# Example Regarding the Breakdown of Principal and Interest in the Monthly Repayment and Early Repayment of Chong Hing Personal Loan

Chong Hing Bank uses "Rule of 78" method to breakdown of principal and interest in the monthly repayment of Personal Loan. The "Rule of 78" is the calculation of the interest and principal repayment and the allocation of the two components. In principle, customer's repayment will be utilized to settle the interest prior to the principal. A larger proportion of the repayment made in the early stages is allocated to settle the interest and finance charges, with a smaller proportion to repay the principal. Such allocation of the repayment will reverse after more instalments have been made.

Demonstration of "Rule of 78" is as follows:

Using 12-month tenor loan as an example, weight for the 1<sup>st</sup> month interest is set as 12 units, weight for the 2<sup>nd</sup> month interest is set as 11 units, weight for the 3<sup>rd</sup> month interest is set as 10 units and so on. Weight for the last month's interest is 1 unit. Therefore, the total interest weight is 78 (12 + 11 + 10 + ... + 1 = 78). So if the customer chooses a 12-month loan, 12/78s of the interest is assessed as the 1<sup>st</sup> month's portion of the total interest, 11/78s of the interest is assessed as the 2<sup>nd</sup> month's portion of the total interest and so on until the 12<sup>th</sup> month at which time 1/78s of the interest is assessed as that month's portion of the total interest. If the tenor is 36 months, the sum of interest units for 36 months is 666 (36 + 35 + 34 + ... + 1 = 666), hence 36/666s of the interest is assessed as the first month's interest portion of a 36-month loan.

## Example of calculating interest portion of each month:

A customer borrows a 12-month loan of HK\$100,000 at a monthly flat rate of 0.21%.

Monthly interest = HK\$100,000 x 0.21% = HK\$210

Interest for the full term = HK\$210 x 18 (instalments) = HK\$2,520 Monthly repayment amount = (HK\$100,000 + HK\$2,520) / 18 (monthly payments) = HK\$ 8,543.33

## Based on the Rule of 78, the amount of interest paid each month

= Interest for the full term  $\times \frac{\text{Remaining number of monthly payments}}{\text{Sum of the number of monthly instalments in the loan}}$ (For 12 monthly payments, it will be = 12 + 11 + ... + 2 + 1 = 78)

	Interest	Principal (repaid)
The 1 <sup>st</sup> month	HK\$2,520 x 12/78 = HK\$387.69	HK\$8,543.33 – HK\$387.69 = HK\$8,155.64
The 2 <sup>nd</sup> month	HK\$2,520 x 11/78 = HK\$355.38	HK\$8,543.33 – HK\$355.38 = HK\$8,187.95
The 3 <sup>rd</sup> month	HK\$2,520 x 10/78 = HK\$323.08	HK\$8,543.33 – HK\$323.08 = HK\$8,220.26
The 4 <sup>th</sup> month	HK\$2,520 x 9/78 = HK\$290.77	HK\$8,543.33 – HK\$290.77 = HK\$8,252.56
The 5 <sup>th</sup> month	HK\$2,520 x 8/78 = HK\$258.46	HK\$8,543.33 – HK\$258.46 = HK\$8,284.87
The 6 <sup>th</sup> month	HK\$2,520 x 7/78 = HK\$226.15	HK\$8,543.33 – HK\$226.15 = HK\$8,317.18
The 7 <sup>th</sup> month	HK\$2,520 x 6/78 = HK\$193.85	HK\$8,543.33 – HK\$193.85 = HK\$8,349.49

The calculation is as follows:

The 8 <sup>th</sup> month	HK\$2,520 x 5/78 = HK\$161.54	HK\$8,543.33 – HK\$161.54 = HK\$8,381.79
The 9 <sup>th</sup> month	HK\$2,520 x 4/78 = HK\$129.23	HK\$8,543.33 – HK\$129.23 = HK\$8,414.10
The 10 <sup>th</sup> month	HK\$2,520 x 3/78 = HK\$96.92	HK\$8,543.33 – HK\$96.92 = HK\$8,446.41
The 11 <sup>th</sup> month	HK\$2,520 x 2/78 = HK\$64.62	HK\$8,543.33 – HK\$64.62 = HK\$8,478.72
The 12 <sup>th</sup> month	HK\$2,520 x 1/78 = HK\$32.31	HK\$8,543.33 – HK\$32.31 = HK\$8,511.03
Total	HK\$2,520	HK\$100,000

\*Rounded up or down to the nearest two decimal places

The above example shows that nearly 30% of the interest for the full term is repaid in the first two monthly payments.

## Example of calculating principal, interest and fee payable upon early repayment using "Rule of 78":

Further to the above example, assume a customer has already settled repayment for the 6<sup>th</sup> month, then requests for full early repayment on or before the 7<sup>th</sup> monthly repayment due date.

Assume the prepayment fee as: 1% of the outstanding principal amount of the Loan (subject to a minimum prepayment fee of HK\$300) will be charged if the customer repays the Loan on a Monthly Repayment due date. Repayment must be in full but not partial. Partial Prepayment will not be allowed. Early repayment of the Loan is permissible upon 7 business days' prior written notice thereof having been received by the Bank. The Borrower agrees to pay to the Bank the entire outstanding loan principle (including any arrears), outstanding handling fee and interest up to the next repayment date (if applicable) together with all fees and charges due under the Loan in full as at the time of approval.

Instalment	Repayment	Handling fee	Interest (HK\$)	Principal (HK\$)	Outstanding	Outstanding
	Amount (HK\$)	(HK\$)			Principal (HK\$)	Interest (HK\$)
0					100,000.00	2,500.00
1	8,543.33	0.00	387.69	8,155.64	91,844.36	2,132.31
2	8,543.33	0.00	355.38	8,187.95	83,656.41	1,776.92
3	8,543.33	0.00	323.08	8,220.26	75,436.15	1,453.85
4	8,543.33	0.00	290.77	8,252.56	67,183.59	1,163.08
5	8,543.33	0.00	258.46	8,284.87	58,898.72	904.62
6	8,543.33	0.00	226.15	8,317.18	50,581.54 <sup>1</sup>	678.46
7	8,543.33 <sup>2</sup>	0.00	193.85	8,349.49	42,232.05 <sup>3</sup>	484.62
8	8,543.33	0.00	161.54 <sup>4</sup>	8,381.79	33,850.26	323.08
9	8,543.33	0.00	129.23	8,414.10	25,436.15	193.85
10	8,543.33	0.00	96.92	8,446.41	16,989.74	96.92
11	8,543.33	0.00	64.62	8,478.72	8,511.03	32.31
12	8,543.33	0.00	32.31	8,511.03	0.00	0

#### Repayment distribution schedule is as follows:

\*Rounded up or down to the nearest two decimal places

1. Outstanding principal on the 7<sup>th</sup> monthly repayment due date

- = HK\$100,000 Principal for the 1<sup>st</sup> month Principal for the 2<sup>nd</sup> month ..... Principal for the 6<sup>th</sup> month
- = HK\$100,000 HK\$8,155.64 HK\$8,187.95 ..... HK\$8,317.18

```
= HK$50,581.54
```

#### Prepayment fee

- = Outstanding principal on the 7<sup>th</sup> monthly repayment due date x 1%
- = HK\$50,581.54 x 1%

= HK\$505.82 (As this amount is larger than the minimum prepayment fee of HK\$300, the larger amount of HK\$505.82 is taken)

2. Monthly repayment amount for the 7<sup>th</sup> monthly repayment due date = HK\$8,543.33

- 3. Outstanding principal on the 7<sup>th</sup> monthly repayment due date after monthly repayment
- = HK\$100,000 Principal for the 1<sup>st</sup> month Principal for the 2<sup>nd</sup> month ..... Principal for the 7<sup>th</sup> month

= HK\$100,000 - HK\$8,155.64 - HK\$8,187.95 - ..... - HK\$8,349.49

= HK\$42,232.05

Principal, interest and fee payable

= Monthly repayment amount for the 7<sup>th</sup> monthly repayment due date + Outstanding principal for the 7<sup>th</sup> monthly repayment due date after monthly repayment + Prepayment fee

- $= \mathsf{HK}\$8,\!543.33 + \mathsf{HK}\$42,\!232.05 + \mathsf{HK}\$505.82$
- = HK\$51,281.20

#### 4. Loan interest saved

- = Total interest for 8<sup>th</sup> to 12<sup>th</sup> instalment
- = HK\$161.54 + HK\$129.23 + ..... + HK\$32.31
- = HK\$484.62

As illustrated in the above example, taking into account the prepayment fee, the loan interest saved from early repayment by the customer after the 6<sup>th</sup> monthly repayment due date may not be enough to cover the prepayment fee of HK\$505.82.

The above example is for reference only. Please refer to the table of outstanding principal amount applicable to your personal loan. For enquiry, please call our Chong Hing Loan Application Hotline at 3768 6899.