ZERO RATE OF INTEREST
THE ISLAMIC PRINCIPLE

BY

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INTRODUCTION

The subject of usury (or what has become interest) seems to be as old as recorded history. Holy books have dealt with it, and philosophers, most notably Aristotle, have discussed it in detail. Through the centuries usury was prohibited and usurious behavior was condemned and compared with adultery and theft.

Since the 16th century, however, this position has been almost completely reversed. Interest has not only become acceptable, but is often regarded as essential. It is being applied in all countries of the world.

Abolishing of usury laws has almost universal consequences. Not only has usury become interest, and interest has become synonymous with profits, but the old concept of usury prohibition has been almost eradicated from the minds of people. "Modern" banking has been so completely dominating, that even the remotest individual in the least "civilized" or developed corner on earth is exposed to it and has to experience it. Underdeveloped as well as developed countries alike are destined to feel the impact of interest, as almost all governments carry increasing debt burdens adding to sky-rocketing deficits.
Interest has become the norm of economic behaviour and money dealings. It has become an unquestionable foundation of economic monetary theory and practical policy. Lately, it has become the main tool of Central Bankers "to check inflation". Economists are however divided on this issue, and some have advocated very low interest rates (most notably Keynes). The zero rate of interest, in particular, has not been (since the time of the scholastics) really addressed, except for a few Islamic economists who made some serious attempts to study the subject.

Indeed references concerning the zero rate of interest, are difficult to find. There are a few studies related to "different zeros", such as zero option, zero population/energy growth, the zero sum society, the zero sum solution, zero systematic graphs, zero basic budgeting/planning, etc. No title could be traced that looked into the zero rate of interest by modern economists.

One must admit therefore, that "zero rate of interest" is hardly considered by economists today and might be, under the prevailing point of view, highly controversial. Interest, like Newton's laws of gravity and Galileo's astronomical discoveries, is no longer disputed. The dispute is not whether interest should be charged, but rather how high should the rate be.
This paper supports the zero rate of interest. It attempts to present the basic views of what can be divided into three major schools. The first part covers the Aristotelian/Scholastic school. Both Aristotle and the Scholastics have had similar analyses of usury. Part two deals with usury in Islam, how it is defined and viewed within the Islamic economic system. Analyses of some recent Muslim economists are also presented.

The last part deals with the modern (first half of 20th century) theories of interest rate. Modern economists have had different views regarding this topic. How is it determined? What should the rate be? How is it defined, and why should it be paid?

It must be admitted that this paper is raising more questions (in an area where questions have hardly been raised) than giving answers. The scope of this paper does not permit in-depth analysis which requires a great deal of data gathering, over extended periods of time, to be able to make more profound conclusions.
CHAPTER 1: ORIGIN OF USURY AND USURY LAWS

Alfred Marshall in his celebrated book Principles of Economics commented on the dilemma of those who borrow and must pay interest:

"Those who borrowed were generally the poor and the weak, people whose needs were urgent and whose powers of bargaining were very small. Those who lent were as a rule either people who spared freely of their superfluity to help their distressed neighbors, or else professional money lenders. To those last, the poor man had resort in his need; and they frequently made a cruel use of their power, entangling him in meshes from which he could not escape without great suffering and perhaps the loss of the personal freedom of himself or his children. Not only uneducated people, but the sages of early time, the fathers of the medieval church and the English rulers of India in our own time, have been inclined to say that money lenders traffic in other people's misfortunes seeking to gain through their adversity; under the pretense of compassion, they dig a pit for the oppressed. In such a state of society it may be a question for discussion, whether it is to the public's advantage that people should be encouraged to borrow wealth under a contract to return with increase after a time; whether such contracts, taken one with another do not on the whole diminish rather than increase the sum total of human happiness."(1)

i) The Earliest Form of Interest:

Ancient Babylonia had a fairly developed capitalist society. Profitable investments were made in slaves, agriculture enterprises, live stocks, caravan ships, buildings, irrigation projects, and stocks of goods. The Code of Hammurapi, King of Babylon about 2250 B.C. did not seem to talk about usury, neither did the ancient
Babylonians have a word for usury, in the sense of the legal definition. Interest may have been paid in grain on agriculture loans instead of money. Sometimes interest was abated, shifting the principal to the lender in case of floods or other catastrophes that destroyed the crops of debtors. Loans without interest were frequently made, but interest on money was also a known practice. (2)

There is a strong belief that the prohibition of the old Moszaic Law was developed from the relationship amongst the tribes of the Israelites. Under religious life, relationship has to be kind and helpful. Loans were accommodating between one another and were made at no interest.

It is mentioned that Moses had said the following:

"If thy brothers be waxen poor, and fallen in decay with thee; then thou shalt relieve him; yea though he a stranger, or a sojourner; that he may live with thee. Thou shalt not give him thy money upon usury, nor lend him thy victuals for increase." (3)

In the Talmud, permission has been given for returns to be realized on money, if it is used for trading enterprises, provided these were based on partnership agreements.
ii) **Aristotle Condemned Interest:**

The Greeks were also known to have charged interest, that was high at times, causing agriculture to suffer. It is not clear if interest was outlawed much before the time of Aristotle. However, Aristotle did pronounce all interest to be unnatural and unjustifiable, since it increases intrinsically on itself, and not on any other object or goods.

He had this to say:

The most hated sort (amongst all trades) and with the greatest reason is usury, which makes a gain out of money itself and not from the natural object of it. For money was intended to be used in exchange but not to be increased at interest. And this term interest, which means the birth of money from money is applied to the breeding of money because the offsprings resembles the parent. This is why of all modes of getting wealth this is the most unnatural. (4)

Money was intended to be used simply for the purpose for which it was established. Aristotle views on the real purpose and intent of money were made very clear:

All goods therefore must be measured by some one thing so we said before. Now this unit is in truth demand, which hold all things together...; but money has become by itself a sort of representative of demand; and this is why it has the name money (nomisma) — because it exists not by nature but by law (nomos) and it is in our power to change and make it useless...
Now the same thing happens to money itself as to goods - it is not always worth the same; yet it tends to be steadier. This is why all goods must have a price set on them for then there will always be exchange, and if so, association of man with man. Money then, acting as a measure makes goods commensurate and equates them; for neither would there have been association if there were not equality, nor equality if there were not commensurability. ...There must be a unit, and that fixed by agreement (for which reason it is called money); for it is this that makes all things commensurate, since all things are measured by money.(5)

During the Roman Empire, and in subsequent centuries, usury laws were enacted at times, and repealed at others. Interest was permissible at 5% in 347 B.C. then it was abolished in 342 B.C. when it was found unenforceable, it was allowed again by decree in the year 50 B.C. This time the rate allowed was 12%".

As the Church was established, the early Church fathers such as Chrysostom, Tertullin and others were all opposed to interest of any kind.(6) This policy of usury prohibition by the Church continued all through the medieval period, as will be explained.

iii) The Scholastic Analysis of Usury:

As mentioned, usury did undergo the most profound changes during and after the 16th century. Modern and medieval writers could not agree on the purpose of interest, and the problems, even though identified, were never progressively approached.
Medieval and modern writers on interest apparently have little in common except the subject to which they address themselves. Their eras are so different and so distant that the intellectual influence of one upon the other has been inappreciable. Circumstances of these eras are such that the practical problems involved, though fundamentally the same, cannot apparently be discussed from a common viewpoint. The two schools differ notably, if not irreconcilably in purpose. The medieval writer scanned the facts to see what, given such and such conditions, was right and just. The modern writer looks at the facts to see what will be sound policy."

That is the major difference between the two schools. The Schoolmen were concerned with justice; with right and wrong; penetrated deep into philosophy, history, theology, natural law, Roman law and human experience, human nature, social environment and universal fairness. Maybe because of this, continuity and consistency have been prevalent between medieval thinkers and those of many centuries before. The Scholastics always clearly defined what they were analysing, and knew the purpose of their analysis. They faced problems, thought about them, and wrote solutions based primarily on their beliefs of what was right and just, and what was not.

The first medieval definition of usury in the western world was given by the Nynweger Capitulary, in the year 806, during Charlemagne's empire. It stated emphatically:

"Usury is where more is asked than given."

By the year 1050, usury prohibition was enacted into the law of the Land of the Roman Empire. The defence that the usurer was helping the borrower productively, was blatantly rejected. Papal condemnation of usury was recognized and applied by laymen.

Full restitution of usury victims was enforced as of 850 A.D. Even if such victims were dead, at least half the amount paid as usury was given back to their heirs. St. Anselm of Canterbury (1033-1109) of Italy was the first medieval author to suggest "the similarity of usury and robbery." (9)

His student, Lucca, was the first medieval author to categorically treat usury "as a sin against the seventh Commandment and demand restitution of usuries as stolen goods." (10)

The second Lateran Council passed the first decree in 1139, universally prohibiting usury. It declared that usury is reprobated both in the Old and the New Testaments, and further declared that usurers shall be held infamous. (11)
Late in the 12th century and early in the 13th, the medieval position on usury had been firmly established:

(1) usury is whatever is demanded in return on a loan beyond the loaned good itself;

(2) the taking of usury is a sin prohibited by the Old and New Testaments;

(3) the very hope of any return above the good itself is sinful;

(4) usuries must be restored in full to their true owners; and

(5) higher prices for credit sales are implicit usury.(12)

The scholastics based their theory on a combination of Christian tradition, Roman Law and Aristotle. These in turn are based on: The Old Testament, sacred to the Jews; the new law of the Gospel, which replaces the Old law for Christians; and "natural law" that binds all men.(13)
The third Lateran Council excommunicated devious usurers. However, since most usurers were Jews and Lombards, Jews could not be excommunicated. The Fourth Lateran Council decreed however, that Jews were asked to reimburse the Church for taxes lost on Christian properties which had come into their possession through usury.

A considerable number of medieval thinkers and scholars have written about the subject of usury, defending and clarifying the prohibition laws in the period between the end of the eleventh and the fifteenth centuries. In 1180, a statement attributed to St. John Chrysostom, was incorporated in Gratian and became part of the law of the Church. This was to have an immense influence on the subject in the centuries that followed.

"Of all merchants, the most cursed is the usurer, for he sells a good given by God, not acquired as a merchant acquires his goods from men; and after the usury he reseeks his own good and the good of the other. A merchant however does not reseek the good he has sold. One will object: Is not he who rents a field to receive the fruits or a house to get an income similar to him and who levels his money at usury? Certainly not. First, because money is only meant to be used in purchasing. Secondly, because one having a field by farming receives fruit from it; one having a house has the use of inhabiting it. Therefore, he who rents a field or house is seen to give what is his own use and to receive money, and in a certain manner it seems as if he exchanged gain for gain. But from money which is stored up you take no use. Thirdly, a field or a house deteriorates in use. Money, however, when it is lent, is neither diminished nor deteriorated."(14)
Such a statement was a basis for the Scholastics' argument that was later to be developed. The usurer sells what is God's. Money is fruitless in a technical sense, and does not deteriorate, and it is used for exchange. The usurer takes something that is not his.

As stated, the list of medieval writers on the subject after the 11th century is very long. Only a few will be briefly presented. Probably the greatest Scholastic theologian was Saint Thomas Aquinas (1225-1274). He was a Dominican, a teacher at the University of Paris and various Italian universities, and had an immense influence on intellectual life of medieval Europe during his life and after his death. Early in his youthful days, he built on Aristotle's premise with the following argument:

All other things from themselves have some utility; not so, however money. But it is the measure of utility of other things as is clear according to the philosopher in the Ethics V:9. And therefore the use of money does not have the measure of its utility from this money itself, but from the things which are measured by money for goods. Whence to receive more money for less seems nothing other than to diversify the measure in giving and receiving, which manifestly contains inequity. (15)
There are two interesting divergences from Aristotle. The first is that Aristotle values money by its purchasing power, the quantity of goods for which it is exchanged. Aquinas insists that money is just a measure. Analysis of changes of prices of natural goods that might effect the purchasing power of money is precluded. The character of the measure itself is unaffected by changes which arise fortuitously in the goods market. Being a measure, money has only its legal face value, and like other measures it is independent of whatever is measured by it, and is fixed and stable in its measurement. It cannot therefore be sold.

The second divergence was that Aristotle was objecting to usury on the basis of misusing money. The purpose of money was simply as a means of exchange for goods. St. Thomas based his objection on the nature of money itself. If money is a measure with a fixed value, to value it differently at different times is to distort its formal natural character. The purchasing power of money could change, but its value relative to itself should not. Money is formally non-vendible. It is the medium to facilitate the terms of a sale; but it can never itself be the term of sale. This concept of money was to become central to later usury theory. (16)
Later on, Henry Hesse of Germany (1325-1397), building on the mystic lines, states that the only objects of a loan are goods consumable in use, that the borrower owns the money loaned, that the usurer exploits the borrower's labour, and that time should not be sold. Also, since justice provides for the equality of loss and gain, it is violated when only the borrower is loaded with an unequal risk.

Finally, the last scholastic to be mentioned is St. Bernardine of Siena (1380-1494). He lived in the northern part of Italy and traveled extensively through cities of that region for missionary activities. He was thus confronted with increasing pressures from usurers, involved in trade activities. He would not bend the usury prohibition rule. St. Bernardine argued that fungible goods should not increase beyond their determined value. Natural fungibles like wheat have their value fixed naturally by their quantity. Artificial fungibles like money have their value fixed by law. It is unnatural to take from either class of goods more than their measure.
St. Bernardine added to Aristotle and St. Thomas's argument: (1) usury is the selling of money, which is naturally non-vendible; (2) it is the unjust receiving of a certain gain in return for giving an uncertain one; (3) it is the selling of his own industry to the borrower; and (4) it is against charity. (17)

It is clear that the Scholastics agreed that usury is a profit on a loan, that it is against justice, from whichever way it is looked at. The borrower and his profits are irrelevant in the transaction, and the lender should not be rewarded on a loan. Fungibles and money loans should have fixed value. These should not increase with time through lending.

From the social aspects, the scholastics considered the evil effects of usury on agriculture, the exploitation of the poor, and the encouragement of an idle rentier class.

To conclude this section, Professor Schumpeter had this to say about medieval theologians (scholastics). Though he was more often referring to 16th and 17th century scholastics, those of the earlier centuries may fit this description as well:

They were, no doubt, judges and directors of consciences ... they always knew what they were talking about.
Their pronouncements rested as much on a mastery of economic facts and of the relation between these facts, that is to say of theory - as they did in the hyper empirical system. This fact not only makes them interesting to the scientific economist, but also levels a weight to their pronouncements which those of modern ecclesiastics of all denominations very often fail to carry. (18)

Most of the 20th century economists seem to have looked down on the Schoolastics and their reasoning, sometimes out of ignorance, Keynes, among the notable economists, was one of the few exceptions however, as he too came to understand in more clear terms the Canonists' position; he wrote:

I was brought up to believe that the attitude of the medieval church to the rate of interest was inherently absurd and that the subtle discussions aimed in distinguishing the return of money loans from the return of active investment were more Jesuitical attempts to find a practical escape from a foolish theory. But now I read the discussion as what the classical theory has inextricably confused together, namely the rate of interest and the marginal efficiency of capital. For now it seems clear that the disquisition of the schoolmen were directed towards the elucidation of a formula which could allow the schedule of the marginal efficiency of capital to be high, while using the role and custom and the moral law to keep down the rate of interest. (19)
CHAPTER II: ISLAMIC PRINCIPLES AND THE THEORY OF INTEREST

The equivalent of the word usury in Arabic is riba. Literally the word means any excess or increase (of the principal). Principal here is not limited to money but could be any type of goods in a transaction with the same commodity. Quality differentiation of the same commodity is not considered acceptable for exchanging different quantities (for example 1 kg of good dates for 2 kg of bad dates, would be considered riba). The bad quality of dates could be sold on the open market, and the returns of this exchange can be used to buy the good quality dates at the ongoing market price. This would be permissible.

Due to the fact that in Muslim countries the banking system is basically the same as that prevailing in the West, views have been raised as to whether riba would include interest on production loans, or just that of consumption. The arguement is that while consumption loans fall clearly within the definition, it is not as clear with the case of production loans, since these are "collaboration between lender and borrower to increase the utility of wealth and they should both share that increase". (20)

However, Al-Arabi argues to the contrary:

That it is more likely that what has been forbidden in the Qur'an is really interest on production loan since this was the pillar of trade in Makkah at the time of the Prophet 'peace be upon him'. (21)
1) Basic Islamic Principles:

Since Muslim writers must present their views on *riba* based on what is stated in the Qur'an (the Noble Scripture of Islam) and the *Sunna* (sayings and/or traditions of the Prophet) some of these will now be quoted, (as translated from Arabic). The Quran condemns usury and says that it is not like trade, which is permitted. The punishment of those who deal in usury is compared with the rewards of those who give in charity:

Those who (in charity) spend of their good by night and by day, in secret and in public, have their reward with their Lord: On them shall be no fear nor shall they grieve. Those who devour usury will not stand except as stands one whom the evil one by his touch hath driven to madness. That is because they say trade is like usury. But God has permitted trade, and forbidden usury. Those who after receiving direction from their Lord, desist shall be pardoned for the past; their case is for God (to judge); but those who repeat (the offence) are companions of the fire; they will abide therein. God will deprive usury of all blessing, but will give increase for deeds of charity, for He loveth not creatures ungrateful and wicked. "(22)

In another set of verses the dealer in usury is seen in direct conflict with God and Islam. The debtor must be dealt with justly and with compassion. Instead of charging interest it is better to remit part of his debt in way of charity.
"Ye who believe; Fear God, and give up what remains of your demand for usury if you are indeed believers. If ye do it not, take notice of war from God and his Apostle. But if ye turn back, ye shall have your capital sums (principal). Deal not unjustly, and ye shall not be dealt with unjustly. If the debtor is in a difficulty, grant him time till it is easy for him to repay. But if ye remit it by way of charity, that is best for you if you only knew. And fear the day when ye shall be brought back to God. Then shall every soul be paid what it earned, and none shall be dealt with unjustly."(23)

Those were the final verses revealed about riba. Three other verses were revealed earlier. In the first, the taking of interest is looked at as greed.

"Ye who believe! Devour not usury, Doubled and multiplied. But fear God that ye may really prosper. Fear the fire, which is prepared for those who reject faith. And obey God and the Apostle that ye may obtain mercy."(24)

In the second, interest is looked at as an injustice, an evil deed, which is punishable:

"That they (the Jews) took usury, though they were forbidden, and that they devoured men's substance wrongfully, We have prepared for those Among them who reject faith a grievous punishment."(25)

Finally, in the very first verse that was revealed, it is stated that God would not recognize interest even if it is given out to others, for it is rightfully the property of others.
"That which ye lay out (of usury) for increase through the property of other people, will have no increase with God. But that which ye lay out for charity, seeking the countenance of God; (will increase); it is these who will get a recompense multiplied." (26) (VS 39 S.30)

Muslims firmly believe that the Qur'an is the revealed word of God. The principal sources of Islamic Law are the Qur'an, and the Sunna, the sayings and traditions of the Prophet (peace be upon him). The Sunna explains the Qur'an or implement the injunctions, in practice.

The Prophet's sayings about usury were many, an indication of the seriousness of this subject. A selection are quoted:

(1) "Do not sell gold for gold, unless equivalent in weight, and do not sell less amount for greater amount, and do not sell gold or silver that is not present at the moment of exchange for gold or silver that is present." (Present against future) (27)

(2) "Gold for gold, silver for silver, wheat for wheat, barley for barley, dates for dates, salt for salt, must be of equivalent weight, hand to hand. He who gives or takes more incurs riba ... the giver and the taker are equally usurers. (Muslim and Ahmad)." (28)

"... if these commodities (gold, silver, wheat, etc.) are exchanged against different commodities, you can exchange them as you like, provided the exchange is from hand to hand." (Bukhari and Muslim)

"Don't sell gold for gold unless equal in weight, nor silver for silver unless equal in weight, but you could sell gold for silver or silver for gold as you like." (29) (Bukhari)
"All riba contracted during Jahiliya (Pre-Islamic era) is annulled. The first riba I declare void is that of Al-Abbas Ibn A'bdul-Muttalib (the Prophets' uncle). You have only right to your capital, wrong not and you should not be wronged." (30)

During the time that the Qur'an was being revealed, there were different types of transactions referred to as riba:

(a) A person would buy some goods promising to pay at a certain time. If the time came and the purchaser did not pay, another easing time was allowed provided the purchaser pays an additional amount.

(b) Loans were made for a certain period, on conditions that at the expiry of that period more is added to the principal. If the debtor failed to pay, then an increase can be stipulated and added. (33)
(ii) Early Muslim Scholars and the Rate of Interest:

Imam Razi is one commentator of the Qur'an who discussed the subject of usury in somewhat great detail. In his view, one reason for the prohibition of interest, was that such a transaction necessitates the exacting of another's wealth without any legal consideration. It might be argued, Imam Razi continued, that the creditor could get a return from his money, if he invested it instead of lending it (without interest), and therefore it would be legal for the creditor to get "interest" (or dividend) from the debtor, on such a transaction. But, Imam Razi argues, that if the creditor were to invest his money directly, he could make a profit, but he also stands to lose, even part of the principal. The creditor's deriving a profit from such a transaction is uncertain. Whereas any additional amount from the debtor to the creditor, becomes a certainty if he were allowed simply to earn interest.

Imam Razi pointed out that interest could well produce a rentier class idle and therefore unproductive to society, which would be harmful. Worldly affairs cannot progress satisfactorily without trade, arts and crafts. Activities in which this class, as well as others, should be implicitly involved.
If interest was to be declared illegal, investors will be forced to be more judicious in borrowing and squandering money. People do borrow money at whatever rate if it is available. This brings to an end mutual sympathy and common goodliness and obligation. Another point explained is that the Qur'an, which is the highest authority on Islamic law, lays down clear and unambiguous orders against all riba transactions. It is not necessary therefore that reasons should be advanced for orders that are clearly stated. Imam Razi added that it is quite probable that we may not fully understand all the reasons that necessitated this order. (32)

This last point, while unrelated to economic reasons of the prohibition of interest, is important to understand Muslim scholars' attitude towards concepts and principles, upon which the Qur'an had a final verdict. Indeed scholars all over the centuries of Islamic enlightenment, used the Qur'an to understand certain phenomena, but in all cases accepting in principle the Qur'anic verdict. Qur'an and Muslim theologians have never put Muslim liberal thinkers and scholars on trial because of whatever views they may happen to champion.
These are the reasons why scholars do not delve at length on this subject. Abu Yosuf (731-798), who wrote about various issues relating to government finances, principles of taxation and its application to product and land, market prices versus price control or fixing (which he opposed) and agriculture development, yet he did not see it necessary to go into the details of usury prohibition. Ahmad Ibn Hanbal (780-855) who covered wide topics of economic freedom of contract and enterprise and enforcing fair competition to prevent monopolies, did not as well examine the economic reasons of usury prohibition.\(^{33}\)

Ibn Hazm (d. 1064) who was a champion of socio-economic justice and who argued for the state responsibility to eradicate poverty, made no mention of usury prohibition. Neither did Al Ghazali (1055-1111) who covered many different subjects of economics, find it necessary to look into the analysis of usury.\(^{34}\)

Ibn Khaldun (1332-1404), in his book Al Mugaddima which was hailed by historian Toynbee as "the greatest work of its kind that has ever been created by any mind in any time or place",\(^{35}\) made no attempt to analyse interest. He undertook detailed analyses on different economic concepts
that covered the rule of state, the market system, taxation, division of labour and labour productivity as well as money. He stated that money "serves as a store of value and a standard of exchange", very much in line with modern concept. "Silver and gold as units of money were a measure of value of all capital accumulation and as the standard of exchange as all things are subject to market fluctuations from which gold and silver are exempt."(36)

Other scholars as well, such as Yahya Ibn Adam (920), Ibn Rushd (Averroes) (1215), Ibn Abdussalam (1168) and others who were scholars of renown through the Muslim world, did not analyse the prohibition of usury. Simply because of two obvious reason:

(a) The scholars mentioned did excell during their time. They analysed the real ills and the problems of their societies at that point in history, and tried to propose and present solutions to those current problems. Interest and usury were never problems, in the Islamic societies, through those ages.

(b) The Qur'an prohibited certain things and acts, and made some others either recommended or obligatory to be fulfilled. As well, certain things were made permissible and people individually or in groups, have
the choice to do as much as they wish in these areas. But what was prohibited required no further analysis, and what was recommended or obligated, on the other hand, became the pre-occupation of scholars, and detailed analyses ensued.

Analyses and indepth studies went into the obligations, for people had to do them as they should, and it was important that they should know the details. The forbidden behaviours and/or actions such as usury, drinking alcohol, adultery, theft, and others, were punishable crimes. Detailed studies were only made of the legalities and how these were to be enforced. Since they are explicitly prohibited in the Qur'an, seeking reason beyond the obvious, is tantamount to opening the doors for fruitless arguments, that would prove nothing. God, the Creator, knows best.

iii) Some Principles of Islamic Economic:

Islamic principles, discussed by many of the scholars mentioned above and by contemporary Muslim economists are almost fully in line with laissez-faire economics. Artificial impediments to fair trade are prohibited. Globally speaking, protectionism, if its purpose is the establishment of an artificial agriculture or industry that cannot be efficiently established will not be acceptable.
Any signs of *laissez-faire* abuse by monopoly or other forms would not be acceptable. The market forces must operate in a competitive environment. The Prophet directed that prices for goods should be set at the market. Full information on the goods was regarded as mandatory. Availability of goods and in what quantities, qualities, prevailing prices etc. must be common knowledge. People's property is sacred, like individuals themselves, and cannot unjustly be hampered with by other individuals, groups, or even government.

iv) **The Institution of Zakah in Islam:**

Where Islam markedly differs with other economic systems, in most non-ambiguous terms, is in the institution of *Zakah*.

*Zakah* is one of the main features of Islamic finance and economic systems. The word connotes the sweetening and purifying of something. It also would mean praising some act or some individual. It is a Qur'anic term. When used for financial purposes, it means the giving of a certain portion of one's net wealth, that is above a certain prescribed minimum (*annisab*) in excess of one's personal and family consumption. It is calculated on one's net worth, over one year's period. *Zakah*, unlike charity (which is
voluntary and can be paid to the recipient at any time and in any amount), is an annual assessment and is paid to an established official authority from within the local level of government.

Zakah is collected on agricultural products (5% if grown by man made irrigation systems, and 10% if irrigated by natural source, i.e. rain). Sheep, cattle and other animals are all subject to Zakah. Bullion money, money (paper, coins and deposits) are also included in the net worth. Agricultural land is not subject to Zakah. Neither are stocks of trade, tools and other media for production. Houses and buildings for personal use, appurtenances of living and public ownerships are not considered for Zakah payment calculations. Luxury goods, determined by local, social and cultural conditions, are subject to assessment.

Certain financial practice would not be acceptable in an Islamic society. Hoarding is a vice. The use of precious metals for household utensils is considered extravagant and therefore unnecessary spending. Zakah therefore, and not interest from the Islamic point of view, is what makes people invest and/or spend money, rather than hoard it. Muslim economists argue that no one will be hoarding money if he has to pay 2½% per year (or 25% of his accumulated wealth in less than 12 years, and 75% in less
than 55 years). (34) Zakah itself has to be spent among the deserving and not to be kept in any revolving fund. Those deserving Zakah will surely proceed to spend what they get, and would hardly afford to save, thus stimulating consumption of goods and services and growth of national expenditures.

There are three major differences between Zakah and taxes prevalent today:

(1) Income taxes are paid on the annual flow of income. The principal in savings accounts for instance is not taxed. Zakah would be payable on all financial assets. Zakah has to be paid on yearly average balances of accounts (on stock above the exempted minimum). Personal business losses would not necessarily constitute a reason for deferring Zakah, as long as the individual has more than the minimum exemption.

Corporations are not regarded as entities, and do not pay Zakah. Individuals must pay, for it is a personal obligation. Some individuals who have shares in enterprises may not have enough to be eligible Zakah payers, i.e. they may not reach the minimum basic allowance. This direct personal responsibility leads to the second difference
between Zakah and taxes. Unlike taxes, Zakah is not supported by the power of law alone. It is also a very basic aspect of the Islamic beliefs. Not paying due to non-acceptance of the Islamic principle, would in effect place a person out of the fold of Islam.

The third difference stems from the way Zakah is distributed. Zakah is collected locally and cannot be transferred out of that locality unless all the needy are first taken care of. The basic needs of individuals in the society, are not to be compromised for any other priorities. The Qur'an clearly specifies the categories (eight of them) and their priorities of Zakah distribution.

"Alms are for the poor, the needy, and those employed to administer the funds, for those whose hearts have been (recently) reconciled (to truth); for those in bondage and in debt; in the cause of God; and for the wayfarer; (Thus is it) ordained by God and God is full of knowledge and wisdom."(38)

Four out of the eight categories, (support for the poor, the needy, the wayfarer, and the bankrupt) are socio-economic considerations. The fifth is for those who are not in the main stream of society and need help in some way to make them feel more comfortable. The sixth is for freeing slaves and paying ransoms for captives. The seventh includes all necessary activities (including defence) that
society has to carry out. Finally, the expenses and overhead of the Zakah fund can be all covered from it. Zakah could be directed towards long term projects. Individuals could be trained to obtain different skills, or provided with factors of production.

If the Zakah fund is not sufficient to meet the necessities of people, then the government has the obligation to study a scheme, all-be-it temporary, to obtain extra funds from those who have, and to distribute among those who do not. Under this principle comes such projects that are urgent or essential, and cannot be postponed. In short, both the state, and individuals on personal levels, are responsible that no one goes hungry. For the basic necessities, people do not have to borrow, even if loans are available interest free.

v) The Role of Money:

When exchanging two different qualities of the same good, the Prophet, peace be upon him, would not allow differential in weights, to compensate for the inferiority of one over the other. Rather one must be sold at the market price, and pay for the other equally at its market price. This is the surest way that no ill feelings or dissatisfaction will ever arise between the two
individuals. Money here is not only being used as a medium of exchange, but in a way it is being encouraged in that function.

Modern writers, in the field of Islamic economics, almost have a consensus of opinion, that creation of money and/or credit are responsibilities of the state, and not the private banks. Creation of credit is related to the general strength and stability of the economy. Private institutions' right to create money, may not always be conducive to the proper application of monetary policy. It is not conducive that banks should be trading in goods that they do not own. (39)

It is a general principle in Islamic jurisprudence (based on a saying of the Prophet 'peace be upon him') that anything in which the population has a general vested interest should be the responsibility of the state and not to be controlled by private institutions, or specific individuals. Since interest would not be a factor, the creation of money and credit becomes a tool of economic policy. Money is thus left to play the vital role as a measure of value, and is efficiently employed as a medium of exchange, and not manipulated in transaction involving only itself, unrelated to physical productivity.
Patinkin assumption of money as the \((n + 1)\) good in the economy, has been criticized by the Muslim economists on the ground that this will lead to a model that includes cross transaction among goods just like transactions between money and goods. In reality, however, while there is exchange between money and goods, there is no exchange between goods and goods, as such.(40)

In an Islamic environment, interest charging and the creation of credit (by private banks) will not be allowed. Banks will require 100% reserve requirements for demand deposits. This will be in line with the proponents of the 100% reserve (Simon, Knight, Currie, the Federal Reserve Board, Friedman and Frederick Soddy).

In his book "100% Money", Fisher wrote:

"Let the Government ... turn enough of the assets of every commercial bank to increase the cash reserve of each bank up to 100% of its checking deposits ... after this substitution of actual money for securities ... the bank would be required to maintain permanently a cash reserve of 100% against its demand deposits ... the checking deposits department of the bank would become a mere storage warehouse for bearer money and would be given a separate corporate existence as a checking bank."(41)

The 100% reserve requirement will alleviate the degree of instability attributed to demand deposits. The rentier class would never appear in an "Islamic society". Money can only be spent, invested, or loaned interest free.
vi) Islamic Financial Institutions:

Islamic financial institutions are primarily service institutions, and do not have the role of the monetary institutions played by the private banks. Demand deposits made by households will have 100% reserve. Investment deposits would have to be created for investments purposes. There is no prohibition for these institutions to charge for their services, such as checking account facilities. Those who wish to invest had to deposit their money in the Investment deposits. These people as well as the banks will in turn invest in firms and face the chance of loosing or gaining, since the investment in the different firm would be on equity basis. There will be no guarantee returned.

Banks and investment houses will be investing their liquid assets, based on a profit/loss sharing agreement. Banks will be expected to seek optimal investment opportunities,. The profits when realized, will be true representative of actual productivity in the goods market. There will be pure and fair competition for investment funds. There will be no mathematically inflated predetermined figures unrelated to productivity, nor will there be transfer of ownership of assets from the different groups of society to the rentiers. Individuals of all classes, when involved in economic activities in the society, reap the fruits and/or pay for the losses. No collaterals or guarantees are required.
In an Islamic system, the Zakah fund will again play a major role. On average Zakah amounts to 27.50% of the national income. (42) Bytulmal, or the House of Finances, in the different localities, is expected to play a key role. Not only must it meet the basic needs of the poor, but must also provide interest free loans or straight out grants for different projects to help different low income groups or support urgent and crucial services. Zakah fund would not be used for consumption of luxury goods nor for their production.

Zakah fund, as well as that of other financial institutions can set their own criteria and principles of making loans and/or getting involved in partnerships etc. Questions as terms of loans, percentage financed by the borrowers, eligibility requirement for credit, and maximum allowable level of credit will always be determined on the merit of each case by individual institutions.
CHAPTER III: THE MODERN THEORIES OF INTEREST

The period of modern theories of interest is considered to have started from the 16th century, when rules prohibiting usury were being removed by government decrees. This was a complete reversal of the previous stand. From emphatic and practical condemnation of usury, the decrees were tolerating acceptance, and defense of interest by governments, by scholars and of course by money lenders.

i) Historical Prospective:

The first breakaway with medieval usury laws was by Henry the VIIith of England who decided in (1575) that anything under 10% should be accepted as "a fair rate of interest". In 1624, a fairer rate of interest was thought to be 8%. Still in 1651, the better rate was considered to be 6%. Before the decade was over in 1660, to help industry, induce development, and better compete with the Dutch, an even better rate was set at 5%.(43)

In France, the rate was reduced from 5 to 2 per cent in 1720. It was raised to 4 per cent in 1724, and to 5 per cent in 1725. While usury laws started to be reformed in most European countries, the church was doing its part as well. The church was trying to liberalize its position and
to get abreast with the new developments. Indeed, as early as the mid sixteenth century, John Calvin (1509-1564)\(^{(44)}\) the Protestant leader completely abandoned the detailed analysis of the Scholastics, and redefined usury as sinful only if it hurts one's neighbour. The separation was made: profits on loans to the poor were wicked, but those made to the rich or to business people, were no worse than profits on a sale of a good.

Claude Somais (1528-1653)\(^{(45)}\), another Calvinist classicist, went all the way to defend public usurers and money lenders, who drew their profits from the poor. Not only did he completely break away from the usury prohibition, he even criticized the Scholastic theory.

The first Catholic author to adopt the Calvinist position was Scipio Maffei (1675-1755)\(^{(46)}\), a friend of the reigning Pope, Benedict XIV. He issued a defense of usury comparable to that of Calvin.

Within the first century of abrogating the usury prohibition, the Church not only abandoned its previous position for which it defended vehemently for centuries, but joined the band-wagon of criticizing its own teachings. Economists however, did not seem to have been convinced that fast, and with that degree of conviction.
Sir Josiah Child, noting that Holland was successful in accumulating considerable wealth at low interest rates, suggested that it would be good for England to lower its rate to 4 per cent. On the other hand, John Locke, in 1892, was more radical and advocated the removal of all restrictions on interest rates. France, nevertheless held to her position longer than her neighbours. However, Turgot (51) in 1770, became involved in a dispute between money lenders and borrowers for unpaid consumption loans, in the town of Angoulême. In defense of the money lender, Turgot wrote: "Les Prêts d'Argent". He based his arguments on the premise of individual freedom. He argued that a man has a right to make his own financial decision. Not only was he successful in getting the excess amounts paid to money lenders, but after the French Revolution, the National Assembly declared that loans on interest to be legal, thus bringing usury prohibition to its final fate.

Jeremy Bentham (47) in England in his "Letters in Defense of usury" published in 1787, argued for removing all restriction on usury. By 1834, English Acts, against usury were repealed. Other countries then followed: with Denmark in 1855, Spain in 1856, Sardinia, Holland, Norway, and Genova, in 1857, Saxony and Sweden in 1864, Belgium in 1865, and Prussia and the North German Confederation in 1867.
In the U.S. however, many States had different usury laws well into the 20th century. (48)

ii) **Economists Views of Interest:**

After having been legalized, interest became more and more a reality of life (not much due to economists reasoning or new scientific economic breakthroughs). Early economists found themselves confronted with a phenomenon that has gained acceptance, and to be explained and defended.

For many decades the prevailing view was that of the classical theory of interest, forwarded by Adam Smith and David Ricardo, and further developed by Marshall and to some extent John Stuart Mill and others.

According to Smith and Ricardo, interest was the compensation received by the lender for profits made from a borrower, investing the money. The rate of return on the real capital and the rate of interest were not clearly separated. In the classical theory of business profits came to be called the rate of interest. Smith's usage of capital stock meant that part of wealth which is not consumed but rather utilized for production purposes, to bring in money, reward or investment. (49) Interest was then the
inducement paid for savings. Ricardo viewed all capital to be stored labour, and therefore attributed all value to labour.\(^{(50)}\) It was on this basis that Marx developed his exploitation theory of labour in a Capitalist economy.

In his early writings, Ricardo clearly stated that the rate of interest was solely determined by the rate of profits. Later he indicated that the rate of interest is determined by the rate of profit only to a large extent, which meant other factors affect interest as well.\(^{(51)}\)

The classical theory of interest as outlined by Ricardo can be summerized by three points:\(^{(52)}\)

1) The average of the rate of profit and the rate of interest move in the same direction;

2) The rate of profit determines the average interest rate; and

3) Profit rates are not changed directly with changes in the rate of interest.
To have a better insight into the relationship between the rate of profit and the rate of interest, economists after Ricardo felt the need to analyze the money market, which was ignored by Ricardo. Tooke and Mill argued that government demand for loanable funds, and risk factors influenced the interest rate. The interest rate they argued, was much more independent from the rate of profits, than what Ricardo had indicated. Tooke not only argued that the interest rate was not dependent on, and did not necessarily move in the same direction with that of the rate of profits, but went further to suggest the possibility of the two moving in opposite directions. The assumption that all money borrowed was fully utilized for production was the principal error, Tooke argued. Borrowed money, utilized for other purposes, had such significant impact, that conclusions based on this assumption were misleading. Furthermore, the supply and demand for loanable funds may not be increasing in the same ratio. (53)

Tooke's analysis suggested that interest rates are elements in the cost of production:

A general reduction in the rate of interest is equivalent to, or rather constitutes, a diminution of the cost of production. This is more specially and very obviously a necessary effect, where much capital is employed as in the case of manufactures, but it likewise operates in all cases where an outlay of
capital is required according to the length of time ordinarily occupied in bringing the commodities whether raw or produced finished goods, to market the diminished cost of production hence arising would, by the competition of the producers, inevitably cause a fall of prices of all articles into the cost of which the interest of money entered as an ingredient. (54)

Tooke further made the conclusion that a low interest rate did not cause any increase in prices.

Marshall emphasized both demand and supply in determining the rate of interest. On the supply side, he saw interest as the reward for the sacrifice of savings or waitings (Marshall used "waiting" instead of the term "abstinence" used by Senior, as the cause of interest).

In conclusion, the classical political economy approach laid down by Adam Smith and Ricardo, followed by and elaborated by Mill, Marshal, Tooke and others, and later by Böhm-Bowerk, Hayek and Fisher, viewed the average rate of interest as only a portion of the general rate of profit. This was in contrast with the marginal approach, where the natural or average rate of interest is equated to the return on capital, as advocated by Wicksell.
iii) The Marxian Perspective:

Accepting, as the rest of the classicals, that interest on money and return on capital were synonomous, Marx viewed interest as a portion of the surplus value generated by production, and not as the revenue generated by capital, a position similar to that of Ricardo. Marx viewed the rate of profit determined by the rate of interest and not vice versa. Interest and profits are relations between capitalists and not related to labour. He further indicated that interest paid cannot exceed the surplus value. Marx agreeing with Tooke and Mill, about the relative independence of the average rate of interest, pointed out that the rate of interest is directly influenced by the international market, irrespective of the economic conditions of the country.

On the money side Marx indicated that speculative bills can undermine the credit system. Marx realized the growing importance of the stock exchange and that speculators, led by bankers can influence interest rates to a major degree. Marx had no idea of what constituted an acceptable rate of interest.
He wrote:

"Massie has rightly said in this respect; the only thing which any man can be in doubt ... is what proportion of these profits belong to the borrower and what to the lender, and thus there is another method of determining than by opinions of borrowers and lenders in general; for right or wrong in this respect, are only what common consent makes so." (55)

This is in line with Keynes who wrote:

"The rate of interest is a highly conventional ... phenomenon. For its actual value is largely governed by the prevailing view as to what its value is expected to be. Any level of interest which is accepted with sufficient conviction as likely to be durable will be durable, subject, of course, in a changing society, to fluctuations for all kinds of reasons around the expected normal". (56)

Unlike Keynes, however, Marx had the foresight that money institutions and their influence would reflect distributional power in the society. He recalled the power of the early capitalists, when the emerging industrial bourgeoisie was able to restrain the power of money lenders, getting the governments to reduce interest rates.

In support of his views, Marx presented evidence given by a private banker, Towells:

How do you think the Act of 1844 has operated? If I were to answer you as a banker, I should say that it has operated exceedingly well, for it has afforded a rich harvest to bankers and money capitalists of all kinds. But it has operated very badly to the honest industrious tradesman ... It has made money-lending a most profitable pursuit ... It [The Bank Act] enables
the London-Joint stock banks to return 20 to 22 percent to their proprietors? - The other day one of them was paying 18 percent and I think another 20 percent; they ought to support the act of 1844 very strongly. The little tradesmen and respectable merchants, who have not a large capital ... it pinches them very very much indeed". (57)

The Bank Act of 1844, improved the position of the bankers'. Since it was done through an act of law, this reflects the Bankers' influence on decision making in the society.

Marx rejected Overstone's argument (representing the Currency School) that the extra issuing of currency (of bank notes) would lead to increase in the price level. Permanent changes in the supply or demand of loanable funds do not lead to similar changes in the real capital market. Marx argued that most loans, particularly short term ones, are not to expand production, but are to induce borrowers to convert assets from less to more liquidity. Further improvement in the credit system can greatly enhance loanable funds accumulation; without any changes in actual accumulation of capital:

"An accumulation of loan capital can take place without any actual accumulation, i.e. by mere technical means, such as expansion and concentration of the banking system; and a saving in the circulation reserve, or in the reserve funds of private means of payment, which are then always transformed into loan capital ... The mass of loanable money-capital thus grows quite independently of the actual accumulation." (58)
iv) The Keynesian Theory:

Probably more than any other economist in this century, Keynes has had, at least on a conceptual level, the biggest impact on the traditional views on the rate of interest. The traditional theory sounded more like a defense and a justification of an existing phenomenon (interest rate) than coming up with hard analyses of its nature, its effects, and its necessity, in a way resembling the repetitive points that were put forward in the defense of usury prohibition during the medieval centuries, though those earlier views were clearer, more to the point, and not in conflict with each other.

Originally marginalist, Keynes' views agreed with those of Böhm-Bawerk, Hayek and Wicksell. However, Keynes departed from this school at a later stage.

The marginal theory held the view that the rate of interest is simply the price of credit, and it is therefore governed by the supply of and the demand for capital. In Lerner's words "The rate of interest is the price that equates the supply of credit, or savings plus net increases in the amount of money in a period to the demand of credit, or investment plus the net hoarding in the period". (59)
Keynes, of course, held the view that savings and investment are always equal, regardless of the rate of interest. Furthermore, savings are not determined by the rate of interest, but by the level of income. The interest rate, in the Keynesian view is simply a premium obtainable on current cash, over deferred cash. It is a payment for lending money not for saving or spending. It is a payment for parting with liquidity, or not hoarding, for specified periods. It is a price which equates the desire to hold wealth, in the form of cash, with the available quantity of cash.

Keynes therefore reversed the causality. It is investment that is needed to encourage savings and not vice versa. Increases in investment will lead to profit and higher employment, resulting in a higher level of income, which in turn leads to more savings and investments.

Keynes wrote:

"The initiative lies with the entrepreneurs and not with the savers. The savers as a group are helpless in the hands of the entrepreneurs though any one individually is free to save as much as he likes".(60)
As for the traditional approach view of an automatic, or self adjusting equilibrium between savings and investments resulting in recovery of output and employment, this would not have occurred in Keynes view, without a deliberate and vigorous action by the monetary authority to bring the market interest rates down. He wrote:

"The point at which I withdraw reliance upon the above course of events appears when the recovery in output leads to an increase of savings. For there is no safeguard against savings increasing faster than they can be absorbed by investment, except a monetary policy deliberately aimed at making a rate of interest sufficiently stimulating to investment; and under an automatic system there is no certainty, or even possibility, of this."(61)

As Keynes attempted to criticize the role of money in the traditional theory, he came to realize that the heart of the problem is the interest rate. He wrote:

"The divergence between real-exchange economics and my desired monetary economics is, however, most marked and most important when we come to the discussion of the rate of interest."(62)

According to Keynes the rate of interest rises if there is an increase in the liquidity preference by entrepreneurs, though it does not necessarily have to rise, if the monetary authorities respond quick enough to the increased demand for credit.
Keynes thought that there was a limit of how low interest rate would fall, and it was unlikely to reach the zero level.

He stated that the rate of interest is a highly conventional phenomenon because it depends upon what the community thinks to be the safe rate.

Keynes indicated that a higher rate of interest might induce more saving, if income was unchanged. But if a higher rate of interest retards investment, income will necessarily fall, until the declining capacity to save has sufficiently offset the stimulus to save given by the higher "rate of interest". The more virtuous we are, the more determinedly thriftily, the more obstinately orthodox in our national and personal finance, the more our income will have to fall when interest rises relative to the marginal efficiency of capital. Obstinancy can bring only a penalty and no reward. (63)

Keynes among the modern economists, came closest to the Islamic principles, in foreseeing the possibility of a zero interest rate in a properly organized community. Rentiers will disappear but enterprise can still survive; he wrote:
"A properly run community equipped with modern technical resources, of which the population is not increasing rapidly, ought to be able to bring down the marginal efficiency of capital in equilibrium approximately to zero within a single generation, so that we should attain the condition of a quasi-stationary community where change and progress would result only from changes in technique, taste, population and institutions, with the products of capital selling at a price proportioned to the labour, etc., embodied in them in just the same principles as govern the prices of consumption goods in which capital-chargers enter in an insignificant degree."

(64)

An ideal society for Keynes is, when, not only the rate of interest is zero, but even the marginal efficiency of capital is zero:

"If I am right in supposing it to be comparatively easy to make capital goods so abundant that the marginal efficiency of capital is zero, this may be the most sensible way of gradually getting rid of many of the objectionable features of capitalism. For a little reflection will show what enormous social changes would result from a gradual disappearance of a rate of return on accumulated wealth. A man would still be free to accumulate his earned income with a view to specify it at a later date..." (65)

While rentiers will disappear, there would still be room for enterprise to survive:

"Though the rentier would disappear, there would still be room, never the less, for enterprise and skill in the estimation of prospective yields about which opinions could differ. For the above relates primarily to the pure rate of interest apart from any allowance for risk and the like, and not to the gross yield of assets including the return in respect of risk. Thus unless the pure rate of interest were to be held at a negative figure, there would still be a positive yield to skilled investment in individual assets having a doubtful prospective yield. Provided there was some measurable unwillingness to undertake risk, there would also be a positive net yield from the aggregate of such assets over a period of time. But it is not unlikely that in such circumstances, the eagerness to obtain a yield from doubtful investments, might be such that they would show, in the aggregate, a negative net yield." (66)
Keynes went on to state his belief that one of the main causes of the world poverty of resources is the high premium attached to money.  

v) **Schumpeter Theory of Interest:**

In a lengthy chapter, (Interest on Capital) Schumpeter analysed interest charged on productive loans as distinct from interest charged on consumptive loans, which also included all government credit requirements. Consumptive loans, in Schumpeter view, "do not constitute the great social phenomenon that needs explaining".  

Schumpeter proceeded by asking three questions about interests on productive loans. The **first** question is about interest paid on capital. There must exist a **value** out of which this interest payment comes. Where does it come from? The **second** question, why does this value become the spoils of particular individuals? The **third** question, which Schumpeter considered "by far the most difficult which may be described as the central problem of interest on Capital", how does it happen that a stream of goods flows permanently, that interest is a net income which one may consume without impairing one's economic position?
Competition and imputation must in the long run reduce the surplus value over that of the factors of production (labour and land) to zero. But because interest is a permanent stream then it comes so sharply into conflict with the fundamental and undoubted facts of competition and imputation, since interest is not rent, nor labour. One has to prove that there is a third factor involved in the production of goods to be able to explain it. Böhm-Bawerk, however has shown that no independent element exists and abstinence is not a third factor. The surplus value could not be explained by the theory of monopoly. Monopoly positions do not occur regularly and numerously enough for this explanation to be accepted. More over interest exists without them.

To offer an explanation on the fact that present goods are valued higher than future goods will not suffice, since future goods are not automatically valued less than present goods. Passing of time does not have this primary effect. Even if the value of many goods increase with time, it proves nothing.

Interest thus "is only a parasite in the body of wages and rent; it has clearly nothing to do directly with surplus value". (67)
Schumpeter stated that, in development surplus, value falls into two groups: entrepreneurial profit and increase in demand (reprecussions of developments). Interest cannot be attached to reprecussions of development for the process leaves no room for the phenomenon of interest, and such profits are not permanent. It must therefore flow from entrepreneurial profit. "Interest acts as a tax upon profit." Interest does not adhere to any class of concrete goods, for all surplus values on concrete goods, must be by nature temporary and cannot immediately form a permanent income. Interest could neither be the whole profit nor part of it, since this is temporary.

In addition to its agreement with other theories of interest, Schumpeter's theory is based on three further propositions:

(a) That interest as a great social phenomenon is a product of development; (b) that it flows from profits; and (c) it does not adhere to concrete goods. By which he tried to avoid the necessity of finding an element of value in concrete goods, corresponding to interest.
Schumpeter went on to state that within the circular flow, and in a market which is in equilibrium, it is impossible with a given money sum to obtain a greater money sum. Only in the course of development can one get a higher return for the product because the prices of the means of production, were not determined with regard to this employment, but only with regard to its previous uses.

Schumpeter believed that in the course of development by which he presumably means the production process lies the answer for his three questions presented earlier:

"Here then, the possession of a sum of money is the means of obtaining a bigger sum. And a present sum therefore will be valued higher than a future sum. In this lies the explanation of interest." (68)

Schumpeter has raised many interesting questions. In fact it is for this reason that a brief summary of his chapter has been presented. However, he does not seem to have really answered those questions thoroughly.
Stating that interest comes out of development because people are willing to pay more in the present, so they can get more in the future, is basically putting the old classical concept in different words than really answering his three questions, particularly his last question - how can interest be permanent? Indeed, how can it be permanent and compound at the same time?

Schumpeter did not pretend that he solved the problem, adding some strong remarks against interest; he wrote:

"However incomplete our arguments may be, and however much more precise formulation and however much modification they require, I believe the reader will never the less find in them some of the elements for understanding that part of economic phenomena which has hitherto presented most difficulties. I have only one thing to add: I wished to explain the interest phenomenon but not to justify it. Interest is not, like, profit for example, a direct fruit of development in the sense of a prize for its achievements. It is on the contrary rather a brake in an exchange economy a necessary break on development, a kind of "tax on entrepreneurial profits". (69)

Schumpeter is equating interest with taxes on profit. Indeed even worse, for while profit taxes are only collected when profits are realized, interest payments, have to be made regardless of profits. Interest is more of a business tax than just a tax on profits.
Schumpeter tries to soften his stand against interest in away that is hardly convincing; he stated:

Certainly this is not sufficient to condemn it even if one includes condemnation or approbation of things in the tasks of our science. Against the condemnatory verdict we can assert the importance of the function of this ephor of the economic system" and we may conclude that interest only takes away something from the entrepreneur which would otherwise occur to him, and not from other classes - neglecting the cases of consumption and of productive consumptive credit". As if he is not himself very convinced with this last statement defending interest, he wrote concluding his chapter:

Neither Schumpeter, nor other economists could come up with a satisfactory answer for the question; why should interest be permanent on productive loans? If this is the case with productive loans, how could it be justified that interest is charged on consumptive loans? In concluding his chapter, Schumpeter concluded that interest might be unacceptable from the social justice point of view, he wrote:

Yet this fact together with the fact that the interest phenomenon is not a necessary element in all economic organizations, will always result in the critic of social conditions finding more to object to in interest than in other else. Therefore it is important to state that interest is only the consequence of a special method of carrying out new combination, and that this method can be much more easily changed than the other fundamental institutions of the competitive system!"(71)

Schumpeter might prove to be too hopeful, for changing this method is not going to be easy at all.
CHAPTER IV: THE DILEMMA OF MODERN THEORY OF INTEREST

"The concrete phenomenon is always what decides if a theory is to be accepted or rejected. The sole criterion—and there can be no other—of the truth of the theory, is the greater or lesser correspondence, with concrete phenomena. Vilfredo Pareto (Manual d'economie politique)." (72)

The classical theory outlined previously dominated economic thought during the 18th and 19th centuries. Tooke and Marx rejected the argument that the interest rate was determined by profits. They both felt the need to analyse the money market to better understand whatever relationship there may be between the rate of interest and the rate of profits. During the first quarter of the 20th century, and specially after the stock market crash of 1929, economists started to doubt the relevance of neo-classical theory to the realities and problems of the day. Major industrialized countries were confronted with heavy debt burdens.

Some economists thought that Canonist's analysis was probably even more relevant to the prevailing problems at the time than was modern theory, Lawrence Dennis wrote:

"It seems appropriate in 1932 to discuss interest and debt in the light of present day realities, and not classroom hypothesis showing how credit is understood by its apologist to work. The canonist doctrine cannot be dismissed by simplest hypothesis which are as remote from most of the realities of today as freeland for American settlers. The Canonist doctrine should be discussed in the light of the hypothesis that the British nation cannot honour its I.O.U."
This hypothesis will be found highly relevant to both canonical thought of the fifteenth century and realities of the twentieth. ...The realities of today are less tolerant of the Calvinistic harmonies between private greed and public good. As an American, who is not unread in economic subjects, I must say that I find far better arguments for the cancellation of war debts among the Canonists, than I find among the neo-classists. There is something peculiarly incongruous about any theoretical defence of interest made in 1932 by a British economist."(73)

Other economists suggested that there was no true theory of interest at all. Sommerville wrote:

"It is not obvious that the modern economist, even on the ground of theory, is entitled to be superstitious towards the Canonists. It is several centuries since the world emancipated itself from the authority of the Canonists, and there has been ample time to construct a true theory of interest, but there is no theory in possession of the field today. Böhm-Bawerk wrote a volume to expose the errors and inadequacies of all his contemporaries and predecessors, and Professor Cassel has written a monograph, in which he assails the errors and the inadequacies of Böhm-Bawerk. The lack of a wholeproof theory of interest was manifest to the student before Mr. Keynes began his new questioning, and I imagine that opinion now is less settled than before."(74)

He also suggested that the Canonists argument has been more relevant at the time than that of neo-classical theory at the present:

"Apart from theory the Canonist attitude needs no defence. Economic historians, among who Cunningham and Ashley may be named, are mostly agreed that in the conditions of the time the prohibition of usury served the welfare of society. It can hardly be said that the practical influence of modern economic theory has been equally happy. The tendency of the
legislation in the western world is to restore some of the restrictions on money-lending which were abolished during the reign of Laissez faire. Modern experience has been too much for modern theory. For the most striking example of reaction of observers against the results of modern theory, readers should turn to the chapter entitled "Indebtedness" on the 1931 Report of the Royal Commission on Labour in India. In all social history there are few pages so shocking as these, and the Royal Commission (on p. 229) apportions a measure of responsibility for the evils it describes to the influence of nineteenth century economic thought."(75)

When compared with the arguments of modern theory, the Canonists are superior:

"No modern economic theory meets the Canonist argument. Productivity of Capital? Interest is paid on money not on capital, and has to be paid irrespective of productivity. The reward of waiting? This is only the change of a word from the reward of abstinence, a theory over which Professor Cannan makes merry. The higher value of present over future goods? This only explains why borrowers are willing to pay interest, and therefore why lenders are able to extract it."(76)

Keynesians argued that in order for modern theory to justify interest relevant questions have to be answered:

"It seems to me that to justify interest it is necessary not only to prove that savings and investments are for all economic purposes, practically identical acts, and not only to show that the act of investment, takes the form of the creation of an asset, other than the right of action acquired by the creditor against the debtor; but also to demonstrate that such assets subsequently yield utilities, the exchange value of which equals the full debt charges".(77)
Furthermore, the question might be asked, that even if the interest rate was at times equal to the yield on assets acquired through debts, how could this be accurately pre-determined?

Many views of the traditional theory were rejected by Keynes and his supporters. Four of these objections are outlined. These are: the natural rate of interest, equating the rate of interest with the return on capital, speculation, income redistribution and concentration of wealth.

i) The Natural Rate of Interest:

Most classicals have tried to explain the natural rate of interest. Some of them considered it "essential" in understanding the interest rate. Marx, and then Keynes, rejected it as non-existent and/or useless.

Wicksell writes:

"There is a certain rate of interest on loans which is essential with respect to commodity prices, and tends neither to raise nor to lower them. This is necessarily the same as the rate which would be determined by the supply and demand if no use were made of money and all lending were effected in the form of real capital goods." (78)
How can this be proven? Can there be a non-zero rate of interest that does not affect prices? How can this natural rate be determined, or approximated? A natural or whatever rate of interest that would be "neutral with respect to commodity prices" would possibly be conceived only if it was zero.

Ludwig Von Mises, in his book "The Theory of Money and Credit" writes:

"After the example of Wicksell, we designate that rate of interest which would be established through supply and demand if real capital goods were loaned in natura without the mediation of money, the natural rate of interest and that rate which is demanded for a loan that consists of money or money substitutes, the rate of money interest. The banks can through progressive expansion of the issue circulating money media force down the rate of money interest to the level set by the cost of the banking business and thus, practically speaking, to nothing." (79)

Of course banks can lend at a lower rate of interest if they were forced to, but for them to force down the rate of interest, is something that has never happened, and probably never will? Why should they? If the rate of money interest was forced down to "nothing" where is the natural rate of interest?
Another believer in this "natural rate of interest" is Professor Hayek, he wrote:

"An adequate explanation of that "natural rate" is the undispensible starting point for any realization of the conditions necessary to the achievement of equilibrium and for an understanding of the effects which every rate of interest actually in force exerts on the economic system."(80)

So far no adequate explanation of the natural rate of interest has been given. How could the insistence continue on the naturality and necessity of interest when its effects "exerted on the economic system could not be fully understood"?

Marx rejected the concept of the naural rate of interest. He wrote:

"...But it is different with the interest of money capital. Competition, does not, in this case, determine the deviations from the rule. There is rather no law of division except that enforced by competition because as we shall see later, no such thing as a natural rate of interest exists."(81)

The natural rate of interest does not exist, Marx argues, because the material laws of production cannot regulate the price of money which is outside the sphere of production.
"If we inquire further as to why the limits of a mean rate of interest cannot be deduced from general laws, we find the answer lies simply in the nature of interest. It is merely a portion of the average profit. The same capital appears in two roles, as loanable capital in the lender's hands, and as industrial capital or commercial capital in the hands of the functioning capitalist. But it functions just once, and produces profits just once. In the process of production itself, the nature of the capital as loanable capital plays no role."(82)

Keynes, though originally a believer in a concept of a natural rate of interest changed his mind.

"When I wrote my Treatise on Money, I believed in common with those who speak of forced saving, that there was a unique natural rate of interest. But as we shall find in book three this is not the case."(83)

In another passage, after conceding it was a mistake to speak of the natural rate of interest in his treatises; he wrote:

"I am no longer of the opinion that the concept of a natural rate of interest, which previously seemed to me a most promising idea, has anything very useful or significant to contribute to our analysis."(84)

More recently, Pasinetti wrote a chapter titled "The Natural Rate of Interest" in his book "Structural Change of Economic Growth". He presents an interesting analysis of a few concepts. Some of these are now discussed:(85)
(1) The rate of interest pertains to the production cycle which is complete in itself. No financial transactions are needed to attain self sustained growth. Likewise the rate of interest pertains to the sphere of consumption and to the needs of individual consumers to transfer personal consumption through time. This sphere can operate totally independently from the production side.

(2) The "natural rate of interest" is equal to the standard rate of productivity growth plus the rate of inflation.

The production section can operate independently, and be naturally at necessarily lower rates of profits and lower prices for consumers had it been left operating naturally without the pressure of the financial market and interest rates.

Consumption, operating in the financial market, might become a hinderence to investment instead of being conclusive to it, due to the positive rate of interest.
Pasinetti's argument that the natural rate of interest is equal to the standard rate of productivity growth plus the rate of inflation, cannot be determined a priori.

The growth rate and the rate of inflation can only be estimated after loans at predetermined rates of interest have been utilized. Furthermore, both the productivity growth rate and the rate of inflation are at least to some extent, influenced by the rate of interest. Another area that would make predetermining a natural rate of interest practically impossible, is the area of consumer loans and probably most government debts, which are not productive at all.

\[\text{ii) Interest as a Return on Capital:}\]

Defining interest as a return on capital can be misleading, since interest is paid on money loans regardless of the uses of such loans. They might be used for consumption, investment, speculation, paying old debts or even gambling. The Canonists had a more defined concept in this regard:

"The merit of the Canonist theory is that it kept clearly in the mind the fact that interest is a charge for the use of money, not a yield from the investment of capital. It is an error of modern theory to treat interest as the price of, or return from capital. Money is not capital, it is not even representative
capital, though it is potential capital, but the lender of money does not make the change from potency to act. Capital only exists as capital goods, and the service of converting money loans into capital, of using productively, of investment, in Mr. Keynes word, is performed by the borrower when it is performed at all." (86)

Treating money as capital, and lending as investment is rejected by the Keynesians:

"The great support which Mr. Keynes gives to the Canonists, I take to be this: his strong distinction between Saving and Investment shows that it is theoretically wrong to treat money as representative capital and lending as Investment. Interest is the price paid for the use of money, it is not the yield of capital. The marginal productivity of capital proved or assumed, may be one of the factors that go to determine the rate of interest but interest has no necessary relation with capital productivity." (87)

On similar lines, in one of his articles Keynes wrote:

"The answer to the question whether there is an increment of wealth corresponding to the savings of an individual seldom depends on what he does with the money which represents that part of his income which he refrains from spending on current consumption. He may use his savings to buy a bond and yet there may be no increment of capital wealth coming into existence as a result of his saving. ... If an increment of saving by one individual is not accompanied by an increment of new investment - then it necessarily causes diminishing receipts, disappointment and losses to some other party when an act of savings merely results, however unintentional, in a loss to someone else, it is of an anti-social tendency, and the subsequent payment of interest to the saver for ... debts have to be interest as much as assets - is a burden which if it accumulates with time may become insupportable." (88)
One of the basic conclusions of the modern theory is that interest and profits move in the same direction. This was rejected by the Keynesians:

"The orthodox doctrine has related interest closely to profit, as if the two progressed or declined together. Mr. Keynes shows them as antagonists. Interest upon money is simply an added cost upon capital goods and therefore a deduction from profits and a burden upon enterprise." (89)

Furthermore, the rejection of the Canonists' theory of profits by the classicals is based on simplistic assumptions that are not realistic. Profits have been discussed. It is not the Canonists that did not understand profits, but rather it is the classicals who do not seem to understand the Canonists and their theory of usury, mixing up money with capital and interest with profits.

The fundamental distinction between saving and investment which Mr. Keynes makes, renders it equally fundamental to distinguish between interest and profit and between money and capital. It is here that Mr. Keynes is brought into the camp of the Canonists. Professor Cassel in his Nature and Necessity of Interest criticized the Canonists and opposed them with the principle that interest is paid for the use of capital not for the use of money. Now the Canonists never quarrelled with payment for the use of capital, they raised no objection to true profit, the reward of risk, ability and enterprise, but they disputed the identification of the lending of money with the investment of capital and denied the justice of interest as a reward for saving without investment." (90)
Böhm-Bawerk considers as "one of the great advantages" of the interest rate is to induce savings. This however has been rejected by the Keynesians who argue that savings depends on the level of income not the rate of interest. Furthermore savings do not necessarily mean investment.

"...The classical argument that interest is necessary to evoke saving wears a difficult aspect when we appreciate that saving does not necessarily mean investment. The saving of money may actually diminish investment, and interest is different to investment. If we could be assured, as the Canonists tried to do; that savings could be rewarded only when it is investment on capital goods, we should have gone far to stop the master evil that Mr. Keynes has revealed to us of saving exceeding investment."(91)

iii) Interest and Speculation:

Neo-classicals and Keynesians have almost opposite views about speculators. Neo-classicals consider speculators as people with knowledge and this reduces risk, since risk varies inversely with knowledge. The Keynesians disagree. According to Keynes rentiers are part of the class of speculators who lend to destabilize the economy by their irrational behaviour in the stock market. Through their strong preference for liquidity rentiers could just generate cumulative movements that often lead entrepreneurs to forestall or misdirect their investments.
Speculators to Keynes were far from having better foresight or knowledge but can be "ignorant individuals whose main preoccupation is to make quick capital gains";

"As also pointed out by Keynes, this historical advent and growth of a sophisticated capital market that facilitated the financing of large scale enterprise brought with it the development of a class of individuals, the rentiers, or, as Veblen described them, the absentee owners, whose main activity was not the commitment of the financial capital for long-term investment, but rather whose principal concern was the short-term capital gains arising out of speculative financial acquisition. With the rising proportion of the equity of the business enterprise, falling into the hands of the rentier class, investment spending became progressively vulnerable to what Keynes vividly described as "the mass psychology of a large number of ignorant individuals" whose main preoccupation in the capital market is to make capital gains, subject always to the necessity of remaining liquid (Keynes 1936, p. 154). The inevitable result of such an institutional arrangement is the development of a highly unstable economic system characterized by large savings in the availability of liquidity regulated by the rentier and banking sector."(92)

Speculation flourish at the expense of the productive sector:

"Contemporary economic institutions, particularly in North America, have moved further and further away from productive enterprise and have become increasingly concerned with financial acquisition for purely speculative purposes. For instance, R.J. Alexander points out that speculation has flourished in the United States at the same time that the productive sector of the economy declined."(93)
Marx also was concerned about the influence of speculation and the stock market, not only on the lives of individuals and the interest rates, but also on the competitive markets and apparent increase of the degree of concentration.

"The credit system makes the social character of capital predominant with respect to its private character. This tendency is reinforced by the further development of the financial market. The definite separation of ownership from management brought about by stock companies and the expansion of the Stock Exchange give new forms again to the antithesis... Capital becomes still more easily transferable. Its movements also begin to be regulated by speculation and gambling. Violent crisis are accelerated together with the concentration of wealth in the hands of pure adventurers. Marx goes on to state: "since property here exists in the form of stock, its movement and transfer becomes purely a result of gambling on the stock exchange, where the little fish are swallowed by sharks and the lambs by the stock exchange wolves."(87)

iv) Negative Income Redistribution:

Some studies have been lately made that proved the worst fears of many economists, most notably Keynes, that a high-interest rate results in a transfer of income from the industrialists to the rentier sector.
Evidence supports Pasinetti's argument, that whenever \( r-g>0 \) (\( r \) is rate of interest, and \( g \) is the growth rate), then there exists a transfer of income from the individual to the rentier section. When \( r-g<0 \); when the rate of growth is higher than interest rates, then rentier income is reduced. Prosperous periods have been associated with an interest rate below the rate of growth along with a decline in the share of rentiers income.\(^{(95)}\)

Based on Pasinetti's analysis Lawroie and Seccarecia concluded:

"From the late 1970s and onwards there has been an immense transfer of income towards the rentier sector accompanied by overall conditions of stagnation, especially in investment spending."\(^{(88)}\)

In both Canada and the U.S. there has been a major increase of interest income as a share of net national income. In Canada interest income even surpassed corporations profits in 1982.

"In Canada for instance, the share of interest income has grown exponentially during the post-war period from a mere 1.8% in 1947, to a peak of 10.6% of net national income in 1982, with the most significant increase taking place during the recent monetarist era in Canada. These structural changes however, appear more dramatic when one focuses separately on the relation between interest and profit. Indeed, while in 1947 interest income was merely 10.1% of the value of corporation profits (before taxes), this ratio reached its peak in 1982 at a value of 136.7 percent of profit income! As is described in greater detail by Hixson, a similar phenomenon can be found in the United States (Hixson 1983)"\(^{(97)}\)
Between 1946 and 1985 while real income had increased 2.3 fold there was 19 fold increase of wages, 16 fold increase of corporate profits, 6 fold increase of unincorporated business income. Net interest income however increased 159 fold, from an amount of less than $2 billion to over $287 billion. (98)

One of the serious negative results of this problem is a decline of aggregate demand due to the income transfer to the rentier class, which has a lower propensity to consume. This forces firms to reduce their rate of spending facing the problem of overindebtedness, which might lead to a "Ponzi finance" situation, which can cause financial breakdowns. (99)

Based on Pasinetti's analysis, and in view of the present regime of interest rates vis-à-vis, the rate of growth, one can predict that a major shift of income distribution in favour of the rentier class is presently taking place. Subtracting the rate of inflation from the prevailing interest rates, the rentier rate of interest is still almost double that of the rate of growth. Since interest is charged on consumption loans as well as on huge government, mostly non-productive debts, the redistribution
of income from society towards the rentiers is probably even more dramatic. Yet the Central Bank is still talking about increasing the interest rate to "contain" inflation. One can probably find economists who might argue that prostitution can be a helpful tool for the purpose of better desired income redistribution.

In concluding this section, it might be noted that there are a few other areas where interest might have a major negative impact, but not covered in this study, though these might be important and useful. What effect does the interest rate have for instance on consumer loans, inflation, unemployment, government debts, third world development and other aspects of economic life.

v) Interest and Social Justice:

Through the centuries interest was always thought of as unjust. In modern times some economists and other scientists have had different views concerning the rate of interest.
Böhm-Bawerk wrote:

"It is for instance undeniable that the circumstances attending the exchange of present for future goods are pre-eminently disposed to create a situation that is close to a monopolistic exploitation of the indigent. Present goods are inexorable necessity for the support of all human life. Anyone without them must attempt to secure them at any price. By sheer force of circumstances, the man bereft of means is barred from producing them on his own account.

...In a bargain of that sort, he is (the borrower) doubly handicapped. One handicap is his fortune position, the other is the numerical relations between the buyers and the sellers of present goods. ...It is possible for interest to be accompanied by circumstances that spell usurial exploitation and social evil."(100)

Fisher on the other hand tried to explain interest and defend the traditional theory, but seems uncomfortable that interest is some sort of a problem, he wrote:

"But the persistent notion that fundamentally, interest is unjustified has given the subject a peculiar fascination. It has been and still is the great economic riddle."(101)

Lawrence Dennis, writing in 1932, in the Economic Journal, had this challenge for the modern theory and its proponents:
"The effectiveness or impotency of credit is now being tested. The next ten years should furnish evidence on which to pronounce a verdict. If, without a war, it is found possible through the wise use of credit — now the chief preoccupation of the American Government to check the present decline and to stimulate an upturn, the defenders of interest will have a stronger case. If a war has to take us out of the present depression, or if Government expenditures financed by capital tax levies, accompanied by a large scale issue of fit money or particularly non-interest bearing central bank credit, proves to be the way out, then the case of interest will appear well-nigh hopeless. Credit is on trial."(102)

Keynes in support of an article written by Sommerville, almost agreeing with the Canonists wrote:

"Personally I have come to believe that interest or rather too high a rate of interest is the "villain of the piece" in a more far-reaching sense than appears from the above. But to justify this belief would lead me into a longer story than would be appropriate in this place."(103)

Frederick Soddy who was a Nobel Loreate of Chemistry, not an Economist, had some interesting comments, and wrote few books, about money. Frank Knight said about Soddy's book Wealth, Virtual Wealth and Debt "brilliantly written and brilliantly suggestive and stimulating."

Herman Daly, another economist, thought of Soddy as having been "fifty years ahead of his time."
The fundamental error of economics is the confusion of wealth, a magnitude with an irreducible physical dimension, with debt, a purely mathematical quantity.

"Debts are subject to the laws of mathematics rather than physics. Unlike wealth which is subject to the laws of thermodynamics, debts do not rot with old age and are not consumed in the process of living. On the contrary, they grow at so much percent per annum, by the well known mathematical laws of simple and compound interest. ... For sufficient reason, the process of compound interest is physically impossible, though the process of compound decrement is physically common enough. Because the former leads with passage of time ever more and more rapidly to infinity, which, like minus one, is not a physical but a mathematical quantity, whereas the latter leads always more slowly towards zero, which is, as we have seen the lower limit of physical quantity. ...(104)

Historians of the - let us hope - happier future in store for humanity will probably find it difficult to believe that in a scientific age such an error could have exercised the sway over the human mind that it actually does in this the third decade of the twentieth century."(105)

Soddy argues that "to put an absurd human convention against a natural law, is not only foolish but highly dangerous. The absurdity of infinite growth has been the most ignored anomaly in the bradigm of modern economics. As Soddy puts it:
"If Christ whose views on the folly of laying up treasurers on earth are well known, had put by a pound at this rate, it should now be worth an Octillion, and Tariff Reform would be of little help to provide that, even if you colonized the entire stellar universe.

...It is this absurdity which inverts society, turns good into evil and makes orthodox economics the laughing stock of science. If the consequences were not the familiar atmosphere of our daily lives they would be deemed beyond the legitimate bounds of the most extravagant comic opera."(105)i

Finally Schumpeter in concluding his chapter (Interest on Capital) stated:

I believe the reader will nevertheless find in them some of the elements for understanding that part of economic phenomena which has hitherto presented most difficulties. I have only one thing to add; I wished to explain the interest phenomena but not to justify it. Interest is not, like profit for example, a direct fruit of development in the sense of a prize for its achievements. It is on the contrary rather a break, ... a kind of tax on entrepreneurial profits. ...the fact that the interest phenomenon is not a necessary element in all economic organizations, will always result in the critic of social conditions finding more to object to in interest than in anything else.(106)
CONCLUDING REMARKS

Two main schools can be distinguished; the Modern School and the prohibition school. The prohibition school includes both the Scholastics and the Islamic. They stand firmly against usury or interest of any type. The Scholastics advance the scripture, Natural Law, Roman Law, Aristotle and the long standing Church position through the centuries prohibiting interest. In Islam the Qur'an clearly and unequivocally prohibits interest. Muslim scholars are unanimous about this; and Muslims have by and large, up to the present time, lived to it.

The prohibition school is not talking about a theory, but rather about a natural, basic law. Dealing in usury is a crime, just like adultery, gambling and theft. The nature of the contract is not just, for it is a guaranteed gain for one party against an unguaranteed gain, or a possible loss for another.

This school does not rely on economic analysis for their prohibition. It is rather stated as an axiom. It stands by itself. Economists and society's thinkers can find justification for those who cannot see the reasons behind such prohibition. Modern theorists, therefore, do not seem to address themselves to the usury from the point of view of the Canonists.
But modern theory has not settled this issue. The Keynesians are, at times closer to the Canonists. They do not see much positive use for the interest rate, but see its negative effects to be numerous. Modern theory therefore does not agree on the definition of interest, its effects and the way it is, or how it should be determined. On the practical side, dealing in interest is dominating the world scene, as if all pronounced verdicts are for it. Economists have yet to answer the question — is interest just? Whatever is unjust cannot be natural and/or necessary.

It should be emphasised that Islamic concept on interest — a total prohibition — is not subject to changes with the passage of time.

All revealed scriptures condemned and prohibited usury in any form. Economists, up to the present time still disagree on the concept of interest.

While the Islamic view is unambiguous, emphatic and unrelenting — at all times there had been either complete agreement with the Islamic view, or partial agreement.
Joan Robinson has been quoted to have said:

"...when capitalism is rightly understood, the rate of interest will be set at zero, and the major evils of capitalism will disappear." (107)

A more efficient and equitable income distribution is needed for attaining a more acceptable degree of social and economic justice. In my view one of the prerequisites of attaining that would be a zero rate of interest.
FOOTNOTES

(1) Ryan, F. -- 1924, pp. 37-38
(2) Ibid, p. 39
(3) Ibid, p. 40
(4) Barnes, S. -- 1984, Volume 2, Book 1, Chapter 10
(5) McKeon, R. -- 1966, Chapter 6, pp. 1011-1012
(6) Ryan, op. cit., p. 44
(7) Dempsey, B. -- 1943, p. 1
(8) Noonan, J. -- 1957, p. 15
(9) Ibid., p. 16
(10) Ibid., p. 17
(11) Ibid., p. 18
(12) Ibid., p. 20
(13) Ibid., p. 38-39
(14) Ibid., p. 51-52
(15) Ibid., p. 53-54
(16) Ibid., p. 72-73
(17) Dempsey, op. cit., p. X
(18) Ibid., pp. 219-220
(19) Economic Thinking in Islam, 1968, p. 68
(20) Ibid., p. 69
(21) The Holy Qur'an, pp. 111-112
(22) Ibid., pp. 112-113
(23) Ibid., pp. 156-157
(24) Ibid., p. 231
(25) Ibid., p. 1062
(26) Abu-Saud, 1968 p. 12
(27) Ibid.
(28) Ibid., p. 13
(29) Ibid.
(30) Ibid., p. 14
(31) Qureshi, A. -- 1945 pp. 51-54
(32) Economic Thinking in Islam, op. cit., p. 110
(33) Kahf -- 1978, p. 62
(34) The Holy Qur'an, op. cit., p. 458
(35) Kahf, op. cit., p. 73
(36) Ibid., p. 74
(37) Hotson, J. -- 1987, p. 188
(38) Kahf, op. cit., p. 76
(39) Cassel, G. -- 1957, p. 7
(40) Noonan, J. op. cit., p. 365
(41) Ryan, F. op. cit., p. 48
(42) Ibid., p. 52
(43) Ibid., p. 57
(44) Qureshi, A. op. cit., p. 13
(45) Panico, C. -- 1988, p. 20
(46) Ibid.
(47) Ibid., pp. 22-23
(48) Ibid., p. 34
(49) Ibid., p. 58
(50) Ibid.
(51) Ibid., p. 59
(52) Ibid., p. 72
(53) Ibid.
(54) Ibid., p. 73
(55) Ibid., p. 76
(56) Ibid., pp. 85-86
(57) Qureshi, A. op. cit., p. 29
(58) Ibid., p. 26
(59) Panico, C. op. cit., p. 123
(60) Ibid., p. 128
(61) Ibid.
(62) Dempsey, B. op. cit., p. 42
(63) Panico, C., op. cit., p. 127
(64) Qureshi, A. op. cit., p. 35
(65) Ibid.
(66) Ibid.
(67) Ibid., p. 36-38
(68) Schumpeter, J. -- 1934, p. 157
(69) Ibid., p. 159
(70) Ibid., p. 173
(71) Ibid., pp. 210-211
(72) Ibid., p. 211
(73) Ibid., p. 211
(74) Allais, M. -- 1969, p. 356
(75) Lawrence Dennis -- 1932, pp. 318-320
(76) Sommerville, H. op. cit., p. 319
(77) Ibid., pp. 320-321
(78) Dennis, L. -- 1932, p. 312
(80) Ibid., p. 42
(81) Ibid., p. 202
(82) Panico, C. op. cit., p. 58
(83) Ibid., p. 128
(84) Panico, C. op. cit., p. 128
(85) Ibid.
(86) Pasinetti, L., 1981, pp. 156-175
(87) Sommerville, H., pp. 322-323
(88) Ibid.
(89) Keynes, J. -- 1932, p. 135
(90) Sommerville, H. -- 1932, p. 647
(91) Ibid., p. 647
(92)
(93) Ibid., p. 649
(94) Hotson, J. -- op. cit., p. 199
(95) Panico., C., op. cit., pp. 85-86
(96) Lavoie & Seccareccia, p. 152
(97) Ibid., p. 153
(98) Lavoie & Seccareccia, p. 59
(100) Lavoie & Seccareccia, 1988, op. cit., p. 55
(101) Böhm-Bawerk, E. -- 1959, pp. 338-339
(102) Fisher, I. -- The Theory of Interest, Clayton, 1974, p. 53
(103) Dennis, L., op. cit. p. 317
(104) Keynes, J., op. cit. p. 137
(105) Soddy, F. -- 1926, pp. 70-71
(106) Daly, H. -- 1980 12:4, p. 485
(107) Schumpeter, H., op. cit., pp. 210-211
(108) Lavoie & Seccareccia, 1985, p. 157
BIBLIOGRAPHY

THE ARABIC BOOKS

ABU SAUD M. (1987) - Main Outlines in Islamic Economics: International Islamic Federation of Student Organizations

ALMAUDUDI, A. - Airriba: For ALANSAR, Cairo, Egypt


ANNAJJAR A. (1987) - 100 Questions and Their Answers: International Federation of Islamic Banks


HAMD, A. - Observations of the Experience of FAISAL ISLAMIC BANK: Nation House for Printing

IBNUTAYMYA - The Collections of FATAWA Sheik AL-ISLAM IBNU TAYMEYA: Saudi Cultural Centre in Morocco

QUTB, S. - In the Shade of the Qur'an: DAR Alshuruq

THE HOLY QUR'AN

ZAIR. M. (1985) - "Usury and its Role in Bankrupting Nations": APIQUTISAD ALISAMI (May, April) (pp. 306-311)
THE ENGLISH BOOKS

ABU-SAUD, M. (1986) - Contemporary Economic Issues - Usury and Interest - Zakat and Research Foundation, Cincinnati, Ohio

ADARKAR, B. (1932) - "Mr. Keynes and the Canonists" - The Economic Journal: March, 120-131


ALLAIS, M. (1969) - "Growth and Inflation", The Journal of Money, Credit and Banking, August, 355-426


BÖHM-BOWERK, E. (1959) - Capital and Interest: Librarian Press, South Holland


DEMPSEY, B. (1943) - Interest and Usury: American Council on Public Affairs, Washington, D.C.

DENNIS, L. (1932) - "Usury and the Canonists" - The Economic Journal: June, 312-318

ELGAR, E. ~ Keynes and Public Policy After 50 Years - Volume 2; Theories and Methods


IBN UHALDÜN (1958) ~ The Magaddimah - An Introduction to History. Translated from Arabic by Franz Rosenthal (3 Volumes) - Bollingan Series XLIII Pantheon Books


KAHF, M. (1978) ~ The Islamic Economy: The Muslim Student Association of the U.S. and Canada

KEYNES, J. (1932) ~ "Savings and Usury" - The Economic Journal - March 135-137


LAVOIE, M. & SECCARECCIA, M (1985) - "Money, Interest and Rentiers": The Twilight or Rentier Capitalism in Keynes General Theory; Keynes and Public Policy After 50 Years - Volume 2 Theories and Methods: Edited by Hamond, J. and Smithin, J., Edard Elgar


LONGHOLM, O. (1984) - The Aristotelian Analysis of Usury - Reulametrykk AsBergeren


NOORZOY, M. (1988) - Islamic Laws on Riba (Interest) and Their Economic Implications: Department of Economics, University of Alberta

PAISH, F. (1967) - Long-Term and Short-Term Interest Rates in the United Kingdom: Augustas Rolley Publisher


PAREL, A. (1978) - Calgary Aquinas Studies - Psutifical Institute of Medieval Studies, Toronto

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCHNOW, H.</td>
<td>1988</td>
<td>The Five Year Outlook for Interest Rates: Randy McNally &amp; Company, Chicago</td>
</tr>
<tr>
<td>QURESHI, A.</td>
<td>1945</td>
<td>Islam and the Theory of Interest: Idarah I. Adabiyati Delli, Delhi, India</td>
</tr>
<tr>
<td>RAYAN, F.</td>
<td>1924</td>
<td>Usury and Usury Laws: Houghton Mifflin Coup., Boston</td>
</tr>
<tr>
<td>SANDWELL, B.</td>
<td>1932</td>
<td>&quot;Mr. Keynes and the Canonists&quot; - The Economic Journal - March 131-135</td>
</tr>
<tr>
<td>SAMUELSON, P.</td>
<td>1957</td>
<td>&quot;Wages and Interest&quot; - American Economic Review - Volume 7 and 6 - Dec. 884-912</td>
</tr>
<tr>
<td>SECCARECCIA, M.</td>
<td>1988</td>
<td>&quot;System Viability and Credit Churches&quot; - &quot;An Examination of Recent Canadian Cyclical Fluctuations&quot; - Journal of Economic March (49-77)</td>
</tr>
<tr>
<td>SODDY, F.</td>
<td>1934</td>
<td>The Rôle of Money: George Poulledge and Sons Ltd., London</td>
</tr>
<tr>
<td>SOMERVILLE, H.</td>
<td>1932</td>
<td>&quot;Usury and Standstill&quot;: The Economic Journal - June pp. 318-323</td>
</tr>
<tr>
<td>SYMOSIUM REPORT</td>
<td>1983</td>
<td>Interest Rates and Recovery: C.O. Howe Institute, October</td>
</tr>
</tbody>
</table>


- The Holy Qur'an, Translation by Yosuf Ali - Amana Corp. Brenthwood, Maryland