The comparative role of banking in binary and Islamic economy

Rodney Shakespeare and Sofyan Harahap
Economics Department, Trisakti University, Jakarta, Indonesia

Abstract

Purpose – The purpose of this paper is to set out the role of banking in a binary and Islamic economy.

Design/methodology/approach – By comparison, the paper shows that the main requirements for such an economy, although superficially similar, differ from the realities of "free market" finance capitalism. The paper goes on to explain how, in a binary and Islamic economy, commercial banks would be the means by which interest-free loans, coming from the central bank and *ummah* and directed at various forms of productive capacity, would be introduced.

Findings – There is no difficulty in using the banking system to introduce the binary and Islamic economy. However, a paradigm issue is involved.

Practical implications – The central bank-issued interest-free loans implemented through the commercial banking system loans serve the ends of both binary and Islamic economics in that they enhance the real economy and forward social and economic justice.

Originality/value – The paper shows how use of these loans is a new concept with a power to change the whole of the economy and society in a beneficial way.

Keywords Islam, Banking, National economy, Interest rates, Economic processes, Free market economy

Paper type Research paper

Introduction

Present "free market" finance capitalism has characteristics which are often honoured more in rhetoric than reality. For example, the markets for capital, allegedly free, are not free; and inflation is an inherent and inevitable part of the structure. A binary and Islamic economy, however, using the commercial banking system to introduce (from the central bank and/or *ummah*) interest-free loans directed at various forms of productive capacity, has genuine free markets, widespread private property, no inflation and social and economic justice.

Main requirements for a binary and Islamic economy

An understanding of the main requirements for a binary and Islamic economy can be obtained by examining not only the *Qu'ran* and *sunnah* but also the culture, attitudes and practices of Muslims and then setting everything in the context of modern, and likely future, circumstance. Central to that economy is the concept of *tawhid* which embraces all aspects of life so that there is an overall sense of unicity, relatedness and comprehensiveness or – integration, interaction and evolution (IIE) (Choudhury, 2003; Choudhury and Harahap, 2004; Choudhury and Shahadat Hossain, 2003; Baaqui, 2005; Hossain, 2005). A paradigmatic change is involved (Choudhury, 2005a, b; Harahap, 2005; Christensen, 2005) with a need to develop a coherent foundation taking account of a wide range of studies rather than a narrow legalistic approach (Haneef and Furqani, 2005). The requirements especially for binary economy and to a great extent for Islamic economy may include:

Humanomics
Vol. 25 No. 2, 2009
pp. 142-162

0828-8666
DOI 10.1108/08288660910964201

- free markets (Sadeghi, 2005; Saleem, 2005);
- widespread private capital ownership spreading productive capacity to all individuals in the population so that they produce (and thus earn) independently of whether or not they also have a conventional job;
- an efficient wealth creation including a balancing of supply and demand;
- structural economic and social justice (rather than mere palliative charity (Shakespeare and Challen, 2002; Sadeghi, 2005);
- no inflation (Hassan, 2004);
- proper encouragement of small and start-up businesses (Sadeq, 2005);
- sharing and participatory structures in all aspects of system;
- a strong ethical sense imbuing everything;
- an end to *riba*/interest and economic colonialism;
- an end to economic colonialism or neo-colonialism;
- public and environmental capital projects; and
- a direct connection between money and the real economy.

Associated with these requirements are a desire for:

- an increase in political freedoms and a deepening of democracy;
- policy to unite inhabitants who have different linguistic, religious, geographical and ethnic backgrounds; and
- environmental stewardship.

The deficiencies of "free market" finance capitalism in respect of the main binary and Islamic requirements

However – and this will come as an unpleasant surprise to minds conditioned by the endless propaganda spewing forth from radio, newspapers and television – the present system of "free market" finance capitalism is deficient in *all* of the main binary and Islamic requirements. The deficiency, moreover, is the more remarkable because those requirements (with the exception of no *riba*/interest and strong ethical sense) are largely extolled in "free market" rhetoric.

Thus, in respect of the binary and Islamic requirement for a unicity concept, neoclassical economics has no genuine sense of overall relatedness. It separates the economy from society, denies the need for morality in economics and, at the same time, dares to claim that all its outcomes are just.

In respect of free markets, the labour markets today are relatively free (although much less free than is normally supposed) but the markets for productive capital are most certainly not free – indeed, they are *un*free. The reasons for this include:

- an outdated savings doctrine;
- a deep misunderstanding of who or what physically creates the wealth;
- a theoretical misconception of the time value of money; and
- a failure to devise a modern method of providing collateral.

The result is that, throughout the world, productive capital today is narrowly owned (and, as things stand, will remain narrowly owned) and therefore "free market" finance capitalism is better described as *un-Islamic unfree market finance capitalism*. Certainly in the case of the large mature corporations, there is no reason why capital ownership cannot be spread more widely (Ashford and Shakespeare, 1999; Kurland *et al.*, 2004).

The third binary and Islamic requirement – for widespread private ownership of productive capital – has obvious political and societal virtues but it is also intimately connected with genuinely free markets as is the fourth binary and Islamic requirement for efficient wealth creation. Because of the lack of freedom in present capital markets, private property in productive capital – the major contributor to wealth creation – is not widely spread which causes a deep imbalance in supply and demand. It is fundamental to market theory that who or what creates the wealth should get the resulting income and that – as required by Say's Theorem (Law) – there should be a proper balancing of supply and demand. But this does *not* happen at present. Moreover, it *cannot* happen unless, through wide capital ownership, productive capacity (and its associated income) is spread so that those with reasonable consuming needs can fulfill them. It is a remarkable thing that Jean Baptiste Say himself thoroughly understood that the Theorem (Law) attributed to him (in fact, it is in the writing of Smith, 1776) does *not* work unless there is a spreading of capital ownership and thus Adam Smith, who was mainly concerned with labour as the creator of wealth, had got things badly wrong. In 1803, JB Say wrote:

> To the labor of man alone he (Smith) ascribes the power of producing values. This is an error. A more exact analysis demonstrates . . . that all the values are derived from the operation of labor, or rather from the industry of man, combined with the operation of those agents which nature and capital furnish him. Dr. Smith did not, therefore, obtain a thorough knowledge of the most important phenomenon in production; this has led him into erroneous conclusions, such, for instance, as attributing a gigantic influence to the division of labor, or rather to the separation of employments. This influence, however, is by no means inappreciable or even inconsiderable; *but the greatest wonders of this description are not so much owing to any peculiar property in human labor, as to the use we make of the powers of nature. His ignorance of this principle precluded him from establishing the true theory of machinery in relation to the production of wealth* (Italic emphasis supplied).

It can also be observed here that Islamic countries do not lack human and material resource and it is time to address the issue of why they unnecessarily languish. A remarkable lecture on this matter was given by Ing. B.J. Habibie (former President, The Republic of Indonesia) at the international conference *Islamic Economics and Banking in the 21st Century*, Jakarta, Indonesia, November, 2005. The former President, a successful aircraft engineer, well understands the potential of technology to create wealth. See also Mutis (1995).

The fifth binary and Islamic requirement – for economic and social justice – is connected to the previous requirements for free markets, private property in productive capital, and economic efficiency. However, conventional neoclassical economics believes that social and economic justice generally cannot be furthered without decreasing economic efficiency – i.e. conventional economics thinks efficiency and justice are incompatible. But in the new insights, understandings and policies associated with an Islamic economy, social and economic justice and efficiency are not only compatible but are also so intimately connected that the one reinforces the other. In the binary and Islamic economy *justice* (particularly in the form of widespread capital ownership) *creates the efficiency and the efficiency creates the justice* (Al-Jahri and Zarqa, 2005; Shakespeare and Challen, 2002; Ashford and Shakespeare, 1999; Kurland *et al.*, 2004).

Sixth, the binary and Islamic economy desires minimal, preferably no, inflation. It wishes that money should maintain, even increase, its buying power. Today, however, there is a continual inflation in all economies which is essentially caused by the banking system continually increasing the money supply. At present most of the new money supply (97 per cent in the UK but the percentage varies in different countries) *is created out of nothing by the banks which then add interest*. However, while the money for the principal is created, the money to pay the interest is not. The result is a continual need to create more and more interest-bearing money which both pushes up inflation and, at the same time, increasingly puts individuals, corporations, towns, cities and nations into an ever-burgeoning, and often unrepayable, debt. Inflation and debt are inherent to the present system (el Diwany, 2003). Inflation will never be moderated, let alone eliminated, unless the nature of the present money supply is understood and correction made. In particular, if inflation is to be eliminated, money must be directly and continually linked with the real economy.

The briefest look at the Muslim populations, for example, of Indonesia, Bangladesh, Pakistan and India establishes that socially, culturally and economically (Hassan, 2004; Alam, 2004), small and start-up businesses are essential to the success of individuals and the economy. But such businesses usually have to bear the crushing burden of *riba*/interest. Binary economists and Muslims know that loans must be repaid but there is no need to make the repayment difficult or impossible as happens with present interest-bearing money. They also uphold sharing and participatory structures (mudharabah, musharakah schemes) but, in practice today such schemes, even with Islamic banks, are generally rare. Muslims should investigate the company structures of Mondragon in Spain and the mechanisms of binary economics. (See also the Justice-based Management of the Washington, DC, Centre for Economic and Social Justice – www.cesj.org; Kurland *et al.*, 2004; Christensen, 2005).

Even rarer today is to find anything in conventional economics which requires an ethical sense. For example, conventional accounting and capitalism in general claim that a company's main responsibility is to create profit and a maximum return for stockholders. But Islam requires a social responsibility (Harahap and Basri, 2005). Moreover, accounting cannot be neutral – it is certain to embody values (Harahap, 2005; Harahap and Choudhury, 2005a, b; Dusuki and Dar, 2005; Sairally, 2005). There must be a push to end corruption (Khan, 2005; Christensen, 2005). All forms of corruption must be eliminated (Nasrullah, 2005).

An end to *riba*/interest is essential for both religious and practical reasons yet the present system and its main money supply is based on interest-bearing debt. And, unfortunately, present Islamic Finance and Banking (whether it likes admitting it or not) is unavoidably a part of that system. Islamic finance and banking certainly endeavors to avoid the appearance of interest by using various legal and administrative devices, but it cannot avoid the fact that at the heart of the present system is the creation of interest-bearing money by the banks. In a very fundamental way, therefore, there is a conflict between present reality and Islamic religious injunction. Besides, certainly where productive capacity is concerned, interest is not necessary. Interest today usually comprises a bundle of things, of which only some are necessary. Thus administrative cost is necessary; profit is necessary and, in particular circumstances, some provision for collateral (*rahn*) may be necessary, *but interest itself* (which puts the world into more and more debt) *is not necessary.*

Moreover, Islam requires an end to economic colonialism. There is widespread mourning for the loss of Islamic economic sovereignty (Anjum, 2004). Another requirement is the proper provision of public and environmental capital projects. But present interest-bearing money is the main means by which economic colonialism is maintained and also the main reason why it is difficult to provide desirable public and environmental projects.

There is also the binary and Islamic requirement for a direct connection between money and the real economy (Harahap, 2005). Indeed, the present banking system cannot justify its present existence unless it can fairly claim (as it certainly tries to claim) that it directs money towards the real economy. Despite the claim, however, it does *not* do so. Lietaer (2001) says that speculative trading (trading whose sole purpose is to take advantage of the changes in the value of currencies) has all but taken over the foreign exchange markets so that the real economy is relegated to a mere side-show. Of all the foreign exchange transactions, less than 2 per cent relate to the real economy. Thus, in reality, only a small percentage of the money supply is directed towards the real economy and the rest goes towards consumer credit, derivatives, a huge rise in existing asset prices and to generally putting the whole world into ever-increasing debt. The fundamental justification for the present banking system therefore no longer exists and, noting that, binary economics and Islam now look towards re-instating that justification. In fact especially in Indonesian case, the ratio of financing (loan) to deposits is more or less 100 per cent it means that all third party's fund go back to real sector. In conventional banks that ratio is around 40 per cent go to real sectors and the rest they put in central bank or in speculative transactions.

Lastly, modern people desire an increase in political freedoms and a deepening of democracy but many Muslim countries have little or no political democracy let alone economic democracy. Muslim countries ask for policy to unite inhabitants who have different linguistic, religious, geographical and ethnic backgrounds. And surely many people today understand that at present there is a failure to undertake a proper environmental stewardship.

So, in summary, there is an acute discrepancy between the realities and rhetoric of "free market" finance capitalism on the one hand, and the fundamental requirements of binary economics and Islam on the other.

The role of banks in a conventional economy

Banks provide financial services including the extension of credit (i.e. lending money).

Lent money is created out of nothing

However, contrary to popular belief and continual propaganda, banks do *not* lend their own money nor that of depositors. Instead, extended credit is *new* money which is created out of nothing and, on repayment, is cancelled. The matter was put clearly by the Federal Reserve Bank of Chicago (1992):

> The actual process of money creation takes place primarily in banks.

Sir Josiah Stamp, director of the Bank of England during the years 1928-1941, stated in regard to "banking":

> The modern banking system manufactures money out of nothing. The process is perhaps the most astounding piece of sleight of hand that was ever invented. Banking was conceived in iniquity and born in sin. Bankers own the Earth. Take it away from them, but leave them the power to create money, and with the flick of the pen they will create enough money to buy it back again. . . . Take this great power away from them and all great fortunes like mine will disappear, and they ought to disappear, for then this would be a better and happier world to

> live in. But if you want to continue to be slaves of the banks and pay the cost of your own slavery, then let bankers continue to create money and control credit.

And Frederick Soddy, 1921 Nobel Prize Winner for Chemistry, wrote:

> The whole profit of the issuance of money has provided the capital of the great banking business as it exists today. Starting with nothing whatever of their own, they have got the whole world into their debt irredeemably, by a trick. This money comes into existence every time the banks "lend" and disappears every time the debt is repaid to them. So that if industry tries to repay, the money of the nation disappears.

Furthermore, the famous American economist JK Galbraith has said:

> The process by which banks create money is so simple that the mind is repelled.

He went on to add that the process is one that is almost breathtaking in its audacity (Galbraith, 1975).

The process was neatly summarised by Graham Towers, former Governor of the Central Bank of Canada who in 1939 said that:

> Each and every time a bank makes a loan, new bank credit is created – new deposits – brand new money.

All of which raises three key questions:

(1) Who *(society or the banking system) has the ultimate right to create money*?

(2) And why has society's privilege to create money been usurped.

(3) Does the usurpation matter?

In what follows, these questions should be borne in mind.

Interest is added

To the requirement of borrowers having to repay the lent money (which has been created out of nothing), banks add the requirement to pay interest. And when asked to justify the payment of interest, the first response is to point to the cost of administration. This is not unreasonable because the cost of administration can be a part of interest as can provision for default. The provision might be for the default of the borrower or the default of other borrowers in general.

However, when:

- The administration cost is minimal (as in the case of public capital investment when the administration cost can often be low, even minimal. This is because the administrative cost is substantially borne *by the borrower* and *not* by the lender, e.g. as when a local government body collects fees and taxes with which to repay its debts).
- The collateral – security for a loan – is adequate or largely not involved (as when a government undertakes the obligation to repay, or when specific provision is made for collateral).
- There has been a scrutiny to establish whether the investment can pay for itself.

Where is the justification for interest?

Where is the justification for something which is *in addition* to administration cost? (Bank operational costs and *riba* are separate – Gafoor, 2004).

Where is the justification for something which is *in addition* to reasonable profit and which locks on to a debt so that, because of the effects of compound interest, the debt will be repaid many times over or, frequently, will never be repaid at all? When this happens (because the total debt – principal plus compound interest – has rocketed beyond any possibility of repayment) the effect is that more and more interest has to be everlastingly paid.

Is interest necessary?

So is interest necessary?

For Muslims, the giving or taking of *riba* (interest) is wrong because the Qur'an forbids *riba*. However – and we are being frank – for non-Muslims the question is not whether interest is wrong but whether it is necessary.

To which question the banks generally reply that interest is necessary and may then try to end any further discussion of the matter. In so doing, they are essentially expressing conventional thinking because *riba*/interest is at the heart of the conventional economic paradigm or understanding of reality (Kuhn, 1962).

However, the banks also tend to add that interest is necessary because somebody's hard-earned money is being lent. *But the banking system is* not *lending its own, or its depositors', money.* It is creating the lent money out of nothing by pressing computer buttons. There is thus no justification for the imposition of interest. The administrative component of interest is certainly justifiable but interest itself is not.

Yet – it will be asked – it cannot be that simple. Surely great thinkers have discovered a justification for interest?

Well, there certainly have been attempts at justifying interest – after all, without a valid justification for interest the conventional paradigmatic understanding of economics quickly falls apart. Nassau Senior, for example, wrote of "abstinence" seeing interest as the reward for abstaining from immediate consumption (Senior, 1836). Rather similarly, Marshall (1890) spoke of "waiting" as did Cassel (1903). And the principle of time-preference was enunciated by Bohm-Bawerk (1884) who viewed a loan and the associated interest as a real exchange of present goods against future goods. Yet the underlying idea of time preference is of paying an extra price (interest) for getting something now rather than having to wait.

But if a person, by pressing computer buttons, creates the money to be lent out of nothing why should that person be allowed to impose interest? That person has done no abstaining and done no waiting. And who gave him the right to create the money out of nothing in the first place? Those who create money out of nothing are normally deemed to be forgers and counterfeiters.

Yet, today, money *is* created out of nothing by the banking system which has, in practice, been allowed not only to usurp society's prerogative to create money but also to usurp society's right to impose tax – for that, in effect, is what interest is except that the benefit of the "tax" does not go to the government. (In the case of the UK, the usurpation originally happened in 1694 when the founder of the Bank of England gave £1.2 million @ 8 per cent interest to King William III to fight the war with France. This was the first UK National Debt and, in effect, the government's inherent right to issue money had been sold to the banking system. The National Debt principle – and the usurpation – has since been copied worldwide.)

The conventional economist will then try to make one last, desperate, defence of interest. He will articulate conventional savings doctrine which says that, before there can be investment, there must be financial savings and physical savings and thus investors are being rewarded for abstaining from consumption in order to develop productive capacity.

Indeed, at first it sounds sensible to say that, before there can be investment, money must be obtained and bricks and cement, for example, must be available. *But suppose the money is created out of nothing by the pressing of computer buttons* and suppose the bricks and cement are easily available (even though, when in short supply, their prices can rise or, if necessary, alternatives are available)? *Where, then, is the justification for conventional savings doctrine*?

The answer to the question is simple – there is *no* justification. Where interest is concerned, people should beware of false, outdated concepts such as the time value of money and conventional savings doctrine which are presented to the populace as unchallengeable untruths. In reality, however, they are cynical deceptions designed to maintain the malignant grip of money-lenders and other undesirable features of finance capitalism such as rich-poor division and economic colonialism.

So the question remains – *Why should there be interest at all?* And the answer is that there is *no* justification for interest. Interest is simply an unnecessary "tax", and a very large one, imposed by those who *appear* to own money and have the power to dictate the terms on which others can borrow. Interest has hugely deleterious effects on the economy and society as a whole. The effects of interest are complex but in Aachen, Germany, for example, interest on capital is 12 per cent of the cost of rubbish collection; 38 per cent of the cost of drinking water; 47 per cent of the cost of sewage; and up to 77 per cent of the cost of public housing. Indeed, it has been estimated that an amazing 50 per cent of the price of *all* goods and services relates to borrowing costs (principal and interest) (Kennedy, 1995; el-Diwany, 2003).

Moreover, the financial receipts of interest go only to a small percentage of the population and foreigners. Overall, the cost of interest causes 80 per cent of the population to pay out much more than they receive; 10 per cent are in balance; and the last 10 per cent receive very much more than they pay out. Internationally, of course, the effects of compound interest are such that whole societies are trapped into an ever-increasing debt which they can never repay, and the attempt to repay in practice results in their economic resources being ripped off to outsiders (Kennedy, 1995).

The extraordinary claimed justification for creating money out of nothing and then adding interest. However, when it is forced to admit the fact that it creates money out of nothing and adds interest, the banking system then tries to justify that fact by making an extraordinary claim. It claims that the lent money (at interest) is especially virtuous because it profoundly serves the needs of the economy by efficiently allocating resources.

Admittedly, that justification would be a strong one *if* it were true. *But it is not true.*

Firstly, the present monetary system continually cancels the principal of a loan on repayment but, at the same time, it has not created sufficient money for the repayment of interest. Thus, if there is to be sufficient money in the economy, more and more interest-bearing money must be created in an endless upward, inflationary, spiral. This spiral has nothing to do with the efficient allocation of resources. Moreover, since there is a pressing need to have more and more borrowers the consequence is more and more debt with the banking system being increasingly careless as to whether the money will be repaid as long as more and more money is borrowed. That carelessness is antipathetic to the efficient allocation of resources and it is why, today, people – even heavily indebted people and bankrupts – are continuously pressed to borrow more and more money, e.g. by using credit cards.

Secondly, the claim of efficiently allocating resources, particularly for productive capacity, is a complete lie. Nowadays, the banking system does *not* allocate money to new productive capacity and, instead, allocates it to derivatives; to the bidding up of existing asset prices (such as house prices); to consumer credit; to putting individuals, companies and whole societies into debt, indeed, to anything but the real, productive economy. Today, only a tiny percentage (less than 2 per cent) of the money supply goes into new productive capacity (Lietaer, 2001). Very significantly, the speculative trading of currencies now swamps the world's money exchanges and the capital development of a country becomes an irrelevance to the activities of a casino (Meera and Larbini, 2004). The bulk of the speculative trading is done by the currency trading departments of the banks (Lietaer, 2001). Greed has overtaken common sense and the situation is madness.

Thirdly, the requirement to pay interest diminishes the capacity of borrowers to repay and diminishes their capacity to consume. Put simply, borrowers have to repay more than they have borrowed and must consume less than the value of the borrowed sum. It is therefore perverse to claim that this is in any way to do with the efficient allocation of resources because it simply "allocates" resources *away* from the borrower (which, of course, is the real reason for lending money at interest).

Fourthly, the use of interest-bearing money *doubles* or more the cost of capital projects. This is because interest, particularly when compounded, hugely adds to the cost of a project. Doubling, however, is the least of what happens. Such is the accrual of compounded interest that the amount of repayable money trebles, quadruples and quintuples before rising like a rocket so that the sum owed becomes incapable of ever being repaid. This is also the basic mechanism which has caused the National Debt of most countries to rise to astronomical levels.

But there is a remarkable exception – the Channel Island of Guernsey which, in the early nineteenth century, and having insufficient income to fund borrowing for an essential sea wall, decided to create its own money to build the sea wall and then take back the money (via fees and taxes) with the option of cancelling it. The practice has been continued so that, today, Guernsey is largely free of National Debt. Guernsey is prosperous (although the fact that Guernsey is a tax haven tends to mask the true source of prosperity which is freedom from National Debt). Thus we can see that a nation's interest-bearing debt is a continual, grossly enervating, burden for which there is no need and it massively defeats the purpose of the efficient allocation of resources.

In summary, the claimed justification for creating money out of nothing and then adding interest has little or no basis in reality and must be rejected.

The conventional definition of endogenous and exogenous money

Conventional endogenous money

We can now understand that the conventional definition of endogenous money is:

> Interest-bearing loans issuing from the banking system for the efficiency and resource-allocating purposes of a market economy.

It should be noted that the conventional definition of endogenous money does *not* include *interest-free* loans issued by a central bank for the purposes of the efficiency and resource-allocating purposes of a market economy.

However, as has already been seen, interest is *not* necessary and, moreover, far from allocating resources efficiently, the present system does something *akin to the opposite*.

The conventional definition – and the associated banking practice – furthermore, does not accommodate (and has no intention of accommodating) the basic requirements for an Islamic economy. Thus there is *no* intent or practice to spread capital ownership; *no* proper balancing of supply and demand; *no* concern for structural economic and social justice; *no* practical encouragement of small and start-up businesses; *no* encouragement of sharing and participatory structures; *inadequate* public and environmental capital projects; *no* strong ethical sense imbuing everything; *no* policy to unite; and everywhere, everywhere, there is the *riba*/interest which wrecks people, companies, towns, cities, nations and economies and which is pushing the world to environmental disaster (el-Diwany, 2003).

And it should be further noted that the conventional use of the term "endogenous" money amounts to a deception, if not a lie. In any dictionary "endogenous" has the meaning of "coming or growing from within". Thus the conventional claim that money coming from the banking system is endogenous is a disgraceful twisting of words – indeed a perversion of vocabulary – for it is essentially being claimed that government and other institutions at the heart of society are in reality outside society and only the banking system is inside. That is arrogance and hubris on an ineffable scale.

Conventional exogenous money

The conventional definition of exogenous money is:

> Debt-free (i.e. non-repayable or "printed") money issued by the government.

Again, it should be noted that this definition does *not* include interest-free *loans* issued by a central bank for the efficiency and resource-allocating purposes of a market economy.

"Exogenous" has the meaning of "coming from without" so, again, a deception is involved. "Printed" money coming from a government *cannot* be said to be coming from outside the society, can it? Admittedly debt-free or "printed" money is undesirable because it is usually disassociated from productive capacity and so likely to cause inflation but it cannot be said to be coming from outside the society.

The binary and Islamic definition of endogenous and exogenous money

It can now be observed that the neither the conventional definition of endogenous money nor the conventional definition of exogenous money includes *interest-free loans* issued by a central bank for the purposes of productive capacity. Because no interest is involved, the capital cost is one half or less of the usual cost.

Moreover, – and this is a matter of the greatest importance – such loans *cannot* be inflationary. This is because when the lent money is repaid it is *cancelled* leaving behind (in the economy) the productive capital asset. However, conventional economics likes to pretend that the possibility of such interest-free loans does not exist.

Binary and Islamic endogenous money

But conventional economics is wrong – the possibility most certainly *does* exist.

Let us now consider the binary Islamic definition of endogenous money which is in almost complete contrast to the conventional definition. The binary Islamic definition is:

> Interest-free loans originating from the central bank and issued to the government for public and environmental capital projects which may be privately owned or, administered by the banking system, issued to the private sector for small and start-up businesses and also for medium and large corporations if thereby wide capital ownership is extended.

Crucially, the binary Islamic endogenous loans originate with the central bank. By originating the money with the central bank (rather than the banking system) *society's* ownership of the money is established and hence the money can be interest-free and focussed on the purposes of productive capacity and the real economy. It should be stated, however, that whenever any change to the monetary system is proposed, many conventional minds react by misconstruing – it often seems deliberately – what is being said. Thus, whereas the new binary Islamic endogenous loans are, like any other loans, repayable, those conventional minds falsely allege that non-repayable "printed" money is being proposed. Whereas the new binary Islamic endogenous loans are totally directed at productive capacity, it is alleged that the loans are not so directed. And whereas the binary Islamic endogenous loans cannot be inflationary (in fact they are *counter-inflationary*), it is falsely alleged that the loans will create an inflation akin to that of Germany in 1923.

The charitable view of all this misconstruing and false alleging is that it results from a paradigmatic inability to grasp the basis of a new paradigm. Sometimes, however – such the hostility to anything which is new and positive – it seems as if many conventional minds are deliberately and irresponsibly prepared to allege absolutely anything.

The concept of Islamic endogenous money is traceable back to 1995 in the work of Choudhury (1997, 2003) who is the author of a most remarkable and extensive range of books and papers. Choudhury emphasises the importance of connecting money with the real economy.

However, looking at the situation from another perspective, the concept of endogenous money (defined briefly as central-bank-issued interest-free loans, administered by the banking system, and directed at productive capacity *if* wide ownership is involved) has been in existence for nigh on 50 years in the developing writings of binary economics (Shakespeare and Challen, 2002; Ashford and Shakespeare, 1999; Kurland *et al.*, 2004; Kelso and Adler, 1958, 1961; Kelso and Hetter, 1967, 1986, 1991; Gauche, 1981, 1998; Ashford, 1990, 1996; Miller, 1994.) It has also been considered in several recent papers given at international Islamic academic conferences all of which deal essentially with the necessary connection between money and the real economy (Shakespeare and Challen, 2002; Shakespeare, 2004, 2004a; 2005, 2005a).

Binary and Islamic exogenous money

Also in almost complete contrast to the conventional definition of exogenous money is the binary and Islamic definition, i.e.:

> Interest-bearing loans coming from abroad or such loans created by the banking system operating within a country.

These loans, of course, are the usual loans which come from present banks. Needless to say these loans are *not* necessarily directed at productive capacity and furthering the needs of society; and they hand control of the economy – and society – either to a narrow elite or to outsiders. Moreover, they do not implement the requirements for a binary Islamic economy.

The role of banks in a binary Islamic economy

No sudden change to a binary Islamic economy is proposed – or is possible. Rather there should be a gradual shift. This would be done, over time, by restricting the existing ability of the banking system to create endless supplies of interest-bearing loans while increasing the ability of the central bank (*bayt el mar*) to issue interest-free loans directed at various forms of productive capacity. The overall responsibility for monetary matters will be with the central bank (*bayt el mar*) and it is proposed that binary Islamic money should have some relationship either to gold alone or gold within a basket of commodities. Gold is not obligatory in Islam (Haneef and Barakat, 2002).

The restriction on banks creating money would be achieved by gradually increasing the percentage of reserves which a bank must deposit (at the central bank) before it can create money. Eventually, a situation of 100 per cent reserve would be reached (Hassan and Choudhury, 2002). In that situation commercial banks would be creating no money at all although, of course, they would be lending their own and, when wished, their depositors' money. Islamic banks will continue with, for example, profit and loss sharing and mark-up financing (Ismail and Ahmad, 2004).

Thus binary Islamic money starts with a country's central bank and so ultimate ownership of the money is in the hands of society and not, as at present, in the hands of individuals. In an interest-free banking system, the central bank can control the banking business and the supply of money by varying the reserve ratio as well as the borrowing ratio (Anjum, 2005). The money is then issued as *interest-free* loans to the banking system, to be administered by the banking system only for productive, real economy and wide ownership purposes. The loans are administered generally on free market and efficiency principles and are *repaid, firstly, to the commercial bank which then repays the money to the central bank*. In essence a bank would administer interest-free money (for the purposes of a binary Islamic economy) but not own the money.

Because no *riba*/interest is involved the general result is of a *halving* of the cost of new productive capacity, a wider distribution of productive and consuming power, a much greater efficiency and a much greater social and economic justice. Just as importantly, debt is reduced and national independence is increased.

Specific uses of binary Islamic endogenous loans

Binary Islamic endogenous loans combine efficiency with social and economic justice. Taking the form of state-issued, interest-free loans (administered by the private banking system) they are directly related to the real economy, made repayable and, when repaid, are cancelled or cancellable thus ensuring that productive assets always back a society's currency.

Crucially – because interest is not necessary – the loans allow capital projects to be constructed for *one-half, or one-third or even less of the present cost*. Moreover, the loans cannot be inflationary. The loans must be repaid and, when repaid, are cancelled thus ensuring that productive assets always back a society's currency. The cancellation of the money on its repayment ensures that there can be no inflation because a productive asset has been created and the money used to bring it into existence is eliminated. Indeed, binary Islamic endogenous loans create a *counter-inflation*, i.e. more wealth and economic activity are created but with lowered prices.

The mechanism for the loans is simple. In the case of public capital projects (e.g. roads, bridges, hospitals, schools, waterworks, fire stations, sewage works, etc.) the national bank (in Islam, *bayt el mar*) lends interest-free money to the government for the purposes of the government's own capital expenditure. However, the capital projects can still, if wished, be built by the private sector, managed by the private sector, even owned by the private sector. The key point is that the cost, at the very least, is being halved. In due course, the lent money is collected (via fees and taxes) by the government and then repaid to the central bank.

Interest-free loans for public capital projects have been used by the Channel Island of Guernsey over the years. Guernsey has minimal National Debt. Malaysia is believed to be experimenting with such loans and, of late, has achieved some remarkable feats of construction. Over the period 1939 1974 – a prosperous period – Canada used the loans and, today, many Canadian municipalities are demanding their use again to upgrade poor infrastructure. In the USA, 3,400 governmental bodies (local boards, towns, cities, etc) and six State governments support the idea of interest-free money for infrastructure – a Bill reached Congress but was defeated by powerful vested interests. After 1935 New Zealand used such loans – for hydropower schemes, railways, state housing, etc. – and had a remarkably prosperous period.

In the case of the private sector, the central bank (*bete el mar*) lends interest-free money to the banking system which then administers it on market principles including the ability to repay the money, and the existence of collateral. In the case of large corporations, moreover, a key condition for the use of interest-free loans is that the investment is associated with the creation of new shareholders thereby distributing the ownership of new capital assets throughout the population (Kurland *et al.*, 2004; Ashford and Shakespeare, 1999). This distribution (at half the present cost) is something which can never be done by the banking system as it exists today, indeed, is incapable of even being understood by the present banking system.

Because the origin of the loan is the central bank, the commercial banks have no right – and no power – to charge interest. They can, however, charge for reasonable administration and any other necessary cost.

The essence and rationale of the loan mechanism is that, as long as the money is lent for defined productive purposes, the commercial banks should have a supply of interest-free money (from the central bank) to be lent, interest-free, to satisfy those purposes. The purposes are in the private sector in three main areas:

For small and start-up businesses

When a small or start-up business has to borrow interest-bearing money the chances of its survival considerably diminish. But interest is *not* necessary when money is put into productive capacity. In particular, there is no need for small and start-up businesses to be burdened with the crushing burden of interest-bearing debt. As long as there is scrutiny to ensure that the business, or person, has a viable proposal and there is appropriate provision for collateral and administration cost, there is no reason for there to be interest at all.

Of late it has been observed that poor Bangladeshi women, for example, have a good record of successfully repaying loans due to a combination of their character, culture and co-operative practices. Noting the repayment record, the usual money-lenders have moved in and private, interest-bearing finance is being made available to these women because it reaps a big profit for the lenders.

That is disgraceful and completely unnecessary. The women live in very difficult conditions and the need to repay interest takes a large proportion of their income. It also prevents them extending their co-operation, and its benefits, to other women. It is a scandal that interest-bearing money is used for small and start-up business when interest-free money can be used instead. It is particularly scandalous that lenders, in practice doing none of the work, are being allowed to batten onto poor people who become a form of exploitable milch cow.

For large companies/corporations

This lending is only *if* the investment creates new owners of capital *and is part of policy to enable all individuals, over time, on market principles, to become owners of substantial amounts of productive capital*. By using central bank-issued interest-free loans, administered by the banking system on the market principles of binary economics, a large corporation would get cheap money (Kurland *et al.*, 2004; Ashford and Shakespeare, 1999; Shakespeare and Challen, 2002). If interest-free loans have been used for such investment, there also needs to be a requirement for a full payout of corporation earnings if the impetus to wide ownership is to be maintained and if new capital owners are to receive a substantial income coming from their capital ownership.

Wide ownership – on the principles of binary economics – uses interest-free money to enable any person in the population, over time on market principles, to have a basket of shares paying out their true, full earnings. In practice it means that not only employees but people not in formal employment (e.g. women carers and children) may have an income because they have been connected to what truly creates wealth – productive capital assets.

This distribution of *future* productive capacity (at half, or less, of the present cost) is something which can never be done by the banking system as it exists today, indeed, is incapable of even being understood by the present banking system. Yet it is very easily done – it only requires the issuance of a supply of interest-free *loans* from the central bank, such supply to be directed at productive capacity and wide ownership.

There is also a huge paradigmatic problem with most conventional economists because they always have the greatest difficulty in understanding that interest-free loans, directed at productive capacity, are loans and *must be repaid*. They also do not understand that such loans cannot be inflationary, indeed, are *counter-inflationary* (creating more wealth but at lower prices) because the money which helped bring the productive capital asset into existence is repaid and cancelled leaving the productive asset behind.

Crucially, the spreading of capital ownership and its associated income will, over time, enable all members of society to have a basic income independently of whether or not they are in the conventional labour market. Thus *all* people become productive and so have the income that comes from their production thereby enabling them to be consumers.

The use of interest-free loans for spreading future productive capacity using future earnings is called *simulfinancing* because it requires only *one* amount of financing to finance both production *and* consumption (Kelso and Kelso, 1991). In contrast, conventional economics has to use *two* amounts of financing – for production *and* consumption – and so is inflationary.

However, a key condition for the use of interest-free loans is that the investment must be associated with the creation of new shareholders thereby distributing the ownership of new, *future* capital assets throughout the population. The assets pay for themselves out of what they will earn in the future (Kelso and Adler, 1958, 1961; Kelso and Hetter, 1967; Gauche, 1981; Kelso and Kelso, 1986, 1991).

Another key condition would be that all large corporations would be generally required to pay out *all* their earnings except for reserves for research, depreciation and development. This requirement is necessary to ensure that:

- corporations are encouraged to accept interest-free loans with the associated responsibility of widening ownership in the economy;

- the loan is repaid at a competitive rate over a reasonable period of time;
- the beneficiaries receive all the income coming from capital productiveness; and
- the entire economy is able to achieve sustainable aggregate growth and distributive justice on market principles.

For medium companies/corporations
Interest-free loans should also be available for medium-sized companies and corporations *if* the loans are associated with the widening of ownership. However, unlike large corporations, medium-sized corporations would not be generally required to make a full payout of earnings (except for reserves for research, depreciation and development), so that the option of expanding via retained earnings would remain. Once the interest-free loan is accepted, however, full payout in future would be required.

Lastly, the binary and Islamic endogenous interest-free loans can be used for *farms*, *loans to students* and *green capital investment* which is essential, particularly for clean, renewable energy. At present, using interest-bearing loans, a lot of green technology is not financially viable. With interest-free loans, however, it would become viable. Thus we could have, for example, clean electricity through tidal barrages, dams, windmills, wave machines, solar electricity, and geothermal power stations. Putting it bluntly, the future of the world depends upon bringing into being new technologies for the clean (no carbon dioxide) generation of electricity and only interest-free loans can guarantee that.

The role of banking in Islamic perspective

There is no specific guidance from Rasulullah SAW on the form of banking industry. However, according to the tradition relating to the organisation of economic activities, the form of banking in Islamic perspective can use the existing form with some modifications. Thus, as we understand from the *ushul fiqh* in *muamalat* domain, all economic activities are permitted as long as there is no prohibition from Allah and Rasullullah. In sum, the form of banking industry can follow and maintain the existing system with some modification to comply with *Shariah* law.

The operation of banking in Islamic perspective can use the conventional bank model, such as an intermediary function, that bridges the owner of money and the entrepreneurs. The bank receives money from the people and then finance the projects proposed by entrepreneurs. The people can invest their money to establish an Islamic bank, deposit their money in an Islamic bank on a wadiah or mudharabah basis, or donate it as a *waqf*, *zakah*, *infaq* or *shadaqah*. The bank can also get money from other sources to finance projects needed by its customers.

In Islamic perspective the monetary system must have 100 per cent banking reserves with a gold-backed standard. The central bank must maintain the stability of economy and monetary system as well as be responsible for the issuance of money. It also functions as the lender of last resort to supply money to a commercial bank which has a lot of projects to finance.

The commercial bank should be allowed to do anything related to investment activities, perform all products that comply with *Shariah* such as *murabahah*, *mudharabah*, *musyarakah*, *as salam*, *al istishna*, *Ijarah*, *Ijarah Muntahia Bittamlik*, *Qard*, *mudharabah mutlaqah*, *sukuk*, *wadiah*, *wakalah*, *sharf* and other activities like collecting *zakah*, *infaq*, *shadaqah* and manage *waqf*. All banking activities and management should comply with *Shariah* and a *Shariah* supervisory board should be established to ensure that all shariah laws are obeyed, good corporate government is implemented, risk is accounted for, and attention given to social issues and employees' welfare. Projects can only be financed if they are *halal* and not detrimental to the nature and environment. If an Islamic bank is unable to manage a project by itself – either due to a lack of money or technical competence – it may organise a syndication with other Islamic banks or institution that are going to use Islamic scheme. It may also ask for other investors from abroad or from the central bank.

The objective of a bank is not merely to pursue profit for its owners, depositors or other investors. The motivation for establishing any company, including banks, must be obedience to Allah SWT. The management of a bank and its relationship with the other institution should used *shuratic* process which is IIE and continuous improvement or *kaizen* in Japanese term. This means that the factual result of the interaction can be learnt, evaluated, and improved to attain the maximum result for the benefit of stakeholders. All parties depositors, owners, the government, businesses and clients are a group of society working together under the tawhid umbrella to pursue common objectives – the full obedience to Allah Subhana Wa Ta'ala and the achieving social welfare either in this world or in the hereafter (Choudhury, 2003).

The present state of affairs with the *Shariah* understanding should be changed. *Shariah* is the substance or the real truth which only Allah knows. Our domain is in the *fiqh*, hence *Shariah* compliance should be understood as the operation of Islamic banking, money and socioeconomic development in our thinking based on *shuratic* process. The focus in these practices is on Fiqi, not Qur'an and Sunnah for fresh discourse, particularly during these changing times. All answers related to our problems must be sought continuously in reference to the epistemological inquiry in the Qur'an and the Sunnah along with continuously fresh discourse in the Shura. This is the principle of the shuratic process. It calls for reconstruction of the Islamic bank operation within the Ummah concept and progress towards it.

What can be argued for convenience rather than as a rule is that because it is difficult to change overnight from the existing banking, economic, financial and monetary laws within the national and global framework, there must be a fast-track will and program to change along lines of Islamic transformation. This will of course mean a great deal of challenges and efforts, new thought and brave strides forward. The model of change is the micro-model of Islamization that can be launched by the Islamic financial intermediaries towards project-specific and participation-based development financing and economic integration. Many new ideas will be required. All will be aimed at untangling the web of intricacies and enslavement of the Ummah from the Western and conventional economic, political, financial and social complexes.

The model to refer to in this regard is called the Tawhidi String Relations where all models and activities should be referred to the concept of Tawhid, the Oneness of Allah, the only one who rules the world and guides all people. It is epistemologically premised on the oneness of the divine laws as a systemic interactive, integrative and dynamic concept of relational learning for gaining unity of relations and thus knowledge between entities. The principal entitles to start up with will be the micro-economic and financial, institutional and social orientation for project financing and community expansion in the light of the Ummah example. Appropriate networking, education and technologies will be needed to advance this direction of activities. In all of this foreign encroachment should not be allowed (Harahap, 2005; Choudhury, 2003).

Thus Islamic banks will have to enter this laboratory of challenges and new thinking, action and enforcement. *Shariah* cannot be just a word or a concept cluttered with strange names and ideas. We should go back to the Qur'an and the Sunnah and discover a new thing every time through shuratic processes.

The key decision facing Islam

The role of commercial banking in a binary or Islamic economy is to be the mechanism through which endogenous central bank-issued interest-free loans are directed at various aspects of the productive and moral economy. By implementing the mechanism a society can achieve an overall sense of relatedness and connection; free markets; wide ownership; efficient wealth creation; economic and social justice; no inflation; an ethical economy; an end to *riba*; an end to economic colonialism; a direct connection between money and the real economy; using 100 per cent reserve requirements monetary system with the gold standards, a deepening of democracy; policy to unite; and protection of the environment.

A society can decide either to implement binary Islamic endogenous money in which case the beneficial consequences will soon become apparent to, and over time serve the needs of, all people (including non-Muslims). In doing this Islam will be giving a moral, material and intellectual lead to the world.

The possibility of an independent development of something which is the equal of, even better than, the existing system is important not only because of the Islamic desire to develop something which is new and distinctive but because neoclassical "free market" finance capitalism makes the arrogant hubristic assumption that it is the perfection of the development of history and that, apart from minor modifications, nothing much better could ever come into existence. The hubris is expressed in Fukyama (1992).

Above all, by using binary Islamic loans, a society will have evolved a positive, distinct identity based on shuratic process which refer to Quran and Hadist. If Islam is to give a moral, intellectual and material lead to the world its economy must be completely distinctive. Without that distinctiveness, the *ummah* will never free itself from control by others (Choudhury 1997, 2003). Choudhury spearheads the call for Islam to have a distinctive way forward and use endogenous money (Choudhury, 1989, 1990, 1998).

However, it should also be recognised that understanding the use of Islamic endogenous loans has huge implications and the scale is such that a new paradigm is involved and thus, at first, some people may have difficulty in understanding what is involved.

References

Alam, M.N. (2004), "The influences of 'Societal Sector Institutions' in promoting lender-borrower network relationships between Islamic banks and cottage industry owners", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Al-Jahri, M.A. and Zarqa, M.A. (2005), "Redistributive justice in a developed economy: an Islamic perspective", *International Conference, Islamic Economics and Banking in the 21st Century, November 2005, Jakarta*.

Anjum, M.I. (2004), "Globalization at crossroads of warfare, revolution, and universalization: the Islamic panacea, stratagem and policy instruments", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Anjum, M.I. (2005), "Alternative models of Islamic banking", *International Conference, Islamic Economics and Banking in the 21st Century, November 2005, Jakarta*.

Ashford, R. (1990), "The binary economics of Louis Kelso", *Rutgers Law Journal*, Vol. 22, pp. 19-73.

Ashford, R. (1996), "Louis Kelso's binary economy", *The Journal of Socio-Economics*, Vol. 25, pp. 15-42.

Ashford, R. and Shakespeare, R. (1999), "Binary economics – the new paradigm", *Passim*, Chapters 6-9.

Baaqui, B.E. (2005), "The empircal and trans-empirical in physics", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning, December 2005, Asian University of Bangladesh*.

Bohm-Bawerk, E. (1884), "Capital and interest: history and critique of interest theories".

Cassel, K.G. (1903), *The Nature and Necessity of Interest*, Macmillan, London and New York, NY.

Choudhury, M.A. (1989), *Islamic Economic Co-operation*, Macmillan, London.

Choudhury, M.A. (1990), "Islamic economic co-operation", *Journal of Economic Cooperation Among Islamic Countries*.

Choudhury, M.A. (1997), *Money in Islam*, Routledge, London.

Choudhury, M.A. (1998), *Reforming the Muslim World*, Kegan Paul, London.

Choudhury, M.A. (2003), *The Islamic World-System: a Study in Polity-Market Interaction*, Routledge, London.

Choudhury, M.A. (Ed.) (2005a), *Money and Real Economy*, Wisdom House, Leeds.

Choudhury, M.A. (2005b), "Islamic economics and finance: where do they stand?", *International Conference, Islamic Economics and Banking in the 21st Century, November 2005, Jakarta*.

Choudhury, M.A. and Harahap, S.S. (2004), "Social accounting in Islamic political economy", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Choudhury, M.A. and Hossain, M.S. (2003), "A development planning application of relational epistemology and Tawhid".

Christensen, W. (2005), "Search for a universal paradigm: making justice live for all", *International Conference on Universal Paradigm of Socio-Scientific Reasoning, December 2005, Asian University of Bangladesh*.

Dusuki, A.W. and Dar, H. (2005), "Stakeholders' perceptions of corporate social responsibility of Islamic banks", *International Conference, Islamic Economics and Banking in the 21st Century, November 2005, Jakarta*.

el-Diwany, T. (2003), *The Problem with Interest*, Kreatoc, London.

Federal Reserve Bank of Chicago (1992), "Who creates money?", *Modern money mechanics – a workbook on bank reserves and deposit expansion*.

Fukuyama, F. (1992), *The End of History*.

Gafoor, A.L.M.A. (2004), *Interest, Usury, Riba, and the Operational Costs of a Bank*, A.S. Noordeen, Kuala Lumpur, p. 35.

Galbraith, J.K. (1975), *Money: Whence It Came, Where It Went*, Houghton Mifflin.

Gauche, J. (1981), "General stock ownership corporations: another step in broadening capital ownership", 30 American University Review.

Gauche, J. (1998), "Binary modes for the privatisation of public assets", *The Journal of Socio-Economics*, Vol. 27, pp. 445-59.

Haneef, M.A. and Barakat, E.R. (2002), "Gold and silver as money: a preliminary survey of Fiqhi opinions and their implications", Viability of the Gold Dinar, *International Conference on Stability and Just Global Monetary System, Kuala Lumpur*.

Haneef, M.A. and Furqani, H. (2005), "Usul al-Iqtisad as a pre-requisite in developing contemporary Islamic economics", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning, December 2005, Asian University of Bangladesh.*

Harahap, S.S. (2005), *Accounting Crisis – To Quest The Epistemology of Science*, LPFE-Usakti, Jakarta, pp. 12-52.

Harahap, S.S. and Choudhury, M.A. (2005), "The disclosure of Islamic values: bank annual report", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning, December 2005*, *Asian University of Bangladesh*.

Harahap, S.S. and Basri, Y.Z. (2005), "Socioeconomic disclosure of Islamic and conventional banks", in Choudhury, M.A. (Ed.), *Money and Real Economy.*

Hassan, A. (2004), "Islamic social capital and networking", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Hassan, M.K. and Choudhury, M.A. (2002), "Micro-money and real economic relationship in the 100% reserve requirement monetary system", Viability of the Gold Dinar, *International Conference on Stability and Just Global Monetary System*, *Kuala Lumpur*.

Hossain, M.K. (2005), "Economics in Islam: a prelude to socio-scientific paradigm", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Ismail, A.G.b. and Ahmad, I.b. (2004), "Does the Islamic financial system design matter?", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Kelso, L. and Adler, M. (1958), *The Capitalist Manifesto*, Random House, New York, NY.

Kelso, L. and Adler, M. (1961), *The New Capitalists*, Random House, New York, NY.

Kelso, L. and Hetter, P. (1967), *Two-Factor Theory: The Economics of Reality*, Random House, New York, NY.

Kelso, L. and Hetter, P. (1986), *Democracy and Economic Power – Extending the ESOP Revolution Through Binary Economics*, Ballinger Publishing Company, Cambridge, MA, Chapters 5-12.

Kelso, L. and Hetter, P. (1991), *Democracy and Economic Power – Extending the ESOP Revolution Through Binary Economics*, 2nd ed., Ballinger Publishing Company, Cambridge, MA, Chapters 5-12.

Kennedy, M. (1995), *Interest and Inflation-Free Money*, Seva International, Lansing, MD, Chapters 1 and 3.

Khan, A.A. (2005), "Islamic ethics and business in Bangladesh", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Kuhn, T.S. (1962), *The Structure of Scientific Revolutions*, University of Chicago Press, Chicago, IL.

Kurland, N.G., Brohawn, D.K. and Greaney, M.D. (2004), *Capital Homesteading for Every Citizen*, Centre for Economic and Social Justice, Washington, DC, pp. 1-100.

Lietaer, B. (2001), *The Future of Money*, Random House, London, pp. 314-17.

Marshall, A. (1890), *Principles of Economics*, Macmillan, London.

Meera, K.M. and Larbini, M. (2004), "Seignorage of fiat money and the Maqasid al-Shariah: the compatibility of the gold dinar with the Maqasid", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Miller, J.H. (Ed.) (1994), "Curing world poverty: the new role of property", pp. 21-34, 61-74, 93-149.

Mutis, T. (1995), "Pendekatan Ekonomi Pengetahuan dalam Manajemen Kodedeterminass", Jurus Jitu Memenangkan Persaingan, Jakarta.

Nasrullah, A. (2005), "Ethics in public administration: where Bangladesh stands?", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Sadeghi, M. (2005), "Islamic economics as a science and an economic school", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Sadeq, A. (2005), "Microfinance, poverty alleviation and economic development: theory and practice", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Sairally, S. (2005), "Evaluating the 'social responsibility' of Islamic finance: learning from the experiences of socially responsible investment funds", *International Conference Islamic Economics and Banking in the 21st Century, November 2005*, *Jakarta*.

Saleem, Y. (2005), "Disorder (fasad) and equilibrium (islah) from a Quranic perspective", *International Conference on A Universal Paradigm of Socio-Scientific Reasoning*, *December 2005*, *Asian University of Bangladesh*.

Senior, N. (1836), *An Outline of the Science of Political Economy*, University Press of the Pacific.

Shakespeare, R. (2004), "Binary economics", *Proceedings Published in Money and Real Economy – Comparative Studies in Real Money Linkages with Social Issues, Economic Institutions and Markets in Islamic Perspective*, *The Trisakti University*, *Jakarta*.

Shakespeare, R. (2004a), "Islamic endogenous loans", *Proceedings Published in Harmonizing Development and Financial Instruments by Shariah Rules for Ummatic Integration, December 2004*, International Islamic University, Chittagong.

Shakespeare, R. (2005), "Non-interest resource mobilization for public capital projects – the use of Islamic endogenous loans", *6th International Conference on Islamic Economics, Banking and Finance, Jakarta*, *November 2005*.

Shakespeare, R. (2005a), "The universal paradigm and Islamic endogenous loans", December, Asian University of Bangladesh, Dhaka.

Shakespeare, R. and Challen, P. (2002), "Seven steps to justice", *Proceedings of the Published in Viability of the Islamic Dinar, August, International Islamic University, Kuala Lumpur*.

Smith, A. (1776), *The Wealth of Nations*.

Further reading

Ahmad, K. (2005), "Islamic economics: a scheme of thoughts or a branch of post capitalism", *Lecture given at the International Conference Islamic Economics and Banking in the 21st Century*, *November*, *Jakarta*.

Choudhury, M.A. (2001), "Exogenous and endogenous money", *Encyclopaedia of International Political Economy*.

Habibie, I.B.J. (2005), (former President, The Republic of Indonesia), *Lecture given at the International Conference, Islamic Economics and Banking in the 21st Century, November, Jakarta*.

Harahap, S.S. and Choudhury, M.A. (2004), "Social accounting in Islamic political economy", *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*, International Islamic University, Chittagong.

Hasan, A. (2005), Mata Uang Islami, “Islamic money”, Telaah komprehensif system keuangan Islami, Jakarta: Radja Grafindo Persada. In Arabic title: *Al-Auraq Al-Naqdiyah fi Al-Iqtishad Al Islami (Qimatuha wa Ahkamuka)*.

About the authors

Rodney Shakespeare a member of the Christian Council for Monetary Justice, UK. He is a Visiting Professor of Binary Economics, Triskati University, Jakarta, Indonesia. Rodney Shakespeare is the corresponding author and can be contacted at: rodney.shakespeare1@btopenworld.com

Sofyan Syafri Harahap is Professor of Accounting at Trisakti University, Jakarta, Indonesia.