Economic Feasibility of Interest Free Products in Indian Commercial Banks

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***Abstract* – The report from the committee on medium–term path on financial inclusion released by RBI in December 2015 had recommended commercial banks to have an interest free window. In this context, we have explored the implementation of interest free housing loans (an asset product) in Indian commercial banks. We developed a financial model for such a home loan product based on rental income. Then, we went on to explore the fit of this product in commercial banks in India. Our key finding is that since the rental yields are very low, such a product may not be economically feasible in Indian commercial banks. Hence, for interest free assets to exist, we also need to have interest free liabilities.**

***Index Terms* – Riba, Joint Ownership, Murabaha, Diminishing Musharaka, cost-plus financing, lease to own model**

I. INTRODUCTION

The report of the committee on medium–term path on financial inclusion released by RBI in December 2015 had various recommendations. One observation made by the panel was significant voluntary exclusion due to lack of interest free banking products and services. Due to the non-availability of interest free banking services in India, some sections of the society, including those in the economically disadvantaged strata of society are not being able to access banking products and services due to reasons of faith. Hence, one of the recommendations in the report was to enable commercial banks in India to have a specialized window offering interest free products and services. The report suggests various products. But for our study we have focussed on implementation of one product which is interest free housing loans.

We first start with a brief description about some of the interest free housing loan products available and why we chose a particular product. We then talk about the details of the interest free home loan product which we have used for our analysis. We then explore fitting of this product in Indian commercial banks. Then, we look at other supporting evidences for our hypothesis that interest bearing liabilities and interest free assets can't coexist.

II. INTEREST FREE HOME LOAN PRODUCT OPTIONS

There are few interest free (Riba-free) home loan products which have been devised as an alternative to the conventional home loan product. Broadly, they are either cost plus financing models or lease to own models. We attempt to briefly describe a few here, and explain why we chose one of these products over the other for our analysis.

Murabaha

Murabaha is also referred to as cost plus financing. In Malaysia this contract is also called *Al-Bai Bithaman Ajil (BBA)* or a deferred payment sale. This method starts when the customer approaches a bank and tells the bank his/her choice of property. The bank then purchases the property and adds a certain profit over the cost of the asset. Then the bank sells the property back to the customer. The profit rate in such a contract is decided by looking at the prevalent interest rates being charged by other conventional banks. Figure 1 summarizes the transactions involved in the product. The murabaha contract appears to blur the lines between a conventional interest bearing home loan and interest free home financing. This was because it was seen to be a replica of a conventional transaction where the interest rate was merely replaced by a profit rate. So this method has received criticism from many of the Islamic community members. We believe that if this product is introduced in India, it may not be accepted readily because of such criticism. Hence we decided not to use this product for our analysis.

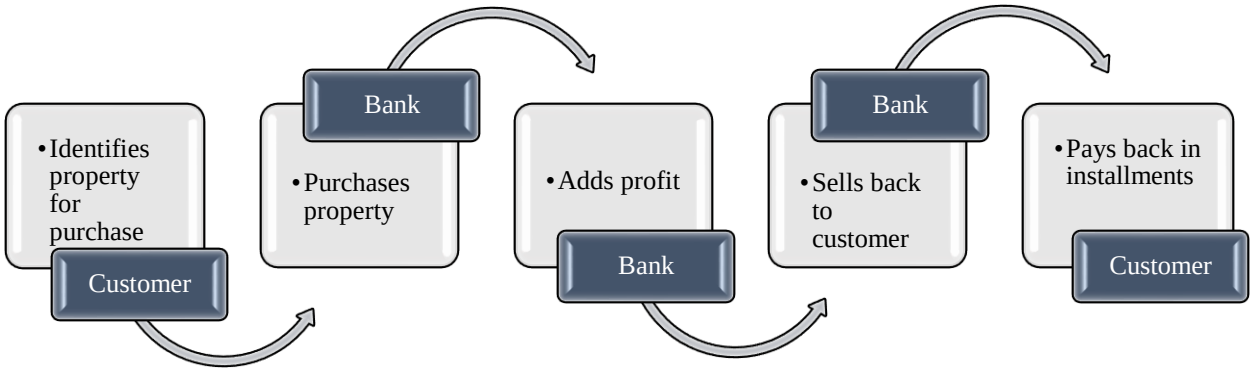


Figure 1 showing sequence of transactions in a cost plus financing approach

Diminishing Musharaka

Diminishing musharaka or the diminishing partnership is a lease to own model. It involves the customer identifying his/her property and approaching to a bank for financing. The bank then invests in the property by getting into a joint ownership of the property with the customer. The bank then gets a rental income from the customer for offering its share of property to the customer for use. The bank gets a promise from the customer that the he/she will buy back the remaining ownership of the property from the bank over the duration of the loan. As the customer purchases back the bank's share of property, the ownership of the bank declines and hence the rent is adjusted proportionately. Figure 2 summarizes the steps involved in this product. Whenever the customer purchases back the share of the property from the bank, the price at which the share is purchased has to be at the market price. But since it is difficult to negotiate and determine rent every month in order to decide the market value, so we decided we won't use this model for our study.

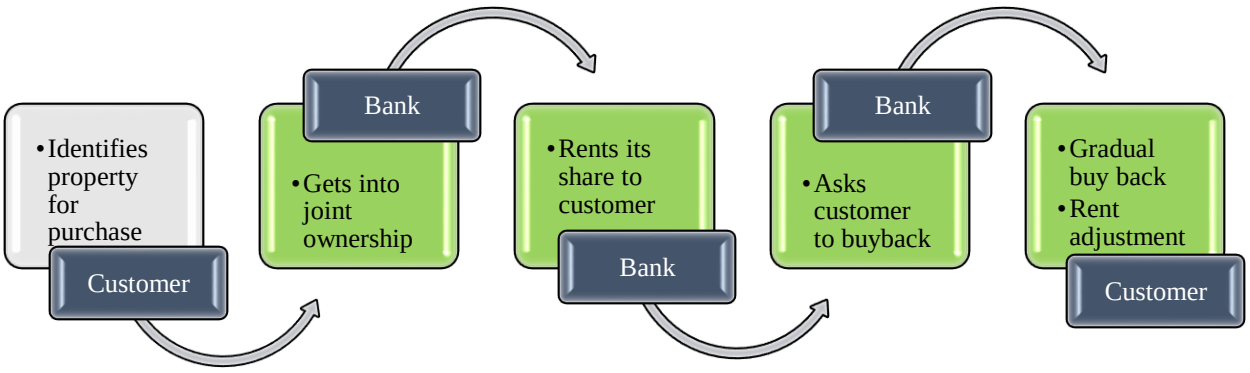
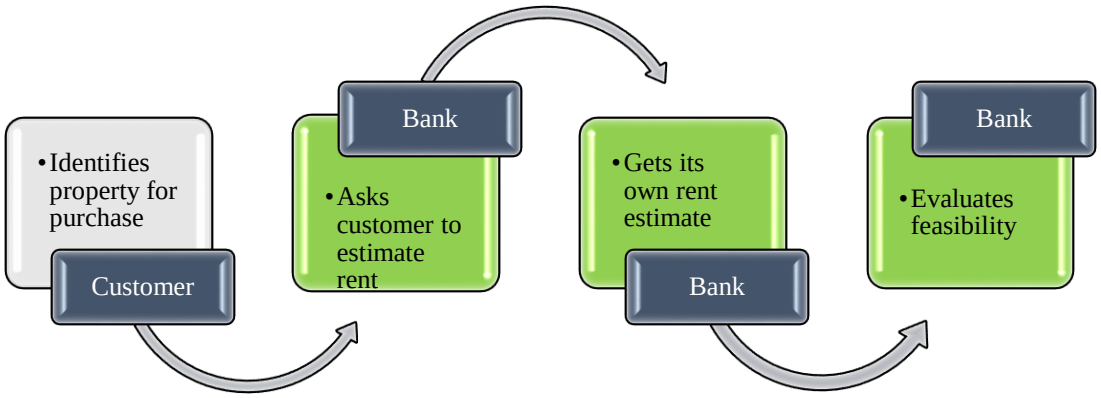


Figure 2 showing sequence of transactions in a diminishing Musharaka approach

III. CHOSEN MODEL OF INTEREST FREE HOME LOAN PRODUCT

As we have seen in the previous section, the interest free home loan product has many variants. Broadly, they are divided as on cost plus markup, and partnership models based products. The model described below is adapted from the housing loan model of Bank of Whittier, USA. It is a slightly modified version of the diminishing musharaka concept described above.

The approach used here is described in figure 3. First the buyer of the house approaches the interest free window for a home loan product with a specific property in mind. The bank then evaluates the property for economic feasibility and disburses the loan to the buyer only if the bank finds the investment viable. The approach to determine the economic viability of the investment is described later. If the bank goes ahead with the investment, then the bank enters into a partnership with the customer. The bank and the customer then become the joint owners of the property, and the bank appoints the customer as its agent to purchase the property on its behalf. The bank then sells its complete portion of the investment to the customer and records the property in the customer's name. The title of the property is registered with the name of the customer but the customer's ability to trade the property is limited until complete possession is established. The bank would then exercise a lien and get a contractual promise from the customer to return back the bank's portion over a certain duration of time. The rights over the property are divided into two – the right to own the property and the right to use or operate the property. Hence, after exercising the lien the customer is the sole owner of the property, but the bank and the customer are joint owners of the right to use or operate the property. So, as the customer goes ahead and uses the property, the bank takes the rental charge from the customer for using the bank's share of the property. This rental charge declines in proportion to the loan outstanding after the repayment of principal by the customer. The repayment of loan increases customer's proportion of ownership in the property, and reduces the share of bank in the property. So here the problem seen in diminishing musharaka in the previous section is solved because the bank sells its share to the customer upfront immediately so the share is at the market price.



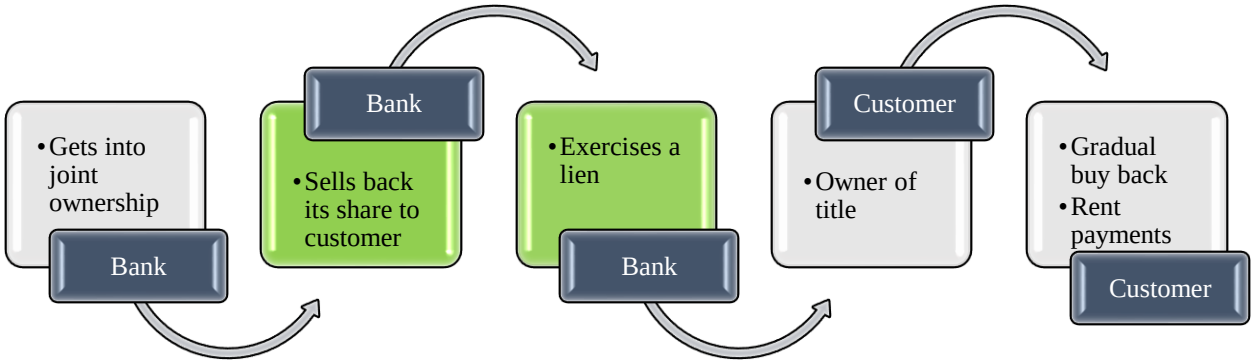


Figure 3 showing the housing loan model – modified diminishing musharaka

The rent is determined by the customer and the bank, both bringing their own estimates of the equivalent market rent prevailing in that area. The average of these figures or an amount which is acceptable to both the bank and the customer is decided as the rent for the property. This value of rent is then used to compute the rate of return from this lending exercise. The monthly payments by the customer consists of two amounts. One is the amount of principal to be returned to the bank. The other portion is the amount of rental payment made to the bank. Apart from this a onetime handling fee, transaction fees, and other maintenance fees are charged to the customer. The rental yield from this product can be determined as follows:

P_T – Total price of the house
P_D – Down payment made by the customer at the start
P – Principal that customer owes to the bank at the start

$$P = P_T - P_D$$

n – Duration of loan in months
Amount of principal to be returned each month,

$$p_i = \frac{P}{n}$$

R – Market determined or mutually agreed upon rent of the property

Rent payed in 1st month,

$$R_1 = \frac{R * P}{P_T}$$

Rent payed in the i[th] month,

$R_i = \frac{R*P}{P_T}\left(1 - \frac{i-1}{n}\right)$, for i ranging from 1 to n

If we assume the rent payments follow an arithmetic progression with first payment being R_1, there after each rental payment decreasing by $\frac{R_1}{n}$, the sum of the rental payments over the lifetime of the loan therefore is

$$\sum R_i = \frac{n}{2}\left[2 * R_1 - (n-1)\frac{R_1}{n}\right]$$

which then simplifies to a total rental income to the bank of

$$\frac{n\,R * P}{2\,P_T}\left(1 + \frac{1}{n}\right)$$

Hence, the annualized annual return from the investment would be

$$\left[1 + \frac{n\,R}{2\,P_T}\left(1 + {}^{1}/_{n}\right)\right]^{({}^{12}/_{n})} - 1$$

If there is no down payment, i.e. $P_D = 0$ then the annualized returns become

$$\left[1 + \frac{n\,R}{2\,P}\left(1 + {}^{1}/_{n}\right)\right]^{({}^{12}/_{n})} - 1$$

In conclusion we see that the return on investment is dependent on $\frac{R}{P}$ which is the ratio of the agreed rent amount and the amount lent to the customer by the bank.

The rate of return calculated as above is used to decide the economic viability of the investment. If the return from the investment is higher than the expected return required by shareholders, then the bank goes ahead with the loan disbursal. Also in this case, the bank ensures that at this higher rate of return, the customer doesn't have to pay a monthly installment higher than any other competitive market monthly installment being offered by other conventional banks. If the rate of return is lower than what is expected by shareholders, the bank doesn't go ahead with the loan disbursal amount.

IV. FITTING IN COMMERCIAL BANKS

We tried to study and see whether the product described in the above section would be a good fit in an Indian commercial bank. For this, we tried to compare the monthly EMIs and the annualized rate of return to the bank in case of conventional and interest free housing loan. We took a sample case of a property costing INR 1 crore, where 20% down payment is being done by the customers. This meant that the final amount lent by the bank to the customer would be 80 Lakhs. We have taken the loan duration to be 20 years. We took monthly rent for that property to be approximately 25,000 INR. Given this scenario we got our monthly EMI for interest free home loan product to be around 47,600 INR. For the same loan amount of 80 Lakhs and a 20-year duration, the monthly EMIs offered for a conventional bank would be around 75,000 INR. Also, the annualized rate of return over the investment in the interest free case turned out to be around 1.80%. Table 1 summarizes this comparison between conventional home loan product and an interest free home loan product.

	Conventional Loan	*Modified Diminishing Musharaka*
Property cost	INR 1 crore	INR 1 crore
Amount put by customer	20 Lakhs	20 Lakhs
Loaned principal	80 Lakhs	80 Lakhs
Interest rate	12%	-
Rent per month	-	25000
Annual expected Inflation	5%	5%
Loan duration	20 years	20 years
EMI / month	INR 74,931	INR 47,605
Total Amount paid back by customer	INR 17,983,479	INR 11,425,331
Total income to bank	INR 9,983,479	INR 3,425,331
Annualized return	4.13%	1.80%

Table 1 showing a sample comparison between conventional loan and modified diminishing musharaka (with rent marked to market)

The EMI per month for the conventional loan is calculated by using the annuity concept.

$$Loan\ Amount\ (PV) = \frac{EMI}{1+r} + \frac{EMI}{(1+r)^2} + \frac{EMI}{(1+r)^3} \cdots$$

where, r is the effective monthly rate of interest charged. This expression reduces to,

$$PV = \frac{EMI}{r}\left(1 - \frac{1}{(1+r)^n}\right)$$

where n is the duration of loan amount in months.

We find a very low rate of return with diminishing musharaka in Indian context. Such meagre returns would render any such investment economically unviable. More importantly, the Indian commercial banks have to serve their interest bearing deposits too which cost around 8%. This implies the cost of capital itself is high enough to render such an investment unviable. Below are the results of an analysis that we did to find at what point such an investment can start making some economic sense.

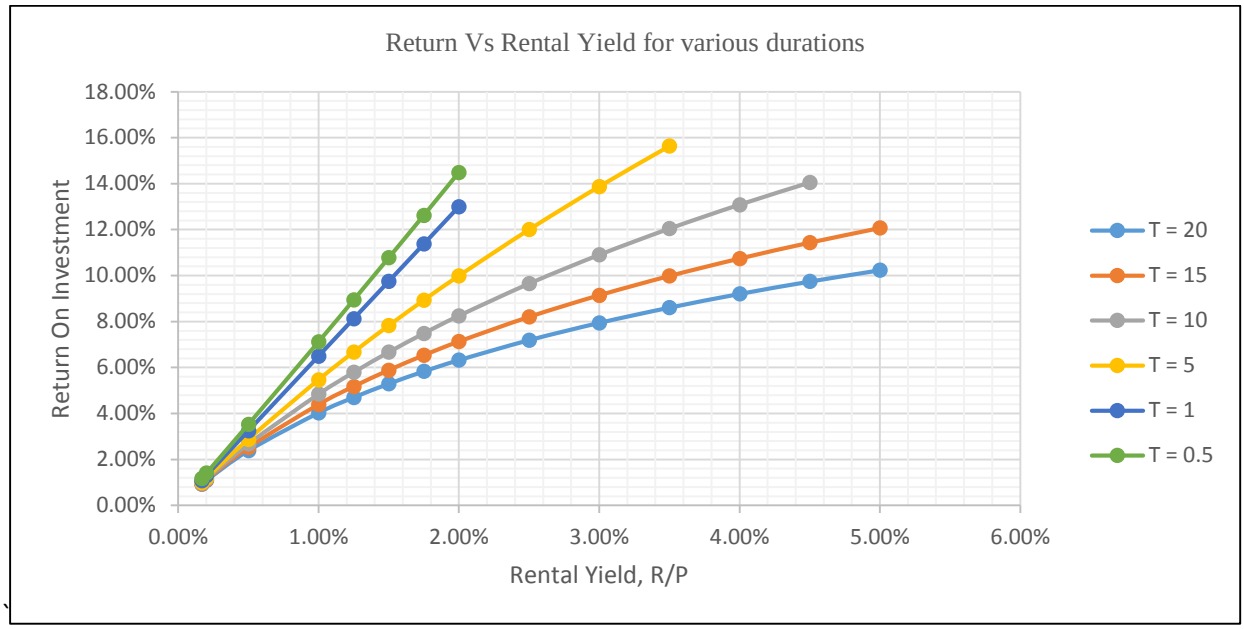


Figure 4 Showing Return on the Investment Vs Rental Yields for a given duration in years

The above graph shows the rental yield defined as the ratio of the initial rent amount agreed upon at the beginning of the contract to the price of the property (*R/P*) on the X axis. The Y axis shows the annualized returns which the bank can expect from this lending exercise. The figure 4 can be read as how the return from the investment varies with the rental yield for a given duration (in years). From figure 4, we can see that for the investment to have some economic sense (i.e. returns at least 10%), we need higher rental yields. Also we see that for a duration of 20 years, the rental yield required for a return of 10% is about 5%. The same return of 10% can be achieved with a rental yield of 3.5% in 15 years and rental yield of 2% in a 5-year time frame. This implies that if introduced, this product would be more viable for shorter time durations.

In the above case the rent once agreed upon in the beginning would not change over the course of the life of the loan. But then, this meant that the bank loses out on any appreciation in the rental income over the course of the duration of loan. Hence we thought it would be best that a clause be added in the initial contract between the bank and the customer that the rent would be marked to market every year. A safe assumption for marking to market the rent would be by taking the inflation value prevalent and increasing the rent by the prevalent inflation value. The figure 5 below shows exactly the same computations from previous figure but by increasing the rent by the inflation value of 5% every year. From figure 5, it is very clear that the same returns are now achieved at a lower rental yield when compared to figure 4. But this effect is more pronounced in the investments which are longer in duration.

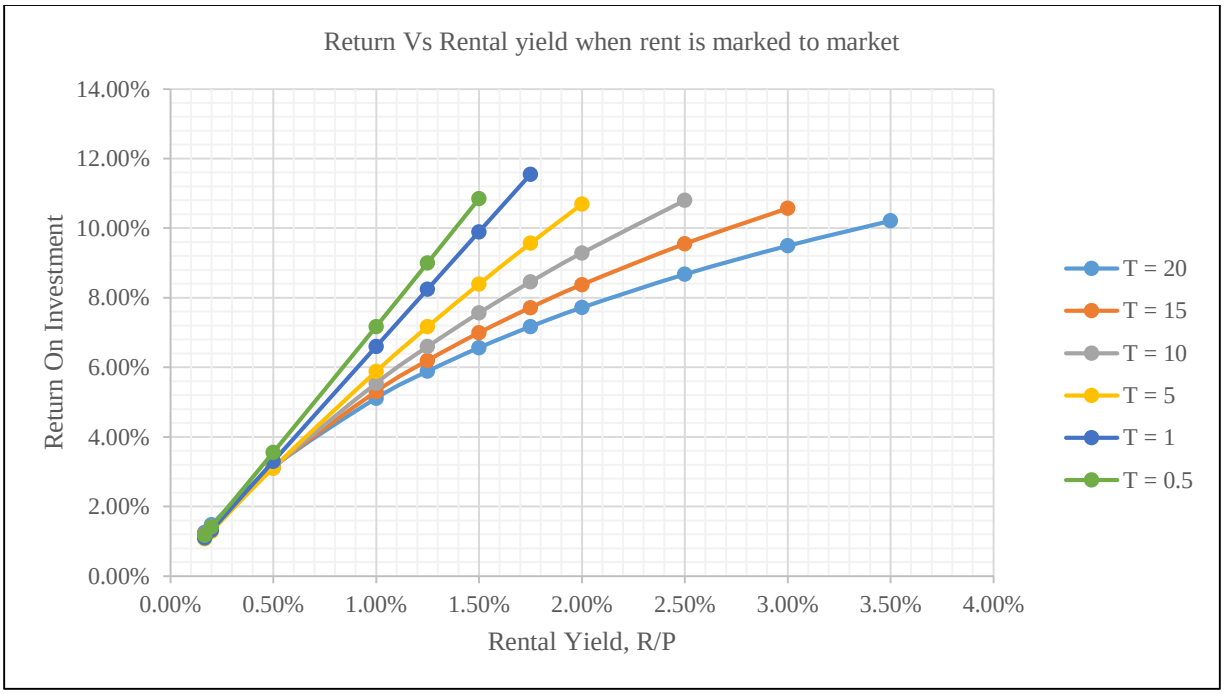


Figure 5 showing the return on the loan if rental income is marked to market

Even after marking the rent to market value, we find that the investment would not be economically viable. This leads us to believe that the bank would need to reduce its cost of capital by taking interest free deposits. If the bank is able to make its source of capital interest free, or even something where it doesn't have to keep providing a guaranteed return on capital, then this model may be economically feasible. Hence we believe, for interest free asset products to exist the bank needs interest free liabilities too.

V. OTHER SUPPORTING EXAMPLES

We couldn't find banks which offered solely interest free products on the asset side. Conventional commercial banks like Standard Chartered, HSBC have their own subsidiaries Saadiq and Amanah respectively offering interest free products. This way they take interest free deposits and give out interest free loans. The subsidiaries as a whole are economically viable because they do not give any fixed return on deposits. So, they are able to operate with lower yields on assets.

We also studied a co-operative credit society in India, which is based on the principles of interest free banking. As a cooperative society, they extend their services only to the members. Their members are mostly individuals who have excess funds and are looking for interest free investment and deposit opportunities. These funds are then lent out in an interest free manner to needy, small and medium enterprises. Hence, this cooperative credit society is able to operate because both its liabilities and assets are interest free.

VI. CONCLUSION

If a commercial bank wants to start an interest free housing loan product, it has many options to choose from. The cost plus model suffers from the drawback that it appears like a conventional interest based product where the interest rate is simply replaced by a profit rate. Hence it attracts a lot of criticism and its acceptance among people may also be in doubt. The partnership model solves the problem in the murabaha product. But the diminishing musharaka sale of banks share to customer at a fixed price, and not at the market price may be an issue. The modified diminishing musharaka is not perfect, but we believe is the best among all the options.

If the modified diminishing musharaka is applied for housing loans, the annualized returns turn out to be very small. This is a problem in Indian context

because the capital is not interest free. There is a guaranteed interest paid to the deposit holders in India. So, the low returns on interest free housing loans mean that the product will not be economically viable because banks would need a higher return to serve their deposits. To ensure such a product works, the liabilities must be interest free. That is, interest free assets can't coexist with interest bearing liabilities. So if an interest free window is to be opened in India, the commercial banks must ensure that they have both interest free assets as well as interest free liabilities.

VII. REFERENCES

1. Yahia Abdul Rahman (2010), *The Art of Islamic Banking and Finance: Tools and techniques for community based Banking*
2. Edib Smolo, M. Kabir Hassan (2011), "The potentials of musharakah mutanaqisah for Islamic housing finance"
3. Ahamed Kameel Mydin Meera, Dzuljastri Abdul Razak (2009), "Home financing through the musharakah mutanaqisah contracts: some practical issues"
4. Ahamed Kameel Mydin Meera, Dzuljastri Abdul Razak, "Islamic Home Financing through Musharakah Mutanaqisah and al-Bay' Bithaman Ajil Contracts: A Comparative Analysis"
5. http://www.bnm.gov.my/index.php?ch=174&pg=469&ac=388&lang=bm
6. https://www.sc.com/pk/saadiq/
7. https://www.sc.com/my/saadiq/wholesale-deposit-cash-products.html
8. https://www.hsbc.com.my/1/2/amanah/personal/amanah-savings
9. https://www.bankofwhittier.com/savings.php
10. https://www.bankofwhittier.com/#financing