of other costs and shift it to the customers. To make things economists that are more sensible, can take any commodity they wish and find answer for them to see where they stand in an economy. They will soon realize that in order to make economics a realistic discipline, many changes have to be made, and soon. Going back to the above table and concentrate on the distinction made between money and capital. Under some legal obligations, firms keep their records under the basis of accounting rather than economics principles. To artificially enforce some rules and definitions to firms, so important role they play in an economy, with no legal mandate takes us away from real world problems and might make many of our attempts quite hypothetical and consequently reducing the remaining parts of economics, so essential, to mere mental practice with no relevance to realities. Therefore, with appropriate modifications nothing is more practical than economics. One-way, if not the only way, to make economics more practical than it now stands is to make some reconciliation between economics and other branches of social science. Not only we do not gain much by making some economic concepts isolated from their counterparts in other disciplines but also we lose practicality in these respects. To make economics more sensible than it is now and better understood by students makes us obligated to bridge the existing gaps between some economics terminologies and those shared by other similar branches of studies such as management, accounting, finance, law, and the like.

A close look at the differences that exist between money and capital shows that they, in fact usually, originate from the ideas New Institutional economists have put forward. This can be probably, best be accomplished by considering their characteristics as follows:

$$M:\{(1)\ L=100\%;\ (2)\ V>1;\ (3)\ MC=0;\ (4)\ d=0;\ (5)\ \sigma=0;\ (6)\ R=r\}$$

$$K:\{(1)\ L<100\%;\ (2)\ V=1;\ (3)\ MC>0;\ (4)\ d>0;\ (5)\ \sigma>0;\ (6)\ R=\rho\}$$

Where: L= liquidity; V= velocity; MC= marginal cost; d= depreciation
R = return; σ = risk; r= rate of interest; and ρ = rate of profit

As is seen from above sketch two observations can be made: (1) there are no similarities, whatsoever, between money (M) and capital (K), and (2) all the differences stem from legality aspects of money and capital. It is the institution of the firm, which has the task of transforming money to capital. As it stands, interest (rate) cannot be derived from capital (stock). This distinction is fundamental to our understanding of capital theory.

The mechanism that transforms money into capital can be visualized as:

$$M \mathbin{♀} L \rightarrow K$$

In this case ♀ stands for “legal combination” and L for labor. It should be read:” as soon as a sum of money (potential capital, M) is legally combined with a factor of production most likely labor (L), it changes its legal aspect to actual capital.” Failure to distinguish between money, capital, and calling capital “a sum of money” without any qualification has been the source of many misconceptions. In the macroeconomic formulation of the “equation of exchange” associated with the Cambridge School national income and money are two stocks related as : $M=kY$ whereas in the Neoclassical model, the velocity of money, V, serves the function of converting the money stock into a flow in: $MV=Y$. It seems, though, that the attempt to make the equation dimensionally valid does not necessarily make money identical with capital with dual characteristics; one capital as stock and the other investment as flow.

Money with all the importance attached to it (i.e., being potential capital besides its fundamental functions in Islamic economics) is discussed differently from those in other social sciences. Its peculiarity does not make it to be something ordinary logic rejects it. If by money in the Table some economists believe it to be “circulating capital,” again it does not give money a character different from the capital in accounting language. The origin of some items on the asset side of a balance sheet goes back to the capital initially intended to put in investment projects. They include cash, bank account, accounts receivable, equipments and machinery, building, storage rooms, inventory… etc. As it stands, economists have to accept all items of the balance sheets prepared by accountants if their responsibility for both making economics as a practicable science and policy recommendations is a serious issue. Let us go back again to the Table. Almost all Western economists believe that capital stands in the same relation to interest as labor does to wages. Besides undermining the place of labor—human beings—they mostly seem to have forgotten where interest has come from. It essentially originates in the money market whose main and ultimate determinant is speculative demand for money—to recall Professor Hicks'[11] strong assertion that "The demand for money itself is necessarily always speculative in a wide sense". The money rate of interest is the outcome of speculation on money. Professor J. Tobin[12] distinguishes two possible sources of liquidity preference (certainly for speculative purposes), while recognizing that they are not mutually exclusive. "The first is inelasticity of expectations of future interest rates. The second is uncertainty about the future of interest rates".

Although some monetary economists have tried to distinguish between short-term from long-term interest rates without taking the trouble to go through the details, however it seems futile to me. Nevertheless, the fact is that the long-term is the envelope of the short-term interest rates and that speculative demand for money, which is a short-term phenomenon, determines short-term interest rates. Debt-capital which is one standard method to finance parts or all investment expenditures are long-term in nature seems that the borrowers have to borrow at the "going" rate of interest normally determined in "the" money market. It is not conceivable to talk about two different money markets based on term structure, one for the short-term loans which are basically for speculative purposes and the other for long-term purposes to finance debt-capital. This kind of treatment, if plausible, could be generalized to cover "prices" of all durable goods. Long-term prices are based on short-term prices. Furthermore, our long-term income depends on our short-term income. This was probably the reason Professor Hicks[13] assumed that one-period interest rates are determined in a general equilibrium framework in which either a long- or a short-term rate, but not both, are included. Additionally, Professor Lutz[14], in his paper on the term structure after laying out quite carefully the assumptions needed to validate the expectations hypothesis, deduces that:

a) The long-term rate is the average of future short-term rates.
b) The long-term rate can never fluctuate as widely as the short-term rate.
c) It is possible that the long-term rate moves contrariwise to the short-term rate.

Now we turn to short and long-term interest rates and briefly explain the problem that exists in such treatments. Although two distinct interest rates are distinguished in capitalism, one short-term and the other long-term, they are of the same nature but different magnitudes. The same is true for money; money is money, we do not have different monies. Special care has to be taken here not to get confused our main concern about "money" with other types of money some economists like Professor Gordon

[11] See his Value an Capital;(1968);p.56.
[12] His "Liquidity Preference as Behavior Towards Risk"; Review of Economic Studies;1958;pp.65&67.
[13] Value and Capital;(1968);pp.165-166.
[14] "The Structure of Interest Rates"; Quarterly Journal of Economics;1940.

Tullock[15] talks about in his paper. The type of "money" we are mainly concerned with throughout this paper is the type that," in and of itself, is an almost perfect expression of a large externality,"[16] whose perfect manifestation is "paper money." We also understand the assertion made by J. M. Keynes[17] that for every "durable commodity" there can be a rate of interest in terms of itself, but our concentration is on the "paper-money rate of interest". Now that we have made an attempt to expose the confusion around the concept of capital and money, a quick review on the rate of interest, as return to money, and rate of profit, as return to capital and comparing their impacts on economic activity might be instructive; see Appendix A.

2-1 A Note on Speculation and on Demand for Money in an Islamic Economy

Ever since bizarre terminologies like **"**loans with equity feature**s"**[18] have appeared in the Islamic economics literature have constantly infuriated me. It should be clear that "loan" and "equity" are not only of two different legal natures but also very different in economic consequences. The strand of erroneous thoughts and conclusions of some papers may convey the idea that they are ultimate of Islamic economic analysis of their kind due to their unfortunately having become the most frequently cited papers. The problems become even more serious when one realizes that they have, surprisingly enough, long survived unscathed as they stand. Therefore, there is an urgent need with ever expanding literature as well as the practice of Islamic banking both in Muslim and non-Muslim countries to, once and for all, re-examine the two most important economic concepts, i.e., money and capital whose different legal aspects and economic consequences place them under two different contracts. Furthermore, with ever-increasing awareness of the public on Islamic banking the urgency become even more serious. Repeatedly, loan is used for money whose return is interest (Riba) and capital, mostly for investment, whose return is profit.

As I understand, "many objectionable features of capitalism," stem from the fact that monetary sector is independently dealt with the real sector; hence instability acknowledged by many master economists. *The failure to integrate monetary sector in the real sector has severely impaired many economies of the world.* Specifically, financial integration in the real sector should undeniably be the most important task of Muslim scholars if seeking for a sound, self-correcting, and dynamic Islamic economic system is a serious issue. This effort, if successfully carried out, will make both money and Islamic banking endogenous. This is the type of dream that economist strive for. The purpose of my paper is an endeavor to help standardize both the connotation and the operation of above two concepts in the literature, as much as I can, by integrating money in capital theory. Therefore, if my objections and suggestions have any validity, they shall reduce many of the existing ambiguous analyses and the consequences of Islamic banking to irrelevance. This might eventually place the basic concepts, in Islamic banking, in the mainstream. If succeeded, it would pave the way toward such

[15] "Competing Monies"; Journal of Money, Credit an Banking; Nov. 1975;pp.491-497.
[16] Op.Cit.;p.491.
[17] The General Theory;1964;pp.222-223.
[18] M.S. Khan & A. Mirakhor (eds.): Theoretical Studies in Islamic Banking and Finance; (1987),p.169.

standardization. However, it is expected, as is evident, that my paper to face several objections, all of which are welcome in advance.

It appears that with above demonstrations there would be no need to emphasize that studying demand for money in an Islamic economy adds nothing to our understanding due to the abolition of interest and consequently of its immediate derivative, that is, speculation. Ignoring the mutual relationship between interest rate and speculation made the classicists believe that the money is for transactions and nothing else like speculation. Keynes later discovered its destructive role. Although their ignorance about speculation goes back to its unimportance in those days but our deliberate ignorance is due to the strict abolition of interest (rate) in Islam. I firmly believe that this prohibition is, by no means, limited to money because the effects are all the same. Money, copper, wheat, or even steal plant are all speculated upon.

Based upon above argument, it seems to be an absolute mistake not to condemn speculative demand for money in an Islamic framework. For those writers, like Mohsin S. Khan and A. Mirakhor, who might still have problem to swallow my argument it should suffice them to ask themselves why Keynes asserted that there would be as many rates of interest as there are durable goods in an economy.[19] Due to its being at the very infant stage of the development, such mistakes in Islamic Banking have many evil bearings on them. A master economist who has good command on both capitalistic system and Islamic school of economic thought will never make such a preliminary mistake. *Mohsin S. Khan[20] and later with the assistance of A. Mirakhor tried to develop an IS-LM curve apparently based on Islamic Interest-Free banking without any justification as to its relevance.* By changing the name of "real rate of interest" to "real rate of return" he[21] describes the model as "a dynamic variant of the standards IS-LM model and no special factors have had to be introduced up to now". In conclusion, he cheerfully acknowledges that:

In many ways the lack of understanding and confusion that exists about Islamic economics can be attributed to the virtual absence of formal descriptions of the theory underlying the proposed system[22].

He is probably still on the belief that he has successfully complemented and filled the gap of "the lack of understanding and confusion" that existed in Islamic banking. He may not even know that instead of solving some problems he has unintentionally or otherwise, not only solved any problem but also added new problems. He further adds:"…this model does provide a reasonable portrayal of the types of Islamic banking systems that have been put into practice in certain countries"[23]. There is a need for a short digression. Labor in this system does not receive the reward it deserves. It is under-paid. Profit maximization necessitates the lowest possible wage rate to pay for the labor. Profits and

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[19] Ibid.
[20] Theoretical Studies in Islamic Banking and Finance;1987;pp.15-35.
[21] Op.cit.;p.26.
[22] op.cit,p.31.
[23] ibid.

wages in capitalism naturally move in opposite directions. It is not clear how equity, one of the promises of capitalism, could be preserved in such a system. Additionally, labor is not in a place it deserves if we believe that it is both the producer and the consumer of the goods and services produced in an economy. This is what we mean by independency of demand and supply in a conventional capitalistic system. It is not hard to demonstrate that justice, on the part of labor, is maintained through cooperation between labor and the capitalist. On the other hand, money, in this system, has been paid during past centuries; it does not deserve any reward if regarded as potential capital and the desire is there to liberalize capital. However, as soon as it changes its legal nature to actual capital it deserves its own proper reward. This is exactly what that concerns us here and is the main purpose of this paper.

As said before, there are so many confusions surrounding money and capital as was repeatedly noted. For example, one of them has been made by Professor Cassel[24],in that he explicitly concludes, after some discussion, once again, that **"**the capital produces the interest.**"** It is the speculation of money rather than capital that produces interest in capitalist economies**.** He among others failed to distinguish how and under what circumstances money and capital work. Surprisingly, there is no evidence that any economists has ever seriously talked about the legal aspects of money and capital. These aspects are not yet part of the economic analysis. His argument for interest mainly centers on the productivity of capital. No one has ever cast doubts about the productivity of capital. He further states[25] that the value of capital is the rate of interest. More specifically, it seemed hard for him to realize that capital has the value based upon its productivity, which in turn, is independent from the rate of interest. He seems to make an attempt to show that interest is a real phenomenon, yet ignoring its origin, speculation. There are other economists who try, by linking interest with money to prove "fertility of money.

Still some other economists are on the vague view that money is barren (sterile). The potency and impotency of money is not realized before it is legally combined with factors of production; just the same way as a woman or a man before getting married. Either of them may be potentially potent. In case of money, before its combination with factors of production, there are cases that keep it, seemingly, impotent; however, unlike a naturally impotent man or woman it always has the chance of becoming potent. Money is not naturally impotent, in fact every penny, every time and everywhere, has the potentiality to become potent. It is the type of economic system that keeps part of the potential capital away from factors of production (via production function) and makes it impotent. Unlike impotent man or woman, impotent money kept in money whirlpool, produces lot of economic problems. Money whirlpool is the effect of interest (rate). For centuries, humankind has greatly suffered from keeping monies to act impotent. To pay interest as legal obligation of borrower does not make money potent. Even bankruptcy of a firm, for that matter, does not prove impotency of money used as capital; it has to do with market structure and conditions other than potency of money. We have to look for an economic system within which there are mechanisms that make all the monies available potent.

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[24] The Nature an Necessity of Interest;1957;p.49.
[25] op.cit,p.46.

Elimination of interest makes it possible both to put money next to factors of production, via production function, and to make it "fertile." Money does not go primarily to the money market and then, possibly part of it, into the production function. That part of money, which never comes out the money whirlpool, as is the case in capitalism, is impotent. As said above, unlike impotent man and woman, impotent money inflicts the greatest harm to the society in the form of unemployment, inflation, inequitable distribution of income and wealth, business cycles, and stagflation. We need to explore, in a rather detailed manner, the nature of speculation because of its importance.

By speculation, throughout this paper, we mean any action which changes the course of natural events in a money economy to an unsound and unhealthy one for the general public but to the benefit of a very few. Unhealthy events are those which, soon or late, bring about instability in the economy and the crises of confidence which afflict the economic life. So long as it is open to the individual to spend his money, as speculator, on stocks the alternative of purchasing stocks as one of his asset items can not be rendered sufficiently attractive. It needs some ratification and specification in order to prevent any malfunctioning in the system. To bring society into healthy state what needs to be done is to change myopic views of speculators through whatever devices possible combined with development and maintenance of long-run confidence on the part of the general public. These, as we expect and apart from negligible instability due to the characteristics of human nature, would bring in stability. But one thing is for sure and that is speculation harms the public confidence because of the nature of speculators' expectations about the future course of the rate of interest. Speculators normally earn income by attempting to "buy cheap and sell dear". There exist methods to diminish speculative activities in the stock market and bring the bubbles of speculative gains down to zero. One of them is to make the purchase of a stock permanent and dissoluble. This will bring up a dilemma which might seriously impede new investment. However, they should not concern us here. I do not intend, at all, to use the term "speculation" the way it is used in ordinary parlance. I try to use it basically the way Keynes has used it in his General Theory. To be specific, almost all transactions involving exchange of stocks in stock markets whose prices are market-based are speculation. There is an exception to this and that is the exchange of stocks issued by firms and sold in the market for the first time, primary market, and any other time afterwards whose prices closely match with the real value of the firm not to the market value of the stocks. The prices at which stock are normally exchanged far exceeds their real value due to bubbles. Manifestation of the real values of stocks is the real value of the assets of the stock-issuing firm. On such distinction, ordinary stock markets, that are the secondary markets are, as I understand, money markets and the primary markets devoid of bubbles, due to speculation, are capital markets. The latter is essential and necessary for any economic system, be it Islamic or otherwise.

The money market emerging from speculation in the secondary market needs justification. All manipulations taking place in the secondary markets reduce transaction, in fact, to M(1)-C-M(2) where M stands for money and C for commodity, here stock, and M(2)>M(1). In this process, stock plays the role of collateral in exchange of money for money because the two parties do not know each other. The transaction is of lendingborrowing nature "as if" the holder of C needs money and demands it and the buyer of C is there to lend money in exchange for stock. This process takes place in a short period of time. The lender and the borrower, both of them speculators, are entered into such transactions with the intention to reverse their positions, in many instances, the same day. In this very short period of time, "speculation" about the changes in the future rate of interest changes the market value of the stock, yet leaving the asset value of the issuing firm totally intact. The money rate of interest of the magnitude [M(2)-M(1)]/M(1) emerges from such speculative actions. Keynes' essential critic to classicists centers on the fact that rate of interest causes speculation. If my argument is convincing and well justified one concludes that rate of interest is both necessary and sufficient condition for speculation. Given that $\Delta K=I$ the way primary (stock) markets operate, nowadays, are in effect, highly developed money markets in that the time period between two transactions on the same stock is so short that it does not allow any change in the stock of capital, or assets for that matter, to take place.

The word "capital" used in textbooks implies a long-run commitment on the part of the lender and a long-term need for the funds on the part of the borrower. Surprisingly, the money market, in them, is a market for short-term (less than one year) loans[26]. Such a naïve distinction in which time separates capital market from the money market is one of the many sources of confusion. It is very hard to pinpoint when and how such misunderstandings have originated. In the money market, time is so short that does not allow any addition to be made in capital, or asset, for that matter, of a firm to be made. Although, speculation, literally, reduces to the exchange of money for money but it shall not be confused with trade for reasons which are beyond the scope of this paper.

What should worry us most about speculation is the instability it introduces in the economic system. It was satisfactorily demonstrated "…that speculation-if mistaken-tends ultimately to be self-correcting in any commodity market; but what Keynes further recognized was that the self-correcting mechanism is either absent or very slow and painful in the case of the interest rate"[27]. One can then argue that if inconsistency exists in classical model between saving and investment functions, the former being primarily a function of income and the latter a function of the rate of interest, the rate of interest would fall toward zero, except to the extent that the speculative demand for money would cushion its fall. This combined with a relation, attributed to Wicksell, to which we will soon return, in many instances there exist a saving gap,i.e.,$S>I$ which means that the really crucial cause of unemployment is the speculative demand for money. This is the kind of instability speculation brings about and should worry us. The manipulated "price" emerging from speculative activities, quite often, far exceeds the real value of stocks. These manipulated prices do not contribute any extra value, whatsoever, to the assets, or for that matter to the capital, of the issuing firm. The difference in value is nothing but bubble which have frequently burst in the past and there is no guarantee that it will not happen again.

[26] see for example D.G. Luckett; 1984;p.147 & 154
[27] G. Ackley; 1969,p.177

Now the question is how important is above argument in an Islamic framework? Given that speculators are aware of the bubbles existing in the market price of stocks; special care has to be given to avoid any activity which involves interest (rate) to develop. I need to digress here to make sure that I have well understood the meaning of Riba (interest). I firmly believe that the intention of Islam in abolishing interest shall not be attributed exclusively to money rate of interest but rather to all kinds of interest in relation with any durable commodity since" for every durable commodity we have a rate of interest in terms of itself". Furthermore, professional speculators are not the only ones who enter into the stock market. Ordinary people also enter into such transactions. What we need here most is to provide them with full information about what they really buy. They have the right to be informed what they, in fact, possess by buying stocks at their market prices. These are more likely the most vulnerable and losers of all in such markets. To protect the general public, bubbles shall not be allowed to develop. Prices of stocks supplied in the primary markets have to be tried to be as close as possible to their real values. To ensure buyers are not cheated upon, we need to make such information available through whatever channels possible. Ample evidences can be found that a sound Islamic Bazaar is able to provide such information. Such Bazaars are still active in many Islamic countries where buyers have access to the information regarding the prices and qualities of different products. The shapes of these Bazaars have attracted the attention of some location theorists on efficiency grounds and have made some recommendations[28].

A sound and managed stock market with close supervision would eliminate the money market emerging from the conventional stock market and as the result capital market, as defined above, to which scanty attention has been paid, will be substituted for. Islamic economics, by abolishing interest, clears the fog in one stroke. Devoid of interest, finance can hinge only on profit that must originate in the real sector of the economy. Integration of real and financial sectors leaves no room for the money market and its chief activity, speculation.

Real investment expenditures have their attractiveness which might solve the dilemma. Interestingly enough, as mentioned before, statistics show that the rate of profit for G7 combined and for each member country, separately, have been much higher than the long-run rate of interest, with no exception, for 29 consecutive years[29]. The internal rate of return (IRR), the essential criterion for selecting capital investment, would have, undoubtedly, been even much higher than the long run rate of interest, Neoclassical theory holds that the relationship between the rate of profit on productive capital and the real rate of interest on money is based on investment. The latter is increased by high rates of expected return on speculative demand for money. The resulting pressure on available resources cause real interest rates to rise whose impact is to pass on these high rates to the consumers of the community which comprises the whole population but benefits a negligible percentage of people. By "profits" here we mean the gross trading profits of privately owned industrial and commercial companies. That is, in capitalism, profits will be measured gross of interest payments, taxation, and depreciation provisions,

[28] see as an example M.L. Greenhut, 1974
[29] P. Ciocca & G. Nardozzi;1996,pp.167-8

but net of non-trading income such as interest on financial assets owned by the companies[30]. All interest charges will vanish in an Islamic setting. We further retain the capitalistic assumption that the chief objective of the typical firm is to expand its productive capacity which requires investment in fixed assets. Additionally, the amount of profits which the firm sets out to earn is determined by the amount of investment that it plans to undertake. Unlike the position held by neoclassical theory that the firm is willing and able to finance by borrowing any investment project, there would be no borrowing on interest in our model. While we rule out some neoclassical assumption but hold some other, like certainty, but in a different connotation. Reality is too complex to let us assume certainty; however, we need not incorporate uncertainty and instability as the result of speculation in stock market. Rather we need to reduce any uncertain and artificial events to their minimum level. It is well understood that investment expenditure projects are intrinsically interwoven with unavoidable natural risk. Any element of artificial risk (better be termed uncertainty) whose distribution is unknown and depends upon the characteristics of speculators, is deliberately ruled out. In this sense the rate of profits has its own distribution whose mathematical expectation plays central role in investment decision making within our present discussion.

Let us go back to Wicksell's formulation about the interdependencies of money(M), saving(S),investment(I), and hoarding(H)—as the first approximation of liquidity preference—later put by Keynes, which looks like:

$$S+DH+\Delta M=I \ ; \ DH=-H$$

Where DH=dishoarding; by assuming $\Delta M=0$; since $H>0 \longrightarrow S>I$

And naturally unemployment will occur.

In order to have full employment, money has directly to go to the production process. In this way, almost all ills of capitalism, as the author understands, will be removed. This is the type of surgery capitalism needs most. In short, interest is, in fact, the root of all economic evils.

The most capitalism is able to do using monetary and/or fiscal policies are either to boost aggregate demand or aggregate supply. It has proven to be unable to boost both simultaneously. Capitalism needs to go through a thorough surgical operation to make it possible to follow a system that enables it to simultaneously boost aggregate demand and aggregate supply. Professor M. Weitzman's[31] suggestion, to follow Japanese type of labor remuneration alien to capitalism to conquer stagflation is not a remedy but just a tranquilizer. My close investigation to the problem suggests that no one suggestion would be successful unless the cancer cells, i.e. interest and speculation are removed from capitalism. In the surgical operation, we would not only be able to make the economy a healthy one with built-in self-regulating and self-adjusting elements but also a system that guarantees sustained growth. This will partly save economics from its dismal state. Let us see what the author of *The Wealth of Nation*[32] has to tell us:

[30] A. Woods;1975; pp.1-2

[31] The Share Economy (Conquering Stagflation); 1984.

[32] Wealth of Nations;(1937);vol.1;p.5.

> When the stocks of many rich merchants are turned into the
> Same trade their mutual competition naturally tends to lower
> Its profits; and when there is a like increase of stock in all the
> Different trades carried on in the same society, the same
> Competition must produce the same effect in them all.

Again, Adam Smith first took the essential step to disentangle the ever-lasting confusion between money and capital. The sum of money supplied to benefit from interest in the money market may, or may not at all, go into the “adventure” of investment. In fact, the investor seeks to maximize his/her profits, or internal rate of return, to be more precise, which is totally independent from the rate of interest, according to the way interest is customarily treated in relation with the internal rate of return on any investment project. The more fundamental point is that proponents of interest have to provide an explanation as to why interest exists in the absence of inflation and risk, in the first place. An investor works within a legal framework; the so-called “firm” which makes the production to become a possible event. It is essentially and totally different and independent from “buying and selling money” as if money is a private good. With the basic important difference that the former has on all the social benefits attached to it but the latter produces harm to the society. In defending economists, earlier to Cassel, of being able to understand the difference between profits and interest, he (Cassel) [33]again, like others, confused the two concepts; i.e., profits and interest by observing that:

> It would be misleading to suppose that the earlier economists
> Did not understand the difference between business profits
> In general and that part of them, which is properly interest on
> Capital…

Profits are not subdivided into interest and profits of enterprise as has erroneously been done by Cassel.[34] He further observes, “Adam Smith[35] tells us expressly that, in his time, double interest was considered a fair rate of profit,”. Let us make it straightened out. Take a simple example where an entrepreneur uses only two factors of production; capital (K) and labor (L). He borrows the sum of money, at the going rate of interest (r), necessary to undertake a business venture and pays the labor its going wage rate, (W). Assume, additionally, that interest charges, (r. K), as well as wage bill, (W.L), are paid after the product is sold out and from the total revenue, (TR) he receives. Obviously, entrepreneur’s reward is not TR but TR─ r. K─ W.L that is by definition profits (∏). It would be a plain mistake to call the entrepreneur’s total revenue as his profits and say part of which goes to interest charges on capital. It is because profits are exclusive of both interest charges and wage bill. Profits are not subdivided into interest and profits of enterprise as has erroneously been done by Cassel. What an entrepreneur earns and puts into his/her pocket, in a tax-free system, is his/her own reward to which no one can have

[33] The Nature and the Necessity of Interest;(1957);p.24.
[34] op.cit.,pp.24-29.
[35] Wealth of Nations; vol.1;p.9.

any claim, whatsoever. It is hard for me to understand why it has ever been hard for many writers to swallow the above simple calculation. It reminds me of the assertion made by Henry Hazlitt that:

Economics is haunted by more fallacies than any other study known to man.

To find an answer to above-mentioned misunderstanding, two alternatives come to one's mind: firstly, it is hard to understand, and secondly, it pretends to be hard to understand. If the former is the case it would not be that hard to make it understandable but if the latter is truly the case, then one might lead to assume that there is something wrong with Capitalism such writers attempt to hide. This was probably the reason Alan Greenspan stated, in April 1998, that: It has become increasingly difficult for policy-makers who wish to practice, as they put it, a more 'caring' Capitalism, to realize the full potential of their economies. This also reminds us of the strong position Joan Robinson[36] has taken in stating:

> *The purpose of studying economics is not to acquire a set*
> *Of ready-made answers to economic questions, but to learn*
> *To avoid being deceived by economists.*

There is another confusion introduced in economic literature. Who is capitalist? The person who makes advances is no one but a moneylender in that he/she does not have anything to do with capital. In order to go from money to capital a legal process has to be completed. After this process took place and a "firm" is established, "money" loses its own nature and legally transforms into "capital." Besides, that an entrepreneur by taking the risk of investment becomes eligible to earn profits is no reason for the moneylender to ask any portion of it without sharing the risk. Does "profits," on scientific grounds, justify payment of interest? Some master economists, like Professor P.A. Samuelson[37], have found it easy to defend it on ethical grounds; i.e., fairness. He has apparently found the positivistic logic unable to justify interest. In an attempt to salvage the deadlock, he has utilized normative argument. Is the issue not really an ethical one that has been determined in the capitalistic school of economic thought? Is it in the realm of positive economics? The present author has found Western economists' arguments totally unsatisfactory on the grounds of its being in the positivistic domain.

Going back to moneylenders there are of course, many who have the money but desperately avoid any risk. They could be hedged against any risk when interest-free banking is introduced and properly analyzed. It then becomes obvious. What is it that we are so much concerned with? The answer should be clear by now. There are many problems and fallacies rooted on both interest and speculation and not on anything else. These, as I understand, are probably the main "objectionable features of capitalism" Keynes has been so much concerned about. In a futile attempt Cassel,[38]again , like many, if not all, Western economists, tries to, somehow, make some connection, however

[36] Collected Economic Papers (1951-80);vol.2,p.17.
[37] Economics (An Introductory Analysis);1964;pp.583-4.
[38] The Nature an Necessity of Interest; (1957);p.31.

artificial, between the rate of interest and productivity of capital, the origin of which goes back to Bohm-Bawerk era. In some place, Cassel sums up the results of the discussion between Ricardo and Malthus, in the following three points

a) Interest is determined by the principles of supply and demand;
b) The supply [of capital] is regulated by the tendency of accumulation to diminish when the rate of interest diminishes, and
c) The demand [for capital] is regulated by the tendency of the natural productivity of land to diminish when the population increases.

The last two of these, according to Cassel, would have been good starting points in further investigations into the forces operating on the supply and demand of capital. We need to construct the theory of the firm in a different context incorporating the missing elements. For an excellent effort see B. Mukherji[39] in which he has tried to utilize Professor A. Wood's[40] framework to develop a theory of the firm in such a system. Professor Wood's pioneering book has aptly been evaluated to be a book that"…fills a major gap in economics by providing a new theory of what determines the profit margin of the individual company and the share of the profits in national income. It is inconsistent with existing theories of profits, but it is consistent with most empirical studies of company behaviour." Professor G. C. Harcourt's[41] outstanding attempt to utilize accountants' way of dealing with finance problems of companies shall not be omitted from the list of rare economists who have correctly tried to reconcile some economic principles with those of accounting. It undoubtedly adds further insights on the behavior of firms in addition to that of Professor Wood's. Economists will surely learn much by theorizing their models with accounting type analyses. Lot of losses has incurred due to ignoring and/or under-valuing the latter efforts, as is evident from the formers' works and publications. Disagreement with some of them, as has quite often been declared by professional economists, is hardly just to ignore all. It was Irving Fisher[42] who took a first step toward coordinating economist's and accountant's work. This book which was much admired by Vilfredo Pareto besides presenting the first economic theory of accounting, is, or should be, according to Professor J. Schumpeter[43] the basis of modern income analysis. The literature on the necessity of interest for an economy suffers extremely from a logical justification. No single evidence exists, to the extent of my knowledge, on grounds of legality to separate money from capital. Surprisingly enough, on the belief of most, if not all, Western economists that capital was "a sum of money", Robinson[44] has again revived, according to herself, the old question and asked "whether K, quantity of capital, was supposed to be a sum of money or a list of machines." measured.

[39] The Theory of Growth of a Firm in a Zero Interest Rate Economy;(1984).
[40] A Theory of Profits;(1975).
[41] The Social Science Imperialists (Selected Essays);1982.
[42] Nature of Capital and Income;(1965).
[43] History of Economic Analysis;(1994),p.872.
[44] Contributions to Modern Economics;(1979),p.76.

As an eminent authority in the subject and realizing the "defective methodology" in economics and being the first, and probably the best, economist ever to name the very "defective" areas in economics, Professor J. Robinson, has unfortunately failed to correct the defectives and to incorporate the amended defectives in a coherent analytical method. Not only this, but also she has followed the mainstream of thought she had made objection about. The present state capital theory the way neo-classical economists think of a position of equilibrium by using the statement: 'A man of words but not of deeds is like a garden full of weeds' has professionally been recapitulated by her as, "This is sadly true of the theory of capital"[45].

2-2 Supply of Money Unidentified

It seems instructive to go back in the economic history and find out briefly about the validity and effectiveness of monetary policies essentially based on "the supply of money". Let us start from the capitalistic premise that the important variable for determining the level of employment and the rate of change of the price level is the state of aggregate demand. The Radcliffe Committee was appointed by Britain's Chancellor of the Exchequer in May 1957 "to inquire into the working of the monetary and credit system and to make recommendations". The Committee investigated the way in which money was supposed (according to the prevailing monetary theory) to influence that variable. This led inevitably to a consideration of the direct and indirect impact of money to economic activity. It was argued that in a, then, highly developed financial system with many financial intermediaries, grave theoretical difficulties were posed in identifying or labeling some quantity as "the supply of money". The inference is frequently made the Committee itself did not or could not define the supply of money for England. At various places in the Report of the Committee the words "supply of money" are put in quotation marks followed by such phrases like: "however that is defined" or "whatever that may be made to mean", giving rise to the inference that the relevant quantity could not be defined.

It is a subsequent paper by R.S. Sayers, one of the Committee members, widely believed as providing the theoretical substructure for Radcliffe monetary theory that raises the issue whether money can, in fact, be defined. We read, "The difficulty of identification has derived from the two-fold nature of money…as a medium of exchange and as a store of value…"[46]. Although Gail E. Makinon does not agree with the problem posed above but satisfactory justification can hardly be found to the contrary[47].

Now the problem is, if money is undefinable or includes a broad category of "assets", it may either be impossible to discuss the monetary policy actions of central banks, or monetary policy tools for accomplishing stabilization objectives which center on commercial banks may be inadequate and require supplementation. Additionally, if

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[45] Contributions to Modern Economics; (1979);p.81.
[46] R.S. Sayers: "Monetary Thought and Monetary Theory in England"; Economic Journal; Vol.70, No.4; Dec. 1960; pp.710-24
[47] for further analysis of the Radcliffe Report, Gurely-Shaw and Roosa, see Gail E. Makinon; 1977;pp.267-81

money can not be defined, a monetary policy is impossible, or depending on how money is defined, radically different theories may be advanced concerning the way in which money influences economic activity.

It can be argued, at this point, that the level of employment, and the rate of change of the price level, for that matter, is more closely linked with the rate of transformation of money to capital than it is solely on the supply of money, however that is defined. Abolishment of interest and elimination of its derivative, that is speculation, closes that gap between money, as potential capital, and actual capital. It also provides a simple method to define money exclusively as the medium of exchange with the potentiality of becoming actual capital.

Economic growth is closely tied with the amount of capital incorporated with other factors of production but not on money in its strict sense. Let us give an example. Suppose gasoline (gas) is just used in automobiles and airplanes to move passengers from one point to another. Gas needs to be properly placed in a suitable environment, call it "engine", composed of spark plugs, battery, and oxygen in order to be able to perform the task they have been designed for. Amount of demand for gas is directly geared to the number and the capacity of "engines" properly placed in cars and planes. Billions of barrels of gas might be produced and yet passengers wait in long lines to be moved; as is the case in some oil-producing countries. The queues of the passengers can not be eliminated unless specific environment in the form of car and plane engines is supplied. This environment in our discussion is the "institution" of firm to transform money (potential capital) to actual capital. This leads us to the very important question that: "What role, if any, does money play in the process of economic growth?". Do we develop a "better" theory of economic growth by expansion of the stock of money or by stock of capital into the dynamics of the long-run? Another related question is: "How much money of the available stock undergoes a legal process for becoming capital?". By allowing speculation, be it on money or stocks, to take place, those parts which go in the speculation whirlpool does not do any good to the society, but harm, unless it is diverted into the institution of "firms" using other factors of production cooperating with actual capital. The capacity of production of a firm directly hinges upon the value of the assets of the firm. In the aggregate level it is the value of the assets of the firms existing at any moment in time which determines the production capacity of a country not the supply of money. Furthermore, the higher the ability of a country to transform money to capital the greater would be the rate of economic growth, and, the higher the speed of this transformation the greater the ability to absorb unemployed labor and less unemployment. This transformation, obviously, takes time and effort. It is in this sense, as I understand, that time is generally believed to be the essence of capital and not of money. Capital, in a firm, is locked-in for an unspecified period of time as long as firm can survive in the industry. Unlike capital, money is perfectly liquid implying that it can change place very fast. If time is not allowed to be sufficiently long, capital would be unable to produce output; hence no profits.

The essential ingredient of capital is time. Capital does spring from time via money. In other words, capital and time are closely associated. However, we need not go all the way with the Austrians and accept that capital is time. To close the gap between stock of money, paid as the remuneration of factors of production, serving as the medium of exchange, and actual capital have sometimes been recommended to be accomplished by imposing high taxes on the so-called "capital gains". Whether such recommendations would guarantee full employment is dubious. Abolishment of interest and of speculation on any durable good is a powerful device in an Islamic framework to achieve this important goal. In general equilibrium analysis more attention has to be paid on capital and its return as profit than is customarily done. The theory of capital can be treated as an extension of static equilibrium theory to take account of time. Technical progress and economic growth take place in time and is closely related to capital not to money. Production is possible without money, as can be imagined in barter system, but not without capital. This statement is not to be taken as to reduce the importance of money in a money-based economic system. Money has the potentiality to be converted into capital. In money market, time, however short, produces the rate of interest and in capital market rate of profit, or internal rate of return (IRR), for that matter, independently from the rate of interest.

The amount of capital, or assets using our upcoming terminology, is much easier for authorities to measure than to measure the stock of money, as was made clear by the Radcliffe Report. Firms are required, by laws and regulations, to provide tax authorities with their annual financial statements namely, balance sheets and profit and loss statements. The amount of capital, which according to our discussion is closely tied with fixed assets, net of depreciation, can easily be measured using these statements. It does not need to be loosely and unsatisfactorily defined and estimated. Our message in this paper is probably the most important one which will be amazed to find it scarcely discussed at all. The market price of stocks centers on the going, as well as expectations about the future, rate of interest and itself sets boundary around which interest rate would fluctuate. This process might continue before bubbles burst and as long as the issuing firm is in existence.

By abolishment of interest and integrating money in capital theory an interdependent market system will develop which is, hereby, confessed to be a very complicated construction in which all the most important specifications will normally play a part in influencing economic activity. Simple answers to complex problems are not always the best answers. Complicated questions require complicated answers. The type of economic system that would thereby develop in the setting of our paper is going to be a different and much more complicated one than has ever been analyzed. Nevertheless, on economic knowledge we are led to conclude that it expands our understandings with presumably higher economic growth and less instability, if any. It surely produces new problems. But problems are always there to be solved but not going away without.

3-Extended Model

The model presented in the above section was an extension of the conventional theory of the firm where the legal aspect of the firm is left out. This is done for simplicity. Such apparent simplicity therefore is purchased at certain cost: the simplification rules out the aspect of a firm in the real world. This is put back at the cost of the original simplicity. It is not possible, seems to me, to theorize a purely technical relation between output and capital at the cost of the legality dimension. Above section demonstrated a model with the institution of the firm taken into account. In this section, such an institution takes another aspect of the firm in order to make it more realistic. In so doing we, again, go back to some basic accounting terminologies. It deals with the balance sheet of a firm. Balance sheets are identities, which always and everywhere bring about equality between capital (K) and debts (D) from one hand and assets (A) from the other. That is $A \equiv K+D$. It is understood, that the asset of a running firm is always greater than capital in value, or given that $D > 0$, it follows that $A > K$. Schematically:

Balance Sheet

Assets	Liabilities
Fixed assets	capital
Variable assets	debts
Total Assets (A)	≡ Capital (K) + Debts (D)

Management of firms is judged by their own records of actions of their own based on their own responsibilities towards the shareholders. They are accountable for their acts, as they have been legally delegated the authorities to run the business and act accordingly.

Their responsibility to the shareholders is not restricted only to earn ever-increasing rate of profit based on the commonly-use of "capital" of the firm. Using economic terminology, capital in this sense, mostly, refers to a set of machines. Rate of profit (the ratio of profits to capital), though a useful measure in its own right, to evaluate the performances of the management can be misleading for two reasons: (a) a set of machines with no other facilities cannot provide an environment suitable for labor to work. We, in fact, feel that something is missing here New Institutional economists are concerned. Point (a) leads us to (b). (b) As said above, asset value of firms are normally greater in value than capital. Using the ratio of profits to assets (fixed and net of depreciation) provides us with a better and more realistic criterion for evaluation purposes than does the other one. The reason being that management has under its control all the assets of the firm to do its job. This new ratio, for the reason given above, would normally be less than the previous one; however more compatible with realities. This argument essentially proves that the responsibilities of the management go far beyond the shares of the shareholders. In our extended model it is the value, arrangements and the types of the assets of the firm which form the environment in which the labor works not capital being usually defined as sets of machines or "a sum of money."

In an Islamic framework where PLS contract is used as soon as a contract is signed with an Islamic bank both capital and asset values of the firm increases by the same amount. Hence, our model extends to cover such situations. Furthermore, even in the debt-capital case it adds the debt value of the borrower firm with the same impact on its assets, according the fundamental principles of accounting. Machinery, tools, and other equipments constitute only a fraction of the total assets of a firm. To make economic theories more compatible with real life, economists have to make it clear what they mean by "capital" of a firm, above sections were addressed to, which partly made economic science being called dismal science. Does “capital” to an economist refer to the liability of the institution of the firm (a legal entity) to its owners (real entities) or the market value of the firm? What will happen to the rest of the “capital” being defined as the difference between total assets and firm’s debts? Does this discrepancy or does it not contributes to the production of commodity? Are they redundant? If yes, what is the logic behind purchasing them in the first place?

Answer to the questions raised above, and many others, shows that items other than those related to the initial capital put into a firm have their own contributions in producing output; however important, they are not accounted for by economists. Profit maximization precludes any expenditure to occur unless the benefit overwhelms the cost.

Based on above argument some asset items have been made possible to be purchased with capital. Therefore, the proper measure to be used in the production function can be written in the form:

$$Q=f\,(A, L)$$

In this case, Q stands for output, A for assets, and L for labor. As it appears, this formulation encompasses some properties peculiar to itself, and different from the conventional production function in that:

(a) All asset items such as machines, land, buildings, warehouses, and others put together as one inclusive item with their own productivities are accounted in the process of production.
(b) Integration of all asset items means that their contributions to produce output, contrary to the usual method are dependent one each other.
(c) More important of all, it is the value, arrangements, and the types of assets that not only makes the production function, f, meaningful but also transforms the legal aspect of the institution of “firm” into its technical aspects. We have tried so far to come close to some accounting terminologies and make use of their treatment of capital and assets in the balance sheet. We can make further use and redefine investment (I) to be any positive change in the value of net fixed assets (A), (hereafter, just assets unless otherwise specified). That is:

$$I = \Delta A$$

3-1 Is there any significance attached to our formulation?

In this new formulation, as said before, the contribution of every factor of production measures in conjunction with others, and dependently upon them. This brings us closer to real life in which assets without labor have no meaning and vice versa. This necessitates a cooperation that develops between asset owners and labor. The synergy produced as the result of such cooperation benefits both shareholders and labor. In a simplified case, labor has dual character; i.e. it supplies labor to the firm in order to produce goods and at the same time demands goods produced in the economy. This will make a mutual interdependency between aggregate demand and aggregate supply. If this property were taken, advantage of it would bring about a self-adjusting and self-correcting mechanism. In other words, any deficiency in aggregate demand is easily compensated. Such property brings the system close to real life and the underlying assumptions are the messages of Islam.

The traditional treatment that assumes the benefits of the labor to be independent from those of shareholders by paying him, presumably, his value of marginal product not only increases the cost of production but also makes him indifferent to the fate of the firm he works for. This might have been one reason for economists to have suggested efficiency wage with limited advantage which made them, subsequently, inclined to adopt the Japanese way of labor remuneration for, say, the United States, however alien to capitalism[48]. The sub-title of the book is instructive which reads: "Conquering Stagflation" and has another message for the reader; that is, there is, or there are for that matter, factors in capitalism that naturally produces stagflation. As I understand, its origin has to be directed towards interest and its derivatives which necessarily, but illogically, separates monetary sector from the real sector. If I am correct in realizing the problem, then integration in capital theory becomes necessary. Another important feature relates to the way iso-quant map is constructed. Instead of using a vague meaning of capital in conjunction with labor to construct such map just on the basis of technicalities of the production function, our proposal shows that

(a) Both legality and technicality of the production function combined will produce iso-quants, and

(b) The environment in that labor works is provided for by value, arrangement, and the types of assets in legally established firm. The complementarily of labor and assets becomes self evident but them being substitute in the traditional treatment is far from reality.

Aggregation is another unsettled issue in case of heterogeneous capital. The vagueness has two origins. One is related to the meaning of capital itself and the other is that the aggregate of something itself not well defined. Our suggestions in this paper are attempts to provide solution to get rid of this long lasting problem. We cannot wait stranded in an entangled circumstances. Obviously there are numerous types of heterogeneous capital in an economy but if we classify them not the way they are but using our suggestion about replacing assets for capital. In other words, our solution tries to classify the firms rather than machines. Number of firms and the types of products they produce are manageable as opposed to the number of machines. The legality of firms combined with their technicalities will help us here for classification. What we intend to do here is to put firms which produce similar products into one category. In this way, we reduce numerous heterogeneous capitals to a manageable size of the products they produce which will definitely be much smaller in number. Let us take an example. As mentioned before, it is the value, arrangement, and types of assets that produce the environment necessary for labor to be used. If we let Q (1) stand for, say, television, Q (2) for automobile, Q (3) for furniture, Q (4) for textile, and so on, where we disregard the types of goods produced in each category. We write them as sequence:

[48] See, for example, Martin L. Weitzman: The Share Economy (Conquering Stagflation); 1984.

$$Q(1) = f[A(1), L(1)]$$
$$Q(2) = f[A(2), L(2)]$$
$$\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$
$$Q(n) = f[A(n), L(n)]$$

Using this method millions of heterogeneous capitals would reduce to, say, thousands of firms producing similar products. Although this usually happens in economic analysis going from firm to industry but carrying with it the vague concept of capital at the firm level. This method has another advantage with respect to labor force, as well. Instead of analyzing different individual labor force in each firm, they can be considered based on their specialties that will usually be useful in many firms producing like products. Aggregation in this case will become easier for both firms and work force. There may be thousands of unused machines and millions of unemployed work force, the only way to put them to work is to provide legally suitable environment, with, of course, reasonable economic incentives. Money, similarly, needs legal environment combined with profit incentive in order to be converted into capital.

This is similar to the population of a country. Millions of people live in a single country. It would be extremely hard to work with millions of different people. However, classification of population between male and female, age group, level of education, and other similar aspects of the population and putting them into one class will greatly reduce the complexities involved working with total population. Let us talk about another advantage of our suggestions. Working with aggregate data in the conventional way requires collecting information about capital stock of the country. Surprisingly enough efforts are put to estimate stock of capital. As mentioned earlier, all firms are mandated to report their balance sheets as well as their profit and loss statements to the tax authorities. Tax authorities without any futile effort to estimate stock of capital will provide for actual value of assets reported in these formal statements with high degree of confidence. Although, accounting methods adopted by different firms are different, but some restricted criteria are adoptable to make them reduce the differences. Furthermore, there is no claim in this paper to make it possible to solve all problems involved in capital theory but our claim is that we have taken the problem at least one step forward to a satisfactory solution. Accounting is one form of institution around which many decisions, particularly economic, take place. Our solution has taken this institution seriously by incorporating few terminologies in this academic discipline into practical economic analysis. The importance of this area of humankind knowledge cannot be exaggerated further. Again, there are lots more that we can learn from accounting profession and help us understand some parts of economic life. This paper seems to have been partially successful to bridge the gap that has ever existed, on few terminologies, between economics and accounting.

4- IMPLICATIONS OF THE MODEL

> *Milton Friedman argued in 1969 that zero nominal (interest) rates are necessary for efficient resource allocation. This study shows that they are not only necessary but sufficient.*
>
> *H. L. Cole and N. Kocherlakota (1998)*

What remains to be addressed to, is to see the implications and importance of the findings of this paper. Below the reader can find some of the most essential points which are not claimed either to be comprehensive or in importance order. The list, nonetheless, can be extended to include other points as the reader might find them useful.

4-1 Any positive change in the value of firm's assets, defined to be investment, will provide a realistic measure to properly evaluate shares in an Islamic stock market instead of their market values. Given accurately reported financial statements, this measure is devoid of any bubble incurring in conventional stock markets resulting from speculative activities which in turn produces interest of its own. In conformity with Islamic teachings, this allows the buyers to have access to complete information who, quite often, have the least information relative to the sellers.

4-2 Unlike capitalism in which boosting the economy starts from changing money supply, (ΔM), in order to stimulate output, ($\Delta Q>0$), which proves exogeneity of money, endogeneity of money in Islam reverses the path;i.e.:

$\Delta M \longrightarrow \Delta Q$ (via change in interest rate) Capitalistic system

$\Delta Q \longrightarrow \Delta M$ (via M♀ L $\longrightarrow$ actual capital) Islamic system

4-3 Endogeneity of money in Islam makes it neutral as opposed to its being non-neutral in capitalism.

4-4 Abolition of interest which makes both money market and speculation non-existent allows us to concentrate on only three markets; namely labor, capital (in our terminology, firm's assets), and commodity for which general equilibrium framework could be constructed.

4-5 Prohibition of Riba (interest) totally changes the features of Islamic banks from being a monetary institution, as is the case in capitalism, to financial institutions. Naturally, monetary policy tools have limited, or even no, application in this setting. Financial sector, therefore, becomes an integral part of economic system as opposed to monetary sector being independent from the real sector, in capitalism. This is essentially different from discretionary changes in the rate of interest which is nothing but intervention in the market mechanism, quite contrary to what capitalism puts so much emphasis on its avoidance.

4-6 Using internal rate of return (IRR) and comparing IRR's of different projects makes the whole parameters of the system endogenous.

4-7 The importance of above arguments lie in the fact that, in an Islamic state, as soon as there seems to be a need to hire unemployed labor this goal can most likely be achieved by printing money and transforming it into "assets" to be used in conjunction with labor.
4-8 It may come as a surprise to some scholars that, in an Islamic economy, required reserve ratio (RRR) need not be kept which means that it could safely come down to zero. This results from money, in this system, to be an endogenous variable; again basically different from capitalism.
4-9 Given that speculative demand for money is basically absent in an Islamic system, underlying every demand and supply in the real sector there exists corresponding supply and demand for money for transaction activities of equal value. That is, transactions demand for money is not independent of changes in the real sector. Whenever there is a shift in aggregate demand function there will be a concomitant shift in the transactions demand schedule. This precludes the system to be dichotomized into monetary and real sectors.
4-10 Labor works in an environment produced by the value, arrangement, and the type of assets in such a way that neither one is able to function without another. In other words, production is a collective action income has also to be collective. This implies that productivity of labor can not be treated independently from that of capital (in our terminology, assets). This certainly provides appropriate rights for the labor force that supplies its labor to produce and also demands what it produces.
4-11 Any search for a model appropriate to a modern western economy, devoid of serious objectionable features, which would allow for an analysis of accumulation of capital, rather, assets, and of the distribution of the net product has to incorporate profits as "the core of analysis".
4-12 To shift our views from sole concentration of the technicalities of production to its legality as well, may, at first glance seem to be unimportant. However unimportant it might be "it is important to be unimportant". In fact, it gives a new dimension, ever absent, to look at almost all economic activities New Institutionalists have advocated. It not only provides a view on the institution of firm, but also proves to be quite useful if extended to other activities undertaken by agents of a society; be it marriage, labor-employer, tenant-landlord, etc. all of which are based on social, formal or informal, contracts. All such contracts bear with themselves specific obligations towards all parties involved, necessary for modern economies to coordinate multiplicity of complex activities. Gain(s) are obtained if benefits to parties are well defined, appreciated and internalized. Cooperation has proven to produce net gains more than those of conflict, if any.
4-13 Social legal structure accommodates all the relationships that exist among agents of a society in such a way that the better and the more effective these structures the more advanced a society would be. One reason for backward economies might be that their governments have failed to provide such an environment with proper checks and balances combined with reward-punishment. This gives us the clue where these societies have to start from.
4-14 This approach has many implications, some of which mentioned above, and is useful for Islamic and capitalistic systems alike.
4-15 Such treatment not only puts labor and assets in their own positions but also bridges the gap between production and consumption from which supply and demand are derived

respectively. That is, if production is a collective action, which is by definition, income has also to be collective which gives right to labor to share part of the profits of the firm it bestows its effort in. As the result, built-in stabilizer is placed in the system which guarantees sustained growth. This, in turn, makes the system counter cyclical through its ability to simultaneously boost both aggregate demand and aggregate supply.
4-16 Labor having stake in the profits of the firm he puts his labor in, not only increases its productivity, rather upholds its effort up to its maximum, but also reduces costs; hence increase in profits. This seems to be the kind of system Islamic economics advocates in which cooperation plays central and inseparable role.
4- 17 The view deduced from this paper about the theory of the firm fundamentally changes our previously perceived concept of the subject matter.
4-18 The most important and immediate contribution of this paper is to make money, in an Islamic framework, an endogenously determined variable via integrating money in capital theory. That is, supply of money is determined on the basis of the availability of factors of production in the economy. Any advancement in technology or know-how or development of manpower skill or new resources discovered which necessitates an increase in money supply will give proper signal to the Islamic central bank. The central bank will have no hesitation or fear about inflation to increase money supply accordingly. It is not hard to demonstrate that the system this paper leads to would be a counter cyclical and stable system through providing the most reliable criterion for the optimum money supply; the long-lasting dilemma capitalism has not produced any solution as yet to cope with. It also provides a method to integrate financial (rather than monetary) sector in the real sector. This is quite different from the way money is treated in the other system in which money supply is an exogenous variable and, as such, monetary sector is treated independently from the real sector. This, as I understand, is the most vulnerable feature of capitalism which can be deduced from interest-bearing loans in the money market and its mutual interdependence with speculative demand for money.

There are other observations in regards to our basic model. Based on our research these are recapitulated in Appendix B**.**

Appendix A: Comparing the Rate of Interest and the Rate of Profit and their Impacts on Economic Activity

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Characteristics of the rate of interest:

1-It is produced in the institution of "loan", specifically, in money market in its broadest sense developed in the paper,
2-It is both the cause and effect of speculation,
3-It, being a monetary phenomenon, is independent from the internal rate of return (IRR) of a capital investment project; hence the opportunity cost of capital,
4-Firms take it as an exogenous variable,
5-Like money, it is also an artificial social convention which might be proven to be unnecessary hence could securely be ignored and deleted from an economic system,

6-It makes full employment impossible via paving the road for speculation,
7-Its elimination bridges the gap between saving and investment and makes the dream of full employment a reality,
8-Its trend, on the expectations of the future rate of interest, adversely affects investment according to both classical economists and Keynes,
9-It produces instability due to speculation (Keynes 'view),
10-Its burden is imposed upon all consumers an yet benefits a very few,
11-In making decision among alternative investment projects it works as the cut-off rate. In its absence projects compete with each other.

Characteristics of the rate of profit:

1 -It is produced in the real sector in the institution of "firms" and differs in magnitude from one firm to another,
2-It is the product of actual capital,
3-It is a variable endogenously determined within the real sector of the economy,
4-It is real; whether positive or negative. Consequently it can not be deleted from an economic system,
5-Its magnitude gives as incentive for investment and works in favor of full employment,
6-Its presence has no burden on the consumers. Consumers willingly choose to contribute to its magnitude.

Appendix B: Recapitulated Observations Derived from the Paper

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B-1 In mainstream economic textbooks, money and capital markets are treated as loan and separated from one another by the length of the loan period.
B-2 The legality of loan precludes the lender to share with the borrower the outcome of the money lent. This property will allow the borrower to use the borrowed money in whatever uses he/she wishes. This means that loans do not have to be used in investment projects.
B-3 Failure to distinguish between legal aspects and functions of money and capital has become the source of many misunderstandings.
B-4 it is widely, and correctly, believed that interest and profits are returns to money and capital, respectively.
B-5 Interest is determined in the money market due to speculative demand and profits in the real sector of the economy.
B-6 Historical evidences show that, contrary to the commonly held position, the rate of interest and the rate of profits, in developed countries, have never been equal in the long-run.
B-7 It is one thing to describe and define money; it is something else to define and make use of capital. Textbooks do not teach students how money can and transforms into capital. Students being instructed other areas related to economics such as business law, accounting, organization, and management still know all too little about the actual behavior of the firm; however, some characteristics of *the institution of the firm* suggest some clues. (a) Firms have two aspects, namely legal and technical, (b) legality aspects usually precedes its technicality, (c) both legality and technicality aspects of the firm, in

modern economies, allow firms to provide "environment" in which labor works and, hence, enjoy legal profits.

B-8 Contrary to the traditional treatment, transformation of money into capital, via the institution of the firm, is costly. When it is costly to transact, institutions matter; something essential but absent in the neoclassical framework. Neoclassical economics further assumes no cost is involved between production and consumption period. As the result, commodities sell out at production costs, given the structure of the market.
Allocative efficiency criterion is abused in such a framework.

Some of the following statements, directly related to our main concern, have been borrowed from Douglass North (1992).

B-9 By institution we mean: the rules of the game, the humanly desired constraints that structure human interaction. They are made up of formal constraints (such as rules, laws, constitutions), informal constraints (such as norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics.

B-10 Institutions are not created to be socially efficient; however, they are formed to reduce uncertainty in human exchange.

B-11 The institutional framework of a firm dictates the kinds of skills and knowledge perceived to have the maximum pay-offs.

B-12 Institutions extend economic theories by incorporating ideas and ideologies into the analysis. This will allow us to compare different economic systems, in a satisfactory fashion. A grand cooperative economic system of Islam, as I perceive it, perfectly fits into this kind of analysis.

B-13 Since the organizations, a kind of which is formal firms, owe their existence to the perpetuation of institutional matrix they will assure path dependence.

B-14 The ideal path dependence can be imagined every group of individual is capable of striving and asking for it. Cooperation, not conflict, is a good example its fruits seldom experienced, which forms such a path.

B-15 The institution of the firm is the only transmission mechanism that makes it possible to transform money (potential capital) into actual capital.

B-16 The institution of the firm establishes with or without formalities. Conventions or mutually agreed upon contracts might substitute the formalities, as is often the case in small-scale activities.

B-17 Those who believe, whether explicitly or implicitly subscribed to neoclassicism, that there is no distinction between "a sum of money" and "capital" are tacitly assuming that the transactions cost moving from "a sum of money" to "capital" is zero or non-existent. That is, as soon as "a sum of money" is gathered capital of equal amount is generated without elapse of time or any cost incurred. They further deal in a world of *instrumental rationality* where institutions are unnecessary[49]. Of course, there is no implication that the consequent institutions are efficient; however, necessary but neglected.

B-18 Neoclassical economists assume perfect information. However, we live in a world of incomplete information. Information not only is asymmetrically held by the parties to exchange but also is costly and not all individuals are prepared to pay for it. Obviously, those with high quality of information preserve a better position compared to others.

[49] See Douglas C. North: The New Institutional Economics and Development (1992).

B-19 In a grand cooperative Islamic economic system, composed of many small coops, it is assumed, by definition, that information is evenly distributed among co-operands in one coop with the result of producing positive synergy not only at micro but at macro level, too.
B-20 It is costly to go from money (medium of exchange with velocity greater than unity) to actual capital (with velocity equal to unity; at least in short run).
B-21 The stock of means of production, the so-called "capital goods," has been known to be an imprecise concept; the imprecision becomes even worse in a system where it is believed that "…capital produces the interest". We cannot remain stranded among imprecise, and sometimes irrelevant, concepts.
B-22 It is true that the finance to be invested is a definite sum of money, but it is not all that there is to it. The market value of capital goods, at its best and unambiguous definition, is "a definite sum of money." The principal question is how such "a definite sum of money" becomes capital.
B-23 In cases where rate of interest is zero (prohibited as is in Islam or otherwise), on grounds of the elimination of the money market and interest rate derivatives, it becomes mandatory to integrate money in capital theory.
B-24 Profit-and-Loss Sharing (PLS) contract is the vehicle by which integration of money in capital is made possible in an Islamic setting.
B-25 As soon as PLS is signed capital and assets of the firm increase simultaneously by equal amount. Islamically established firms, based on cooperation principle, will be able to enjoy equity-capital to finance their investment projects.
B-26 from the two most popular external finance sources available to traditional firms, namely debt-capital and equity-capital, only the latter is applicable to such firms and the former is prohibited on the grounds of being interest-oriented. It shall be non-existent. Equity-capital (share) holder has his/her own privileges and obligations as opposed to the restricted so-called un-Islamic privilege of debt-capital.
B-27 there is no greater challenge facing today's Muslim scholars than incorporating fundamental principles of institutional economics that will fill in many of the gaps in the economic analysis both at micro and macro levels and provide us with a different approach to a better understanding of the real world consisting of positive transactions costs.

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