



A Comparative Study between Shariah Financing System and Conventional Financing System in Financing Motor-Vehicle Purchase in Indonesia

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Abstract

The purpose of study is to compare the shariah system with the conventional system in financing the motor-vehicle purchase. Shariah financing is a financing system using shariah principles in which the use of interest or riba is not allowed. Basically, in each financing transaction, the one who gives the financing surely expects to gain profit. This study is to reveal how the profit is obtained in shariah system compared with how the profit is calculated in conventional system. The method used in this analysis is by using the calculation of Flat-Rate and Effective-Rate Interest so that the difference between shariah system and conventional system can be seen. Based on the result of the study, it is found that the financing system with shariah system can be equated to the calculation result of Flat-Rate Interest used in conventional method. Therefore, it can be concluded that the Indonesian system of motor-vehicle financing with shariah system still takes profit in certain percentage which is equal to Flat-Rate Interest used in the calculation of interest in conventional system. The study also reveals that shariah financing system has an advantage in its cheaper financing cost and more stable interest expense for each period of credit debt payment than conventional financing system in which effective-rate is used to calculate the interest of outstanding balance financing given.

Keywords: shariah, conventional, interest, flat-rate, effective-rate

PREFACE

Nowadays, the automotive industry grows so fast. The data owned by AISI (*Asosiasi Industri Sepeda Motor Indonesia*) reveals that the sales of motor vehicle keep on increasing year on year. The sales of motor vehicle in Indonesia show a fantastic record. According to the data from AISI, the sales of motorcycle reached 8,034 million units in 2011 and 7,141 million units in 2012. Although there was an 11.2% increase, the number of sales was still great. It shows the need of motorcycle is ever lasting for Indonesian people. Yet, the interesting one is that the growth of motorcycle sales is also followed by the increasing number of credit demands as well as the increasing amount of leasing companies in Indonesia. At present, 65 companies providing credit facilities for motorcycles as "Consumer Finance" or "leasing" are registered in APPI (*Asosiasi*



Perusahaan Pembiayaan Indonesia). The presence of financing companies has great impact on the increasing sales of motor vehicle in general and motorcycle in particular. Presently the sales of motorcycle are still dominated by credits. It is also said by Gunadi Sindhuwinata, the chief of *Asosiasi Industri Sepeda Motor Indonesia* (AISI), that the motorcycle sales by credits reach 70% of the total number of sales. It has to be approved that the sales of motorcycle by credits show a remarkable result. However, the credit facilities can be based on either conventional system or shariah system, of which each has different calculating system. The difference is because the shariah system does not include an interest which is called *riba*, but it takes a particular margin for the revenue which is asked by the creditors.

EXPLANATION

Basically, motor-vehicle financing can be done by financial institutions such as banks or financing companies. Financing companies are often associated with leasing companies. In fact, not all activities of financing companies are the same as those of leasing companies. Leasing (according to the declaration of the Minister of Finance No. 1169/KMK.01/1991) is the activity of financing in providing capital assets as either financial lease or operating lease, to be used by the lessee for a certain period of time based on regular payment. Motor-vehicle financing for consumers is usually categorized as financial lease. It is in accordance with the financing character of which the vehicle and its specifications are chosen by the customers and the leasing companies merely provide the financing of items chosen by customers.

Based on what has been stated in the Preface, in this part the present writer tries to compare between the conventional financing and the shariah financing. Conventional is the term given for the financial system which is usually used in the world at the moment, while shariah is the concept of financial system based on Islamic principles which forbid interest or *riba*.

Conventional System

Basically, investment revenue of the economic conventional system is always based on its rate of return which is known as interest. It is determined by two kinds of calculation generally known as Effective rate and Flat rate.

Effective rate is the interest charge on an investment done by banks or financial institutions. The interest is calculated based on outstanding balance debt/financing given. The calculation of Effective Rate can be seen as follows:

Example:



Financing Rp 10,000,000,- for 2 years, 12% effective interest rate

The interest factor is:

$$\frac{1}{0,01} - \frac{1}{0,01 (1 + 0,01)^{24}} = 21.2433$$

$$\text{Monthly payment} = 10,000,000 / 21.2433 = 470.737$$

Loan Amortization schedule:

Month	Credit	Beginning Balance of Obligation	Credit	
			Interest	Obligation
1	470,734.72	10,000,000	100,000	370,735
2	470,734.72	9,629,265	96,293	374,442
3	470,734.72	9,254,823	92,548	378,186
4	470,734.72	8,876,637	88,766	381,968
5	470,734.72	8,494,668	84,947	385,788
6	470,734.72	8,108,880	81,089	389,646
20	470,734.72	2,284,679	22,847	447,888
21	470,734.72	1,836,791	18,368	452,367
22	470,734.72	1,384,424	13,844	456,890
23	470,734.72	927,533	9,275	461,459
24	470,734.72	466,074	4,661	466,074

Flat rate is a way of charging interest done by banks or financial institutions. It is calculated based on the amount of financing given to the debtor then it is charged equally during the contract period of debt agreement. The calculation of Flat Rate can be seen as follows:

Example:

Financing Rp 10,000,000,- for 2 years, 12% flat interest rate

So the calculation of its payment is as follows:

$$\text{The interest for 2 years} = 10,000,000 \times 12\% \times 2 = 2,400,000$$

$$\text{Monthly payment} = (10,000,000 + 2,400,000) / 24 = 516,667$$



Loan Amortization Schedule:

Month	Credit	Beginning Balance of Obligation	Credit	
			Interest	Obligation
1	516,667	10,000,000	100,000	416,667
2	516,667	9,583,333	100,000	416,667
3	516,667	9,166,666	100,000	416,667
4	516,667	8,749,999	100,000	416,667
5	516,667	8,333,332	100,000	416,667
6	516,667	7,916,665	100,000	416,667
20	516,667	2,083,327	100,000	416,667
21	516,667	1,666,660	100,000	416,667
22	516,667	1,249,993	100,000	416,667
23	516,667	833,326	100,000	416,667
24	516,667	416,659	100,000	416,667

Shariah System

Shariah Principle is a rule of agreement based on Islamic Law between the party who gives financing and another party who invests money to finance business activities or other activities that are stated based on Shariah, such as: financing based on profit sharing (*Mudharabah*), financing based on capital sharing (*Musarakah*), financing based on profit-oriented principle of buying and selling goods (*Murabahah*), financing capital assets based on lease which is pure lease without alteration (*Ijarah*), lease with ownership alteration on the rented object (*Ijarah Walthiqin* or *Ijarah bi-tamlik*).

Profit-Sharing System

Profit sharing is a contract of agreement between capital owner and customer as the capital manager to gain profit based on the contract agreement. There are two kinds of financing with profit-sharing system. One is based on *Mudharabah* principle and the other is based on *Musarakah* principle. *Mudharabah* is a contract of business agreement between two parties where the first party is the capital owner, while profit is shared between the two parties based on the agreements stated in a contract. Abdullah Saeed defines *mudharabah* as a contract between two parties where by one party called *rabb-al-mal* (investor) entrusts money to a second party, called *mudharib* for the purpose of conducting trade.

Mudharabah financing is generally used for:



- a. Financing operational capital, such as capital for conducting trades and services
- b. Particular investments

In this principle, there is a connection between financial expert and business expert, where an agreement of profit sharing is usually achieved between the two parties.

Musyarakah comes from the words *syirkah* or *syarikah* which means an agreement of cooperation between two or more parties for a particular business where each party contributes money with the agreement that profit and risk will be shared together according to the percentage of contribution or according to what has been agreed together. Abdullah Saeed declared *musyarakah* as a partnership.

Leasing System

Ijarah is a lending and renting system which is included in shariah system. There are two kinds of *ijarah* in shariah system. They are called *ijarah* and *ijarah al-muntahia bittamlik* (lease with right option or purchase option). *Ijarah* without ownership is the alteration of right to utilize or to get benefit from something without being followed by ownership alteration of the thing. *Ijarah muntahia bit-talmik atau ijarah waiqtina* (financial lease with purchase option) is a blend of buying-and-selling together with lending-and-renting contract, or in other words, leasing contract which is ended by the alteration of ownership from the lessor to the lessee.

This financing practice is usually done in our daily life in order to help the lessee who needs capital asset when the lessor has no intention to possess that asset.

Buying-and-Selling System

Murabahah is a buying-and-selling contract between bank and customer, the bank buys thing needed by the customer and sells to the customer for the profit that has been agreed together which is added to the cost of the thing. *Murabahah* buying and selling (*Bai' al-Murabahah*) is a term mostly used by financial institutions as a form of financing which has promising profit outlook. That is why all or almost all shariah financial institutions use it as a financing product in developing their capital (*al-Bunuuk al-Islamiyah Baina an-Nazhoriyah wa at-Tathbiiq*, Prof. DR. Abdullah Ath-Thoyaar hal. 307).

Murabahah buying and selling systems done by shariah financial institution are known as follows:

1. *al-Murabahah lil Aamir bi Asy-Syira'*



2. al-Murabahah lil Wa'id bi Asy-Syira'
3. Bai' al-Muwa'adah
4. al-Murabahah al-Mashrafiyah
5. al-Muwaa'adah 'Ala al-Murabahah. [2]

While in Indonesia it is known as *Murabahah* buying and selling or *Murabahah kepada Pemesanan Pembelian* (KPP).

It can be concluded that *murabahah* KPP buying and selling contains as follows:

1. There are three parties included:
 - a. The applicant or the customer who is the buyer from the financial institution.
 - b. The seller who sell something to the financial institution.
 - c. The financial institution which gives and sells something to the applicant or the customer.
2. There are two kinds of transaction contract:
 - a. A contract between the seller and the financial institution.
 - b. A contract between the financial institution and the buyer (the applicant).
3. There are three declarations:
 - a. A declaration of the financial institution to purchase something.
 - b. A bonding declaration of the financial institution to purchase something for the applicant.
 - c. A bonding declaration of the applicant (the customer) to purchase that thing from the financial institution.

It is clear that *murabahah* buying-and- selling KPP is a kind of dual contract consisting of two contracts, three declarations, and three parties. Having studied this *muamalah* and its process, it is clearly seen that there are two transaction contracts in one transaction contract, but the process of the two transaction contracts is not complete in one time from the completion of the contract, because both are two contracts which are not tied in one contract. It can be concluded that the two contracts are connected together with a bonding declaration between two parties, the financial institution and its customer.



Based on that condition, this kind of buying and selling is similar to contract agreement in one transaction from one bonding side so that it can also be stated that: Buy an item for me and I will give you a particular amount of profit.

It is because the item at the first contract does not belong to the financial institution, but it will be bought based on the bonding declaration to be bought by other party. By observing the whole process of this *muamalah* and its containing, it is clear that *Mu'amalah Murakkabah* generally and also particularly is being observed for the obligations contained in this *muamalah*. Unlike *Murabahah* which does not contain bonding declaration (*Ghairu al-Mulzaam*), it is an untied contract, so it is clear that the law is different.

Comparative Between Murabahah (Shariah Financing System) and Conventional Financing System

Based on the above explanation about conventional system and shariah system together with the instruments in shariah system, in this part we will see the calculation comparing between the conventional system and shariah system calculation occurring in motorcycle financing in Indonesia.

Study case is taken from the price of Japan-branded matic-scooter type of motorcycle.

Table 2.3.1 Murabahah Payment of Type B Brand HMotor

Price	DP	Credit				
		11	17	23	29	35
13,500,000	1,500,000	1,340,000	932,000	739,000	627,000	555,000
	1,600,000	1,331,000	926,000	734,000	622,000	551,000
	2,000,000	1,295,000	901,000	714,000	603,000	534,000
	2,500,000	1,248,000	866,000	685,000	580,000	512,000

Source: list of *Murabahah* payment for motorcycle from Adira Finance



Table 2.3.2 Conventional Payment Type B Brand HMotor

Price	DP	Credit				
		11	17	23	29	35
13,500,000	2,700,000	1,355,000	927,000	725,000	606,000	517,000
	2,800,000	1,344,000	920,000	719,000	602,000	512,000
	2,900,000	1,334,000	913,000	713,000	597,000	508,000
	3,000,000	1,324,000	906,000	708,000	592,000	504,000
	3,100,000	1,313,000	899,000	702,000	587,000	500,000
	3,200,000	1,303,000	892,000	696,000	583,000	496,000
	3,300,000	1,293,000	885,000	691,000	578,000	492,000

Source: list of payment for motorcycle from Adira Finance

Based on the data above, the present writer tries to analyze each financing system with the following tables:

Table 2.3.2 Customer's Total Amount of Payment (Murabahah)

Customer's Total Amount of Payment				
16,240,000	17,344,000	18,497,000	19,683,000	20,925,000
16,241,000	17,342,000	18,482,000	19,638,000	20,885,000
16,245,000	17,317,000	18,422,000	19,487,000	20,690,000
16,228,000	17,222,000	18,255,000	19,320,000	20,420,000

Source: data operation resulted by Ms. Excell

Table 2.3.3 The Amount of Margin (Murabahah)

The Amount of Margin Stated by Financing Company				
2,740,000	3,844,000	4,997,000	6,183,000	7,425,000
2,741,000	3,842,000	4,982,000	6,138,000	7,385,000
2,745,000	3,817,000	4,922,000	5,987,000	7,190,000
2,728,000	3,722,000	4,755,000	5,820,000	6,920,000

Source: data operation resulted by Ms. Excell



Table 2.3.4 Customer's Total Amount of Payment (Conventional)

Customer's Total Amount of Payment				
17,605,000	18,459,000	19,375,000	20,274,000	20,795,000
17,584,000	18,440,000	19,337,000	20,258,000	20,720,000
17,574,000	18,421,000	19,299,000	20,213,000	20,680,000
17,564,000	18,402,000	19,284,000	20,168,000	20,640,000
17,543,000	18,383,000	19,246,000	20,123,000	20,600,000
17,533,000	18,364,000	19,208,000	20,107,000	20,560,000
17,523,000	18,345,000	19,193,000	20,062,000	20,520,000

Source: data operation resulted by Ms. Excell

Table 2.3.5 The Amount of Interest Paid by Customer

The Amount of Interest Paid by Customer				
4,105,000	4,959,000	5,875,000	6,774,000	7,295,000
4,084,000	4,940,000	5,837,000	6,758,000	7,220,000
4,074,000	4,921,000	5,799,000	6,713,000	7,180,000
4,064,000	4,902,000	5,784,000	6,668,000	7,140,000
4,043,000	4,883,000	5,746,000	6,623,000	7,100,000
4,033,000	4,864,000	5,708,000	6,607,000	7,060,000
4,023,000	4,845,000	5,693,000	6,562,000	7,020,000

Source: data operation resulted by Ms. Excell

If we compare the amount of margin table with the amount of interest paid by customer table, we will see the difference. This is because of the different system. In shariah system, margin is only stated by the financing institution based on *murabahah* principle while flat interest system is used in conventional system (for new vehicle). Several differences that can be analyzed are as follows:

Shariah System (*Murabahah*):

1. Down payment is less expensive because transaction and administration fee is less expensive, besides there is no strict rule (at the time when this paper is made) about the amount of minimum down payment.
2. The profit stated by the company is definite. It is not based on the interest system with a particular amount.
3. Shariah system has a disadvantage for the customer. It is when the customer completely pays in advance during the period of buying-and-selling agreement, so the customer does not get a discount of what must



be paid. It is because the terms of interest and obligation are not used in shariah system, that is why the customer who has completely paid in advance will pay according to the remaining obligation of which the credit has not been paid.

Conventional System:

1. Down payment is more expensive than shariah system, because there is a regulation for minimum down payment stated by each consumer financing company (before the regulation from Indonesian Bank).
2. The interest payment stated is high although flat rate system is used for new vehicle (it can be equated to margin system in *murabahah*) and effective rate interest is used for second-hand vehicle.
3. In flat rate interest system stated by conventional system, when the customer wants to completely pay the obligation in advance, the customer has to pay only the remaining obligation and a particular amount of penalty fee because the customer completely pay faster than the period stated in the agreement.

Based on the data above, motorcycle B, brand H, costs Rp13,500,000,- then the present writer will compare the calculation by using flat rate interest system, effective rate system, and also *murabahah* system. Here is the simulation of calculation:

The expenses appearing for conventional system are:

Insurance expense assumption TLO : 4% for two years

Administration expense assumption : Rp 500,000,- /motorcycle

Flat rate interest assumption : 30%

Effective rate interest assumption : 30%

Down payment assumption : 30%



Conventional System with Effective Rate Calculation

DP	4,050,000
Total payment	5,090,000
Obligation	9,450,000
Interest	30%
Monthly Interest	0.025
Period (year)	2
Period (month)	24
Interest Factor	17.88498583
Credit	528,376.1524

Month	Credit	Beginning Balance of Obligation	Credit	
			Interest	Obligation
1	528,376.15	9,450,000	236,250	292,126
2	528,376.15	9,157,874	228,947	299,429
3	528,376.15	8,858,445	221,461	306,915
4	528,376.15	8,551,530	213,788	314,588
5	528,376.15	8,236,942	205,924	322,453
6	528,376.15	7,914,489	197,862	330,514
7	528,376.15	7,583,975	189,599	338,777
8	528,376.15	7,245,198	181,130	347,246
9	528,376.15	6,897,952	172,449	355,927
10	528,376.15	6,542,025	163,551	364,826
11	528,376.15	6,177,199	154,430	373,946
12	528,376.15	5,803,253	145,081	383,295
13	528,376.15	5,419,958	135,499	392,877
14	528,376.15	5,027,081	125,677	402,699
15	528,376.15	4,624,382	115,610	412,767
16	528,376.15	4,211,615	105,290	423,086
17	528,376.15	3,788,529	94,713	433,663
18	528,376.15	3,354,867	83,872	444,504
19	528,376.15	2,910,362	72,759	455,617
20	528,376.15	2,454,745	61,369	467,008
21	528,376.15	1,987,737	49,693	478,683
22	528,376.15	1,509,055	37,726	490,650
23	528,376.15	1,018,405	25,460	502,916
24	528,376.15	515,489	12,887	515,489

Source: data operation resulted by Ms. Excell



Conventional System with Flat Rate Interest

DP	4,050,000
Total payment	5,090,000
Obligation	9,450,000
Interest	30.0%
Period (year)	2
Credit of interest	236,250
Total Obligation	15,120,000
Credit	630,000
Credit of Obligation	393,750

Month	Credit	Beginning Balance of Obligation	Credit	
			Interest	Obligation
1	630,000	9,450,000	236,250	393,750
2	630,000	9,056,250	236,250	393,750
3	630,000	8,662,500	236,250	393,750
4	630,000	8,268,750	236,250	393,750
5	630,000	7,875,000	236,250	393,750
6	630,000	7,481,250	236,250	393,750
7	630,000	7,087,500	236,250	393,750
8	630,000	6,693,750	236,250	393,750
9	630,000	6,300,000	236,250	393,750
10	630,000	5,906,250	236,250	393,750
11	630,000	5,512,500	236,250	393,750
12	630,000	5,118,750	236,250	393,750
13	630,000	4,725,000	236,250	393,750
14	630,000	4,331,250	236,250	393,750
15	630,000	3,937,500	236,250	393,750
16	630,000	3,543,750	236,250	393,750
17	630,000	3,150,000	236,250	393,750
18	630,000	2,756,250	236,250	393,750
19	630,000	2,362,500	236,250	393,750
20	630,000	1,968,750	236,250	393,750
21	630,000	1,575,000	236,250	393,750
22	630,000	1,181,250	236,250	393,750
23	630,000	787,500	236,250	393,750
24	630,000	393,750	236,250	393,750

Source: data operation resulted by Ms. Excell



The expenses appearing for shariah system are:

Insurance expense assumption TLO : 4% for two years

Administration expense assumption : Rp 500,000,- / motorcycle

Expected profit margin assumption : Rp 6,000,000,- (two years)

DP	4,050,000
Total payment	5,090,000
Obligation	15,450,000
Period (year)	2
Credit	643,750

Month	Credit	Beginning Balance of Obligation	Credit	
			Margin	Obligation
1	643,750	15,450,000	250,000	393,750
2	643,750	14,806,250	250,000	393,750
3	643,750	14,162,500	250,000	393,750
4	643,750	13,518,750	250,000	393,750
5	643,750	12,875,000	250,000	393,750
6	643,750	12,231,250	250,000	393,750
7	643,750	11,587,500	250,000	393,750
8	643,750	10,943,750	250,000	393,750
9	643,750	10,300,000	250,000	393,750
10	643,750	9,656,250	250,000	393,750
11	643,750	9,012,500	250,000	393,750
12	643,750	8,368,750	250,000	393,750
13	643,750	7,725,000	250,000	393,750
14	643,750	7,081,250	250,000	393,750
15	643,750	6,437,500	250,000	393,750
16	643,750	5,793,750	250,000	393,750
17	643,750	5,150,000	250,000	393,750
18	643,750	4,506,250	250,000	393,750
19	643,750	3,862,500	250,000	393,750
20	643,750	3,218,750	250,000	393,750
21	643,750	2,575,000	250,000	393,750
22	643,750	1,931,250	250,000	393,750
23	643,750	1,287,500	250,000	393,750
24	643,750	643,750	250,000	393,750

Source: data operation resulted by Ms. Excell

It can be seen from the simulation that has been done and has resulted the three tables above, actually shariah system has less expensive financing solution than



conventional system. However, on the other side, shariah system also has its own limitation which has been stated at the previous part.

CONCLUSION

It can be concluded that financing with shariah system can be an alternative to provide financing that has a win-win solution for both the customer and the financing institution. For customer, there is a certainty of the amount of obligation that has to be paid and it is not as difficult as using the interest calculation that can be equated to flat rate interest calculation. It is different from conventional system of interest expense that uses effective rate system (for used vehicle) which seems to be more unfavorable for the customer.

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