

Hamid Zangeneh and Ahmad Salam

*Central Banking in an Interest Free Banking System*

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Comments:

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The article by Hamid Zangeneh and Ahmad Salam is a welcome departure in the Islamic finance literature, as relatively little has been written about the role of central banks in an Islamic financial system. The authors review the major functions of central banks, and then discuss how monetary tools need to be adapted in an Islamic economy, these including discount rates, open market operations, reserve ratios, refinancing ratios, credit controls, moral persuasion, profit sharing ratios and exchange rates.

The authors cite an earlier paper by Mohammad Nejatullah Siddiqi who has probably given more consideration to the issues than anyone else.<sup>(1)</sup> One of Siddiqi's main concerns is the central bank's role as lender of the last resort, as it is ultimately responsible for safeguarding the interests of depositors, whether the system is conventional or Islamic, although arguably in an Islamic economy it is not so much a matter of consumer rights, but rather of moral responsibility to Muslim depositors who have entrusted their savings to an Islamic bank in good faith. Although the authors quote Mohammad Uzair when discussing the tools of central banking,<sup>(2)</sup> Sidjqi has looked at these matters more recently, at least in a summary form.<sup>(3)</sup>

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(1) **Muhammad Nejatullah Siddiqi**, "Central Banking in an Islamic Framework", paper in *al Idara al Maliyah fil Islam*, Royal Academy for Islamic Civilisation Research, Amman, vol. 1, 1989, pp. 31-76.

(2) **Mohammad Uzair**, "Central Banking in an Interest Free System", in Mohammad Ariff, (ed.) *Monetary and Fiscal Economics of Islam*, International Centre for Research in Islamic Economics, King Abdulaziz University, Jeddah, 1982, pp. 211-236.

(3) **Muhammad Nejatullah Siddiqi**, *Teaching Economics in Islamic Perspective*, Scientific Publishing Centre, King Abdulaziz University, Jeddah, 1996, pp. 207-208.

### Theory and Practice of Central Banking

Zangeneh and Salam's discussion is at the theoretical rather than the practical level, as it is about establishing principles rather than looking at the central banking experience in Muslim countries. There have been a number of papers presented to commercial conferences on Islamic banking and finance dealing with the practical issues of central bank regulation. Farah Fadil, for example, questioned whether Islamic banks should be subject to the same regulations as conventional banks.<sup>(4)</sup> In many Muslim countries Islamic banks exist in financial environments where conventional banks dominate, but in some cases, as in Turkey, Egypt and Jordan, they are governed by special regulations that allow for their operational conformity with the Shariah law. In other countries they are regulated in the same way as conventional banks, even though these regulations were usually drafted with Western financial practice in mind.

Circumstances are clearly different in Iran and Pakistan where there has been more inclusive regulation either to Islamise the entire domestic financial system as in Iran, or to Islamise a range of financial instruments as in Pakistan. These experiments presumably approximate more closely to the type of comprehensive interest free banking system envisaged by Zangeneh and Salam, but they are not referred to in the text. There have been a number of articles and monographs on Islamic banking in Iran by Abbas Mirakhor and others, including two which are listed in the references,<sup>(5)</sup> but the lessons from the Iran's central bank practices are not dealt with in the article. The approach of Zangeneh and Salam is basically deductive from the Shariah law and conventional monetary principles rather than being inductive from the actual experiences of Muslim countries.

Pakistan provides an example of the practical problems which arise when an attempt is made to Islamise financing operations as far as the Central Bank is concerned. There the Central Bank is very much an agent of government, and it has been obliged to follow changes in monetary policy decided within the Ministry of Finance. Zangeneh and Salam do not discuss the issue of how much autonomy central banks should enjoy, and its relation with governments.

In an Islamic context there is also the issue of the relationship between central banks and religious bodies, in the case of Pakistan the Council of Islamic ideology.<sup>(6)</sup> It drew up a blueprint for interest free banking, but this was never properly implemented due to changes in government. Nevertheless the religious authorities have a duty to ensure that the Shariah law is upheld in the sphere of monetary policy, and in 1991 the Federal Shariah Court of Pakistan ruled that interest transactions were illegal,

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(4) **Farah Fadil**, "Standardisation and Regulatory Issues of Islamic Banks", Info Centre Conference on Islamic Banking and Finance, Dubai, 6-7th November 1994.

(5) **Moshin S. Khan** and **Abbas Mirakhor**, "The Framework and Practice of Islamic Banking", *Finance and Development*, Vol. 23, No. 3, 1986, pp. 32-36. For a more comprehensive account of the early experiences of Islamic banking in Iran see **Zubair Iqbal** and **Abbas Mirakhor**, *Islamic Banking*, International Monetary Fund Occasional Paper No. 49, Washington D.C., 1987.

(6) **Christine Gieraths**, "Pakistan: Main Participants and Final Financial Products of the Islamisation Process", in Rodney Wilson, (ed.), *Islamic Financial Markets*, Routledge, London, 1990, pp. 171-195.

although the government successfully appealed to the Supreme Court against this ruling.<sup>(7)</sup> All this illustrates the dilemmas a central bank can face when there is uncertainty and a lack of clarity over the direction of policy.

### **Macroeconomic Objectives and the Responsibilities of Central Banks**

Zangeneh and Salam state that the primary role of a central bank is to provide "sufficient reserves and hence the money supply to avoid large fluctuations in the price level and unemployment rate." (page 26). This sounds uncontroversial as most can agree on the need for stable prices. The issue of unemployment is more complex however, the authors referring to stable unemployment, presumably at the natural rate, which is not necessarily the same as low unemployment. Widening the remit of a central bank to include unemployment targets is arguably inappropriate in any case. This is a matter in the realm of politics, and hence of concern to governments, not unelected central bankers. Inflation targets are another matter however, as this involves the implementation of monetary policy, which is certainly within a central bank's responsibility. The inflation goal, low or zero price rises, may be determined by a political process, but the achievement of the goal is the job of the central bank. Some clarification of these distinctions would have been welcome in the paper.

According to Zangeneh and Salam a central bank should co-operate with other authorities, presumably government, to achieve a balanced economic growth and development, characterised by an equitable distribution of income and growth. These objectives are commendable, and will be applauded by most Islamic economists, but there can of course be a trade off between equity and growth. Normative, indeed ethical decisions about where the balance should lie are a matter for political debate, but for Muslims the concern must be as much about relative responsibilities of different groups in society. The issue is what people do with their income and wealth, not simply the quantity of income and wealth they have. How all this maps into monetary policy and the contribution of central banks in these respects is far from clear, although spelling this out would certainly be beyond the scope of the article.

### **Central Banks as Lenders of the Last Resort and Regulators**

The authors are on more traditional ground when they discuss the central bank's role as lender of the last resort. In many western countries however this role is less significant as banks in countries such as the United States are obliged to take out deposit protection insurance. Often when banks get into difficulties it is not so much a matter of the central bank simply providing funding to bale them out, but rather of arranging a take-over or merger with a sounder institution which is interested in increasing its market share. This also seems the preferred policy of central banks in Muslim countries, not simply reflecting the lack of central bank resources, but rather a desire to avoid getting too involved with particular commercial banks when a better long term solution is to place the bank on a firmer financial footing by encouraging

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(7) **Fuad al-Omer** and **Mohammad Abdel-Haq**, *Islamic Banking: Theory, Practice and Challenges*, Oxford University Press, Karachi, and Zed Books, London and New Jersey, 1996, p. 99.

institutional enlargement. In Islamic banking, as with conventional banking, it is the smaller institutions that are more vulnerable to runs on deposits as a result of a loss of customer confidence.

In the United Kingdom the Bank of England, in its role as the central bank, has taken an interest in Islamic banking development. Both the Governor, Eddie George,<sup>(8)</sup> and Michael Ainley,<sup>(9)</sup> the senior manager involved in surveillance and supervision, have attended and spoken at Islamic banking conferences. Their interest reflects the fact that both British banks, and those based in the Muslim world but with offices in London, are engaged in Islamic financing to varying degrees, a trend that is becoming more marked. The London market, according to Michael Ainley, has always welcomed innovation, and Islamic banking is seen in these terms. For the Bank of England, and other central banks, prevention is seen as preferable to a cure for commercial bank malpractice which can undermine client confidence. Zangeneh and Salam pay perhaps insufficient attention to regulatory responsibilities when discussing central bank functions, yet it is more important to have regulatory safeguards to protect depositors than simply stating that the central bank will act as lender of the last resort.

For banks operating in more than one country the key central bank will be that of the home country where the bank is based, as the central banks of host countries will rely on it to exercise adequate supervision. If however the home country has Islamised its banking but the host country has not, this can result in complications over compatibility of rules and regulations. Consolidating what occurs in different jurisdictions always presents problems. The Iranian banks function according to the Shariah law within Iran for example, but in London they operate like conventional banks so that they are able to offer as full a range of services as their rivals. The Basle Committee which was concerned with international banking envisaged the same minimum capital requirements applying everywhere, but there is a case for Islamic banks having lower requirements as the depositors are taking a greater risk than those with conventional banks whose assets and returns are guaranteed. There are some, however, who argue the opposite, including Abdul Malik al Hammar, a former governor of the United Arab Emirates Central Bank. He believes that Islamic banks should maintain greater levels of capital adequacy because of the new and unfamiliar nature of their financial instruments.<sup>(10)</sup>

### **Central Bank Use of Discount Rates as a Tool of Monetary Policy**

The most detailed part of Zangeneh and Salam's article is where they deal with the tools of central banking. They assert, probably correctly, that a central bank in an Islamic economy can use many, if not all of the tools available in a conventional banking framework. Some of these may have to be modified, but it is cheaper and more effective to use existing tools rather than devise completely new ones. However when

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(8) **Eddie George**, "Islamic Banking", in *European Perceptions of Islamic Banking*, Institute of Islamic Banking and Insurance, London, 1996, pp. 7-10.

(9) **Michael Ainley**, "A Central Bank's View of Islamic Banking", *European Perceptions of Islamic Banking*, Institute of Islamic Banking and Insurance, London, 1996, pp. 11-20.

(10) *Ibid.*, p. 19.

they go into detail, some of the tools are arguably less acceptable from the perspective of Shariah law than perhaps the authors are prepared to admit.

The most obvious example is undoubtedly the discount rate which central banks use to regulate the overall volume of credit in an economy. This functions on a similar basis as interest. At first sight this may not appear exploitative as it concerns only the direct relationship between the central bank and the commercial banks, but a deeper analysis reveals that the wider public can be affected, and economic injustice may result. Raising the discount rate to induce a credit squeeze means that potential borrowers are penalised through no fault of their own, and they are at a disadvantage compared to those who already enjoy financing on fixed terms.

Zangeneh and Salam concentrate on the mechanics of how the profit rate can be calculated, but this is not the fundamental issue. Merely calculating the discount rate on the basis of a weighted average of the returns in different sectors does not solve the problem of the injustice which arises when the central bank changes the discount rate with macroeconomic conditions in mind rather than the microeconomic situation facing individual depositors and those being funded.

Fahim Khan's discussion of discount rates is more informative than that of Zangeneh and Salam, as he examines the issue in terms of pure time preferences, undistorted by interest, rather than through effects which are remarkably similar to central bank induced interest rate changes.<sup>(11)</sup> The mechanism specified by Zangeneh and Salam is of doubtful validity from an ethical as well as from an economic perspective. They give an example where the rate of profit for a bank is eleven percent in the previous period, (page 28), but then have the central bank determining at its discretion a discount rate of six percent. This is simply assumed, but not justified. Because the commercial banks can then borrow from the central bank at six percent, and lend at eleven percent, they expand their lending. This according to Zangeneh and Salam raises the rate of profit to fifteen percent, which assumes increasing rather than diminishing returns as more money is lent out. Monetary theory, supported by most empirical evidence, suggests that diminishing returns are more likely.

Zangeneh and Salam then have the bank penalised for the rise in the profit rate, the additional four percent (fifteen minus eleven percent) being credited to the central bank, which can in turn use these funds to compensate for banks making below "normal" profits. In reality the concept of "normal" profits assumes a reactive rather than a pro-active approach to profit determination, a view that profits are determined by macroeconomic conditions rather than a factor which can be influenced by microeconomic agents such as individual banks. For Zangeneh and Salam there are ultimately no incentives for individual financial institutions, as the profits they make are redistributed to loss making institutions.

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(11) **Fahim Khan**, "Time Value of Money and Discounting in Islamic Perspective", in *Essays in Islamic Economics*, Islamic Foundation, Leicester, 1995, pp. 159-173.

### Open Market Operations in an Islamic Economy

The buying and selling of government securities by central banks as a tool of monetary policy is discussed by Zangeneh and Salam. There are no particular Islamic objections to such mechanisms, provided the instruments being bought and sold are acceptable under the Shariah law. The main problem in most Muslim countries is that capital markets are insufficiently developed, and therefore open market buying and selling can destabilise the prices of government securities as a result of the lack of market depth. This is an economic development issue rather than a matter of religious significance, the solution favoured by the authors being to restrict buying and selling to a composite stock, such as the central deposit certificate originally suggested by Siddiqi.<sup>(12)</sup>

Zangeneh and Salam reject the suggestion of Uzair that central banks should be required to hold a quarter of the capital stock of commercial banks.<sup>(13)</sup> This rejection seems appropriate given the reasons they cite, firstly the potential conflict of interest between central banks as regulators and banks they partly own, and secondly due to the powerful position which central banks enjoy as potential creators of reserve money. In most Muslim countries it is politicians however rather than central banks that are to blame for excessive money creation. There is a strong case for central banks being independent, but they should be bound by monetary rules, one sensible provision being that the money supply should not be allowed to expand at a higher rate than the rate of real productive growth in the economy. This should ensure non-inflationary conditions, which are necessary to ensure the efficient operation of Islamic financial instruments. Where *riba* exists, the injustices are made worse if there is high inflation and an unstable monetary situation, perhaps a consequence of politicians dispensing favours to powerful lobby groups rather than keeping public expenditure under control and maintaining fiscal discipline.

### Reserve Ratios as Instruments for Monetary Control

The discussion on reserve ratios by Zangeneh and Salam focuses on the merits of imposing a one hundred percent reserve requirement on the commercial banks in order to curtail their ability to expand the money supply. Such reserve requirements limit commercial banks ability to lend commercially, and hence constrains their profitability. Although there was much discussion of this issue in the context of tightly regulated economies in the 1960s and 1970s, in modern economies where the private sector, including private commercial banks, play a leading role, this debate is arguably obsolete. Those with current accounts have to be protected of course, whether the bank is commercial or Islamic, and adequate reserve ratios should be maintained to protect bank depositors. For those with savings and investment deposits, especially when the bank is Islamic, what really matters is the profitability of the banks, as this is what determines their returns. Higher reserve requirements means less bank profit and lower returns for depositors, this being the opportunity cost of bank liquidity. Islamic banks

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(12) **Muhammad Nejatullah Siddiqi**, "Central Banking in an Islamic Framework", op. cit., p. 28.

(13) **Mohammad Uzair**, "Central Banking in an interest Free System", op. cit., pp. 213-214.

in any case often end up with greater cash reserves than they would wish, reflecting the lack of liquid instruments available which are acceptable from the point of view of the Shariah law. Hence reserves to cover potential withdrawals by current account clients are scarcely an issue. Rather the problem is to identify sufficient Islamic financing opportunities. Far from being profligate in a monetary sense, an increasing share of banking business accounted for by Islamic banks implies a more conservative and cautionary monetary stance, and a lower risk of micro level bank default and macro level inflation.

Central bank manipulation of refinance ratios in the interest of *Qard Hasan* lending is discussed briefly by Zangeneh and Salam. This could be used as an incentive mechanism, but it is not clear why the central bank, and ultimately therefore the taxpayers, should bear the cost of such subsidy. Rather *Qard Hasan* costs can easily be absorbed by the Islamic bank itself, including its shareholders and depositors. The shareholders arguably have a moral duty to support such activities, and as in practice *Qard Hasan* interest free loans are only provided to existing Islamic bank depositors, the opportunity cost of such cross subsidised lending in terms of foregone profit shares can be regarded as a kind of mutual insurance, or a solidarity tax which recognises the duty of a Muslim towards his religious brothers in their time of need.

### Methods of Direct Monetary Control

Zangeneh and Salam briefly discuss selective credit controls. These have been much less used in recent years, as governments have been urged to deregulate financial markets, and controls are regarded by many as a distorting factor that results in higher than necessary transactions costs and market inefficiencies. Such controls have been applied to consumer credit, this being rationed while priority is given to the finance of input supplies by producers. This has often been associated with financial repression, where returns to savers are so low that insufficient savings are generated, and where borrowing is not rationed by a pricing mechanism but by government.<sup>(14)</sup> Acknowledging the validity of the Islamic prohibition of *riba* does not mean accepting financial repression however, as market determined returns for Islamic financing instruments overcomes the problem and ensures the interests of investors and those seeking funding are reconciled. Countries that pursued infant industry policies of import substitution often put producer interests before those of consumers, but such policies are now much less popular, as one consequence has often been highly protected local industries making poor quality products and providing generally low standards of service for their clients.

From an Islamic perspective there could arguably be a case for the religious authorities taking some interest in credit controls in order to ensure that financing is for items or activities which are *halal* rather than *haram*. The Central Bank may need

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(14) See **Ronald I. McKinnon**, "The Case Against Financial Repression", in Gerald M. Meier, *Leading Issues in Economic Development*, 6th edition. Oxford University Press, 1995. pp. 204-208. The early identification of this condition was discussed by **Maxwell J. Fry**, "Models of Financially Repressed Developing Economies", *World Development*, Vol. 10, September 1982.

its own Shariah advisors, although whether their advice should be implemented by direct controls or voluntary regulation may be a matter of debate. Where the Central Bank is autonomous and independent of government, there is also the issue of whether it is the bank or the government that should be responsible to ensure that the Shariah law is respected in credit allocation, or if the higher religious authority should itself oversee the process. The issue here is not economic efficiency or development objectives, but rather moral and ethical considerations of what is *halal* and what is *haram*. Zangeneh and Salam mention moral persuasion, which is certainly more important in a religious context than in more secularised societies.

Zangeneh and Salam suggest that the profit sharing ratio in an Islamic financial system could be used by the central bank as an instrument of credit control. In particular they argue that the investment share ratio could be used to regulate the level of economic activity, while the depositors share ratio could be used to control the money supply. They do not advocate rigid ratios, but rather a range or band for each so that there is a degree of uniformity, yet some scope for competition between individual banks.

It is not clear why uniformity is needed as far as either returns to investors or depositors are concerned, as both parties are free to choose what financial institutions they deal with. Some may choose a higher quality of service and lower returns, or higher returns but a more basic level of service. In Islamic banks the real potential conflict is between depositors with savings or investment accounts on the one hand and shareholders on the other, as both enjoy profit shares. A higher return for shareholders can mean a lower return for depositors and vice versa. There are however automatic checks. If all the profits were distributed to shareholders and depositors got no return, the latter would take their funds to another institution and the share price would collapse. Islamic banks which are quoted companies have to perform a delicate balancing act between the different parties with an interest in the institution, but this should be a matter for bank discretion and judgement, not for central bank imposition of fixed ratios which may not take the circumstances of particular institutions into account or how these change over time.

Zangeneh and Salam suggest that a central bank could encourage commercial banks to advance funds to a depressed area of a country in the interests of regional economic development by lowering the return to the bank and raising the return to the entrepreneurs who are funded in the particular region. Banks are unlikely to wish to expand less profitable funding however at the expense of more profitable opportunities, and if an Islamic bank adopted such discriminatory policies, its depositors and shareholders would have to bear the costs. No doubt this is why Zangeneh and Salam suggest that such policies should be combined with selective credit controls, but this would only be to confound the bureaucratic interference and prevent markets from functioning effectively. It may be that subsidies are needed for depressed regions for schemes such as infrastructure improvements which would raise returns in the regions. These should be paid directly however, so that taxpayers know how much of their money is being used in this way. Transparency and accountability are what is important rather than hidden subsidies and obscure pricing that masks who the



beneficiaries and contributors are. It is entrepreneurial effort that brings economic development in any case; government and central banks can only create stable conditions for business to operate, they cannot ensure development themselves.

### **Indirect Tools of Central Banking**

Exchange rate policy is discussed by Zangeneh and Salam, notably the merits of fixed and free rates, and the possibilities for managed floating. Many Muslim states fix their exchange rates and then use foreign exchange controls to keep their international transactions in balance, rather than liberalising payments and possibly capital movements and letting the market determine the exchange rate. The advantage of a fixed exchange rate policy is the stability which results, and the fact that the risk of inflation associated with depreciating rates is reduced, as well as the potential problems of unemployment and underemployment if exchange rates appreciate. In practice fixed rates usually mean overvalued rather than undervalued currencies, hence problems of unemployment and under-utilised capacity may persist. On the other hand depreciation and devaluation often do not bring the benefits the International Monetary Fund and the World Bank suggest where the imports are in inelastic demand and exports are dollar rather than local currency denominated as is the case with most Muslim countries exporting primary commodities.

These are not mere technical matters, but impinge on the lives of ordinary Muslim citizens. Nevertheless it should not be left to central bank officials to determine exchange rate policy, which is ultimately a matter of political choices. An Islamic economy will need stability if problems of *riba* are to be avoided and if Islamic financial instruments are to work properly, but unemployment and underemployment is also unacceptable in the longer term in any Muslim society. This is not to suggest that the Central Bank has no role to play in exchange rate management. The governor should certainly be consulted over policy, and the expertise of the Central Bank staff will be required for the everyday management of foreign exchange reserves. Furthermore the governor will represent the country in international financial forums such as the Arab Monetary Fund in the case of the Middle East or the Bank for International Settlements in a wider context, and even the IMF itself, although this usually also involves finance ministers.

Where exchange rates are pegged there is the issue of what currency they should be determined against. The United States dollar was widely used by many countries during the Bretton Woods and Smithsonian eras of fixed rates, and during the early period of managed floating many Muslim currencies continued to be pegged to the dollar, as this was the currency in which oil was priced and many international commodity transactions were conducted. Due to the depreciation of the United States dollar against the Japanese yen and the German mark, the other two major international currencies, many Muslim countries started to fix parities in relation to trade weighted currency baskets or composite currencies such as the Special Drawing Right. The Islamic dinar, the official currency of the Islamic Development Bank, has a fixed parity with the Special Drawing Right, but as this has appreciated against the

dollar this has increased the cost of funding repayments for Muslim countries reliant on dollar pricing and invoicing for export receipts.

### Conclusions

Zangeneh and Salam have made a useful contribution to the literature on central banking in an Islamic economy, and have explored some of the areas originally delineated independently by Siddiqi and Uzair in the 1980s. The discussion of the role of central banks has moved on from then however, with much less emphasis on regulation and more on how central banks can act to facilitate the efficient operation of banking systems in deregulated markets where private modes of financing are assumed to be the norm.<sup>(15)</sup> Such liberalised markets can serve Islamised economies well, but it is nevertheless important that in their behaviour market participants, including the bankers as intermediaries, respect Islamic business ethics in general and the Shariah law in particular.

Muslims may legitimately disagree over the degree of central bank independence from government, as well as over what the role of government should be in monetary policy.<sup>(16)</sup> The relation of central banks vis a vis the religious authorities needs to be clarified however, as does the question of whether central banks should have Shariah advisors or religious supervisory boards. There is also the issue of whether the Islamic banks can be subject to the same statutes as conventional banks under the jurisdiction of the central banks, or whether separate provision needs to be made to respect their modes of operation, as is the case in many Muslim states. This raises the question of reporting requirements and accounting standards, which arguably is better dealt with separately.

For the Islamic world as a whole, the Islamic Development Bank could potentially play a role as a central bank for central banks, and it could also act as a regulator for Islamic commercial banks. This would impinge on national monetary sovereignty however, which may prove to be as unacceptable to Muslim states as it is to some states in the European Union when faced with the prospect of an ever more powerful European Monetary Institute. Nevertheless, if trade within the Muslim world is to increase substantially, this may require not only the elimination of import controls and payments restrictions, but also a degree of exchange rate stability against the Islamic dinar or another agreed common standard. Perhaps the most potentially important part of Zangeneh and Salam's article is where they discuss exchange rate issues, as the transactions costs associated with exchange rate instability is a significant impediment to greater economic integration in the Muslim world. An interesting research agenda, perhaps for a future article, would be to consider what role central banks in Muslim states can do to facilitate such integration.

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(15) For an up to date discussion of how central bank functions have changed see **Charles A. E. Goodhart**, *The Central Bank and the Financial System*, Macmillan, London, 1995. For a review of current practice in developing countries see **Maxwell J. Fry**, **Charles E. Goodhart** and **Alvaro Almeida**, *Central Banking in Developing Countries: Objectives, Activities and Independence*, Routledge, London, 1996.

(16) As do secular economists. See **Eric Schaling**, *Institutions and Monetary Policy: Credibility, Flexibility and Central Bank Independence*, Edward Elgar Publishing, Cheltenham, U.K., 1995.

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