Aggravating housing situation: Return and ownership issues in Islamic home financing revisited

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Abstract

In my latest article on Islamic home financing models in the ISRA Journal, June 2013,I had shown that the Zubair Diminishing Balance Model (ZDBM) does not involve compounding of return and the transfer of ownership to the customer perfectly matches the payments' rate; the two norms Islamic models must meet. It is satisfying to note that Nabil in the same issue of the journal takes up these issues in a comprehensive and tightly argued conceptual paper and convincinglyvindicates my position on the compounding issue. However, he argues that the transfer of ownership in the ZDBM also does not meet the stated ideal even as it is closer to the norm than other constructs. The objective of this paper is to clarify my position on this latter issue albeit I shall put on record a more clinging demonstration of interest compounding in the conventional formula as many Islamic banks use it not only in home financing but in other deferred payment contracts as well.

Key words: Shari'ah norms; home financing, Ownership transfer; Segmental murabahah

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1. INTRODUCTION

The importance of a residential accommodation can hardly be over emphasized in civilized living. That is why Islam counts housing from its very inception among the basic human needs which must be met for all individuals living in a Muslim country. It also is true that housing shortage remains an agonizing reality not only in Muslim countries but through out the world. It is surprising that even the most developed of modern societies are not having full provision as Figure 1 depicts though very recent data was not available. Interestingly, the infamous 2007-2008 housing debacle in the US was the result of heightened speculation, not of action to provide a roof over the heads of the homeless.

In view of the huge backlog and increasing shortage of housing in developing countries, the issue has gained urgency across the globe. Natural calamities and unceasing wars in the Muslim world have made the situation all the more alarming. Recently the Islamic Development Bank (IDB) has initiated a massive program to ameliorate the situation in these countries. One result of the added attention to the housing problem in Muslim communities has been the search f a *Shariah* compliant model for home financing. The writings on the subject in the Islamic literature have been on the rise. The focal point in these discussions has been the consequences

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of the widespread use of a conventional formula for determining the periodic instalment payments the client has to make to the bank to acquire complete ownership of the house.

Figure 1
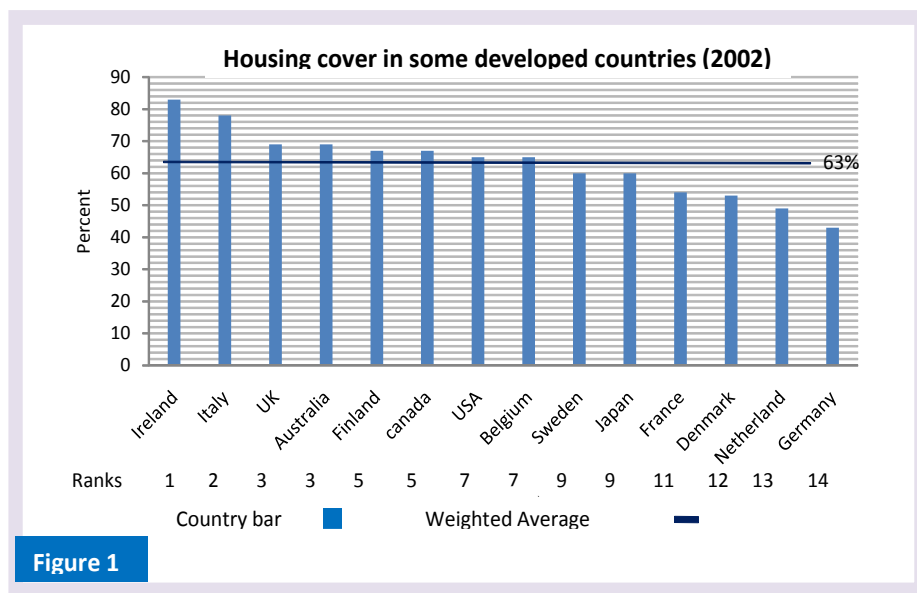
In the on going discussion the paper of Nabil (2013) has convincingly established that Islamic home financing models in current use involve compounding of return on capital – interest, rent or mark-up[2] - if the Excel formula is used for the determination of a uniform periodic installment payment.[3] However, the paper argued that in the ZDBM too the ownership to the customer does not pass pro rata albeit he finds the results much closer to that ideal compared with other models (PP. 70-74). For this demonstration Nabil uses what he calls the dynamics of outstanding balances in Islamic home financing models. The objective of this small note is to correct this misconception about the ZDBM.

To open the discussion, let me reiterate that what I call the pro rata transfer of ownership to the customer is the epitome of justice in Islam. Justice means equality before the law: the Scripture does not permit withholding from the people what rightfully becomes due to them.A tradition says: pay the wages of the worker before his sweat dries up[4]. The Qur'an unequivocally

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[2]Nabil looks vacillating on the point (2013; 40, 77-78). A critic presumably taking cue from Nabil wrote to me that the Excel formula does involve compounding but its Islamic condemnation is confined to interest and as Islamic banks take rent or profit, not interest no objection can be raised to the compounding of returns in their case. He provided no juristic documentation on the point. To me, the fixity of rent/profit rates in the MMP and the admission of their compounding make the model identical to the conventional in form and substance. The analogy of interest compounding is solid I believe to dismiss the stated speculation on compounding in Islamic financing.

[3] See the Appendix where it is demonstrated that any fixed installment

[4] It is argued thatthe reason for the prohibition of *riba imputed to*IbnRushd is its potential to inflict extreme injustice. El-Gamal (2014) perceives its presence even in pure mudarabah contracts. He writes that there is nothing in the Islamic rules of *mudaraba* that prevents the capitalist from offering the worker a share of profits, which could turn out to be grossly unfair relative to his market wage. If the worker has no access to other work, this ostensibly *Islamic* partnership modelcontains the possibility of allowing severe exploitation: the worker may be forced to earn much less than his market wage with unwanted risk to boot. That is the very same extreme injustice (*ghubnfahish*) for which *riba* is but one vehicle.

instructs the believers not to usurp each other's property using unjust means (2:188 and 4:29). Justice is the crux of the matter for calling something *Islamic*. Another verse (16:90) says:

> *Behold: God enjoins justice, and the doing of good, and generosity towards one's fellow men,and He forbids all that is shameful and all that runs counter to reason, as well as all envy, and He exhorts you repeatedly so that you might bear all this in mind.*

The transfer of property at a rate slower than the payment rate must possibly be avoided more so asthe ability to predict the course of events in an economy is extremely limited (Ormerod 2010). The track record of forecasting is very poor. We shall demonstrate that the ZDBM meets that norm to perfection. Nabil's claim that it does not is based on a misinterpretation of what he calls the dynamics of outstanding balances. The following section provides a clarification on the point.

2. THE DYNAMIC BALANCE

The argument in Nabil centers around the changing balance of the payment that remains outstanding as installments are progressively paid until this balance is reduced to zero. However, note that outstanding balances are the *consequence* not the *cause* of how the installment is determined. In focusing at that end Nabil is perhaps putting the cart before the horse[5]. It is fixity of installment hat is the basic and common point in all deferred payment contracts using Excel formula, housing included. The essential point here is how to define the outstanding balance? Should the definition of deductible payment to find this balance with reference to ownership transfer be the sum of (i) the amount of capital returned plus (ii) the return on capital after each installment is paid or it should include only the first of these two elements? The basic difference between Nabil and the present author is on this point. To arrive at his dynamic (outstanding)balance,Nabilincludes both as deductibles[6].On this criterion, he finds the BBA model of home financing alone meeting the ideal; home ownership transfer to the client pro rata as his Figure 1, on page 72 shows.

El-Gamal claims that many classical jurists had classified *mudaraba* as *ijara bi-l-gharar*; hire with (forbidden if excessive) uncertain wage. It may also include an element of *riba* in the sense that the profit share is not commensurate with the work done, fairness being determined by the market wage, as many classical jurists also have determined. The message is to call a transaction "Islamic," it must be fair in some clear sense.

He concludes thatthere is no amount of juristic (*fiqhi*) analysis of contract forms that will help you determine whether or not there is injustice in the exchange. If one cannot refute him, the conclusion is a serious challenge to those who see the solution of all monetary ailments that afflict the world today in universal *Risk Sharing s cheme* and interestingly, insist on keeping it distinct from profit (loss) sharing (Askari et al {2012).

[5]Starting from the consequence end has led Nabil (2013; 50) to conclude that the ZDBM model is not cheaper for the customer than the MMP in identical cases if time value of money is taken into consideration. But should not the aggregate payment under the ZDBM be at least smaller by the amount compounding adds, Nabil admits, to that payment in the MMP? Note that allowing a mark-up in deferred payment contracts is recognition of the time value of money. Once allowed it cannot be repeated as does compounding in the MMP (Hasan 2013; 14, 21).

[6] "(T)he analysis is based on the notion that each element of the periodic instalments can be accounted for in the balance" (Nabil 2013; 46). This assumption is untenable; it vitiates his entire argumentation and hybrid models

The reason is that in the BBA the total amount payable to the bank is settled once for all. The periodic installment may be calculated for uniformity and comparison by inserting the principal (P_0) the agreed rate of return (r) and number of time units (n) into the Excel formula (See Nabil 2013, P. 42 & Table 1). The sum of installments that is the principal amount plus the full period return on it became a loan via a *murabahah* (mark-up) based contract. In BBA, it was this conversion of return on capital into debt that led banks into trouble when in a case of breach or early offer of settlement the amount they claimed as unpaid was challenged and held as unjust in law courts (ZulkiflivsAffin Bank, December 2005). Later on the grant of *ibra*(discount) was introduced into the picture to overcome the difficulty and provide relief to the customersin such cases.[7]The grant of *ibra* is discretionary though, the banks commonly use it.[7]

The case of the BBA apart, it is *prima facie* illogical to merge the return of capital with the return on capital to discuss the issue of ownership transference to the customer. Return on capital is not a variable that exists independent of the return of capital. The bank focus is the latter alone; as long as capital remains unpaid interest accrues on the balance remaining unpaid. If the loan is cleared before time the interest payment stops simultaneously.

Thus, the relevant deduction for calculating the outstanding balance each time is only the return of capital. In a case of breach of contract, the bank will notacceptfromthesale proceeds of the property less than the part of capital that remains unpaidin the MMP model as in the conventional, assuming for simplicity that the market price of the house remains unchanged. On this view of what Nabil calls the*dynamic balance*, only the ZDBM meets the pro rata transference ideal; the MMP model does not. We have shown it earlier but we reproduce it here for completion of this briefnoteusing the same illustration that we used in earlier writings and which our critics also found convenient to use for comparison.

3. OWNERSHIP TRANSFER – MMP versus ZDBM

In bare bones the illustration that Nabil also usesis as follows. The value of the house is $100,000 of which the customer contributes $20,000 and the bank provides the remaining $80,000 for 10 years payable in 20 uniform semi-annual installments. In the MMP the semi-annual installment is as usual calculated using the Excel formula at $5886.54. The amount includes both the return of capital and the return on capital components. It is this notion of installment payment that lies at the heart of Nabil's analysis. However, the ZDBM sees the payments differently. It talks of the uniformity in the return of capital only i.e. $4000 semi-annually.[8] The *murabahah* mark-up at 8% per annum replaces rental and is *segmental* i.e. applied to the diminishing balance at each time

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[7]*Ibra'* means to absolve a debtor from his debt obligationwhathas been established as his liability. Technically, *ibra'* is "an act of absolving one's financial rights established in another person's liability which leads to discharging the other from liability to fulfil the obligation". It is a unilateral waiver of right by a party to the contractwhich is granted out of his benevolence (*ihsan*) at his discretion. (Abdul Khir: 2013; 3).

[8] I must add in all humility that I did not make the needed distinction myself in earlier writings and used total periodic payment – return of capital + return on capital – as the basis of my demonstrations relating to the transfer of ownership to the customer.. I realized the lapse after reading Nabil, especially after seeing the Figure on page 72 of his paper. I regret if this has in any way misled him.

point. Thus, the total payment – return ofcapital plus return on capital – per period does not remain uniform as in the ZDBM. Table 1compares the two positions.
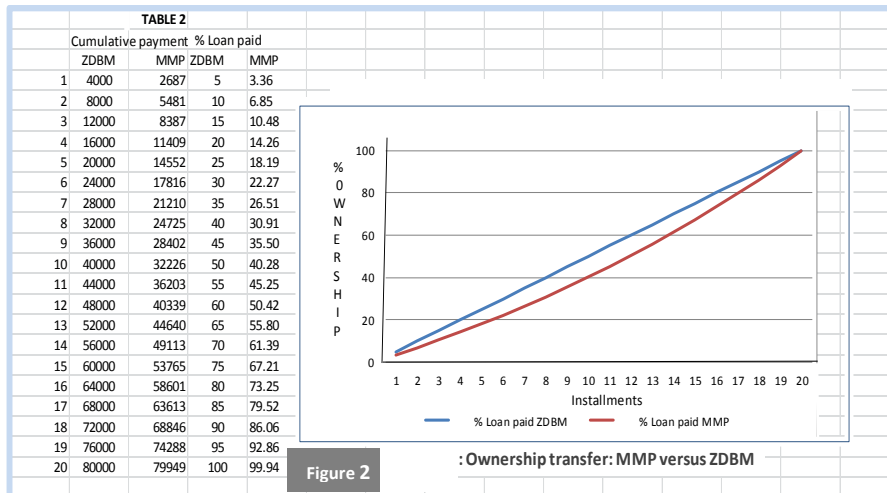
Semi annual periods	MMP				ZDBM			
	Return on capital	Return of capital	Outstanding Balance (80,000 – B)	Total payment (A + B)	Return on capital (G*.04	Return of capital	Outstanding Balance (80,000 – n*F)	Total payment (E+F)
n	A	B	C	D	E	F	G	H
1	3200	2687	77313	5887	3200	4000	80000	7200
2	3093	2794	74520	5887	3040	4000	76000	7040
3	2981	2906	71614	5887	2880	4000	72000	6880
4	2865	3022	68593	5887	2720	4000	68000	6720
5	2744	3143	65450	5887	2560	4000	64000	6560
6	2618	3269	62182	5887	2400	4000	60000	6400
7	2487	3400	58782	5887	2240	4000	56000	6240
8	2351	3536	55247	5887	2080	4000	52000	6080
9	2210	3677	51571	5887	1920	4000	48000	5920
10	2063	3824	47748	5887	1760	4000	44000	5760
11	1910	3977	43771	5887	1600	4000	40000	5600
12	1751	4136	39636	5887	1440	4000	36000	5440
13	1585	4302	35335	5887	1280	4000	32000	5280
14	1413	4474	30862	5887	1120	4000	28000	5120
15	1234	4653	26209	5887	960	4000	24000	4960
16	1048	4839	21370	5887	800	4000	20000	4800
17	855	5032	16338	5887	640	4000	16000	4640
18	654	5233	11105	5887	480	4000	12000	4480
19	444	5443	5662	5887	320	4000	8000	4520
20	227	5660		5887	160	4000	4000	4160

Table 1: Ownership Transfer: MMP versus ZDBM

Source: Author's own construction

Table 2 has been derived from Table 1 and Figure 1 is its graphic depiction. The straight line in the Figure shows the pro rata transfer of house ownership to the customer. In other words, at each point of the line we have:

$$\frac{Cumulative\ Amortization\ ratio}{ownership\ transfer\ ratio} = 1$$

This is what happens under the ZDBM. In contrast, under the MMP cumulative amortization ratio remains less than pro rata transfer ratio(=1) as shown by the gap between the curve and the straight line until the last (20th) payment has been made. This is a serious matter from the Islamic viewpoint and must keep the contract inequitable and therefore void all along the line.

Figure 2: Ownership transfer: MMP versus ZDBM

| | Cumulative payment | | % Loan paid | |
	ZDBM	MMP	ZDBM	MMP
1	4000	2687	5	3.36
2	8000	5481	10	6.85
3	12000	8387	15	10.48
4	16000	11409	20	14.26
5	20000	14552	25	18.19
6	24000	17816	30	22.27
7	28000	21210	35	26.51
8	32000	24725	40	30.91
9	36000	28402	45	35.50
10	40000	32226	50	40.28
11	44000	36203	55	45.25
12	48000	40339	60	50.42
13	52000	44640	65	55.80
14	56000	49113	70	61.39
15	60000	53765	75	67.21
16	64000	58601	80	73.25
17	68000	63613	85	79.52
18	72000	68846	90	86.06
19	76000	74288	95	92.86
20	80000	79949	100	99.94

Source: Author's own construction

If the above argument is acceptable, the conceptual framework of Nabil presenting several hybrid models would possibly need a relook as the total payment – return of capital + return on capital – is the basis of their construction. To illustrate, we compare in Figure the HFM-v model of Nabil with the ZDBM on the basis of data he provides for his model in Table 4, P. 64 of his paper.

Figure 3

| | ZDBM Model | | HFM - v Model | |
| | Outstading | cumulative | Outstanding | Cumulative |
n	Balance	R of C	Balance	R of C
0	80000	0	83,200	0
1	76000	4000	79,040	4160
2	72000	8000	74,880	8320
3	68000	12000	70,720	12480
4	64000	16000	66,560	16640
5	60000	20000	62,400	20800
6	56000	24000	58,240	24960
7	52000	28000	54,080	29120
8	48000	32000	49,920	33280
9	44000	36000	45,760	37440
10	40000	40000	41,600	41600
11	36000	44000	37,440	45760
12	32000	48000	33,280	49920
13	28000	52000	29,120	54080
14	24000	56000	24,960	58240
15	20000	60000	20,800	62400
16	16000	64000	16,640	66560
17	12000	68000	12,480	70720
18	8000	72000	8,320	74880
19	4000	76000	4,160	79040
20	0	80000	0	83200

It is easy to see that the two models are identical except that in the HFM-v Nabil adds the *total* mark-up $3200 to bank finance $80,000 and divides the sum $83200 by 20 to arrive at the uniform semi-annual installment = $4160. In its features the HFM-v is identical with the BBA model of home financingshares its blemishes in equal measure.

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Appendix 1

The conventional loan amortization process is not free of compounding

The formula for determining the equal periodic installment payments (A) to clear the loan on time is as follows

$$A = P_o \frac{r_o (1 + r_o)^n}{(1 + r_o)^n - 1} \qquad (1)$$

In our illustration we $have\ P_o = \$80,000\ semi-annual$ rate of interest 4%, and loan period n $= 20$ semi-annuals units.

Substituting the values in the above formula we get:

$$A = 80,000 \frac{.04\ (1 + .04)^{20}}{(1 + .04)^{20} - 1} = \$5886.54$$

$$P_n = 5886.54 * 20 = \$117730.8 \qquad (2)$$

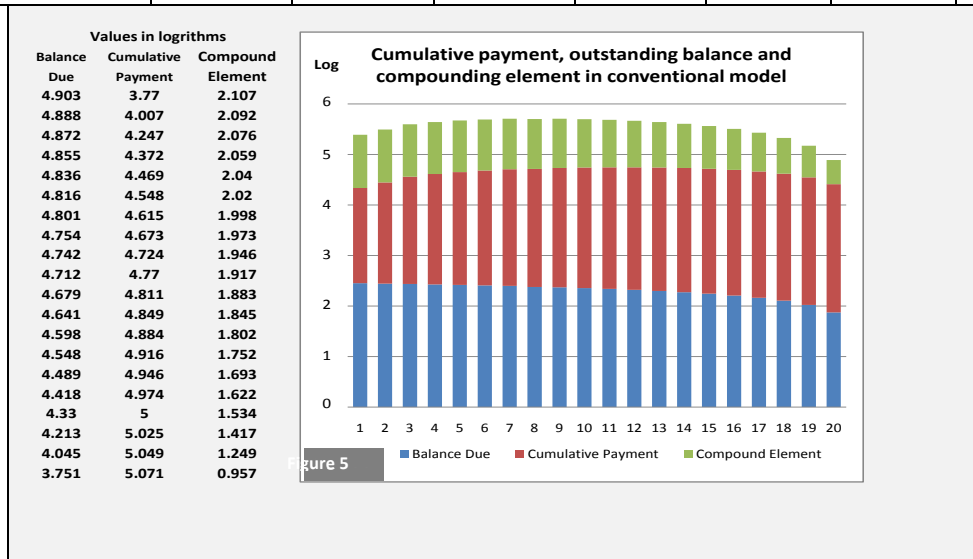| n	Balance Due	Cumulative Payment
0	80,000	
1	77,313	5886.54
2	74,519	11773.08
3	71,614	17659.62
4	68,592	23546.16
5	65,449	29432.7
6	62,180	35319.24
7	58,781	41205.78
8	55,246	47092.32
9	51,569	52978.86
10	47,745	58865.4
11	43,768	64751.94
12	39,633	70638.48
13	35,331	76525.02
14	30,858	82411.56
15	26,206	88298.1
16	21,367	94184.64
17	16,336	100071.18
18	11,103	105957.72
19	5,660	111844.26
20	0	117730.8

Outstanding Balance and cumulative payment in conventional and MMP models are identical

Compound Interest/Rent 0.04%

Principal $ 80,000

Figure 4

I could isolate the compounding element in my earlier paper. It enters into the picture as the formula capitalizes the preceding period return on capital to arrive at the current period outstanding balance (Hasan 2013; 14-15). Thus, the compounding element can be obtained through multiplying the periodic return on capital each time by the periodic rate of return - interest rent or mark-up as in table 3 but the amount is too small for showing visibly in Figure 4 above. However, we know that the conversion of natural values into logarithm in a series gives greater weight to smaller values and less to larger ones. This enables one to make the compounding element vivid as in Figure 5.

Table 3: Compounding element in Instalment payments

Instalment #	1	2	3	-----	19	20	Total
R on C	3200	3093	2981	-----	444	226	37731
(R on C)*.04	128	124	119	-----	18	9	1510

Values in logrithms

Balance Due	Cumulative Payment	Compound Element
4.903	3.77	2.107
4.888	4.007	2.092
4.872	4.247	2.076
4.855	4.372	2.059
4.836	4.469	2.04
4.816	4.548	2.02
4.801	4.615	1.998
4.754	4.673	1.973
4.742	4.724	1.946
4.712	4.77	1.917
4.679	4.811	1.883
4.641	4.849	1.845
4.598	4.884	1.802
4.548	4.916	1.752
4.489	4.946	1.693
4.418	4.974	1.622
4.33	5	1.534
4.213	5.025	1.417
4.045	5.049	1.249
3.751	5.071	0.957

Cumulative payment, outstanding balance and compounding element in conventional model

Figure 5

Based on the present and earlier demonstrations, I maintain my position that not only the formula in equation 1 but any logical method of determining a uniform periodic instalment payment combining return of capital with return on capital will invite the same sort of criticism as spelled out in my writings: it must involve compounding of return and an ownership transfer to the customer at a less than amortization rate until the last instalment is paid.

There is another and more revealing way to identify compounding in the exercise. The bank receives a fixed instalment of $ 5887 semi-annually. How the management looks at it internally is a matter of discretion. It is interesting to see that we may break the instalment into *average* semi annual receipt of return of capital $4000, return on capital $1887 their sum being 5887semi-annual payment. Table 4 presents the result.It is interesting to see that the periodic return of capital remains the same ($4000) as in the ZDBM but the average return on capital is more each time average return is capitalised to calculate the outstanding balance as shown elsewhere. (Hasan2013, 14). Here the last row separates the element

Table 5: Break-up of instalments into uniform Return of Capital and uniform Return

Installment #		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total
Return of Capit	A	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	80000
Return on Capi	B	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	1887	37740
Installm	A + B	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	5887	117740
Return on Capi	B *0.04	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	75.46	1509