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Absence Of Interbank Loan Market And Banking Short-Term Liquidity Management Mechanisms: The Most Pressing Problems Of The Islamic Finance Model

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Abstract

The Islamic finance model is sufficiently well specified at the "bank-to-client" level, but does not regulate the "central bank-to-bank" and "bank-to-bank" relationships. This paper proposes a concrete Shariah-compatible mechanism for setting up an Islamic interbank loan[2] market and managing Islamic bank liquidity, which allows a segregation of Islamic and non-Islamic finance. Islamic banks should as a minimum delink from LIBOR and other traditional reference rates and come up with their own financial benchmarks.

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[2] In the Islamic finance industry the word 'loan' is usually avoided because of associations with interest-based funding. However we use it in this paper, as the term 'interbank loan market' is well-established and the substitution of the word 'loan' with the word 'funding' may lead to misunderstandings.

1. Introduction

The aim of this paper is to propose solutions to one of the most thorny problems of the present-day Islamic banking industry, namely, the lack of Shariah-compatible tools enabling central banks to manage Islamic bank (IB) liquidity and the resultant lack of a full-blown Islamic interbank loan market (ILM).

A good deal of real-life examples show that IBs must continuously hold excess liquidity, as they are unable to raise or place money in the interbank market without transgressing the Shariah principles.

Other numerous examples show that central banks apply conventional tools and approaches to IBs, including the interest-based lending and deposit-taking, citing the lack of alternatives and the dharura (utmost necessity) principle. That said, a central bank's involvement in trading or partnership-based commercial operations with banks seems unnatural, to say the least.

The key issue behind the above challenges is the rate of profit to be expected in the Islamic banking industry. In the conventional financial sector, the London Interbank Offered Rate (LIBOR) is one of the generally accepted benchmarks. The Islamic banking industry does not have its own reference rate and is therefore compelled to conduct business looking at the movements of LIBOR, the flagship of an interest-based economy. This adds up to a discrepancy: while IBs' external (bank-to-client) relationships are fairly well consistent with Shariah, their relationships with each other or with the central bank are generally at variance with Shariah rules. Before this discrepancy is corrected, Islamic banking will be unable to stand apart as a fully-fledged independent and self-reliant sector, but will remain an extravagant adjunct to the conventional financial system.

2. Literature review

The review of the literature for this study focuses on publications posted on the Social Science Research Network website (ssrn.com). A keyword search for articles containing the terms 'Islamic interbank market' and 'Islamic money market' produced six and 39 results respectively. By way of comparison, a search for articles containing the words 'Islamic', 'interbank' and 'market' produced 1,084; 218 and 22,800 results respectively.

Of the first six results mentioned above only one paper (by Sundararajan, V. and Marston, David and Shabsigh, Ghiath, 1998) addressed the Islamic IBL market. Its authors note that for the liquidity management purposes central banks have to partner and share profits with IBs, i.e., take commercial (operating, trading, currency, etc.) risks. The authors emphasize that in the virtual absence of any Islamic IBL market, IBs are exposed to additional costs.

The paper also outlines an interbank lending mechanism adopted in Malaysia as far back as in 1994. It is interesting as a way to calculate the IBs' expected profit rate. The formula for calculating the profit element to be paid to the provider of funds is as follows:

$$X = \frac{P*R*T*K}{365*100},$$

where

X = amount of profit to be paid to the lending bank.

P = principal investment.

R = ratio of the investment recipient's gross profit to revenue (rate of gross profit, in percent p.a., before distribution for investments for one year of the receiving bank).

T = number of investment days.

K = profit sharing ratio.

A weak point of this model is ratio R, as its projected value depends on the borrower's actual characteristics (this represents the risk that the borrower will distort its financials to understate the amounts payable on a loan). Besides, from the formula's logic it follows that the profit rate is simply the borrower's profitability. One cannot agree with this. Indeed, in a conventional economy, LIBOR reflects the weighted interest rate at which banks lend money. Each bank's lending rate, in turn, is a result of the bank's interaction with a great number of potential borrowers. In other words, this rate is market-based. But the discussed ratio R is not the result of a market competition. It is something that the borrower takes from its own financial statements. This is similar to saying that a conventional bank's profit rate depends on clients' reported financial results, rather than supply and demand for loanable funds.

Of the 39 articles found using the key words 'Islamic money market', four were relevant to the subject. The first one (by Aniss Boumediene, 2012) points out that the IBs' liquidity management systems are actually based on interest-bearing financial instruments and are not consistent with Shariah. This idea is reiterated in another paper (Al Ajlouni, 2013), where it is also suggested that an IBL market could be set up based on Al Qardh El Hasan (an interest-free loan). This instrument does not involve any revenue for the lender and any charge for the borrower and has no chance, in our view, to become suitable for practical use due to the commercial nature of the bank-to-bank relationship.

The third paper (Baklanova, Dr. Viktoria and Tanega, Joseph Atangan and Arakcheev, Alexey, 2010) argues that available liquidity management instruments (*murabahah, wakala* and *sukuk*) carry a higher risk at a similar rate of return or an equal risk at a lower rate of return, than conventional instruments. This statement prejudices the possibility of using the said instruments as Islamic liquidity management vehicles. The fourth paper (Wahyudi Imam, 2014) could not be downloaded from the library.

An additional search was made in eLIBRARY.RU, the Russian-language scientific online library, using Russian equivalents for the key words 'IBL market' (29 results), 'Islamic IBL' (0), 'Islamic money market' (0), 'Islamic banking' (47), 'Islamic central bank' (10). Most of the publications analyzed had a descriptive nature, which was predictable, since the majority of Russia's population and even finance specialists are unaware of the Islamic finance issue. Neither of those publications addressed the questions of banking liquidity management and the Islamic IBL market functioning.

The general conclusion that emerges from this research is that the problem of the lack of IBs' liquidity management tools at central banks' disposal and the absence of a fully-fledged Islamic IBL market actually exists.

3. Practice review

Islamic countries have repeatedly taken steps to set up an IBL market, but their practical achievements are very limited. In common with Malaysia, Indonesia has developed and introduced interbank deposits operating under the *wadiah* (safe-keeping) principle and interbank investment certificates based on the *mudarabah* (profit-loss sharing)[3] principle. At the same time, the central bank established a minimum interest rate for interbank investment certificates, based on the current rate for government investment securities plus a spread. The use of an instrument that allows a bank to reward a depositor at its discretion (*wadiah)* instead of paying compensation for depositing money and charge a fixed rate on investment certificates renders the system unstable and dependent upon human factors.

An interesting 'semi-market' practice is being used in Bahrain. The Bahrain-based Arab Banking Corporation (ABC) has launched a special-purpose subsidiary and supplied it with assets. At ABC, they open an account for any customer who desires to make a deposit. In the evening, they use customer deposits to buy the subsidiary's shares in order to sell them out next morning and then return the proceeds to the depositors with an annual gain of up to 0.15%. The gain is allegedly the result of the subsidiary's stock overnight appreciation. ABC claims that it would compensate the depositors for any stock revaluation losses. ABC only takes deposits and does not give out any loans, which is probably its way to maintain short-term liquidity. In all probability, the corporation maintains a short term deficit consciously as part of its policy.

Thomson Reuters has also contributed to the development of the Islamic finance industry by launching the Islamic Interbank Benchmark Rate ('IIBR'). This indicator is a weighted estimate of the expected profit rate, deducted based on a survey of Islamic banks and "Islamic banking windows". A similar indicator, the Emirates Interbank Offered Rate (EIBOR), is used in Dubai. It corresponds to ratio R from the above formula and reflects a bank's profitability rather than risk premium.

Commodity murabahah, the most widely used "central bank-to-bank" relationship tool (involving the sale of some liquid commodities goods at a price) compels a central bank to take commercial risks, which, of course, is unacceptable.

This example (and other similar examples) once again highlights the problems posed by the lack of a fully-fledged IBL market and Shariah-compatible IBs' liquidity management tools.

4. Criticism of the "central bank-to-Islamic bank" relationship models

The main point that this paper seeks to prove is that the existing forms of the central bank-to-IBs interaction in the liquidity management area are Shariah-incompatible. Consequently, all kinds of transactions between IBs and a central bank (CB) should be stopped.

To prove this, we need to consider two principal forms of interaction between the parties, namely the provision of central bank liquidity to IBs and the depositing of IBs' funds at a CB, and show that both are unacceptable from the Shariah perspective.

1. A CB is a priori a risk-free institution. This means that when an Islamic bank is placing money with a CB, it does not assume any risk.

[3] http://islam-today.ru/ekonomika/islamskie_finansovye_rynki_denezhnyj_rynok/

2. Consequently, it may not only accept but even expect any compensation for depositing money (no risk, no reward).

3. As a risk-free institution, CB may not take any business risks. Therefore, it may not, among other things, be a party to any sale and purchase transactions conducted with the aim of providing funding to IBs.

4. Besides, a CB is not authorized to engage in profit-making activities and may not therefore take business risks when issuing loans or taking deposits. Consequently, it may not make a commercial profit from such operations. But where there is no profit, there also is nothing to share with potential partners.

5. All Islamic financial products have so far been developed and intended for retail customers; there are no products designed for the interbank market or for operations with CBs.

Conclusions:

1. A CB should not transact with IBs directly, there should be an intermediary special-purpose vehicle (SPV), acting as CB's agent for management of IBs' liquidity.

2. A special financial asset should be used by a SPV in transactions with IBs.

5. Proposal for establishing a central bank-to-Islamic bank relationship

Basing on the above conclusions the following measures are recommended for establishing a Shariah-compatible system for managing Islamic liquidity and administering the IBL market:

1. CB should set up a SPV responsible for supplying/taking out liquidity to/from IBs.

2. Ministry of Finance should issue long-term sukuk with a daily payable coupon, and CB should set a minimum share of assets an Islamic bank must hold in the form of such sukuk and vest SPVs with the exclusive right to transact such sukuk.

3. SPV and IBs should jointly purchase the volumes of sukuk using CB's funds.

The proposed Islamic liquidity management procedure looks like this. Suppose that a CB decides for some reason to enhance banking system liquidity. To this end, it orders a SPV to enter into repurchase agreements with IBs. At stage one, the banks sells their sukuk holdings to the SPV. At stage two, the parties use the assets: the SPV receives sukuk's daily payments and the IBs invest the raised funds. At stage three, the parties do the reverse operation. In both operations, sukuk have the same value (the value of a debt does not change). Following these operations, the IBs are expected to see some gains from additional investments (if, of course, they know how to invest effectively), and the SPV to benefit from the daily coupon payments.

As a simple example, consider the situation where an Islamic bank sells 100 sukuk each worth 1 ruble to a SPV (Table 1).

Table 1. A way to enhance banking system liquidity

Repo operation stage	SPV	Asset movement	Islamic bank
Stage one			
1.1.	+ 100 sukuk	< ==	- 100 sukuk
1.2.	- 100 rubles	== >	+ 100 rubles

Stage two			
Day 1	+ sukuk's interest payments		100 rubles invested
Day 2	+ sukuk's interest payments		100 rubles invested
…	…		…
Day n	+ sukuk's interest payments		100 rubles invested
Stage three			
3.1.	- 100 sukuk	== >	+ 100 sukuk
3.2.	+ 100 rubles	< ==	- 100 rubles

Note: All numbers are given as an example.
Source: Author's elaboration.

In another example, a CB may deem it necessary to decrease banking sector liquidity. To this end, it orders a SPV to enter into repurchase agreements with IBs. At stage one, the SPV sells its sukuk holdings to the banks. At the last stage, the SPV repurchases the bonds. Following these operations, the IBs see their liquidity decreased, but benefit from sukuk proceeds.

It should be noted, however, that repo agreements are not appropriate from the Islamic finance perspective. It is because the repurchase price is different from the original sale price, and because the reverse transaction may not be carried out if the item is not available in a sufficient quantity. Therefore, we emphasize the following elements of the proposed liquidity management operations:

1. Ministry of finance is not a risk-free institution, and any sukuk-related transation will carry a risk, meaning that the obtained reward (daily coupon) is consistent with Shariah rules.
2. Parties to repurchase agreement already have sellable/purchasable bonds in their asset portfolios, meaning that at the start of the reverse repurchase, the seller actually holds sukuk and not just promises to sell them in the future. In this respect the repurchase agreements are Shariah-compatible.
3. Sukuk repurchase price is the same as the original sale price, which is in line with Shariah rules.

One important issue is the selection of a repurchase agreement counterparty in a situation of mismatch between the demand and supply. In a conventional economy, this is governed by the offered/ asked interest rate. The proposed model also involves competition — but for the quantity of sukuk available for repurchase (at stage three) rather than for bond price. Suppose that a SPV is placing available funds with counterparties, that is, planning to enhance banking system liquidity. To this end, it buys some volume of sukuk from IBs. Obviously, the amount of money necessary for liquidity enhancement is specified by the CB, and the SPV knows beforehand how many sukuk it needs to buy. However, the amount of repurchased sukuk may be different, which creates a potential for competition. Banks may offer the SPV different quantities of sukuk depending on market conditions, which allows the SPV to choose among sellers who name their best offer for repurchase (in terms of sukuk quantities).

6. Conclusions

1. As a risk-free institution, central bank may not enter into financial arrangements with Islamic banks directly. It should set up a SPV for the purpose of such interactions.

2. To establish the Islamic liquidity management process, a special financial instrument — sukuk with a daily coupon — should be issued by the ministry of finance.

3. SPV should act both as the central bank's liquidity management policy tool and the Islamic IBL market organizer.

4. In the Islamic finance industry, profit rate depends on income generated by sukuk with daily coupon payments, which is a reward for the lowest possible risk in the market.

5. Competition for funding in the Islamic finance sector depends on the quantity of sukuk repurchased at stage three of repo operations.

6. In the future, Islamic counties will be able to set up their national currency supporting systems with the help of domestic SPVs. To this end, the latter will enter into repo agreements with each other using national currency and sukuk bonds.

7. In a more distant future, a special agency issuing the Islamic Dinar, a common currency for the Muslim world, could be established based on national SPVs.

7. References

1. Sundararajan, V. and Marston, David and Shabsigh, Ghiath. Monetary Operations and Government Debt Management Under Islamic Banking (September 1998). IMF Working Paper, Vol., pp. 1-30, 1998. http://ssrn.com/abstract=882713

2. Boumediene, Aniss. Financing Government Budget Deficit as a Liquidity Risk Mitigation Tool for Islamic Banks: A Dynamic Approach (March 16, 2012). http://ssrn.com/abstract=2025127

3. Al Ajlouni, Dr. Time-Weighted Debt Units (A Suggested Islamic Scheme to Manage Liquidity Risk) (February 23, 2013). http://ssrn.com/abstract=2223329

4. Baklanova, Dr. Viktoria and Tanega, Joseph Atangan and Arakcheev, Alexey, Islamic Money Management: A Western View (July 15, 2010). Capital Markets Law Journal (2011) 6 (2): 238-252. http://ssrn.com/abstract=2342654

5. Wahyudi, Imam, Interdependence between Islamic Capital Market and Money Market: Evidence from Indonesia (March 1, 2014). Borsa Istanbul Review, Volume 14, Issue 1, March 2014, Pages 32-47. http://ssrn.com/abstract=2518999