

## Regarding the Principal and Interest Distribution in Monthly Repayment of Fubon Personal Instalment Loan

1. Fubon Bank adopted the “Reducing Balance Method” to breakdown the principal and interest in the monthly repayment of Personal Instalment Loan. This method allows the repayment proportion of interest higher during the beginning of the repayment while the repayment proportion of principal will be higher during the end of repayment.

2. Demonstration of the “Reducing Balance Method” :

a. Calculate the monthly instalment amount:

$$\text{Monthly Instalment amount} = (\text{Loan Amount} \times \text{Monthly Flat Rate}) + \frac{\text{Loan Amount}}{\text{Tenor}}$$

b. Calculate the proportion of the Interest payment and principal payment in each instalment by the following steps:

i. To derive an “Effective Rate” which is used to determine the interest proportion in each instalment. The formula is as follow:

$$\text{Monthly Instalment amount} = \frac{\text{Effective Rate} \times \text{Loan Amount}}{1 - (1 + \text{Effective Rate})^{-\text{Tenor}}}$$

ii. Calculate the interest payment proportion in each instalment:

$$\text{Interest payment in each instalment} = \text{Outstanding loan balance} \times \text{Effective Rate}$$

iii. Calculate the principal payment proportion in each instalment:

$$\begin{aligned} \text{Principal payment in each instalment} \\ = \text{Monthly Payment} - \text{Interest payment in each instalment} \end{aligned}$$

3. Example:

Assuming loan amount of the customer is HK\$75,000 with monthly flat rate 0.78% and tenor option is 36 months.

a. The monthly instalment is:

$$(\text{HK\$75,000} \times 0.78\%) + \frac{\text{HK\$75,000}}{36} = \text{HK\$2,668.33}$$

b. Calculate the proportion of the interest payment and principal payment in each instalment

i. Calculate Effective Rate:

$$\text{HK\$2,668.33} = \frac{\text{Effective Rate} \times \text{HK\$75,000}}{1 - (1 + \text{Effective Rate})^{-36}}$$

$$\text{Effective Rate} = 1.404109\%$$

ii. The interest payment and principal payment can be calculated as follow:

	Interest payment	Principal Payment
<b>First instalment</b>	1.404109% X HK\$75,000 =HK\$1,053.08	HK\$2,668.33-HK\$1,053.08 =HK\$1,615.25
<b>Second instalment</b>	1.404109% X HK\$73,384.75 =HK\$1,030.40	HK\$2,668.33-HK\$1,030.40 =HK\$1,637.93
<b>Third instalment</b>	1.404109% X HK\$71,746.82 =HK\$1,007.40	HK\$2,668.33-HK\$1,007.40 =HK\$1,660.93
	⋮	
<b>Last instalment</b>	1.404109% X HK\$2,631.39 =HK\$36.95	HK\$2,668.33-HK\$36.95 =HK\$2,631.39

c. Repayment Table:

Loan Amount :	HK\$75,000.00			
Monthly Flat Rate (%):	0.78%			
Tenor (Month) :	36 months			
Monthly instalment Amount :	HK\$2,668.33			
No. of Instalment	Monthly Instalment Amount (HKD)	Interest Payment (HKD)	Principal Payment (HKD)	Outstanding Balance (HKD)
1	\$2,668.33	\$1,053.08	\$1,615.25	\$73,384.75
2	\$2,668.33	\$1,030.40	\$1,637.93	\$71,746.82
3	\$2,668.33	\$1,007.40	\$1,660.93	\$70,085.89
4	\$2,668.33	\$984.08	\$1,684.25	\$68,401.64
5	\$2,668.33	\$960.43	\$1,707.90	\$66,693.74
6	\$2,668.33	\$936.45	\$1,731.88	\$64,961.86
7	\$2,668.33	\$912.14	\$1,756.20	\$63,205.66
8	\$2,668.33	\$887.48	\$1,780.86	\$61,424.80
9	\$2,668.33	\$862.47	\$1,805.86	\$59,618.94
10	\$2,668.33	\$837.12	\$1,831.22	\$57,787.72
11	\$2,668.33	\$811.40	\$1,856.93	\$55,930.79
12	\$2,668.33	\$785.33	\$1,883.00	\$54,047.79
13	\$2,668.33	\$758.89	\$1,909.44	\$52,138.34
14	\$2,668.33	\$732.08	\$1,936.25	\$50,202.09
15	\$2,668.33	\$704.89	\$1,963.44	\$48,238.65
16	\$2,668.33	\$677.32	\$1,991.01	\$46,247.64
17	\$2,668.33	\$649.37	\$2,018.97	\$44,228.67
18	\$2,668.33	\$621.02	\$2,047.31	\$42,181.36
19	\$2,668.33	\$592.27	\$2,076.06	\$40,105.30
20	\$2,668.33	\$563.12	\$2,105.21	\$38,000.09
21	\$2,668.33	\$533.56	\$2,134.77	\$35,865.32
22	\$2,668.33	\$503.59	\$2,164.75	\$33,700.57
23	\$2,668.33	\$473.19	\$2,195.14	\$31,505.43
24	\$2,668.33	\$442.37	\$2,225.96	\$29,279.47
25	\$2,668.33	\$411.12	\$2,257.22	\$27,022.25
26	\$2,668.33	\$379.42	\$2,288.91	\$24,733.34

27	\$2,668.33	\$347.28	\$2,321.05	\$22,412.29
28	\$2,668.33	\$314.69	\$2,353.64	\$20,058.65
29	\$2,668.33	\$281.65	\$2,386.69	\$17,671.96
30	\$2,668.33	\$248.13	\$2,420.20	\$15,251.76
31	\$2,668.33	\$214.15	\$2,454.18	\$12,797.58
32	\$2,668.33	\$179.69	\$2,488.64	\$10,308.94
33	\$2,668.33	\$144.75	\$2,523.58	\$7,785.35
34	\$2,668.33	\$109.31	\$2,559.02	\$5,226.34
35	\$2,668.33	\$73.38	\$2,594.95	\$2,631.39
36	\$2,668.33	\$36.95	\$2,631.39	\$0.00

Note: The above example is for reference only which may differ from actual situation.

**To borrow or not to borrow? Borrow only if you can repay!**