COMMODITY MURABAHAH TRANSACTIONS (CMT): A SHORT-TERM LIQUIDITY MANAGEMENT TOOL IN ISLAMIC BANKS

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ABSTRACT

Contrary to the ideal Islamic banking model of profit-loss-sharing (PLS) arrangements between depositors and shareholders of the bank, which should make Islamic banks more stable than their conventional counterparts, Islamic banks are found to offer guaranteed deposit and ‘gift’ schemes. This makes them similar to conventional banks, but unlike conventional banks, Islamic banks, due to the non-permissibility of interest according to the Shariah cannot access the money market for short-term liquidity in the event of unexpected withdrawals from depositors. As a result, Islamic banks tend to hold excess liquidity, for which they earn very low or no returns, in order to mitigate against such potential liquidity problems. Effective short-term liquidity management, both liquidity absorption and liquidity injection, is therefore a challenge facing Islamic banks. A number of tools have been developed to address this challenge and Commodity Murabahah Transactions (CMT) is a widely used tool but controversial in terms of its Shariah permissibility. This paper examines the structure and theoretical underpinnings of Commodity Murabahah Transactions (CMT) and discusses its key associated risks.
1. Introduction

The core business of banks is the receipt of deposits, accounted for as liabilities on their balance sheets, and the transformation of those deposits into loans of different maturity, accounted for as assets on their balance sheets. Customers with deposits expect to have access to their funds as and when needed, any doubt or loss of confidence in their ability to access their funds can lead to serious consequences for banks. It could lead to a ‘run’ on the banks causing a wide-scale systemic crisis as evident in the 2007/8 banking and financial crisis. In the wake of the financial crisis there appear to have been an increased interest in a fast growing segment of the financial industry globally; namely Islamic finance and banking.

Conventional banks tend to address any immediate shortfall in their asset-liability management by accessing the money market and lender-of-last-resort (LOLR) facilities. Islamic banks on the other hand, due to the lack of or limited availability of Shariah-compatible money market instruments and lender-of-last-resort (LOLR) facilities face a greater risk in managing their liquidity. Commodity Murabahah Transactions (CMT), based on Tawarruq, was first introduced by the Central Bank of Malaysia and is viewed as an innovative solution to effective liquidity management in Islamic banks.

A perfectly liquid asset can be defined as one whose full present value can be realized or turned into purchasing power for goods and services immediately (Tobin, 1987; Lewis, 1991; Heffernan, 1996). Islamic banks hold illiquid assets while their liabilities are liquid. In addition, Islamic banks hold assets whose precise value is unpredictable while they guarantee the value of their liabilities. If the banks maintain too much liquidity to avoid potential liquidity problems, their profitability is compromised and if they hold too little liquidity they are exposed to significant liquidity risk. Therefore, maintaining the right balance between safety and profitability is key to their efficient operations.

This paper is therefore examining the short-term liquidity management issues faced by Islamic banks and will discuss the theoretical underpinnings of a relatively new and innovative solution, Commodity Murabahah Transactions (CMT), that uses the trading of commodities with deferred payments as a tool to absorb excess liquidity from capital-surplus banks or inject much needed liquidity into capital-deficient banks. Section two provides an overview of the key concepts in Islamic banking. Section three discusses the liquidity issues faced by Islamic banks and outline instruments that have been developed to address these issues. Section four focuses on Commodity Murabahah Transactions (CMT) as a new and innovative tool for both liquidity absorption and liquidity injection. Section five discusses the risks associated with Commodity Murabahah Transactions (CMT), and section six concludes.

2. Islamic Banking

Islamic banks became an important player in the global financial industry. This is not only due to the amount of assets under management, which totaled over $1,000 billion (The Banker, 2011), but also because these banks provide financial services that cater to the needs of a growing segment of investors and credit seekers worldwide who require services and financing opportunities that conform to their religious
preferences. It is argued that the increases in income in the oil rich economies, a growing religious middle class in the Islamic world, and a growing confidence in equity related investment instruments than debt based type of products may have contributed and is probably expected to contribute to the growth of this segment of the financial industry and to the liquidity position of banks involved in offering Islamic financial products.

The field of conventional finance covers areas relating to corporate finance, investments, financial institutions, derivatives, and international finance. These areas relate to the financial management decisions that pertain to making an investment in an asset (both real and financial), the raising of capital through debt or equity to fund these investments, and then the creation of cash flow and rates of returns that are higher than the cost of capital in order to economically and financially justify these investments and hence create value to the provider of capital.

In Islamic finance the decisions relating to an investment in an asset excludes direct or indirect transactions in businesses that pertain to alcohol, pork products, firearms, tobacco, adult entertainment, and the gambling industry (Jobst, 2007). With regard to the raising of finance, the parties involved in a financial transaction are forbidden to charge or receive interest (riba) or have to any form of dealings that is involved in exchanging money for debt without an underlying asset transfer, and that all the cash flow have to be produced by sharia-compliant (halal) sources. In addition, the working of financial institutions such as Islamic banks, takaful companies (Islamic form of insurance), Islamic investment banks, and Islamic private equity firms are prohibited from being involved in speculative activities. These activities involve preventable uncertainty (gharar) such as financial derivatives instruments, forwarding contracts, and future agreements (Jobst, 2007). However, the main essence of Islamic finance should be the absence of interest where the overall agreement amongst Islamic scholars is that the charging of interest and any fixed rate of return promised to an investor that is predetermined ex ante, and are guaranteed regardless of the financial performance of the asset is not permissible (Iqbal and Tsubota, 2006; Iqbal and Mirakhor, 2007; Iqbal and Llewellyn, 2000). Given that Islamic finance encourages a financial structure without interest, then the alternative relationship between the borrower and lender or investor and saver has to be based on shared business risk and returns, and therefore any capital based form of investment that does involve entrepreneurial risk would probably not be considered halal under Islamic principles. The involvement of part of the commodities market contributes to the facilitation of some of the Islamic financial transactions.

When considering the different types of financial transactions offered by Islamic banks, there are a number of modes that are used in this form of banking namely:

_Mudaraba_ – is a financial transaction which relate to profit sharing where one economic agent with capital partners with another that has the business skills, investment management knowledge, skills in investment project and entrepreneurship. The losses are born by the capital owner in this case.

_Murabaha_ - This case is similar to a cost-plus contract where the profit margin given the cost that was incurred by the seller. The cost, profit margin, and selling price must be clearly stated in the contract. This kind of contract is facilitated to businesses
or individuals who do not have sufficient capital. The mark-up profit margin is determined by both the financier who purchases the commodity, product, or raw material, real estate. The time value of money is part of the profit margin. In this case the bank cannot charge any interest on late payment or any more compensation outside the financial contract.

*Musharaka* – is seen as joint venture, or an equity partnership, it is possible that a working partner gets a greater proportion of the profit than a passive partner, and the loss of capital is not in the same ratio to partners. This contract combines the process of management and investment. When the bank is involved in this transaction, the bank claims part of the profit that would compensate for the financial risk.

*Ijara* – This is a type of a leasing contract, here the bank or the financial institution buys the asset from a seller and leases it to the customer at a certain price which should include the profit.

There are other transactions relating to credit sale or *Bai’ al-mujjil*, where the buyer can pay the seller (possibly a bank) by installment where the profit margin is incorporated. There are contracts *Bai Bathamin Aji* where there is no need to disclose profit margin but payment can still be made by installment for the long term. *Sukuks* which is a form of a bond that constitutes a participation right in an asset.

The above are some examples but there are other products.

It is argued by Iqbal and Mirakhor (2007, pp17) that the unconditional prohibition of interest impacts the overall landscape of the Islamic financial system, this concept relates to the prohibition of pure debt security, and therefore, the alternative in this system is risk and profit sharing taking into consideration that the maximization of profit by producers or utility by consumers are not the sole objectives of the society and that any wasteful consumption is discouraged, this argument points to the fact that the generation of waste due to maximization objectives would result in a misallocation of real and financial resources, therefore an Islamic financial system needs to address that the burden is born by all members of the society, where it appears that there is a social welfare function that the society as a whole needs to attain, and that all the parties in an economic and financial transaction partake by accepting risk sharing, a situation that aims to achieve a more efficient allocation of resources, and probably allow the distribution of income in a fairer and more effective way.

With regard to capital, the basic proposition of Islamic finance is that the return on capital would be determined *ex post* and not *ex ante*, and that the size of the return is a function of the size of the economic activity in which the funds were employed to develop. In an Islamic financial system the provision of capital should be linked to the productive flow in the economy and where the size of debt claims should not be greater than the value of production, hence the capital structure should based more on equity rather than debt for firms and financial institutions otherwise “debt bubbles” would develop. It is further argued by Iqbal and Mirakhor (2007) that a practical current conventional example relating to the recognition of the impact of debt is observed by what the IMF advises developing countries to follow; namely avoiding debt-creating flows, more reliance on Foreign Direct Investment (FDI), that borrowing should be for longer maturities probably to ensure the ability of the project
to economic viability and thus meet the liabilities over the period in question, and that enough primary surpluses are created by the economy to meet the debt obligations, in addition if these countries have to borrow then the sovereign bonds should include clauses that would allow a more flexible debt restructuring environment.

3. Liquidity in Islamic banks

In theory, Islamic banks are regarded as less risky in terms of their exposure to liquidity risk compared to their conventional counterparts. This is because the ideal Islamic banking model is that of a profit-loss-sharing (PLS) arrangement on both the assets and liabilities sides of a balance sheet (Rosly and Bakar, 2003; Siddiqui, 2001). With this arrangement, depositors share the risk with the bank on the liabilities side and will normally absorb any adverse loss on the assets side of the bank’s balance sheet. Therefore, in effect, both the shareholders and the instant account depositors absorb any loss to an Islamic bank’s asset returns. As a result, according to Khan and Mirakhor (1987) and Siddiqui (2001), the Islamic banking model is deemed theoretically to be a more stable and robust system than the conventional banking system.

However, in reality, the operations of Islamic banks are found to differ from the ideal structure. For instance, most retail deposit schemes, both current and savings, are based on Wadi’ah Yad Dhamanah (guaranteed safekeeping) or Al-Qard (loan), which are guaranteed principal contracts regardless of the bank’s profitability on its asset side. In addition, Islamic banks in order to compete tend to give hibah (gift) at a rate equivalent to the rate of return on deposits offered by conventional banks. As a result, this deviation from the strict profit and loss sharing model with deposits to that of a guaranteed profit (gift) payment scheme puts strain on the bank’s shareholders (Dusuki, 2007). Therefore, with a balance sheet structure that is similar to conventional banks but without the access to short-term money market instruments to address any immediate liquidity issues like conventional banks do, it can be argued that Islamic banks are more risky.

The first Islamic Interbank Money Market (IIMM) was established in Malaysia in 1994 to help address the short-term liquidity management needs of Islamic banks. A number of instruments have been developed by the IIMM to address these liquidity needs and they include Mudarabah Interbank Investment (MII), Wadiah Acceptance, Government Investment Issue (GII), Sell and Buy Back Agreement (SBBA), When Issue (WI), Islamic Accepted Bills (IAB), Islamic Negotiable Instruments (INI), Islamic Private Debt Securities, Sukuk Ijarah, and Commodity Murabahah Transactions (CMT). Even though there has been a lot of debate and controversy about whether some of these instruments, such as Government Investment Issue (GII) and Negotiable Islamic Certificate of Deposit (NICD), are Shariah-compliant and strictly adhere to the Islamic principles of rejecting riba (interest), some are still widely used (Dusuki, 2007).

According to the Islamic Financial Services Board (IFSB), excess liquidity is currently the norm for most Islamic banks worldwide. Therefore they earn very low or no returns. They have to hold such excess liquidity in order to mitigate against possible liquidity risk because unlike their conventional counterparts, they cannot simply borrow on the money market at interest to meet unexpected withdrawals from
their depositors. According to an IFSB (2010) survey, Commodity Murabahah Transactions (CMT) ranked highest at 49 per cent among the instruments used for liquidity management among Islamic banks. Central Banks, like in Malaysia, have also served as facilitators of CMT, in effect as a Shariah-compliant lender-of-last-resort (SLOLR).

4. Structure of Commodity Murabahah Transactions (CMT)

Commodity Murabahah in its initial form was practiced in the Middle East (especially Saudi Arabia and the United Arab Emirates) and was based on commodities traded on the London Metal Exchange on a spot basis with 100 per cent payment of the purchase price, and then selling the purchased commodity to another party (third party) on a Murabahah (cost plus profit) basis for a deferred payment with a maturity from one week to six months, with spot delivery of the sold commodity (El-Gamal, 2006).

A key extension to this was developed in Malaysia. It was designed as a new Commodity Murabahah instrument in which the underlying asset is the crude palm oil (CPO) and the contract is based on Tawarruq. The use of Tawarruq was officially endorsed as a permissible instrument to be used in the financial market and the IIMM by the Shariah Advisory Council of the Central Bank of Malaysia in July 2005. This new transaction is based on a pre-agreed ‘margin’ or ‘ownership’ from the sale and purchase of the underlying asset.

Tawarruq is a sale contract in which a buyer purchases an asset or commodity from a seller on a deferred payment basis and subsequently sells it to a third party on a cash basis at a price less than the deferred price, purely for the purpose of obtaining cash. It is called Tawarruq because when the buyer purchased the commodity on deferred terms, it was not their intention to utilize or benefit from the purchased commodity. Instead, it was their intention to immediately sell the commodity at spot for cash in order to achieve liquidity, which leads to debate about its Shariah permissibility.

According to the IFSB, “commodity” means a physical product that is and can be traded on a secondary market – for example, agricultural products, minerals (including oil) and precious metals. Precious metals, however, do not include gold and silver, and currency or money is not a commodity. Examples of different types of freely tradable Shariah-compliant commodities include platinum, crude palm oil (CPO), wheat, and cotton. Some Islamic banks and Central Banks may use a suitable local commodity instead.

4.1 Liquidity Absorption

An Islamic bank with excess liquidity that is looking to effectively manage its short-term excess funds can make use of the CMT instrument. The Islamic bank can purchase a commodity from a broker at spot price and delivery with the excess cash. The Islamic bank then makes use of the facilities provided by its Central Bank, for example the Central Bank of Malaysia, to which it sells the purchased commodity on a deferred murabahah basis, i.e. it agrees on a price which is the cost of the commodity plus a declared and agreed profit or mark-up, for which the total price will be paid in the future. The Central Bank then with its now purchased commodity can
sell it to another broker at the original price paid by the Islamic bank, to net off the transaction. The Central Bank now has the funds available for the agreed period, for which it will pay the Islamic bank the original amount plus the agreed mark-up. The Central Bank may appoint the Islamic bank as the agent to sell the commodity in the market. This structure is illustrated in Figure 1.

Figure 1: Liquidity absorption using Commodity Murabahah Transactions (CMT)

4.2 Liquidity Injection

The use of CMT to aid the liquidity of Islamic banks also works in reverse. In such a case, the Central Bank buys the commodity spot on a cash basis. The Central Bank then sells it to the Islamic bank that is facing temporary liquidity problems on a deferred payment basis at a cost plus margin price (murabahah financing). The Islamic bank takes ownership of the commodity and sells it on the spot market to another commodity broker at a cash price equivalent to the original purchase price by the Central Bank to net off the position. The Islamic bank that has liquidity problems now has the necessary cash to address its short-term needs and will pay the Central Bank the cost plus profit amount at the end of the agreed period. The Central Bank could also in this case appoint the Islamic bank to act as its agent to purchase the commodity at the initial stage of the transaction. The structure is illustrated below in Figure 2.
5. **Risks associated with Commodity Murabahah Transactions (CMT)**

The five main types of risks associated with CMT can be categorized as market risk, credit risk, liquidity risk, rate of return risk, and operational risk.

### 5.1 Market Risk

Since the underlying asset in a CMT is a tradable commodity, an Islamic bank that is in possession of the underlying commodity may be exposed to fluctuations in the market price of the commodity. Possible situations include for example, if a customer refuses to honour their commitment to buy the commodity or if the agreement for the purchase is non-binding. In such a case, the Islamic bank would resell the commodity to a broker immediately and incur the cost of the broker’s commission plus any adverse price changes. Therefore, heavy use of CMT by a large number of Islamic banks could pose significant effect on prices and volatility in times when they are all trying to sell and get liquidity.

The type of CMT also determines the extent of the exposure to market price risk. For example, with a CMT for Liquid Funds on the asset side, where an Islamic bank has provided liquidity and is expecting a cost plus profit return from the counterparty at a future date, the market risk transforms into credit risk. In this case, market risk is relevant before the commodity is sold to the counterparty, after it has been sold and the counterparty is due to make payment in the future, then the credit risk of the counterparty becomes the focus. With a CMT for Obtaining Funding on the liability side, where an Islamic bank is looking for liquidity injection, the Islamic bank is exposed to market risk if it holds on to the title to the commodity for a length of time. Another risk exposure is that of fluctuations in currencies if CMTs are denominated in foreign currencies. This can lead to significant foreign exchange risk exposures for the parties involved.

### 5.2 Counterparty Credit Risk

This is the risk exposure that Islamic banks involved in CMT face due to the risk that the counterparty to a transaction could default before the final settlement of the transactions cash flows. This is applicable as described above in the case of a CMT for Liquid Funds on the asset side, when the Islamic bank is expecting to receive a cost plus profit payment at some point in the future. However, for a CMT for Obtaining Funding on the liability side, it is the counterparty that is exposed to the credit risk of the Islamic bank in the transaction, as it is the counterparty that is expecting the future cash flows.

### 5.3 Liquidity Risk

The lack of tradability of CMT is a source of liquidity risk for Islamic banks. Though CMTs are based on tradable commodities, CMTs themselves are not tradable. Once a CMT is entered into, it becomes a receivable and sits on the asset side in the case of providing liquidity or it becomes a payable and sits on the liability side in the case of obtaining liquidity. Murabahah receivables are debt, which a counterparty has to pay
a cost plus profit on maturity, and in most jurisdictions such debt cannot be sold in a secondary market at a price different from the face value. This therefore creates a liquidity risk exposure for the Islamic banks holding Murabahah receivables.

Despite its widespread use by Islamic banks, CMTs are inherently non-tradable and they pose significant liquidity risk to the banks involved. This is because it is not Shariah-compliant to trade in debt in most jurisdictions. Therefore the counterparties have to wait until the maturity of the contract in order to receive their funds. CMTs therefore do not allow much flexibility to the parties involved since they would lock in their positions once a transaction is entered into.

### 5.4 Rate of Return Risk

CMTs also pose a rate of return risk particularly in the case of longer maturity transactions. In a CMT, the suppliers of funding have a contractual fixed return ex-ante, which is the cost plus profit, and that must be disclosed at the start of the transaction. However, in a profit-sharing investment account (PSIA), there is no such contractually fixed rate of return, as the parties are exposed to both the upside and downside risk.

### 5.5 Operational Risk

The choice of the underlying commodity in a CMT has serious implications in terms of maintaining and managing commodity inventories, which could differ in different markets (whether liquid or illiquid) depending on the commodity (whether local or foreign). Part of this consideration involves finding a suitable local commodity for trading. This will help to reduce transaction costs significantly as well as enable other smaller Islamic banks to participate in the market to achieve robust liquidity management.

Another operational risk is clearing and settlement, which in effect refers to counterparty risk. For example, a broker becomes unable to deliver a commodity although they have received cash or a party has purchased a commodity but does not deliver the cash. Therefore, the commodity settlement period should be pre-planned and defined by the Islamic bank. Another point of uncertainty is the potential risk exposure with certain exit policies and early cancellations in CMTs.

Legal risk is also present, particularly for over-the-counter (OTC) transactions with multiple contracts. This can lead to the risk of enforceability, which can cause credit, liquidity or reputational risk. This is also in the context of differences in the legal systems across jurisdictions, when cross-border transactions are entered into. Possible mitigation of such risks includes the adoption of standardized master agreements between parties.

Another operational risk is that of non-compliance to Shariah principles, which can lead to non-recognition of income and result in losses. This can happen as a result of a breach or violation of Shariah rules, possibly due to a failure in an Islamic bank’s internal Shariah governance system and its Shariah body. Possible mitigation strategies include the implementation of a proper process for screening commodity
suppliers and admitting particular commodities as permissible as well as implementing adequate Shariah audits to ensure the validity of the CMTs.

6. Conclusion

Unlike conventional banks, Islamic banks, due to the non-permissibility of interest according to the Shariah cannot access the money market for short-term liquidity in the event of unexpected withdrawals from depositors. As a result, Islamic banks tend to hold excess liquidity, for which they earn very low or no returns, in order to mitigate against such potential liquidity problems. Effective short-term liquidity management, both liquidity absorption and liquidity injection, is therefore a challenge facing Islamic banks. A number of tools have been developed to address this challenge and Commodity Murabahah Transactions (CMT) is a widely used tool but controversial in terms of its Shariah permissibility. This paper examined the structure and theoretical underpinnings of Commodity Murabahah Transactions (CMT) and discusses its key associated risks. It is designed to introduce the importance of the commodities market and how Islamic financial transactions are conducted, this area of the financial services industry has been experiencing substantial growth since the occurrence of the financial crisis 2008 and there appears to be a literature gap in this area of finance which requires more research to explore this important industry.
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