

LOAN REPAYMENT STRATEGIES AND BENEFITS

One can utilise various strategies to repay the loan based on the funds available, be it an incremental strategy or ad hoc pumping of funds into loan account. Let us explore various cases and their implications.

For all the cases considered below, the loan rate is assumed to be 9%, and the investment rate is 12%.

CASE 1: Regular EMI computation

Loan Availed	₹ 1,00,00,000.00
Interest Rate	9%
Term in Years	25
Term in Months	300
EMI	₹ 83,919.64

TOTAL INTEREST PAID	₹ 1,51,75,890.91
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,51,75,890.91

INSTALMENT NO.	MONTH BEGINNING LOAN	EMI	INTEREST PAID	PRINCIPAL PAID	OUTSTANDING LOAN
1	₹ 1,00,00,000.00	₹ 83,919.64	₹ 75,000.00	₹ 8,919.64	₹ 99,91,080.36
2	₹ 99,91,080.36	₹ 83,919.64	₹ 74,933.10	₹ 8,986.53	₹ 99,82,093.83
3	₹ 99,82,093.83	₹ 83,919.64	₹ 74,865.70	₹ 9,053.93	₹ 99,73,039.90
4	₹ 99,73,039.90	₹ 83,919.64	₹ 74,797.80	₹ 9,121.84	₹ 99,63,918.06
5	₹ 99,63,918.06	₹ 83,919.64	₹ 74,729.39	₹ 9,190.25	₹ 99,54,727.81
6	₹ 99,54,727.81	₹ 83,919.64	₹ 74,660.46	₹ 9,259.18	₹ 99,45,468.63
7	₹ 99,45,468.63	₹ 83,919.64	₹ 74,591.01	₹ 9,328.62	₹ 99,36,140.01
8	₹ 99,36,140.01	₹ 83,919.64	₹ 74,521.05	₹ 9,398.59	₹ 99,26,741.42
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Here, for a tenure of 25 years or 300 months, we would be paying an interest amount of ~1.51Cr for a 1Cr principal, i.e. a total of close to 2.5Cr.

CASE 2: Incremental increase in EMI

LOAN AVAILED	₹ 1,00,00,000.00			TOTAL ACTUAL REPAYMENT	₹ 2,51,75,890.91		
INTEREST RATE	9%			REPAYMENT AS PER INCREMENTAL EMI STRATEGY	₹ 1,78,32,945.95		
TERM IN YEARS	25			TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00		
TERM IN MONTHS	300			LOAN CLEARED IN TENURE	149		
EMI	₹ 83,919.64			TOTAL INTEREST PAID	₹ 77,48,659.77		
ANNUAL INCREMENTAL EMI BY %	6%			GAINS BY INCREMENTAL EMI STRATEGY	₹ 73,42,944.96		
INSTALMENT NO.	MONTH BEGINNING LOAN	EMI	ADDITIONAL	TOTAL EMI	INTEREST PAID	PRINCIPAL PAID	OUTSTANDING LOAN
1	10000000	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 75,000.00	₹ 8,919.64	₹ 99,91,080.36
2	₹ 99,91,080.36	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,933.10	₹ 8,986.53	₹ 99,82,093.83
3	₹ 99,82,093.83	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,865.70	₹ 9,053.93	₹ 99,73,039.90
4	₹ 99,73,039.90	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,797.80	₹ 9,121.84	₹ 99,63,918.06
5	₹ 99,63,918.06	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,729.39	₹ 9,190.25	₹ 99,54,727.81
6	₹ 99,54,727.81	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,660.46	₹ 9,259.18	₹ 99,45,468.63
7	₹ 99,45,468.63	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,591.01	₹ 9,328.62	₹ 99,36,140.01
8	₹ 99,36,140.01	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,521.05	₹ 9,398.59	₹ 99,26,741.42
9	₹ 99,26,741.42	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,450.56	₹ 9,469.08	₹ 99,17,272.35
10	₹ 99,17,272.35	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,379.54	₹ 9,540.09	₹ 99,07,732.25
11	₹ 99,07,732.25	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,307.99	₹ 9,611.64	₹ 98,98,120.61
12	₹ 98,98,120.61	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,235.90	₹ 9,683.73	₹ 98,88,436.88
13	₹ 98,88,436.88	₹ 83,919.64	₹ 5,035.18	₹ 88,954.81	₹ 74,163.28	₹ 14,791.54	₹ 98,73,645.34
14	₹ 98,73,645.34	₹ 83,919.64	₹ 5,035.18	₹ 88,954.81	₹ 74,052.34	₹ 14,902.47	₹ 98,58,742.87
15	₹ 98,58,742.87	₹ 83,919.64	₹ 5,035.18	₹ 88,954.81	₹ 73,940.57	₹ 15,014.24	₹ 98,43,728.62
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For the same tenure, if we increase the EMI by 6% year on year, we would be able to repay entirely within 149 months. The total amount that we would be repaying would be ~1.78Cr, which means we would be saving around 73L compared to Case 1.

Case 1 (Normal)	
Loan Aailed	₹ 1,00,00,000.00
Interest Rate	9%
Term in Years	25
Term in Months	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 0.00
TOTAL INTEREST PAID	₹ 1,51,75,890.91
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,51,75,890.91
POSSIBLE SAVINGS	₹ 0.00
LOAN CLEARED IN TENURE (MONTHS)	300
TOTAL GAINS BY INVESTING SURPLUS	NA
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	NA

Case 2 (% increment on EMI YOY)	
LOAN AVAILED	₹ 1,00,00,000.00
INTEREST RATE	9%
TERM IN YEARS	25
TERM IN MONTHS	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	6%
ADDITIONAL EMI	₹ 0.00
TOTAL INTEREST PAID	₹ 77,48,659.77
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 1,78,32,945.95
POSSIBLE SAVINGS	₹ 73,42,944.96
LOAN CLEARED IN TENURE (MONTHS)	149
TOTAL GAINS BY INVESTING SURPLUS	₹ 85,94,710.32
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 12,51,765.36

CASE 3: Adhoc additional repayment of bonus amount as & when/if available

CASE STUDY LIVE ANALYSIS – FINANCIAL PLANNING DIVISION DILZER CONSULTANTS PVT LTD

LOAN AVAILED	₹ 1,00,00,000.00		TOTAL REPAYMENT	₹ 2,51,75,890.91			
INTEREST RATE	9%		TOTAL REPAYMENT IN THIS STRATEGY	₹ 2,14,83,426.98			
TERM IN YEARS	25		TOTAL PRINCIPAL PAID	₹ 1,00,00,000.0			
TERM IN MONTHS	300		LOAN CLEARED IN TENURE	237	19.75 YEARS		
EMI	₹ 83,919.64		TOTAL INTEREST PAID	₹ 1,14,16,749.56			
13TH MONTH EMI	₹ 83,919.64		GAINS BY FOLLOWING THIS STRATEGY	₹ 36,92,463.93			
INSTALMENT NO	MONTH BEGINNING LOAN	EMI	ADDITIONAL EMI	TOTAL EMI	INTEREST PAID	PRINCIPAL PAID	OUTSTANDING LOAN
1	₹ 1,00,00,000.00	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 75,000.00	₹ 8,919.64	₹ 99,91,080.36
2	₹ 99,91,080.36	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,933.10	₹ 8,986.53	₹ 99,82,093.83
3	₹ 99,82,093.83	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,865.70	₹ 9,053.93	₹ 99,73,039.90
4	₹ 99,73,039.90	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,797.80	₹ 9,121.84	₹ 99,63,918.06
5	₹ 99,63,918.06	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,729.39	₹ 9,190.25	₹ 99,54,727.81
6	₹ 99,54,727.81	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,660.46	₹ 9,259.18	₹ 99,45,468.63
7	₹ 99,45,468.63	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,591.01	₹ 9,328.62	₹ 99,36,140.01
8	₹ 99,36,140.01	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,521.05	₹ 9,398.59	₹ 99,26,741.42
9	₹ 99,26,741.42	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,450.56	₹ 9,469.08	₹ 99,17,272.35
10	₹ 99,17,272.35	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,379.54	₹ 9,540.09	₹ 99,07,732.25
11	₹ 99,07,732.25	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,307.99	₹ 9,611.64	₹ 98,98,120.61
12	₹ 98,98,120.61	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 74,235.90	₹ 9,683.73	₹ 98,88,436.88
13	₹ 98,88,436.88	₹ 83,919.64	₹ 83,919.64	₹ 1,67,839.28	₹ 74,163.28	₹ 93,676.00	₹ 97,94,760.88
14	₹ 97,94,760.88	₹ 83,919.64	₹ 0.00	₹ 83,919.64	₹ 73,460.71	₹ 10,458.93	₹ 97,84,301.95
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Here, at a certain point, if we are doubling the EMI amount in that particular month(s), this shows how the total repaid amount gets reduced and so does the repayment tenure. How much is Tenure reduction and interest, and what company it with the original period interest and Tenure

However, the table below shows that if we had invested that extra amount in a 12% returns instrument for the same tenure, how would the fund grow?

CASE STUDY LIVE ANALYSIS – FINANCIAL PLANNING DIVISION DILZER CONSULTANTS PVT LTD



EXPECTED RETURN	12%
TOTAL GAINS IF THE BONUS IS INVESTED	₹ 57,96,130.01
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 21,03,666.07

NO. OF MONTHS	MONTH BEGINNING	INVESTMENT	GAINS	MONTH END VALUE
1	0	₹ 0.00	₹ 0.00	₹ 0.00
2	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
3	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
4	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
5	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
6	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
7	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
8	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
9	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
10	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
11	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
12	₹ 0.00	₹ 0.00	₹ 0.00	₹ 0.00
13	₹ 0.00	₹ 83,919.64	₹ 796.30	₹ 84,715.94
14	₹ 84,715.94	₹ 0.00	₹ 803.85	₹ 85,519.79
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Case 1 (Normal)	
Loan Aailed	₹ 1,00,00,000.00
Interest Rate	9%
Term in Years	25
Term in Months	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 0.00
TOTAL INTEREST PAID	₹ 1,51,75,890.91
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,51,75,890.91
POSSIBLE SAVINGS	₹ 0.00
LOAN CLEARED IN TENURE (MONTHS)	300
TOTAL GAINS BY INVESTING SURPLUS	NA
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	NA

Case 3 (Adhoc EMI)	
LOAN AVAILED	₹ 1,00,00,000.00
INTEREST RATE	9%
TERM IN YEARS	25
TERM IN MONTHS	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 83,919.64
TOTAL INTEREST PAID	₹ 1,14,16,749.56
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,14,83,426.98
POSSIBLE SAVINGS	₹ 36,92,463.93
LOAN CLEARED IN TENURE (MONTHS)	237
TOTAL GAINS BY INVESTING SURPLUS	₹ 57,96,130.01
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 21,03,666.07

CASE 4: Additional Bonus + Additional EMI repayment

As you can see in the above examples, when both the cases, i.e., the additional amount and the additional EMI amount, are paid, the total repayment amount and the total tenure required to clear the loan will also significantly reduce.

Case 1 (Normal)		Case 4 (Bonus & Adhoc EMI)	
Loan Aailed	₹ 1,00,00,000.00	LOAN AVAILED	₹ 1,00,00,000.00
Interest Rate	9%	INTEREST RATE	9%
Term in Years	25	TERM IN YEARS	25
Term in Months	300	TERM IN MONTHS	300
EMI	₹ 83,919.64	EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%	ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 0.00	ADDITIONAL EMI	₹ 83,919.64
TOTAL INTEREST PAID	₹ 1,51,75,890.91	TOTAL INTEREST PAID	₹ 1,14,16,749.68
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00	TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,51,75,890.91	TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,14,83,426.91
POSSIBLE SAVINGS	₹ 0.00	POSSIBLE SAVINGS	₹ 36,92,464.00
LOAN CLEARED IN TENURE (MONTHS)	300	LOAN CLEARED IN TENURE (MONTHS)	237
TOTAL GAINS BY INVESTING SURPLUS	NA	TOTAL GAINS BY INVESTING SURPLUS	₹ 57,96,129.75
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	NA	DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 21,03,665.75

BIRD'S EYE VIEW OF ALL THE ABOVE CASES:

Case 1 (Normal)	
Loan Availed	₹ 1,00,00,000.00
Interest Rate	9%
Term in Years	25
Term in Months	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 0.00
TOTAL INTEREST PAID	₹ 1,51,75,890.91
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,51,75,890.91
POSSIBLE SAVINGS	₹ 0.00
LOAN CLEARED IN TENURE (MONTHS)	NA
TOTAL GAINS BY INVESTING SURPLUS	NA
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	NA

CASE STUDY LIVE ANALYSIS – FINANCIAL PLANNING DIVISION DILZER CONSULTANTS PVT LTD

Case 2 (% increment on EMI YOY)	
LOAN AVAILED	₹ 1,00,00,000.00
INTEREST RATE	9%
TERM IN YEARS	25
TERM IN MONTHS	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	6%
ADDITIONAL EMI	₹ 0.00
TOTAL INTEREST PAID	₹ 77,48,659.77
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 1,78,32,945.95
POSSIBLE SAVINGS	₹ 73,42,944.96
LOAN CLEARED IN TENURE (MONTHS)	149
TOTAL GAINS BY INVESTING SURPLUS	₹ 85,94,710.32
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 12,51,765.36

CASE STUDY LIVE ANALYSIS – FINANCIAL PLANNING DIVISION DILZER CONSULTANTS PVT LTD

Case 3 (Adhoc EMI)	
LOAN AVAILED	₹ 1,00,00,000.00
INTEREST RATE	9%
TERM IN YEARS	25
TERM IN MONTHS	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 83,919.64
TOTAL INTEREST PAID	₹ 1,14,16,749.56
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,14,83,426.98
POSSIBLE SAVINGS	₹ 36,92,463.93
LOAN CLEARED IN TENURE (MONTHS)	237
TOTAL GAINS BY INVESTING SURPLUS	₹ 57,96,130.01
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 21,03,666.07

Case 4 (Bonus & Adhoc EMI)	
LOAN AVAILED	₹ 1,00,00,000.00
INTEREST RATE	9%
TERM IN YEARS	25
TERM IN MONTHS	300
EMI	₹ 83,919.64
ANNUAL INCREMETAL EMI BY %	0%
ADDITIONAL EMI	₹ 83,919.64
TOTAL INTEREST PAID	₹ 1,14,16,749.68
TOTAL PRINCIPAL PAID	₹ 1,00,00,000.00
TOTAL AMOUNT PAID AGAINST LOAN	₹ 2,14,83,426.91
POSSIBLE SAVINGS	₹ 36,92,464.00
LOAN CLEARED IN TENURE (MONTHS)	237
TOTAL GAINS BY INVESTING SURPLUS	₹ 57,96,129.75
DIFFERENCE OF INVESTMENT VS LOAN CLEARANCE	₹ 21,03,665.75

SUMMARY:

1. Most of the scenarios stated above like % increase in EMI year on year, bonus added to loan at any period, and Extra EMI added at any period are considered as to investing the same proceeds at a better-yielding funds.
2. The best scenario is based on actual numbers which need to be considered in the calculation. This will differ from client to client.
3. One simple rule we can see across all the cases is that if the return rate is greater than the loan rate, then we could have some significant savings.

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