

Islamic Home Financing through Musharakah Mutanaqisah and al-Bay' Bithaman Ajil Contracts: A Comparative Analysis

by

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Abstract

Home financing takes a large chunk of peoples' income. As alternatives to conventional interest-based home financing modes, several Islamic modes are currently in existence, the dominant among which are the *al-Bay' Bithaman Ajil* (BBA) and the *Musharakah Mutanaqisah Partnership* (MMP) contracts. The BBA is a *murabahah* contract, based on buy-and-sell principle while the MMP consists of a *musharakah* (partnership) contract and an *ijarah* (rental) contract where the equity of the financier follows a diminishing balance method. Scholars are consensus on the *Shari'ah* permissibility of the MMP contract, but nonetheless, are not consensus on the permissibility of the BBA contract. Middle Eastern scholars generally disapprove of the BBA, which on the contrary is popular in Malaysia, Indonesia, Brunei etc. This paper is a theoretical paper that compares these two contracts for the financing of assets, from Islamic and economic perspectives. The paper concludes that the MMP has several advantages over the BBA for the customer. Apart from being consensus *Shari'ah*-compliant, it can be made to avoid interest (*riba*) totally by means of using some rental or house price index while reducing the cost of homes and the duration of financing. The balance of financing, at any point in time, never exceeds the original price of the asset, unlike under the BBA where it can. When implemented through cooperatives, the MMP can also provide an investment avenue for members while not contributing to macroeconomic problems through the fractional reserve money creation process; and hence is argued to be consistent with the *maqāsid al-Shari'ah*. The paper also provides a mathematical derivation note for the MMP.

I. Introduction

Home is a basic necessity for human life. Everyone needs a shelter for rest, sleep, comfort and protection from sun and rain. It is a place to dwell in comfort with family. Therefore, owning a good home is an aspiration of everyone. People fulfill this need by building a home on their own, purchasing it or renting it from others. Indeed, payment for home mortgage normally takes a good chunk of one's monthly income. Conventional home mortgages are, of course, interest-based and forbidden in Islam. Accordingly, Islamic financial institutions have introduced a number of *Shari'ah*-compliant modes for home ownership, the dominant of which are the *al-Bay' Bithaman Ajil* (BBA) and the *Musharakah Mutanaqisah Partnership* (MMP) contracts. The BBA is the popular concept in countries like Malaysia, Indonesia and Brunei whereas the MMP is widely

practiced in the Middle East, United States, Canada, United Kingdom and Australia. The Middle Eastern *Shari'ah* scholars disapprove of the BBA contract, citing that it is similar to the conventional loans. Indeed, theory of finance predicts that the Islamic modes like BBA to converge to its conventional counterpart due to the *law-of-one-price* (See Meera and Larbani 2004). This convergence has caused Islamic finance to evolve greatly; from being a 'profit-and-loss' banking to fixed-rate *murabahah* financing, and now towards a floating rate financing mode. The Central Bank of Malaysia, for example, has approved a 'floating-rate' BBA where the customer pays a monthly instalment amount that is on the higher end, but thereafter gets a rebate based on the prevailing market interest rate¹. Indeed, many BBA customers have shown dissatisfaction over its implementation.

Caught without much choice, the widespread application of the BBA in this part of the world, has however, put customers as well bankers in jeopardy particularly during volatile economic conditions. This is because the BBA is similar to fixed rate 'debt financing'. During the 1997 East Asian financial crisis, for example, when interest rates were soaring up, the Islamic banks were unable to react, thereby causing huge arbitrage opportunities². Additionally, this also caused liquidity and risk management problems. Accordingly, Islamic banking and finance is being forced to change further; to be one that is *Shari'ah*-compliant and 'friendly' to the customer while also bearing liquidity and other risks 'comparable' to the conventional banking.

The objective of this paper is to make theoretical analyses between the BBA and the MMP contracts. For the benefit of the interested readers, practitioners and teachers of Islamic banking and finance, the paper also provides a mathematical derivation note for the MMP contract.

II. The *al-Bay Bithaman Ajil* (BBA) Contract

The BBA is basically a sale contract which provides the buyer the benefit of a deferred payment, whereby the deferred price of the sale object carries an additional profit. It is an extension of the *murabahah* (cost plus) contract, whereby the commodity exchanged is

¹ Note that this not only makes the Islamic mode to become dependent on interest rate, it can also pose potential cashflow problems since it requires the customer to have a high monthly cash amount compared to the conventional.

² Indeed, this prompted the then Malaysian Finance Minister to suggest the possibility of making Islamic financing modes be based on variable rates (Business Times, April 22, 1998).

“delivered” immediately but the sale price (with profit) is paid in instalments, over a long period (the *murabahah* itself being generally for short periods). While the BBA is widely used in Malaysia, Indonesia, Brunei and few other countries, it has been subjected to much controversy among the *fuqaha* worldwide with regards to its permissibility; where most of the Middle East scholars have rejected it. Even though some *Shari’ah* councils have agreed on its permissibility, a guideline from the Council of Islamic Ideology (Pakistan) in its report on the elimination of interest states that³:

However, although this mode of financing is understood to be permissible under the Shari’ah, it would not be advisable to use it widely or indiscriminately in view of the danger attached to it of opening a back door for dealing on the basis of interest”

In the conventional system, home financing is, of course, usually interest-based and is forbidden in Islam⁴. The current BBA home financing, however, does not alter much the above equation. Instead of charging the customer interest, financiers charge a profit derived through a buy-and-sell contract which is permitted in Islam⁵, but regrettably, the profit rate is dependent on the market interest rate due to arbitrage activities⁶. Therefore, while the BBA is practiced as *Shari’ah* compliant in some countries, it is, nonetheless, converging to the conventional mode where the computational formulas are similar to the conventional and where the profit rate tracks the market interest rate.

The current difference between the fixed-rate BBA and the conventional mode is that once the profit rate is fixed in the BBA, say at 7% per annum, it will remain the same for the entire duration of financing. This, in fact, causes problems for the financiers as it is difficult to estimate accurately the cost of funds and hence the appropriate profit rate over long periods like 20 years, due to the volatility of economic conditions. This

³ The Council of Islamic Ideology Pakistan, (1977), *Elimination of Interest from the Economy*, Islamabad: Government of Pakistan.

⁴ Generally, a conventional mortgage is pegged against the bank’s base lending rate (BLR) plus a spread, e.g. 6.4 % p.a. BLR plus 2.0% p.a. spread (that equals 8.4 % per annum). The price for the loan, thus, varies according to the changes in the BLR which depends on the country’s economic conditions. If, for example, the BLR moved to 6.7 % p.a, the mortgage rate is then revised to 8.7% p.a and so on.

⁵ This is based on the frequently quoted verse from the Holy *Quran (al-Baqarah, 2:275)* which states that Allah has permitted trade and forbidden *riba*.

⁶ Which Shaikh Nizam Yaquby and Muhammad Taqi Usmani, in a 1998 fatwa, approve of so long such interest-based benchmarks do not render the contract on a variable rate.

encourages customers to refinance their home from BBA to conventional during low interest periods and vice versa.

2.1 Operational issues of BBA Home Financing

BBA is a facility provided by the financier to assist the customer pay the cost of financing, e.g. a house, over the tenor of financing, e.g. 20 years, at a fixed rate determined by the financier. The financier initially buys the house from the customer (cost of financing amount) and sells it back to the customer, plus of its profit margin⁷.

As the seller of the property, the *Shari'ah* requires the bank to hold ownership of the property and to hold all liabilities arising, including defects. But currently, BBA documentations show that the bank merely acts as a financier rather than a seller and excludes itself of all liabilities. This, of course, ignores the *Shari'ah* principle of “*al-Ghorm bil Ghonm*” (no reward without risk), “*Ikhtiar*” (value-addition or effort) and “*al-Kharaj bil Daman*” (any benefit must be accompanied with liability), thereby rendering the BBA profit to be implicated with *riba*.

The issue of concern here is the availability of *iwad* (counter value) in BBA financing. According to Rosly (2005), the Qur'an uses trade (*al-bay*) because the profit generated from trading incorporates risk-taking, while the contractual profit from loan transactions (*riba*) is risk-free. It further asserts that *al-bay* implies the existence of *iwad* required by the *Shari'ah* to be a lawful profit in Islam. Three elements of *iwad* that should exist are risk (*ghorm*), work and effort (*ikhtiar*) and liability (*daman*).

Iwad is the basic trait or the *conditio sine quo non* of a halal or lawful sale (*al-bay*), because a sale is necessarily an exchange of value against an equitable return and compensation for the goods or services exchanged⁸. According to Ibn al-'Arabi (d.543H/1148), every increase which is without an *iwad* or equal counter value, is *riba*.

⁷ Indeed, therefore the BBA generally also involves a *bay al-inah* contract that is disapproved by all schools except the Shafi'e school that permitted it with abhorrence (See Mustafa Omar Mohammed, Islamic Financial Contracts (Module 2), Fiqh Muamalat Course Material, International Islamic University Malaysia, p.17). Furthermore, it is important to note that most if not all Islamic banks operate under the fractional reserve system. This means that Islamic banks, just like their conventional counterparts, also create fiat money out of nothing but disburse this newly created money using Islamic financing modes. Meera and Larbani (2004) and others have questioned the *Shari'ah* compliance of fiat money creation itself, an issue on which the *Shari'ah* scholars are still silent about.

⁸ Rosly (2005), p.40.

Iwad is the necessary requirement to be fulfilled in trading (*al-bay*) as it brings along a sense of equity and justice into a business that rendered it superior to an interest-bearing system.

Rosly (2005) also opined that there is no risk taking in the current BBA financing, and, hence, does not merit the Qur'anic concept of *al-bay*. *Daman* (liability) should also exist in a trading transaction whereby the supplier provides guarantees on the goods sold. However in the current BBA home financing, the customer is forced to face the financial burden of paying the for the house even before it is completed, as he has engaged in a 'debt contract' with the bank at the outset. By ignoring the concept of *iwad*, the BBA contract is not seen as conforming to the *maqasid al-Shari'ah* that removes hardship (*raf' al-haraj*) and preventing harm (*daf' al-darar*) in the economic sphere, thereby leaving the welfare of people unprotected – a possible crime when the transaction is done under an Islamic label⁹.

Another issue that arises from the long-term BBA financing is the mismatching of the BBA funds against its short-term deposit tenor. Whilst conventional financing has the ability to address this mismatch in the cost of funds through the variable interest rate (BLR + a spread), BBA financing cannot do this since customers are charged a fixed profit rate for the entire period of financing¹⁰.

2.2 Example of a *al-Bay Bithaman Ajil* (BBA) Financing

Consider the following example¹¹. Assume that a customer wishes to buy a houses priced at RM200, 000. The customer puts a down-payment of 10 percent, i.e. RM20, 000 and finances the remaining 80 percent, i.e. RM180, 000 using the BBA method. Also assume that the Annual Profit Rate (APR) charged by the bank is 10 percent per annum and the duration of financing is for 20 years. The Islamic bank would first buy the house for RM180, 000 and then sell the house to the customer at a profit, with deferred payments over the 20-year period¹².

⁹ See Bilal Farid et.al.

¹⁰ The proposed floating-rate BBA, of course, may solve this mismatch problem.

¹¹ A condition that existed in a locality in Malaysia in 1996.

¹² It is important to note that Islamic banks and conventional banks that operate under the fractional reserve system would, indeed, create this RM180, 000 out of nothing. This mechanism actually adds new money into the economic system without reducing the total deposits of the depositors.

The monthly payment for the above financing is RM1,737.04¹³, payable for 240 months which adds up to RM416, 889.35 in total. The difference between this figure and the original financing of RM180, 000 which equals RM236, 889.35 is the total profit for the Islamic bank from this transaction. The profit of RM236, 889.35 is capitalized upfront in the BBA mode, unlike under the conventional mortgage, where the interest due is not recognized until the elapse of time. One important difference of the BBA compared with the MMP and the conventional mortgage is that of the balance of financing remaining before the expiry of the duration of financing. For our example, the BBA balance after 10 years (i.e. after 120 payments) is the total of the remaining 120 payments, i.e. RM208, 444.80 whereas under conventional mortgage, this amount would represent the total interest paid for the loan over the 20-year period. The Islamic bank, however, may give some rebate for the early repayment, but the amount of rebate is determined at the discretion of the bank. Since the selling price is a price, indeed, *Shari'ah* prohibits the rebate to be stated as part of the contract. Note that even after ten years of repayment, the balance under the BBA mode can even exceed the original financing of RM180,000¹⁴ (See Figure 1). Nevertheless, considering all the socio-economic effects of fiat money, we regretfully assert that Islamic banking within the fractional reserve system can, indeed, be very damaging to the economy¹⁵.

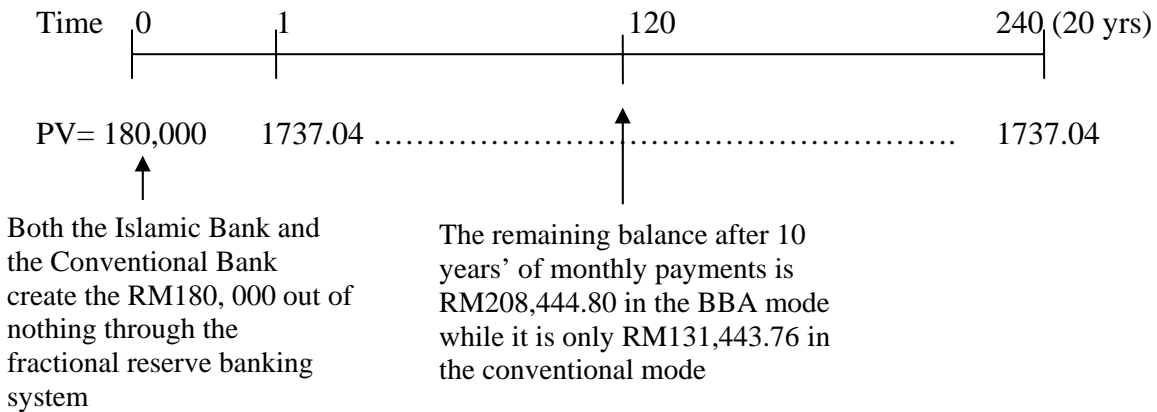
¹³ Computed using the standard formula for present value of annuities, i.e. $PV = \frac{Pmt}{i} \left[1 - \frac{1}{(1+i)^n} \right]$

which gives $Pmt = \frac{i(1+i)^n PV}{(1+i)^n - 1}$.

¹⁴ This happens neither under the conventional mortgage nor the MMP as will be illustrated later, where the balance of financing, at any point in time, never exceeds the principal amount. Therefore, under fractional reserve banking system where both the conventional and Islamic banks create money out of nothing, the Islamic mode is, indeed, very attractive to the bankers. Infact, Citicorp, a conventional bank, is reported as the largest Islamic banking services provider in the world in terms of transactions (*The Asian Wall Street Journal*, 3 May, 2005, p.1).

¹⁵ See Meera (2002, 2004) for a discussion on the socio-economic implications of fiat money creation and for a demonstration why both Islamic and conventional banking systems would ultimately converge, i.e. become equal, due to arbitraging between both the banking systems. This implies that the global Islamic mode of financing would soon converge into the floating rate market. Meera and Larbani (2005) argued that the seigniorage of fiat money is, indeed, a profound *riba*, which the *Sharī'ah* scholars must urgently address.

Figure 1
Islamic Banking and Conventional Banking under Fractional Reserve System



While both the Islamic bank and the conventional bank create the original principal amounts through fractional reserve banking system (i.e. loans given out do not really reduce the deposits of the depositors), a customer owes more money in the Islamic mode than the conventional mode at any time thereafter until the 'loan' is settled. This fact alone is very attractive for even the conventional bankers to provide Islamic mode financing. But, nonetheless, considering the serious negative socio-economic implications of fiat money-based fractional reserve banking, we regretfully conclude that Islamic banking under fractional reserve system is likely to accelerate the said effects –default rates, transfer of wealth and sovereignty etc.(See Meera 2004)

III. The *Musharakah Mutanaqisah* Partnership (MMP) Concept

The *Musharakah Mutanaqisah Partnership* (MMP) contract, on the other hand, is based on a diminishing partnership concept. Here, there are two portions to the contract. First, the customer enters into a partnership (*musharakah*) under the concept of '*Shirkat-al-Milik*' (joint ownership) agreement with the bank. Customer pays, for example, 10% as the initial share to co-own the house whilst the bank provides for the balance of 90%. The customer will then gradually redeem the financier's 90% share at an agreed portion periodically until the house is fully owned by the customer. Second, the bank leases its share (90%) in the house ownership to the customer under the concept of *ijarah*, i.e. by charging rent; and the customer agrees to pay the rental to the bank for using its share of

the property. The periodic rental amounts will be jointly shared between the customer and the bank according to the percentage share holding at the particular times which keeps changing as the customer redeems the financier's share. The customer's share ratio would increase after each rental payment due to the periodic redemption until eventually fully owned by the customer.

Bendjilali and Khan (1995) and Muhammad Taqi Usmani basically agreed on the implementation process of *Musharakah Mutanaqisah Partnership*. They agreed that the product could help the people to less rely on other financing facilities such as the BBA, *Murabahah* etc. The scholars agreed that it is best to implement *Musharakah Mutanaqisah Partnership* for house financing or machinery financing whereby both assets can be leased out according to agreed rental. Joint ownership of a house or machinery is accepted by all schools of Islamic jurisprudence since the financier sells its shares to the customer (See Taqi Usmani 2002). The concept of diminishing *musharakah* is not confined to home ownership only. It can also be applied to other forms of acquiring assets such as buying a car or a taxi for earning income by using it as a hired vehicle. Creating joint ownership in the form of *Shirkah al-Milk* is allowed in the *Shar'iah*¹⁶.

Consider an example, where the customer wants to purchase a taxi to transport passengers, but can only afford 20% of the purchase price. The financier participates by providing the balance 80% of the share. The profit derived from the business is shared between them based on the capital contribution.

The financier's share is divided into eight units. At the end of three months (one quarter), for example, the customer purchases one unit from the financier. Hence, the financier's share gets reduced to 70% while the customer's share increased to 30%. Due to the now higher proportion of share ownership, the customer will be entitled to a higher profit ratio. This process will go on until after the expiry of two years (eight quarters), whereby the whole taxi will be owned by the customer.

¹⁶ Ashraf Usmani (2002), p.116

3.1 Example of a *Musharakah Mutanaqisah Partnership (MMP)* Financing

Consider the same example as for the BBA concept where a customer wishes to buy a house priced at RM200,000. Let's assume again that the customer pays 10 percent of the price, i.e. RM20,000, the financier puts the remaining 80 percent, i.e. RM180,000 and that the average rental for similar homes in the locality is agreed upon between the two parties to be RM1,000 per month. And the customer wishes to add another RM289.58 monthly¹⁷ in order to redeem the financier's share in 20 years. This gives, the total monthly payment as RM1,289.58. Table 2 below provides the schedule for the MMP contract:

Table 2
Payments Schedule for Musharakah Mutanaqisah Partnership¹⁸

Month	Monthly Rent (RM)	Monthly Redemption (RM)	Total Payment (RM)	Customer's ratio	Rental Division		Customer's Equity (RM)	Financier's Equity (RM)	Financier's Cashflow (RM)
					Customer	Financier			
	A	B	C=A+B	D	E	F	G	H	
0				0.10000			20,000.00	180,000	(180,000)
1	1,000	289.58	1,289.58	0.10195	100.00	900.00	20,389.58	179,610.4	1,289.58
2	1,000	289.58	1,289.58	0.10391	101.95 *	898.05	20,781.11	179,218.9	1,289.58
3	1,000	289.58	1,289.58	0.10587	103.91**	896.09	21,174.59	178,825.4	1,289.58
4	1,000	289.58	1,289.58	0.10785	105.87	894.13	21,570.05	178,430.0	1,289.58
5	1,000	289.58	1,289.58	0.10984	107.85	892.15	21,967.48	178,032.5	1,289.58
6	1,000	289.58	1,289.58	0.11183	109.84	890.16	22,366.89	177,633.1	1,289.58
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240	1,000	289.58	1,289.58	1.00000	993.59	6.41	200,000	0	1,289.58
Total = RM309,499.20								IRR = 6%	

Rental Distribution i.e. $E - 2(\text{Customer's}) = 20,389.58 \times \frac{1,000}{200,000} = \text{RM } 101.95^*$; $F - 2(\text{Bank's}) \text{ RM } 898.05$

G-1 Customer's Equity = RM 20,000 + RM 289.58 + RM 100 = RM 20,389.58

H-1 Bank's Equity = RM 200,000 – RM 20,389.60 = RM 179,610.40

¹⁷ Equation (3) in the Mathematical Derivation for *Musharakah Mutanaqisah Partnership* in the Appendix is used to obtain this amount of RM289.58.

¹⁸ An Excel spreadsheet that produces similar schedules for MMP computations is available from the authors upon request.

Notice that while the amount to be paid monthly was RM1737.04 under the BBA concept, the monthly amount needed under MMP is only RM1, 289.58. Therefore, the customer saves RM447.46 monthly but acquires the home also in 20 years. Indeed, if the customer pays RM1,737.04 for the MMP mode as in the BBA, then the customer can own the home in 12 years 3 months¹⁹, i.e. saving about 8 years of monthly payments! Table 3 below provides a comparison for financing the home using the conventional, BBA and MMP methods.

Table 3
Comparison between Conventional Loan, BBA and MMP

Price of house = RM200,000 Customer puts = RM20,000 Financier provide = RM180,000 Monthly Rental = RM1,000			
	APR = 10%	APR = 10%	APR = 6 %
	Conventional Loan	BBA	MMP
Monthly payment	1737.04	1737.04	1289.58
Total Payment in 20 years	416,889.60	416,889.60	309,499.20
Total Interest/ Profit to Bank	236,889.60	236,889.60	129,499.20
APR	10%	10%	6%
Balance after 10 years	131,443.76	208,444.68	116,156.56

From Table 3, it is obvious that so long the APRs are the same the total interest in the conventional equals the total profit in the BBA. But when customer wants to settle the financing earlier, say after 10 years, the loan balance under the BBA is always higher than under the conventional loan. The balance under the conventional is much lower because here the balance is the present value of the remaining 120 payments whereas under the BBA it is simply the monthly payment times 120 (i.e. under BBA the total profit for the twenty years is capitalized upfront). Nonetheless, the bank may give a rebate for early settlement which is decided at its discretion. Nevertheless, the total payments and loan balances are lowest in the MMP among the three financing methods. The mathematical derivation for MMP in the Appendix shows that the return to the MMP

¹⁹ Obtained using Equation (2) in the Appendix.

is solely determined by the rental rate, which in this case is 0.5% per month (accordingly the APR is 6%)²⁰. Interestingly, this return to the financier is neither determined by the initial capital provided by the financier nor the duration of the contract which is usual under debt financing. The return is solely but determined by the rental alone as a percentage of the house price. Such as the case, financiers of MMP would be tempted to finance only homes with high rental rates, whereas it would be in the interest of the customers to negotiate for low rentals. If, in our example, the rental rate for the MMP equals an APR of 10 percent (i.e. where the rental is RM1,666.67 per month) then, indeed, the ‘amortization’ schedule for all the three methods will be the same (though they differ conceptually). But one important difference would still remain, i.e. the balance of financing before expiry of the contract. The balance under the conventional loan and MMP would be the same while the balance under BBA would still be higher. This is because the conventional and MMP methods follow a diminishing balance schedule. Therefore, the balance under conventional and MMP can never exceed the financiers original contribution, but under the BBA it can²¹.

3.2 Operational Issues of MMP Home Financing

From the foregoing argument, it is obvious that the MMP may not be attractive to the bankers compared to the BBA contract because rarely the annual rental rate equals 10 percent which means ten years’ rental equals the original price of the house. This can be deduced from the fact that mortgages generally exceed ten years. The norm in Malaysia is about 20 to 25 years. Indeed, two-generation mortgages have even been proposed (Berita Harian, 26 January 2005). Hence, the MMP is suited to be practiced, for example, by housing cooperatives where the funds are provided by the members for the benefit of the members themselves. While providing cheaper housing for members, the MMP also provides returns to the investing members in the form of rentals and sale of properties. Indeed, observations show that globally the MMP is being successfully practiced in a cooperative setting. Some examples of these are discussed in Section 3.3.

²⁰ The annual percentage rate (APR) in the MMP is determined by the rental rate, i.e. the annual rent divided by the original price of the house. In our example, it is $(RM1,000 \times 12)/200,000 \times 100\% = 6\%$. See equation 5 in the Appendix.

²¹ As in the above example where after 10 years of payments, the balance under BBA is RM208,444.68 which exceeds the original amount of RM180,000!

An additional benefit of implementing the MMP by housing cooperatives is that it avoids new money creation as in the fractional reserve banking. By avoiding money creation and operating under a profit-and-loss sharing setting, the MMP can bring about a harmonious balance between the monetary sector and the real economy and thereby is likely to contribute towards the achievement of the *maqasid al-Shari'ah*.

Nonetheless, the MMP is not going to be free from operational problems. For example, theoretically the rate of return to MMP is determined by the rental rate based on the market rental value, which is very much determined by the location (that affects the property price) and not by market interest rates. As time goes by, the rental value can therefore change, increasing in most cases. It would not then be easy to convince the customer that he now has to pay a higher rental! Keeping track of rentals in many locations can also prove cumbersome to the bank.

Some quarters have, therefore, suggested the use of market interest rate, e.g. the LIBOR, BLR etc, as the benchmark. Adopting this would, of course, render the MMP similar to floating-rate conventional financing since the mathematical formulas for the MMP turn out to be similar to the conventional, as shown in the Appendix (but with interest replaced with rental). Since many real-estate studies have shown the property price as a significant variable determining the rent, we propose some kind of real estate index, like the House Price Index in the Malaysian case²² be used as the benchmark. As Shaikh Nizam Yacuby and Muhammad Taqi Usmani mentioned in their 1998 fatwa:

It is always preferable not to use a benchmark normally used in interest-based transactions, so that an Islamic transaction may not have resemblance with an interest-based transaction.

Hence, unlike the interest rate, a house price index will also be directly linked to the usufruct of the asset²³. The implementation of MMP may also require tax regulations to be amended to allow only rental charges contributing to profit be treated as income to the bank i.e. rental charges contributing to customer's equity must not be taxable²⁴. Similarly, land laws may also need to be amended so as to allow banks to become principal co-owners of properties.

²² The Malaysian House Price Index is computed and released by the Valuation & Property Services Department, Ministry of Finance, Malaysia. See www.jp-ph.gov.my

²³ The index value differs according to locality.

²⁴ See Bilal Farid et.al, p16.

Other practical issues would include issues like what happens if the customer fails to make the rental payments or wants to sell-off the property before fully owning it etc. Also issues about tear and wear, damages to the property due to natural calamities etc. need to be agreed upon. Such issues can, of course, be incorporated into the MMP contract but, nevertheless, are issues to be addressed.

3.3 Current Practices of MMP-type Home Ownership Schemes

The *Musharakah Mutanaqisah* concepts have been adopted by a number of Islamic financial services providers worldwide. Successful cooperative-type models include the Islamic Housing Cooperative (Canada), Ansar Cooperative Housing (Canada) and the Ansar Housing Limited (U.K).

The highly successful Islamic Cooperative Housing Corporation (ICHC) based in Toronto, Canada was established in 1981 out of necessity to avoid the Muslim community from engaging in *riba*. It is based on an equity model different from the traditional debt-based mortgage. To join the co-operative, members buy shares in a single equity pool. Once a member accumulates enough shares, the Co-op buys a house that his family can live in while paying a proportional rent to the Co-op. Thereon, members are required to increase their ownership by investing more money in the Co-op shares. As they do so, the rent goes down in the same proportion until the payments phase out. Eventually, the home buyer surrenders the shares to the Co-op and the Co-op transfers the title. It was reported that under this arrangement, some of their members achieved 100% ownership in seven and half years as there is flexibility to increase ownership at any time.

The ICHC model was approved by the renowned scholar Muhammad Taqi Usmani and was adopted by the Ansar Housing Limited (AHL) of the U.K. The AHL uses the Shared Ownership Scheme (S.O.S) based on the *Ijarah* (rental) mechanism. This method is very flexible and more importantly, equitable to both parties concerned. The monthly repayment includes two elements - a rent portion and a buy-back of additional share of the house. Rent is paid by the occupant on the share of the house owned by the Ansar Housing Ltd. As the occupant increases his share of the house each month the rent decreases accordingly.

There are also financial institutions that have adopted the *Ijarah and Musharakah Mutanaqisah* models in the U.S., Pakistan and United Kingdom. The successful models in the U.S. include those by the LARIBA Finance House in Pasadena, California and the Guidance Financial Group in Reston, Virginia. The LARIBA Finance House is the oldest of the organizations and was originally funded primarily by the Muslims in the U.S. The Guidance Financial Group also has origins in the Muslim community and has been offering products for the past two years. Both LARIBA and Guidance have licenses to sell their products in nearly every state in the U.S.

According to Dr Yahia Abdul Rahman, founder of LARIBA Finance House, “Many American-Muslim families have stayed out of the housing market for years because they are not allowed by Islamic jurisprudence to pay, receive or be charged interest”. Freddie Mac has invested an estimated US\$1 million in contracts from the finance house under an agreement that makes it the nation’s first Islamic financial institution to achieve Freddie Mac Seller/Servicer status. The LARIBA model uses standard real estate financing documents, in accordance with state and local laws. The key to the model is an agreement between LARIBA and the prospective homeowner that establishes jointly negotiated maximum monthly payments based on the property’s sale price and fair rental value in a lease-to-purchase (LTP) with declining equity based on the *Ijara Wa Iqtina Musharakah* concept. Due to high demand, LARIBA has entered into a partnership with Fannie Mae (FNM/NYSE), the nation’s largest source of financing for home mortgages that has committed US\$10 million, to enable more American-Muslim families to purchase homes in the U.S. while abiding by the Islamic religious prohibition against usury.

Under the LTP program, LARIBA would purchase the property with its customers and agrees to sell its shares/units to them. The program allows customers to build equity through monthly payments that combine principal with rent. The rent which is tax-deductible is based on the going market rate agreed upon by both LARIBA and the customer. The rental component is a function of a fair rental value of the property as determined by both the company and home buyer’s research on rental values in the area of the financed property. The home buyer pays a percentage of the fair rental value based on the equity share of the company. This component is referred to as Return on

Capital. The instalment purchase component represents the amount required each month to purchase back the amount advanced by LARIBA over the life of the financing with no additional increase or interest. This component is referred to as Return of Capital. Although monthly payments are fixed for the term of the financing, the rental component that accrues to LARIBA decreases each month as the finance house's equity share declines.

In Pakistan, Meezan Bank's "Easy Home" scheme was the first Islamic home financing facility. It is free from *riba* and in a *Shari'ah*-compliant housing facility approved by the renowned *Shari'ah* Supervisory Board. It utilizes the *Musharakah Mutanaqisah* concept where the bank jointly owns the property with the customer. The bank provides up to 85% of participation in share ownership of the house. The customer agrees to pay the monthly payment to the Bank of which a component is for the rent and another to redeem the equity share. The total monthly payment is reduced regularly as share in the property grows. The customer becomes the sole owner of the property after full investment of the shares on the property has been made. This flexible financing has the benefit of high financing amounts, maximum financing against property value, flexible prepayments with affordable and competitive monthly payment plan with a regularly reducing rental amount.

There are two financial institutions that have adopted the *Musharakah Mutanaqisah* model in the United Kingdom and Ireland, i.e. the Lloyds TSB and Bristol & West. Their partnership with the Arab Banking Corporation (ABC) resulted in *alburaq Shari'ah*-compliant home financing. Customers of *alburaq* can buy residential property over any period up to 25 years and obtain finance up to 90% of the property value. Customers can make full payment at any time and additional payments at each rent review. They can also sell the property as and when they wish. The modus operandi is similar to the *Musharakah Mutanaqisah* described above whereby the customer and bank will each contribute towards purchase of the home and the customer will make periodic instalments through which the bank will sell its share to the customer. With each payment instalment, the bank's share in the property will decrease while the customer's increase. The bank will charge the customer rent for the use of its share of the property, the rent being calculated according to the respective shares.

Lloyds TSB launched its home finance plan based on the concept of *Musharakah Mutanaqisah* recently in March 2005, serving two million Muslims in Britain. The bank buys a home for the customer, who then pays the purchase price in monthly instalments. As the bank is the legal owner of the home, the customer also pays a monthly rent, which decreases as the customer buys the bank's share of the property. The customer will eventually buy out the bank's share at which point ownership is transferred from the customer to the bank. The facility is currently piloted in selected branches.

IV The Differences between the BBA and the MMP Contracts

In summary, the main differences between the joint ownership MMP and debt-type BBA financing are as follows:-

1. There are two separate contracts under the MMP method. The first is a *musharakah* where the client is a partner and the second one is an *ijarah* which involves the leasing of the property. The BBA, on the contrary, follows the *murabahah* concept of buying and selling of property.
2. Under BBA, the selling price of the house does not reflect the market value since the mark-up for the deferred payment is quite substantial. On the contrary, the value of the house under MMP always reflects the market price and the rental is determined by the market rental values.
3. The return to the BBA is based on a fixed selling price (that uses the prevailing interest rate as the benchmark). But under MMP, the financier need not be tied to a fixed profit rate throughout the financing tenor. This is because the rental rate can be revised periodically to reflect current market conditions. Indeed, as argued earlier, the rental can be tied to some economic variables like Rental Index, House Price Index etc.
4. The financier can manage the liquidity risks better as rental payments can be adjusted at the end of each subcontract period. This is not possible under the

current fixed-rate BBA as the profit rate is a constant throughout the entire tenor of financing.

5. Even compared with a floating-rate BBA, the MMP still differs in the balance of financing at any point in time before the end of the contract. Under MMP the balance can never be larger than the original price/finance of the house. Rebates for early redemption under BBA cannot be specifically stated in the contract.
6. The MMP is a more flexible financing structure than the BBA as the customer can own the property earlier by redeeming faster the principal sum of the financier, without the need to compute rebates²⁵ as in BBA.
7. In the event of payment defaults, the penalty charges under BBA can be challenged, while under MMP, defaults will cause the equity of financier to remain constant and therefore entitled to higher rental portions when payments made later.
8. Currently many customers opine that the BBA is similar to the conventional loan with some “disadvantages” for the customer particularly for early redemptions.
9. The MMP is accepted internationally as *Shari’ah*-compliant whereas the BBA is recognized predominantly in the east, i.e. in Malaysia, Indonesia, Brunei etc.

V. Conclusion

This paper made a comparative analysis between the *al-Bay Bithaman Ajil* (BBA) and *Musharakah Mutanaqisah* Partnership (MMP) contracts as means for home ownership. While a home is basic necessity, it consumes a large chunk of peoples’ income for long periods. In the present interest-based fiat monetary system, owning a home is increasingly becoming burdensome. Indeed, mortgages are one of the significant causes

²⁵ Which is at the discretion of the bank since fixing the rebate upfront is not allowed in *Shari’ah*.

of bankruptcies. While price of homes keep rising, the mortgage duration also keep rising, till two-generation mortgages are even being talked about.

In this regard, this paper attempted to argue in favour of the MMP as a better alternative to the conventional mortgage and the Islamic BBA. The BBA is a *murabahah* contract, that is based on a buy-and-sell principle while the MMP consists of a *musharakah* (partnership) contract and an *ijarah* (rental) contract where the equity of the financier follows a diminishing balance method. *Shari'ah* scholars are consensus on the permissibility of the MMP contract internationally, but only scholars in the east generally permit the BBA contract. The paper concludes that the MMP has several advantages over the BBA for the customer. Apart from being consensus *Shari'ah*-compliant, it can be made to avoid interest (*riba*) totally and can reduce the cost of homes and the duration of financing. The balance of finance, at any point in time, never exceeds the original price of the asset, unlike under the BBA where it can.

When a home is purchased from a developer and financed using the present conventional or Islamic BBA, the customer would end up paying about four times the original cost (both the developer and the bank are assumed to make a gross 100 percent mark-up). This, undoubtedly, can burden particularly the low income group. But, *Musharakah Mutanaqisah* Partnership is in line with the objectives of *Shari'ah* as it allows people to own homes with limited initial capital. In doing so, it promotes the welfare of the people. Anything that protects or promotes these is considered as serving the *maslahah* and hence desirable²⁶. As al-Ghazzali remarked²⁷:

“The very objectives of the Shari'ah are to promote the welfare of the people, which lies in safeguarding their faith, their life, their intellect, their posterity and their wealth. Whatever ensures the safeguarding of these five serves public interest and is desirable”

Admittedly though, the MMP is less attractive to the banker compared to the BBA. For that matter, a viable avenue to implement the MMP is through a cooperative setting. When implemented through cooperatives, the MMP can also provide an investment

²⁶ Chapra (1992).

²⁷ Ibid, p1.

avenue for members while substantially reducing the price of house and the duration of financing. The concept has a positive impact on the economy and reduces inflation as no additional money is created in the system compared to debt-financing, as currently done under the fractional reserve banking system.

The MMP is just and fair compared to the conventional loan and the BBA as there is no interest charge or ‘advanced’ profit involved in the *Musharakah Mutanaqisah* Partnership contract. It is purely based on rental payments of property and the redeeming of the financier’s shares.

As a benchmark, the paper suggested the use of a Rental Index or House Price Index in determining the rental to be charged for each specified *ijarah* contract period.

The MMP concept is a viable alternative to the conventional floating rate financing since the rental rate can be adjusted if there are fluctuations in the economy. Hence, it is more flexible, wherein the Islamic bank will not be faced with too many uncertainties due to variations in economic conditions.

As for the society, the MMP brings stability into the economy by promoting positive partnership instead of negative indebtedness thus assisting in the equitable distribution of society’s wealth; minimizing the large number of debt defaults and bankruptcies that are observed in the current financial system.

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Musharakah Mutanaqisah Partnership
A Mathematical Derivation Note

P = Price of asset, e.g. a home

B_0 = Financier's contribution into the partnership

C_0 = Customer's contribution into the partnership

Therefore, $P = B_0 + C_0$

R = Periodic rental, eg. monthly

A = Additional periodic payment by customer to redeem the financier's equity faster

$M = R + A$, is therefore, the total periodic payment

Let C_i = the customer's equity (ownership) of the asset in period i

Let the proportion of customer's equity in period i , $r_i = \frac{C_i}{P}$

Therefore,

$$C_0 = C_0$$

$$C_1 = C_0 + r_0R + A$$

$$C_2 = C_1 + r_1R + A$$

$$C_3 = C_2 + r_2R + A$$

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$$C_n = C_{n-1} + r_{n-1}R + A$$

Therefore,

$$C_0 = C_0$$

$$C_1 = C_0 + r_0R + A$$

$$C_2 = C_0 + r_0R + A + r_1R + A = C_0 + R(r_0 + r_1) + 2A$$

$$C_3 = C_0 + r_0R + A + r_1R + A + r_2R + A = C_0 + R(r_0 + r_1 + r_2) + 3A$$

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$$C_n = C_0 + R(r_0 + r_1 + r_2 + \dots + r_{n-1}) + nA$$

$$C_n = C_0 + \frac{R}{P}(C_0 + C_1 + C_2 + \dots + C_{n-1}) + nA \quad \text{Since } r_i = \frac{C_i}{P}$$

Let $x = \frac{R}{P}$, then

$$C_1 = C_0 + xC_0 + A = (1+x)C_0 + A$$

$$C_2 = C_0 + x(C_0 + C_0 + xC_0 + A) + 2A = (1+2x+x^2)C_0 + (x+2)A$$

$$\begin{aligned} C_3 &= C_0 + x(C_0 + C_0 + xC_0 + A + C_0 + (C_0 + C_0 + xC_0 + A) + 2A) + 3A \\ &= (1+3x+3x^2+x^3)C_0 + (x^2+3x+3)A \end{aligned}$$

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Therefore,

$$C_1 = (1+x)C_0 + A$$

$$C_2 = (1+x)^2 C_0 + (x+2)A$$

$$C_3 = (1+x)^3 C_0 + (x^2+3x+3)A$$

$$C_4 = (1+x)^4 C_0 + (x^3+4x^2+6x+4)A$$

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$$C_n = (1+x)^n C_0 + \left[\frac{(1+x)^n - 1}{x} \right] A \quad (1)$$

and, of course, the proportion of the customer's equity in the n^{th} period is $r_n = \frac{C_n}{P}$

Rewriting equation (1), the number of periods taken by the customer to fully own the house is given by, where $C_n = P$,

$$\begin{aligned}
P &= (1+x)^n C_0 + \frac{(1+x)^n}{x} A - \frac{1}{x} A \\
&= (1+x)^n \left[C_0 + \frac{A}{x} \right] - \frac{1}{x} A \\
(1+x)^n &= \frac{P + \frac{A}{x}}{C_0 + \frac{A}{x}} \\
\Rightarrow n &= \frac{\ln\left(P + \frac{A}{x}\right) - \ln\left(C_0 + \frac{A}{x}\right)}{\ln(1+x)} \tag{2}
\end{aligned}$$

Once the rental, R , has been determined and the customer has decided on the period of partnership, i.e. the n , then the periodic amount the customer has to top up additionally is given by

$$A = \frac{x[P - (1+x)^n C_0]}{(1+x)^n - 1} \tag{3}$$

and, the formula for determining the periodic payment is given by

$$\begin{aligned}
M &= R + A \\
&= \frac{R[(1+x)^n - 1] + x[P - (1+x)^n C_0]}{(1+x)^n - 1} \\
&= \frac{R(1+x)^n - R + xP - x(1+x)^n C_0}{(1+x)^n - 1} \\
&= \frac{x(1+x)^n P - R + R - x(1+x)^n C_0}{(1+x)^n - 1} \quad \text{Since } xP = R \\
&= \frac{x(1+x)^n [P - C_0]}{(1+x)^n - 1} \\
&= \frac{x(1+x)^n B_0}{(1+x)^n - 1}
\end{aligned}$$

$$\Rightarrow M = \frac{x(1+x)^n B_0}{(1+x)^n - 1} \quad (4)$$

which, interestingly, is similar to the normal annuity formula used for computing the payment in conventional loan calculations²⁸. **Hence, mathematically, the normal annuity formula can also be used for *Mushārah Mutanākisah* calculations, but the periodic interest rate is replaced by the rental rate, $x = \frac{R}{P}$.** Indeed then, the periodic rate of return for *Mushārah*

Mutanākisah Partnership is solely determined by the rental rate, $x = \frac{R}{P}$. Therefore, the

$$\text{Internal Rate of Return (IRR) to bank} = \frac{R}{P} \quad (5)$$

Also,

$$\text{Total payment made to financier} = Mn \quad (6)$$

$$\text{Total profit to financier} = Mn - B_0 \quad (7)$$

Note: Since the rate of return (IRR) for the financier is solely determined by the rental rate, $x = \frac{R}{P}$, **irrespective** of the initial capital provided by the financier (B_0)

and/or the duration of the partnership (n), the financier may be tempt **to finance only homes with high rental values**; while it is in the interest of the customers to negotiate for low rentals. At the extreme, if the rental is nil, then the *Mushārah Mutanākisah* financing will become similar to *Qard al-Hassan*.

²⁸ Please see footnote 13.